KEB HANA BANK

Issue of U.S.$400,000,000 Floating Rate Notes due 2024
under the
U.S.$10,000,000,000 Global Medium Term Note Programme

Issue Price: 100 per cent.

Issue Date: 13 June 2019

This information package includes the offering circular dated 11 January 2019 in relation to U.S.$10,000,000,000 Global Medium Term Note Programme (the "**Offering Circular**") and the Pricing Supplement dated 29 May 2019 in respect of the Notes (the "**Pricing Supplement,**" together with the Offering Circular, the "**Information Package**").

The Notes will be issued by KEB Hana Bank (the "**Issuer**"), acting through its principal office in Korea.

Application will be made by the Issuer for the Notes to be listed on the Taipei Exchange ("**TPEx**") in the Republic of China (the "**ROC**").

The Notes will be traded on TPEx pursuant to the applicable rules of TPEx. Effective date of listing and trading of the Notes is on or about 13 June 2019.

TPEx is not responsible for the content of the Information Package and no representation is made by TPEx as to the accuracy or completeness of the Information Package. TPEx expressly disclaims any and all liabilities for any losses arising from, or as a result of, the reliance on, all or part of the contents of this Information Package. Admission for listing and trading of the Notes on the TPEx is not to be taken as an indication of the merits of the Issuer or the Notes.

The Notes have not been, and shall not be, offered, sold or re-sold, directly or indirectly, to investors other than "professional investors" as defined under Paragraph 1, Article 2-1 of the Taipei Exchange Rules Governing Management of Foreign Currency Denominated International Bonds of the ROC. Purchasers of the Notes are not permitted to sell or otherwise dispose of the Notes except by transfer to a professional investor.

Lead Manager and Joint Bookrunner
Standard Chartered Bank (Taiwan) Limited

Joint Managers and Joint Bookrunners
Crédit Agricole Corporate and Investment Bank, Taipei Branch
SG Securities (HK) Limited, Taipei Branch

Co-Managers

Cathay United Bank Co., Ltd.
Fubon Securities Co., Ltd.
KGI Securities Co. Ltd.
President Securities Corporation
Taipei Fubon Commercial Bank Co., Ltd.
Yuanta Securities Co., Ltd.

CTBC Bank Co. Ltd.
KGI Bank
Mega International Commercial Bank Co., Ltd.
Sinopac Securities Corporation
Taishin International Bank Co., Ltd.

IMPORTANT NOTICE

THIS DOCUMENT IS AVAILABLE ONLY TO INVESTORS WHO ARE NON-U.S. PERSONS OUTSIDE THE UNITED STATES

IMPORTANT: You must read the following before continuing. The following applies to the pricing supplement and the offering circular following this page (collectively, the "Offering Circular"), and you are therefore advised to read this carefully before reading, accessing or making any other use of the Offering Circular. In accessing the Offering Circular, you agree to be bound by the following terms and conditions, including any modifications to them any time you receive any information as a result of such access.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN THE UNITED STATES OR ANY OTHER JURISDICTION WHERE IT IS UNLAWFUL TO DO SO.

THE SECURITIES DESCRIBED HEREIN HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR OTHER JURISDICTION, AND THE SECURITIES DESCRIBED HEREIN MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES, OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT). THIS OFFERING IS MADE SOLELY TO NON-U.S. PERSONS IN OFFSHORE TRANSACTIONS PURSUANT TO REGULATION S THEREUNDER THE SECURITIES ACT.

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IF YOU HAVE GAINED ACCESS TO THIS TRANSMISSION CONTRARY TO ANY OF THE FOREGOING RESTRICTIONS, YOU ARE NOT AUTHORISED AND WILL NOT BE ABLE TO PURCHASE THE SECURITIES DESCRIBED THEREIN.

Confirmation of Your Representation: In order to be eligible to view the Offering Circular or make an investment decision with respect to the securities described herein, investors must not be located in the United States or be a non-U.S. person (within the meaning of Regulation S under the Securities Act). The Offering Circular is being sent at your request and by accepting the e-mail and accessing the Offering Circular, you shall be deemed to have represented to the Managers (as described in the Offering Circular) that you and any customers you represent are non-U.S. persons (as defined in Regulation S under the Securities Act) and that the electronic mail address that you gave us and to which this e-mail has been delivered is not located in the United States, its territories or possessions and that you consent to delivery of such Offering Circular by electronic transmission.

You are reminded that the Offering Circular has been delivered to you on the basis that you are a person into whose possession the Offering Circular may be lawfully delivered in accordance with the laws of the jurisdiction in which you are located and you may not, nor are you authorised to, deliver or disclose the contents of the Offering Circular to any other person. If this is not the case, you must return the Offering Circular to us immediately.

The materials relating to the issue of the securities described herein do not constitute, and may not be used in connection with, an offer or solicitation in any place where offers or solicitations are not permitted by law. If a jurisdiction requires that the issue of the securities described herein be made by a licensed broker or dealer and any Manager or any affiliate of such Manager is a licensed broker or dealer in that jurisdiction, the issue of the securities described herein shall be deemed to be made by such Manager or such affiliate on behalf of the issuer in such jurisdiction.

The Offering Circular has been sent to you in an electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of electronic transmission and consequently none of the Managers, nor any person who controls any of them nor any of their respective directors, officers, employees, agents or affiliates accepts any liability or responsibility whatsoever in respect of any difference between the Offering Circular distributed to you in electronic format and the hard copy version available to you on request from the Managers.

You should not reply by e-mail to this distribution, and you may not purchase any securities by doing so. Any reply e-mail communications, including those you generate by using the "Reply" function on your e-mail software, will be ignored or rejected. You are responsible for protecting against viruses and other destructive items. Your use of this e-mail is at your own risk and it is your responsibility to take precautions to ensure that it is free from viruses and other items of a destructive nature.

PRICING SUPPLEMENT

(*incorporated with limited liability under the laws of the Republic of Korea*)

Issue of U.S.$400,000,000 Floating Rate Notes due 2024
under the U.S.$10,000,000,000 Global Medium Term Note Programme

THE NOTES TO WHICH THIS PRICING SUPPLEMENT RELATES (THE "**NOTES**") HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY STATE OR OTHER JURISDICTION OF THE UNITED STATES AND, UNLESS SO REGISTERED, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE SECURITIES LAWS. ACCORDINGLY, THE NOTES WILL BE OFFERED AND SOLD ONLY OUTSIDE THE UNITED STATES TO NON-U.S. PERSONS IN RELIANCE ON REGULATION S.

Lead Manager and Joint Bookrunner

Standard Chartered Bank (Taiwan) Limited

Joint Managers and Joint Bookrunners

Crédit Agricole Corporate and Investment Bank, Taipei Branch
SG Securities (HK) Limited, Taipei Branch

Co-Managers

Cathay United Bank Co., Ltd.
Fubon Securities Co., Ltd.
KGI Securities Co. Ltd.
President Securities Corporation
Taipei Fubon Commercial Bank Co., Ltd.
Yuanta Securities Co., Ltd.
CTBC Bank Co. Ltd.
KGI Bank
Mega International Commercial Bank Co., Ltd.
Sinopac Securities Corporation
Taishin International Bank Co., Ltd.

The date of this pricing supplement is 29 May 2019
and this pricing supplement was deemed effective on 28 May 2019

KEB HANA BANK
(acting through its principal office in Korea)

Issue of U.S.$400,000,000 Floating Rate Notes due 2024
Issued pursuant to the U.S.$10,000,000,000 Global Medium Term Note Programme

This document constitutes the pricing supplement (this "**Pricing Supplement**") relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the Terms and Conditions of the Notes set forth in the Offering Circular dated 11 January 2019 as amended or supplemented from time to time (the "**Offering Circular**"). This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with the Offering Circular. Full information on the Issuer and the offer of the Notes is only available on the basis of this Pricing Supplement and the Offering Circular.

The Notes have not been and will not be registered under the Financial Services Commission of Korea under the Financial Investment Services and Capital Markets Act of Korea. Accordingly, the Notes may not be offered, sold or delivered, directly or indirectly, in Korea or to, or for the account or benefit of, any resident of Korea (as such term is defined under the Foreign Exchange Transaction Law of Korea and its Enforcement Decree) or to others for re-offering or resale, except as otherwise permitted under applicable Korean laws and regulations. In addition, during the first year after the issuance of the Notes, the Notes may not be transferred to any resident of Korea other than a "qualified institutional investor" (a "**Korean QIB**," as defined in the Regulation on Issuance, Public Disclosure, Etc. of Securities of Korea) who is registered with the Korea Financial Investment Association (the "**KOFIA**") as a Korean QIB and subject to the requirement of monthly reports with the KOFIA of its holding of Korean QIB bonds as defined in the Regulation on Issuance, Public Disclosure, etc. of Securities of Korea, provided that (a) the Notes are denominated, and the principal and interest payments thereunder are made, in a currency other than Korean Won, (b) the amount of the Notes acquired by such Korean QIBs in the primary market is limited to less than 20% of the aggregate issue amount of the Notes, (c) the Notes are listed on one of the major overseas securities markets designated by the Financial Supervisory Service of Korea, or certain procedures, such as registration or report with a foreign financial investment regulator, have been completed for offering of the Notes in a major overseas securities market, (d) the one-year restriction on offering, delivering or selling of Notes to a Korean resident other than a Korean QIB is expressly stated in the Notes, the relevant purchase agreement and offering circular and (e) the Issuer and the Managers shall individually or collectively keep the evidence of fulfilment of conditions (a) through (d) above after having taken necessary actions therefor.

The Notes have not been, and shall not be, offered, sold or re-sold, directly or indirectly, to investors other than "professional investors" as defined under Paragraph 1, Article 2-1 of the Taipei Exchange Rules Governing Management of Foreign Currency Denominated International Bonds of the Republic of China ("**ROC**").

Notification under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA") – The Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

1.	Issuer:		KEB Hana Bank, acting through its principal office in Korea Legal Entity Identifier: 6RPK2YDJN6L35AS0M510
2.	(i)	Series Number:	99
	(ii)	Tranche Number:	1
	(iii)	Re-opening:	No
3.	Specified Currency or Currencies:		United States Dollars ("**U.S.$**")
4.	Aggregate Nominal Amount:		
	(i)	Tranche:	U.S.$400,000,000
	(ii)	Series:	U.S.$400,000,000
5.	(i)	Issue Price of Tranche:	100.00 per cent. of the Aggregate Nominal Amount.
	(ii)	Net Proceeds (after deducting a combined management and underwriting commission but not estimated expenses):	U.S.$399,200,000
6.	(i)	Specified Denominations:	U.S.$200,000 and integral multiples of U.S.$1,000 in excess thereof.
	(ii)	Calculation Amount:	U.S.$1,000
7.	(i)	Issue Date:	13 June 2019
	(ii)	Interest Commencement Date:	13 June 2019
8.	Maturity Date:		13 June 2024
9.	Interest Basis:		3-month U.S.$ LIBOR + 75 basis points (further particulars specified below)
10.	Redemption/Payment Basis:		Redemption at par

11.	Change of Interest Basis or Redemption/ Payment Basis:	Not Applicable
12.	Put/Call Options:	Not Applicable
13.	(i) Status of the Notes:	Senior
	(ii) Date of a report to the Ministry of Economy and Finance for issuance of Notes:	20 May 2019
14.	Listing:	Singapore Exchange Securities Trading Limited ("**SGX-ST**") Taipei Exchange, Taiwan, ROC ("**TPEx**")
15.	Method of distribution:	Syndicated

PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE

16.	Fixed Rate Note Provisions:	Not Applicable
17.	Floating Rate Note Provisions:	Applicable
	(i) Specified Period(s)/Interest Payment Dates:	13 March, 13 June, 13 September and 13 December in each year commencing on 13 September 2019 and ending on the Maturity Date, adjusted in accordance with the Modified Following Business Day Convention
	(ii) Business Day Convention:	Modified Following Business Day Convention
	(iii) Additional Business Centre(s):	New York City, London, Taipei and Seoul
	(iv) Manner in which the Rate of Interest and Interest Amount is to be determined:	Screen Rate Determination
	(v) Party responsible for calculating the Rate of Interest and Interest Amount (if not the Principal Paying Agent):	Not Applicable
	(vi) Screen Rate Determination:	
	Reference Rate:	3-month U.S.$ LIBOR
	Interest Determination Date(s):	Second London business day prior to the start of each Interest Period

	Relevant Screen Page:	The display page designated LIBOR01 on Reuters at 11:00 a.m. (London time) on the Interest Determination Date
	(vii) ISDA Determination:	Not Applicable
	Floating Rate Option:	Not Applicable
	Designated Maturity:	Not Applicable
	Reset Date:	Not Applicable
	(viii) Margin(s):	+0.75 per cent. per annum
	(ix) Minimum Rate of Interest:	0.00 per cent. per annum
	(x) Maximum Rate of Interest	Not Applicable
	(xi) Day Count Fraction:	Actual/360, adjusted
	Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions:	Not Applicable
18.	Zero Coupon Note Provisions:	Not Applicable
19.	Index Linked Interest Note Provisions:	Not Applicable
20.	Dual Currency Note Provisions:	Not Applicable

PROVISIONS RELATING TO REDEMPTION

21.	Issuer Call:	Not Applicable
22.	Investor Put:	Not Applicable
23.	Final Redemption Amount of each Note:	U.S.$1,000 per Calculation Amount
24.	Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 7(e)):	U.S.$1,000 per Calculation Amount

GENERAL PROVISIONS APPLICABLE TO THE NOTES

25.	Form of Notes:	Registered Notes: Regulation S Global Note registered in the name of a nominee for a common depositary for Euroclear and Clearstream, Luxembourg
26.	Additional Financial Centres or other special provisions relating to Payment Dates:	New York City, London, Taipei and Seoul
27.	Talons for future Coupons or Receipts to be attached to Definitive Bearer Notes (and dates on which such Talons mature):	No
28.	Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment:	Not Applicable
29.	Details relating to Instalment Notes:	Not Applicable
30.	Redenomination applicable:	Redenomination not applicable
31.	Other terms or special conditions:	Not Applicable
32.	Additional U.S. federal income tax considerations:	Not Applicable
33.	Private Bank Rebate/Commission:	Not Applicable

DISTRIBUTION

34.	(i) If syndicated, names of Managers:	Standard Chartered Bank (Taiwan) Limited *as Lead Manager and Joint Bookrunner* Crédit Agricole Corporate and Investment Bank, Taipei Branch SG Securities (HK) Limited, Taipei Branch *as Joint Managers and Joint Bookrunners* Cathay United Bank Co., Ltd. CTBC Bank Co. Ltd. Fubon Securities Co., Ltd. KGI Bank KGI Securities Co. Ltd. Mega International Commercial Bank Co., Ltd. President Securities Corporation Sinopac Securities Corporation Taipei Fubon Commercial Bank Co., Ltd. Taishin International Bank Co., Ltd. Yuanta Securities Co., Ltd. *as Co-Managers*
	(ii) Stabilisation Manager (if any):	Not Applicable
35.	If non-syndicated, name of relevant Dealer:	Not Applicable
36.	Whether TEFRA D or TEFRA C rules applicable or TEFRA rules not applicable:	TEFRA rules not applicable
37.	U.S. selling restrictions:	Regulations S, Category 2
38.	Prohibition of Sales to EEA Retail Investors:	Not Applicable
39.	Additional selling restrictions:	ROC Selling Restriction, see Appendix A

OPERATIONAL INFORMATION

40.	Any clearing system(s) other than Euroclear and Clearstream, Luxembourg and the relevant identification numbers:	Not Applicable
41.	Delivery:	Delivery against payment
42.	In the case of Registered Notes, specify the location of the office of the Registrar if other than New York:	Luxembourg

43. Additional Paying Agents (if any): Not Applicable

ISIN: XS2007215606

Common Code: 200721560

AMENDMENTS TO THE OFFERING CIRCULAR

The following paragraphs will be added at the end of the section "Summary of the Programme" on page 7 of the Offering Circular:

Recent Developments

Changes in Management

At our annual meeting of shareholders held in March 2019, we appointed Mr. Sung Kyu Ji as our new President and Chief Executive Officer ("**CEO**") replacing Mr. Young Joo Ham whose term ended. Prior to his appointment, Mr. Ji served as Deputy President of our Global Business Group and spent a number of years in overseas postings in Hong Kong and China. At 55, Mr. Ji is one of the youngest CEOs among CEOs of commercial banks in Korea. Mr. Ji has an undergraduate degree in management from Yonsei University.

In addition to Mr. Ji, we appointed other directors and executive officers at the annual meeting of shareholders whose terms ended, including the following directors:

- Mr. Seung Lyul Lee, age 56, was appointed as Non-Standing Director replacing Mr. Cheol Seung Kwark, whose term as Chief Financial Officer of the Hana Financial Group ended. Mr. Lee is currently Deputy President and Chief Financial Officer of Hana Financial Group. Mr. Lee has undergraduate and master's degrees in economics from Seoul National University.

- Mr. Tae Young Kim, age 66, was appointed as Outside Director. Mr. Kim is a former president of Philips Korea and a former Head of Strategic Business Division at Philips Asia-Pacific. Mr. Kim has an undergraduate degree in electrical engineering from Sungkyunkwan University and a master's degree in management from the University of New Haven.

- Mr. Myung Sup Lee, age 63, was appointed as Outside Director and, together with Mr. Tae Young Kim, replaces Mr. In Bae Kim and Mr. Jung Won Lee. Mr. Lee is a former president of Hanwha Investment & Securities. Mr. Lee has undergraduate and master's degrees in management from Yonsei University and a Ph.D. degree in management from University of Maryland.

The names and positions of our executive officers as of 31 March 2019 are set out below. All of our executive officers are employed on a full-time basis.

Name	Age	Position	Officer Since	Term Ends
Sung Kyu JI	55	President and Chief Executive Officer	1 January 2018	Annual General Meeting at the end of FY2020
Ju Hyung LEE	59	Standing Member of Audit Committee	20 March 2017	Annual General Meeting at the end of FY2019
Jun Seong HAN	52	Deputy President	1 September 2015	31 December 2019
Hyo Sang HWANG	59	Deputy President	1 January 2016	31 December 2019
Seong Muk KANG	54	Deputy President	1 January 2016	31 December 2019
Gil Joo KWON	58	Deputy President	30 October 2018	31 December 2019
In Seok KIM	55	Deputy President	1 January 2018	31 December 2019
Yeong Keun ANN	57	Deputy President	1 January 2016	31 December 2019
Ho Seoung LEE	54	Deputy President	1 January 2016	31 December 2019

Name	Age	Position	Officer Since	Term Ends
Chun Sik CHONG............................	56	Deputy President	1 January 2016	31 December 2019
Jae Young KIM	55	Senior Managing Director	1 January 2016	31 December 2019
In Hong MIN..................................	55	Senior Managing Director	1 January 2017	31 December 2019
Sung Ho PARK…………………	54	Senior Managing Director	30 October 2018	31 December 2019
Seoung Oh PARK	54	Senior Managing Director	1 January 2017	31 December 2019
Eui Soo PARK	55	Senior Managing Director	1 January 2018	31 December 2019
Ji Whoan PARK..............................	57	Senior Managing Director	1 January 2017	31 December 2019
Hyeon Kee BAE..............................	53	Senior Managing Director	3 July 2017	31 March 2019
Mi Kyung BAEK	54	Senior Managing Director	1 January 2018	31 December 2019
Seok Wha JEONG...........................	54	Senior Managing Director	1 January 2018	31 December 2019
Hwa Sik KIM	56	Senior Managing Director	1 January 2019	31 December 2019
Geun Young PARK.........................	56	Senior Managing Director	1 January 2019	31 December 2019
Sei Gull PARK................................	55	Senior Managing Director	1 January 2019	31 December 2019
Soon Ki YOON	56	Senior Managing Director	1 January 2019	31 December 2019
Hwa Soo LEE..................................	54	Senior Managing Director	1 February 2019	31 December 2019
Hoo Seung LEE...............................	53	Senior Managing Director	1 January 2019	31 December 2019
Young Sik CHOI.............................	55	Senior Managing Director	1 January 2019	31 December 2019
Dong Hoon KANG	57	Senior Managing Director	1 January 2017	31 December 2020
Dong Geon KIM	55	Senior Managing Director	1 January 2018	31 December 2019

Exposures to China Minsheng Investment Group Companies

It has been reported that China Minsheng Investment Group ("**CMIG**"), one of the largest privately-owned investment groups in China, is facing liquidity problems in connection with repayment of its debt. We own minority stakes in CM International Financial Leasing and CM International Holding, which are subsidiaries of CMIG, and have credit exposures to CM International Financial Leasing. See Notes 13.2, 18 and 51 of the notes to our unaudited consolidated financial statements as of and for the three months ended on 31 March 2019 and 2018 included in Appendix B of this Pricing Supplement.

As of the date of this Pricing Supplement, we have not experienced any default on our loans to CM International Financial Leasing, nor are we aware of any further developments that would impact the value of our equity investments in the subsidiaries of CMIG. However, a further deterioration of the credit situation faced by CMIG could negatively affect our business, results of operations and financial condition.

Results of Operations for the Three Months ended 31 March 2019 and 2018

On 27 May 2019, we released our unaudited consolidated financial statements as of and for the three months ended on 31 March 2019 and 2018, which, along with our audited annual consolidated financial statements as of and the years ended 31 December 2018 and 2017, are included in Appendix B of this Pricing Supplement.

Our operating income for the three months ended 31 March 2019 decreased compared to our operating income for the three months ended 31 March 2018, and our net income for the three months ended 31 March 2019 similarly decreased compared to our net income for the three months ended 31 March 2018. The decrease in our operating income was primarily due to increases in our general and administrative expenses and impairment losses, which offset an increase in our net interest income. The increase in our general and administrative expenses was primarily attributable to certain one-time expenses related to the integration of our employee compensation and benefit plans in connection with the completion of the post-Merger integration process in January 2019. The increase in impairment losses was primarily attributable to an increase in provision for possible loan losses, which was due to a deterioration in the business performance and financial outlook of certain borrowers.

ROC TAXATION

The following summary of certain taxation provisions under ROC law is based on current law and practice and assumes that the Notes will be issued, offered, sold and re-sold, directly or indirectly, to professional investors as defined under Paragraph 1, Article 2-1 of the Taipei Exchange Rules Governing Management of Foreign Currency Denominated International Bonds of the ROC only. It does not purport to be comprehensive and does not constitute legal or tax advice. Investors (particularly those subject to special tax rules, such as banks, dealers, insurance companies and tax-exempt entities) should consult with their own tax advisers regarding the tax consequences of an investment in the Notes.

Interest on the Notes

As the Issuer of the Notes is not an ROC statutory tax withholder, there is no ROC withholding tax on the interest or deemed interest to be paid by the Issuer on the Notes.

Payments of any interest or deemed interest under the Notes to a ROC individual holder are not subject to ROC income tax as such payments received by him/her are not considered to be ROC sourced income. However, such holder must include the interest or deemed interest in calculating his/her basic income for the purpose of calculating his/her alternative minimum tax ("**AMT**"), unless the sum of the interest or deemed interest and other non-ROC sourced income received by such holder and the person(s) who is (are) required to jointly file the tax return in a calendar year is below 1 million New Taiwan Dollars ("**NT$**"). If the amount of the AMT exceeds the annual income tax calculated pursuant to the ROC Income Basic Tax Act (also known as the AMT Act), the excess becomes such holder's AMT payable.

ROC corporate holders must include any interest or deemed interest receivable under the Notes as part of their taxable income and pay income tax at a flat rate of 20 per cent. (unless the total taxable income for a fiscal year is under NT$500,000), as they are subject to income tax on their worldwide income on an accrual basis. The AMT is not applicable.

Sale of the Notes

In general, the sale of corporate bonds or financial bonds is subject to a 0.1 per cent. securities transaction tax ("**STT**") on the transaction price. However, Article 2-1 of the Securities Transaction Tax Act prescribes that STT will cease to be levied on the sale of corporate bonds and financial bonds from 1 January 2010 to 31 December 2026. Therefore, the sale of the Notes will be exempt from STT if the sale is conducted on or before 31 December 2026. Starting from 1 January 2027, any sale of the Notes will be subject to STT at 0.1 per cent. of the transaction price, unless otherwise provided by the tax laws that may be in force at that time.

Capital gains generated from the sale of Notes are exempt from income tax. Accordingly, ROC individual and corporate holders are not subject to income tax on any capital gains generated from the sale of the Notes. In addition, ROC individual holders are not subject to AMT on any capital gains generated from the sale of the Notes. However, ROC corporate holders should include the capital gains in calculating their basic income for the purpose of calculating their AMT. If the amount of the AMT exceeds the annual income tax calculated pursuant to the ROC Income Basic Tax Act (also known as the AMT Act), the excess becomes the ROC corporate holders' AMT payable. Capital losses, if any, incurred by such holders could be carried over five years to offset against capital gains of the same category of income for the purposes of calculating their AMT.

Non-ROC corporate holders with a fixed place of business (e.g., a branch) or a business agent in the ROC are not subject to income tax on any capital gains generated from the sale of the Notes. However, their fixed place of business or business agent should include any such capital gains in calculating their basic income for the purpose of calculating AMT.

As to non-ROC corporate holders without a fixed place of business and a business agent in the ROC, they are not subject to income tax or AMT on any capital gains generated from the sale of the Notes.

ROC TRADING AND SETTLEMENT

Investors with a securities book-entry account with a Taiwan securities broker and a foreign currency deposit account with a Taiwan bank, may request the approval of the Taiwan Depository & Clearing Corporation (the "**TDCC**") to the settlement of the Notes through the account of TDCC with Euroclear or Clearstream, Luxembourg and if such approval is granted by the TDCC, the Notes may be so cleared and settled. In such circumstances, TDCC will allocate the respective book-entry interest of such investors in the Notes to the securities book-entry account designated by such investor in the ROC. The Notes will be traded and settled pursuant to the applicable rules and operating procedures of TDCC and the TPEx as domestic bonds.

In addition, an investor may apply to TDCC (by filing in a prescribed form) to transfer the Notes in its own account with Euroclear or Clearstream, Luxembourg to the TDCC account with Euroclear or Clearstream, Luxembourg for trading in the domestic market or vice versa for trading in overseas markets.

For such investors who hold their interest in the Notes through an account opened and held by TDCC with Euroclear or Clearstream, Luxembourg, distributions of principal and/or interest for the Notes to such holders may be made by payment services banks whose systems are connected to TDCC to the foreign currency deposit accounts of the holders. Such payment is expected to be made on the second Taiwanese business day following TDCC's receipt of such payment (due to time difference, the payment is expected to be received by TDCC one Taiwanese business day after the distribution date). However, when the holders will actually receive such distributions may vary depending upon the daily operations of the Taiwan banks with which the holder has the foreign currency deposit account.

LISTING APPLICATION

This Pricing Supplement comprises the final terms required to list the issue of Notes described herein pursuant to the U.S.$10,000,000,000 Global Medium Term Note Programme of KEB Hana Bank.

TPEx LISTING

Application will be made to the TPEx for the listing of, and permission to deal in, the Notes by way of debt issues to professional investors as defined under Paragraph 1, Article 2-1 of the Taipei Exchange Rules Governing Management of Foreign Currency Denominated International Bonds of the ROC only and such permission is expected to become effective on or about 13 June 2019.

TPEx is not responsible for the contents of this Pricing Supplement, the Offering Circular or any supplement or amendment thereto and no representation is made by TPEx as to the accuracy or completeness of this Pricing Supplement, the Offering Circular or any supplement or amendment thereto. TPEx expressly disclaims any and all liabilities for any losses arising from, or as a result of, the reliance on, all or part of the contents of this Pricing Supplement, the Offering Circular and/or any supplement or amendment thereto. Admission for listing and trading of the Notes on the TPEx is not to be taken as an indication of the merits of the Issuer or the Notes. No assurance can be given that such applications will be granted. If the Notes fail to or cease to be listed on the TPEx, certain investors may not invest in, or continue to hold or invest in, the Notes.

LISTING ON THE SGX-ST

Application will be made to the SGX-ST for the listing and quotation of the Notes on the SGX-ST. The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of the Notes on, the SGX-ST are not to be taken as an indication of the merits of the Issuer, the Programme or the Notes.

USE OF PROCEEDS

The net proceeds from the issue of the Notes will be applied by the Issuer for its general corporate purposes.

RESPONSIBILITY

The Issuer accepts responsibility for the information contained in this Pricing Supplement.

APPENDIX A

REPUBLIC OF CHINA SELLING RESTRICTION

The Notes have not been, and shall not be, offered, sold or resold, directly or indirectly, to investors other than "professional investors" as defined under Paragraph 1, Article 2-1 of the Taipei Exchange Rules Governing Management of Foreign Currency Denominated International Bonds of the Republic of China ("**ROC**"), which currently include:

(a) a "professional institutional investor" as defined under Paragraph 2, Article 4 of the Financial Consumer Protection Act of the ROC, which currently includes: (i) overseas or domestic banks, securities firms, futures firms and insurance companies (excluding insurance agencies, insurance brokers and insurance surveyors), the foregoing as further defined in more detail in Paragraph 3, Article 2 of the Financial Supervisory Commission Organization Act, (ii) overseas or domestic fund management companies, government investment institutions, government funds, pension funds, mutual funds, unit trusts, and funds managed by financial service enterprises pursuant to the ROC Securities Investment Trust and Consulting Act, the ROC Future Trading Act or the ROC Trust Enterprise Act or investment assets mandated and delivered by or transferred for trust by financial consumers, and (iii) other institutions recognised by the Financial Supervisory Commission of the ROC;

(b) a legal entity or fund having applied in writing to the securities firms for the status of a professional investor that meets all of the following three criteria: (i) its total assets exceed NT$50,000,000 according to its most recent CPA-audited or reviewed financial report, provided that the financial report of a non-ROC offshore legal entity is not required to be audited or reviewed by the CPA, (ii) the person authorized by the investor to handle trades has sufficient professional knowledge and trading experience in bonds, and (iii) it fully understands that the securities firm is exempted from certain responsibilities towards professional investors in connection with bond trading activities and agrees to sign up as a professional investor; and

(c) a natural person who has applied in writing to a securities firm for the status of professional investor and who meets all of the following three criteria: (i)(x) he/she has provided a proof of financial capacity of at least NT$30,000,000, or, (y) he/she has made a single trade, the transaction amount of which is higher than NT$3,000,000, and his/her total assets and investments booked at and made through such securities firm are higher than NT$15,000,000 and has provided a statement certifying that the value of his/her total assets exceeds NT$30,000,000, (ii) he/she has sufficient professional knowledge and trading experience in bonds, and (iii) he/she fully understands that the securities firm is exempted from certain responsibilities toward professional investors in connection with bond trading activities and agrees to sign up as a professional investor.

Purchasers of the Notes are not permitted to sell or otherwise dispose of the Notes except by transfer to the aforementioned professional investors.

APPENDIX B

FINANCIAL INFORMATION

This Pricing Supplement contains the following unaudited interim consolidated financial statements of KEB Hana Bank as of 31 March 2019 and for the three-month periods ended 31 March 2019 and 2018 and audited annual consolidated financial statements of KEB Hana Bank as of and for the years ended 31 December 2018 and 2017, and independent auditor's reports and notes relating thereto:

Interim Consolidated Financial Statements

- Report on review of interim consolidated financial statements
- Interim consolidated statements of financial position as of 31 March 2019 and 31 December 2018
- Interim consolidated statements of comprehensive income for the three-month periods ended 31 March 2019 and 2018
- Interim consolidated statements of changes in equity for the three-month periods ended 31 March 2019 and 2018
- Interim consolidated statements of cash flows for the three-month periods ended 31 March 2019 and 2018
- Notes to the interim consolidated financial statements

Annual Consolidated Financial Statements

- Independent auditors' report
- Consolidated statements of financial position as of 31 December 2018 and 2017
- Consolidated statements of comprehensive income for the years ended 31 December 2018 and 2017
- Consolidated statements of changes in equity for the years ended 31 December 2018 and 2017
- Consolidated statements of cash flows for the years ended 31 December 2018 and 2017
- Notes to the consolidated financial statements

The unaudited interim consolidated financial statements and audited annual consolidated financial statements included in this Pricing Supplement were prepared and presented in accordance with Korean equivalent of International Financial Reporting Standards.

KEB Hana Bank and its subsidiaries

Interim consolidated financial statements
for the three-month periods ended March 31, 2019
and 2018 with the independent auditor's review report

KEB Hana Bank

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Independent auditor's report

The Stockholders and Board of Directors
KEB Hana Bank and its subsidiaries

We have reviewed the accompanying interim consolidated financial statements of KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Group"), which comprise the interim consolidated statement of financial position as of March 31, 2019, and the interim consolidated statements of comprehensive income for the three-month periods ended March 31, 2019 and 2018, and the interim consolidated statements of changes in equity and interim consolidated statements of cash flows for the three-month periods then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the interim consolidated financial statements

Management is responsible for the preparation and presentation of these interim consolidated financial statements in accordance with Korean International Financial Reporting Standard (KIFRS) 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of the interim consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express a conclusion on these interim consolidated financial statements based on our review.

We conducted our review in accordance with the review standards for interim financial statements in the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Korean Auditing Standards (KGAAS). Consequently, it does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying interim consolidated financial statements are not prepared, in all material respects, in accordance with KIFRS 1034.

Other matter

We have audited the consolidated statement of financial position of the Company as of December 31, 2018, and the related consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended (not presented herein) in accordance with KGAAS, and our report dated March 6, 2019 expressed an unqualified opinion thereon. The accompanying consolidated statement of financial position as of December 31, 2018 presented for comparative purposes is not different, in all material respects, from the above audited consolidated statement of financial position.

Ernst & Young Han Young

May 15, 2019

This review report is effective as of May 15, 2019, the independent auditor's review report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's review report to the time this review report is used. Such events and circumstances could significantly affect the accompanying interim consolidated financial statements and may result in modifications to this review report.

KEB Hana Bank and its subsidiaries
Interim consolidated statements of financial position
as of March 31, 2019 and December 31, 2018

(Korean won in millions)

	Notes		March 31, 2019 (Unaudited)		December 31, 2018
Assets					
Cash and due from banks	5, 6, 7, 9, 11 and 50	₩	14,494,721	₩	20,452,123
Financial assets measured at FVTPL	4, 5, 6, 7, 8, 12, 15 and 17		9,425,599		8,420,106
Derivative assets designated as hedging instruments	5, 6, 7, 8, 9 and 17		30,516		6,755
Financial assets measured at FVOCI	4, 5, 6, 7, 8, 13 and 15		36,444,850		34,845,060
Securities measured at amortized cost	4, 5, 6, 7, 8, 14 and 15		14,139,936		13,582,381
Loan receivables	5, 6, 7, 8, 9 and 16		246,911,576		244,468,590
Investments in associates	18		1,051,627		988,345
Property and equipment	10 and 19		2,286,857		1,861,622
Investment properties	10 and 20		594,494		527,668
Intangible assets	10 and 21		286,739		285,862
Current tax assets			11,267		11,173
Deferred tax assets	47		51,767		55,845
Other assets	5, 6, 7, 8, 9 and 23		16,896,126		11,340,624
Merchant banking account assets	5, 6, 7, 9 and 23		3,307,085		2,940,272
Non-current assets held for sale	22		468,878		466,117
Total assets		₩	346,402,038	₩	340,252,543
Liabilities and equity					
Liabilities					
Deposits	5, 6, 7, 9 and 24	₩	248,131,430	₩	246,754,859
Financial liabilities measured at FVTPL	4, 5, 6, 7, 8 and 25		3,948,014		3,590,576
Derivative liabilities designated as hedging instruments	5, 6, 7, 8, 9 and 17		47,921		98,797
Borrowings	5, 6, 7, 9, 26 and 50		14,866,444		15,280,970
Debentures	5, 6, 7, 9, 27 and 50		24,619,078		24,668,613
Net defined benefit liabilities	28		175,192		138,491
Provisions	29		204,363		235,186
Current tax liabilities			323,921		258,650
Deferred tax liabilities	47		252,120		184,364
Other liabilities	5, 6, 7, 8, 9 and 30		26,412,980		22,193,235
Merchant banking account liabilities	5, 6, 7, 9 and 30		3,157,808		2,339,383
Total liabilities			322,139,271		315,743,124
Equity					
Issued capital	31		5,359,578		5,359,578
Capital surplus	31		9,670,357		9,670,357
Hybrid equity securities	31		179,737		179,737
Capital adjustments	31		(41,840)		(41,895)
Retained earnings	33		9,713,122		10,122,654
(Regulatory reserve for bad debts in the amount of ₩2,139,549 and ₩1,934,322 as at March 31, 2019 and December 31, 2018, respectively)					
(Required provision for bad debts in the amount of ₩23,897 and ₩205,227 as at March 31, 2019 and December 31, 2018, respectively)					
(Planned provision for bad debts in the amount of ₩23,897 and ₩205,227 as at March 31, 2019 and December 31, 2018, respectively)	34				
Accumulated other comprehensive loss	32		(711,333)		(870,813)
Equity attributable to equity holders of the parent			24,169,621		24,419,618
Non-controlling shareholders' equity			93,146		89,801
Total equity			24,262,767		24,509,419
Total liabilities and equity		₩	346,402,038	₩	340,252,543

The accompanying notes are an integral part of the interim consolidated financial statements.

KEB Hana Bank and its subsidiaries

Interim consolidated statements of comprehensive income

for the three-month periods ended March 31, 2019 and 2018

(Korean won in millions except per share amounts)

	Notes		2019 (Unaudited)		2018 (Unaudited)
Net interest income:	10, 35 and 36				
Interest income		₩	2,504,134	₩	2,169,023
Interest expenses			(1,165,518)		(898,615)
			1,338,616		1,270,408
Net fee and commission income:	10, 35 and 37				
Fee and commission income			213,357		209,916
Fee and commission expenses			(47,822)		(44,772)
			165,535		165,144
Gain on financial instruments measured at FVTPL, net	17, 35 and 38		71,076		84,357
Gain on derivatives designated as hedging instruments, net	35 and 39		10,759		11,784
Gain on financial instruments measured at FVOCI, net	35 and 40		9,706		4,044
Impairment loss	35 and 41		(116,354)		(28,372)
General and administrative expenses	10, 35 and 42		(850,093)		(671,431)
Other operating income (expenses):					
Other operating income	35 and 43		873,698		1,138,060
Other operating expenses	35 and 44		(890,215)		(1,163,236)
			(16,517)		(25,176)
Operating income			612,728		810,758
Non-operating income (expenses):					
Non-operating income	10 and 45		41,636		43,966
Non-operating expenses	10 and 46		(24,766)		(14,041)
			16,870		29,925
Net income before income tax expenses			629,598		840,683
Income tax expenses	10 and 47		(148,499)		(206,674)
Net income for the period			481,099		634,009
Net income for the period attributable to:					
Equity holders of the parent			479,853		631,875
(Adjusted income after regulatory reserve for bad debt in the amount of ₩455,956 and ₩582,400 for the three-month periods ended March 31, 2019 and 2018, respectively)	34				
Non-controlling interests			1,246		2,134
			481,099		634,009
Other comprehensive income:	32				
Other comprehensive income that may be reclassified to profit or loss in subsequent periods (net of tax):					
Gain (loss) on valuation of debt securities measured at FVOCI			127,244		(15,170)
Exchange differences on translation of foreign operations			91,282		21,356
Changes in equity from valuation of investments in associates			37,997		40,831
Gain (loss) on valuation of net investment hedges of foreign operations			(11,127)		3,121
Gain (loss) on valuation of fair value hedges			(3,940)		980
Tax effect			(42,195)		(10,134)
			199,261		40,984
Other comprehensive income that will not be reclassified to profit or loss in subsequent periods (net of tax):					
Remeasurements of the defined benefit plan			168		(2,198)
Gain (loss) on valuation of equity securities measured at FVOCI			(51,653)		163,534
Tax effect			14,158		(44,141)
			(37,327)		117,195
			161,934		158,179
Total comprehensive income		₩	643,033	₩	792,188
Total comprehensive income attributable to:					
Equity holders of the parent			639,188		791,859
Non-controlling interests			3,845		329
Earnings per share (EPS):	48				
Basic earnings per share		₩	445	₩	587
Diluted earnings per share		₩	445	₩	587

The accompanying notes are an integral part of the interim consolidated financial statements.

KEB Hana Bank and its subsidiaries

Interim consolidated statements of changes in equity

for the three-month periods ended March 31, 2019 and 2018

(Korean won in millions)

	Issued capital	Capital surplus	Hybrid equity securities	Capital adjustments	Retained earnings	Accumulated other comprehensive income	Equity attributable to equity holders of the parent	Non-controlling shareholders' equity	Total
As of January 1, 2018	₩ 5,359,578	₩ 9,668,863	₩ 179,737	₩ (42,624)	₩ 8,735,759	₩ (751,704)	₩ 23,149,609	₩ 89,547	₩ 23,239,156
Effect of changes in accounting standards	-	-	-	-	297,679	(370,915)	(73,236)	(983)	(74,219)
Dividends	-	-	-	-	(972,600)	-	(972,600)	-	(972,600)
Dividends on hybrid equity securities	-	-	-	-	(2,439)	-	(2,439)	(505)	(2,944)
Share-based payment transactions	-	-	-	42	-	-	42	-	42
Reclassification of valuation gain or loss on equity securities measured at FVOCI upon derecognition	-	-	-	-	(6,316)	6,316	-	-	-
	5,359,578	9,668,863	179,737	(42,582)	8,052,083	(1,116,303)	22,101,376	88,059	22,189,435
Net income for the period	-	-	-	-	631,875	-	631,875	2,134	634,009
Gain on valuation of financial assets measured at FVOCI	-	-	-	-	-	107,504	107,504	(817)	106,687
Exchange differences on transaction of foreign operations	-	-	-	-	-	21,498	21,498	(988)	20,510
Gain on valuation of net investment hedges of foreign operations	-	-	-	-	-	2,263	2,263	-	2,263
Gain on valuation of fair value hedges	-	-	-	-	-	711	711	-	711
Changes in remeasurement of the defined benefit plan	-	-	-	-	-	(1,594)	(1,594)	-	(1,594)
Changes in equity on investments in associates	-	-	-	-	-	29,602	29,602	-	29,602
Total comprehensive income for the period	-	-	-	-	631,875	159,984	791,859	329	792,188
As of March 31, 2018 (unaudited)	₩ 5,359,578	₩ 9,668,863	₩ 179,737	₩ (42,582)	₩ 8,683,958	₩ (956,319)	₩ 22,893,235	₩ 88,388	₩ 22,981,623
As of January 1, 2019	₩ 5,359,578	₩ 9,670,357	₩ 179,737	₩ (41,895)	₩ 10,122,654	₩ (870,813)	₩ 24,419,618	₩ 89,801	₩ 24,509,419
Effect of changes in accounting standards	-	-	-	-	-	-	-	-	-
Dividends	-	-	-	-	(886,800)	-	(886,800)	-	(886,800)
Dividends on hybrid equity securities	-	-	-	-	(2,440)	-	(2,440)	(500)	(2,940)
Share-based payment transactions	-	-	-	53	-	-	53	-	53
Reclassification of valuation gain or loss on equity securities measured at FVOCI upon derecognition	-	-	-	-	(145)	145	-	-	-
Other	-	-	-	2	-	-	2	-	2
	5,359,578	9,670,357	179,737	(41,840)	9,233,269	(870,668)	23,530,433	89,301	23,619,734
Net income for the period	-	-	-	-	479,853	-	479,853	1,246	481,099
Gain on valuation of financial assets measured at FVOCI	-	-	-	-	-	55,419	55,419	455	55,874
Exchange differences on transaction of foreign operations	-	-	-	-	-	87,170	87,170	2,144	89,314
Loss on valuation of net investment hedges of foreign operations	-	-	-	-	-	(8,066)	(8,066)	-	(8,066)
Loss on valuation of fair value hedges	-	-	-	-	-	(2,857)	(2,857)	-	(2,857)
Changes in remeasurement of the defined benefit plan	-	-	-	-	-	121	121	-	121
Changes in equity on investments in associates	-	-	-	-	-	27,548	27,548	-	27,548
Total comprehensive income for the period	-	-	-	-	479,853	159,335	639,188	3,845	643,033
As of March 31, 2019 (unaudited)	₩ 5,359,578	₩ 9,670,357	₩ 179,737	₩ (41,840)	₩ 9,713,122	₩ (711,333)	₩ 24,169,621	₩ 93,146	₩ 24,262,767

The accompanying notes are an integral part of the interim consolidated financial statements.

KEB Hana Bank and its subsidiaries
Interim consolidated statements of cash flows
for the three-month periods ended March 31, 2019 and 2018
(Korean won in millions)

	2019 (Unaudited)	2018 (Unaudited)
Operating activities:		
Net income before income tax expenses	₩ 629,598	₩ 840,683
Adjustments reconcile net income before income tax expenses to net cash flows used in operating activities:		
Interest expenses	1,165,518	898,615
Interest income	(2,504,134)	(2,169,023)
Dividend income	(6,978)	(9,017)
	(1,345,594)	(1,279,425)
Adjustments to non-cash items:		
Gain on valuation of financial instruments measured at FVTPL, net	(103,423)	(60,660)
Loss (gain) on disposal of financial instruments meausred at FVTPL, net	(485)	14,285
Gain on valuation of derivatives designated as hedging instruments, net	(1,251)	(7,869)
Gain on disposal of financial instruments measured at FVOCI, net	(9,706)	(4,044)
Loss on (reversal of) credit risk of financial instruments measured at FVOCI	120	(212)
Provision of allowance for securities measured at amortized cost	337	536
Provision of allowance for loan receivables and other assets, net	115,895	28,047
Loss on disposal of investments in subsidiaries and associates	348	6
Gain on valuation of equity method investments, net	(32,274)	(25,750)
Depreciation and amortization	104,676	47,388
Gain on disposal of property and equipment and intangible assets, net	(319)	(5,196)
Loss on termination of lease asset, net	92	-
Retirement benefits	37,365	31,726
Share-based payment expenses	3,104	3,400
Transfer of provisions, net	(33,208)	(17,726)
Gain on foreign exchange translation, net	(69,251)	(74,156)
Others	-	(401)
	12,020	(70,626)
Changes in operating assets and liabilities:		
Financial assets measured at FVTPL	(540,933)	1,882,556
Derivative assets designated as hedging instruments	2,111	10,642
Loans	(1,395,180)	(2,728,265)
Net defined benefit assets	-	(1,505)
Other assets	(5,367,197)	(10,424,182)
Merchant banking account assets	(366,814)	17,672
Deposits	568,234	1,317,479
Financial liabilities measured at FVTPL	399,377	(1,629,720)
Derivative liabilities designated as hedging instruments	(10,656)	(13,871)
Net defined benefit liabilities	(854)	-
Provisions	1,979	(876)
Other liabilities	3,318,281	5,992,668
Merchant banking account liabilities	818,425	400,706
	(2,573,227)	(5,176,696)
Cash received from operating activities:		
Interest receipts	2,391,598	2,234,491
Dividend receipts	7,360	9,471
	2,398,958	2,243,962
Cash payment for operating activities:		
Interest payments	(1,039,003)	(1,152,557)
Payment of income tax	(38,974)	(44,299)
	(1,077,977)	(1,196,856)
Net cash flows used in operating activities	(1,956,222)	(4,638,958)

(Continued)

KEB Hana Bank and its subsidiaries
Interim consolidated statements of cash flows
for the three-month periods ended March 31, 2019 and 2018 (cont'd)

(Korean won in millions)

		2019 (Unaudited)		2018 (Unaudited)
Investing activities				
Decrease in restricted due from banks, net	₩	6,328,002	₩	5,316,620
Increase in financial assets measured at FVTPL		(397,716)		(2,765,737)
Decrease in financial assets measured at FVTPL		2,034		3,286,508
Increase in financial assets measured at FVOCI		(4,826,765)		(1,219,960)
Decrease in financial assets measured at FVOCI		3,444,811		2,601,073
Increase in securities measured at amortized cost		(788,027)		(1,481,169)
Decrease in securities measured at amortized cost		293,478		55,753
Increase in investments in subsidiaries and associates		(3,290)		(4,034)
Decrease in investments in subsidiaries and associates		9,676		1,539
Acquisition of property and equipment		(14,233)		(17,382)
Proceeds from disposal of property and equipment		674		22,246
Acquisition of intangible assets		(20,617)		(56,037)
Proceeds from disposal of intangible assets		-		433
Increase in non-current assets held for sale		(4,447)		(11,779)
Acquisition of disposal of non-business use assets		1,753		-
Increase in guarantee deposits paid, net		7,596		29,071
Net cash flows provided by investing activities		4,032,929		5,757,145
Financing activities				
Increase (decrease) in borrowings, net		(678,229)		536,763
Issuance of debentures		2,062,059		1,834,327
Redemption of debentures		(2,208,911)		(723,248)
Dividends paid		(886,800)		(972,600)
Dividends on hybrid equity securities		(2,940)		(2,944)
Repayment of lease liabilities		(63,910)		-
Net cash flows provided by (used in) financing activities		(1,778,731)		672,298
Net increase in cash and cash equivalents		297,976		1,790,485
Cash and cash equivalents at the beginning of the period		4,373,091		7,439,041
Effect of exchange rate changes on cash and cash equivalents		62,631		(54,045)
Cash and cash equivalents at the end of the period (Note 50)	₩	4,733,698	₩	9,175,481

The accompanying notes are an integral part of the interim consolidated financial statements.

1. Company information

General information on KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Group") in accordance with KIFRS 1110 is as follows.

1.1 The Bank

The Bank was established on January 30, 1967, as a government-controlled bank to engage in foreign exchange and trade finance business under the *Korea Exchange Bank Act* enacted on July 28, 1966. On December 30, 1989, the *Korea Exchange Bank Act* was repealed, and the Bank was reorganized as a corporation under the Commercial Code of the Republic of Korea. On April 4, 1994, the Bank was listed on the Korea Exchange (formerly, Korea Stock Exchange). On February 28, 2004, the Bank merged its subsidiary, Korea Exchange Bank Credit Service Co., Ltd. On August 31, 2014, the Bank spun off its credit card division.

On February 9, 2012, Hana Financial Group Inc. ("HFG") acquired 52.27% equity interest in the Bank, and later on April 5, 2013, the Bank became a wholly owned subsidiary of HFG after HFG acquired the remaining interest in the Bank through the mutual exchange of the shares.

The Bank changed to its current name on September 1, 2015 following the merger of Korea Exchange Bank ("KEB Bank") and Hana Bank.

The Bank provides commercial banking service, trust banking service, merchant banking service, foreign exchange and other related services as permitted under the *Banking Act* of the Republic of Korea. As of March 31, 2019, the Bank's headquarters is located in Seoul, with its 752 domestic branches (including 76 satellite offices) and 22 overseas branches (including 2 satellite offices and 4 offices).

The Bank is authorized to issue 2,000 million shares of common stock, and as of March 31, 2019, after a number of capital increases and decreases, stock splits and conversion of preferred shares to common shares, the Bank has 1,071,915,717 shares of common stock issued and outstanding with the total paid-in capital amounting to ₩5,359,578 million.

1.2 Scope and overview of consolidation

The Group's ownership percentages in its consolidated subsidiaries as of March 31, 2019 are summarized as follows (ownership in %):

Investee	Country	Major business	Share ratio (%)	Reporting date
Subsidiaries of KEB Hana Bank				
Hana Bank (China) Co., Ltd.	China	Bank	100.00	March 31, 2019
Hana Micro Finance Ltd.	Myanmar	Other financial business	99.99	March 31, 2019
DGB Leading Solution PEF Invest Trust 143 (*)	Korea	Asset management company	100.00	March 31, 2019
Hana UBS Power PEF Invest Trust 21 (*)	Korea	Asset management company	100.00	March 31, 2019
Hyundai Trust PEF Invest 16 (*)	Korea	Asset management company	100.00	March 31, 2019
Kyobo AXA Tomorrow PEF Invest Trust KH-1 (*)	Korea	Asset management company	100.00	March 31, 2019
Sevenstar Co., Ltd. (*)	Korea	Other financial business	-	March 31, 2019
Marine Solution Co., Ltd. (*)	Korea	Other financial business	-	March 31, 2019
Joong-ang star Co., Ltd. (*)	Korea	Other financial business	-	March 31, 2019
Antakya Co., Ltd. (*)	Korea	Other financial business	-	March 31, 2019
Cosmosolution Co., Ltd. (*)	Korea	Other financial business	-	March 31, 2019
Hana Display First Co., Ltd. (*)	Korea	Other financial business	-	March 31, 2019
Hana Indonesia Green Forest Co., Ltd (*)	Korea	Other financial business	-	March 31, 2019
Bulls Hana 1st Co., Ltd. (*)	Korea	Other financial business	-	March 31, 2019
OCEAN BETTS THE FIRST CO., LTD (*)	Korea	Other financial business	-	March 31, 2019

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
Trust accounts guaranteeing the repayment of principal (*)	Korea	Trust account	-	March 31, 2019
Hana F&I Inc.	Korea	Other financial business	99.58	March 31, 2019
KEB Hana Bank Canada	Canada	Financial business	100.00	March 31, 2019
KEB Hana Bank (Deutschland) A.G. (KEBDAG)	Germany	Financial business	100.00	March 31, 2019
PT Bank KEB Hana (KEBI)	Indonesia	Financial business	89.01	March 31, 2019
Banco KEB Hana Do Brasil S.A. (KEBB)	Brazil	Financial business	100.00	March 31, 2019
KEB Hana NY Financial Corp (NYFinCo)	USA	Financial business	100.00	March 31, 2019
KEB Hana LA Financial Corp (LAFinCo)	USA	Financial business	100.00	March 31, 2019
KEB Hana Global Finance Limited (KHGF)	Hongkong	Financial business	100.00	March 31, 2019
KEB RUS LLC.	Russia	Financial business	99.99	March 31, 2019
Hana Bancorp, Inc.	USA	Financial business	90.56	March 31, 2019
KEB Hana Bank Mexico	Mexico	Financial business	99.99	March 31, 2019
Subsidiaries of Hana F&I Inc.				
KEBW First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	March 31, 2019
KEBI First Securitization Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
KEBS Third Securitization Co., Ltd. (*)	Korea	Asset securitization	5.00	March 31, 2019
KEBT First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	March 31, 2019
KEB The Loft Co., Ltd. (*)	Korea	Asset securitization	-	March 31, 2019
HFS First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	March 31, 2019
Hana Stone First Co., Ltd. (*)	Korea	Asset securitization	-	March 31, 2019
Hana Stone Second Co., Ltd. (*)	Korea	Asset securitization	-	March 31, 2019
HFT Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	March 31, 2019
Hana Sinji First, Inc. (*)	Korea	Asset securitization	-	March 31, 2019
Hana SH First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	March 31, 2019
HFS Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	March 31, 2019
Hana K First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	March 31, 2019
HFD First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	March 31, 2019
HFDG Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	March 31, 2019
HFS 73A Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFS 73B Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFW 73 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFK 74 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFSCN 81 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFB 81 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
Fine5th Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
Fine6th Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFS 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFF 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFN 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFDD 82 Co., Ltd. (*)	Korea	Asset securitization	-	March 31, 2019
HFI 83 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFS 84 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFF 84 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFK 84 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
Hana F&I money in trust (*)	Korea	Money trust	-	March 31, 2019
HFFN 91 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
HFI91 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	March 31, 2019
Subsidiaries of Hana Bancorp, Inc.				
KEB Hana Bank USA	USA	Bank	100.00	March 31, 2019

(*) Although the entity is a structured SPC, the Group recognized the entity as a subsidiary considering its exposure to variable returns and knowledge with regards to its activities.

1.2 Scope and overview of consolidation (cont'd)

Condensed financial statements as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019 Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩ 8,706,292	₩ 7,707,851	₩ 998,441	₩ 96,979	₩ 13,513	₩ 51,766
Hana Micro Finance., Ltd.	36,894	19,325	17,569	2,456	701	1,394
Hana F&I Inc. (*)	892,673	767,888	124,785	12,418	2,772	2,694
KEB Hana Bank Canada	1,255,760	1,062,125	193,635	14,396	2,238	8,247
KEB Hana Bank (Deutschland) A.G.	934,211	835,453	98,758	6,648	1,116	986
PT Bank KEB Hana	3,841,638	3,314,302	527,336	76,866	8,392	31,017
Banco KEB Hana Do Brasil S.A.	186,104	145,940	40,164	3,077	485	959
KEB Hana NY Financial Corp.	143,782	80,477	63,305	2,003	491	1,584
KEB Hana LA Financial Corp.	236,044	169,933	66,111	3,194	699	1,839
KEB Hana Global Finance Limited.	222,803	152,707	70,096	2,893	797	2,183
KEB Hana Bank Russia	204,419	184,926	19,493	22,753	433	2,031
Hana Bancorp, Inc. (*)	246,146	198,869	47,277	2,260	(1,989)	(781)
KEB Hana Bank Mexico	48,887	11,573	37,314	896	203	3,395
Trust accounts guaranteeing the repayment of principal	1,815,587	1,771,967	43,620	16,742	74	74

Classification	December 31, 2018 Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩ 8,107,138	₩ 7,160,464	₩ 946,674	₩ 393,877	₩ 54,371	₩ 52,706
Hana Micro Finance., Ltd.	31,210	15,035	16,175	6,785	2,036	488
Hana F&I Inc. (*)	890,918	768,327	122,591	47,470	11,211	10,629
KEB Hana Bank Canada	1,220,144	1,034,755	185,389	68,138	7,700	172
KEB Hana Bank (Deutschland) A.G.	717,648	619,876	97,772	34,082	5,567	5,556
PT Bank KEB Hana	3,578,994	3,082,675	496,319	267,714	43,761	15,735
Banco KEB Hana Do Brasil S.A.	184,908	145,705	39,203	12,448	1,488	(3,222)
KEB Hana NY Financial Corp.	171,462	109,740	61,722	10,814	2,248	4,767
KEB Hana LA Financial Corp.	259,805	195,534	64,271	14,858	3,870	6,453
KEB Hana Global Finance Limited.	237,855	169,941	67,914	11,781	4,695	7,413
KEB Hana Bank Russia	265,801	248,338	17,463	119,222	860	(3,048)
Hana Bancorp, Inc. (*)	253,222	205,165	48,057	9,986	(3,777)	(1,650)
KEB Hana Bank Mexico	33,919	-	33,919	2,730	(1,650)	(47)
Trust accounts guaranteeing the repayment of principal	1,807,660	1,764,113	43,547	51,424	3,055	3,055

(*) The amounts presented are based on consolidation.

1.2 Scope and overview of consolidation (cont'd)

The following entity is excluded from the Group's scope of consolidation as of March 31, 2019 even though the Group holds a majority of voting rights.

As of March 31, 2019,

Investee	Country	Major business	Share ratio (%)
KEB Hana - KVIC Unicorn Fund of Funds	Korea	Investment	90.9

As of Decemeber 31, 2018,

Investee	Country	Major business	Share ratio (%)
KEB Hana - KVIC Unicorn Fund of Funds	Korea	Investment	90.9

Subsidiaries included in and excluded from the consolidation scope for the year ended March 31, 2019 are as follows:

Company	Reasons
Included in scope of consolidation:	
Subsidiaries of KEB Hana Bank	
OCEAN BETTS THE FIRST CO., LTD	Newly invested
Subsidiaries of Hana F&I Inc.	
Hana F&I money in trust	Newly invested
HFFN 91 Securitization Specialty Co., Ltd.	Newly invested
HFI91 Securitization Specialty Co., Ltd.	Newly invested
Excluded from the scope of consolidation:	
Subsidiaries of Hana F&I Inc.	
KEB Pepper First Securitization Co., Ltd.	Excluded due to the disposal

1.2.1 Hana Bank (China) Co., Ltd. (Hana Bank China)

Hana Bank China was incorporated to engage in commercial banking, foreign currency exchanges and other related operations in China on December 14, 2007. The Bank contributed the assets and liabilities of the branches in Shanghai and Shenyang and its interests in the International Bank of Qingdao, which is the subsidiary of the Bank, to the Hana Bank China in the form of equity contributions on December 24, 2007. Hana Bank (China) Co., Ltd., one of subsidiaries in China, acquired and merged with KEB China, one of affiliates in the Hana Financial Group, on December 15, 2014. (Before the merger, equity interests in Hana Bank China were 59.7% for Hana Bank, 40.3% for Korea Exchange Bank). Its paid-in capital is 3.35 billion yuan as of March 31, 2019.

1.2.2 Hana Micro Finance, Ltd.

Hana Micro Finance Ltd., a subsidiary established in Yangon, Myanmar on August 7, 2014, is doing a small-loan finance service. The objective of the service is to satisfy low incomers' demand for small-loan finance and at the same time to lay the foundation for a retail market with excellent growth potential. As of March 31, 2019, its paid-in capital is 17.5 billion kyat and it owns a head office in Yangon.

1.2.3 Hana F&I Inc.

Hana F&I Inc. (former, KEB F&I) was established on September 11, 1989, to engage in equipment rental and other relevant businesses under the Specialized Credit Financial Business Act (formerly, Equipment Rental Business Act) and was listed on the Korea Securities Dealers Automated Quotation (“KOSDAQ”) on January 15, 1995. KEB F&I has changed its name to KEB F&I Inc. KEB is restricted to control a company which runs the specialized credit financial business in accordance with the Financial Holding Companies Act Article 19 as on and after January 31, 2014. On October 17, 2013, KEB F&I’s Board of Directors approved to change business field to investment in asset backed securities and asset management business in Asset-Backed Securitization Act. It changed its name from KEB F&I to Hana F&I Co. Ltd. on September 1, 2015. Its paid-in capital is 125,400 million won as of March 31, 2019.

1.2.4 KEB Hana Bank Canada

KEBOC was established in Toronto, Canada on October 6, 1981 to provide financial services to Korean companies and residents in Toronto and the surrounding area. The Bank holds 100% stake of the subsidiary as of March 31, 2019. Korea Exchange Bank of Canada has gone through numerous capital increases after the establishment. Its paid-in capital is 83,400 thousand Canadian dollars as of March 31, 2019.

1.2.5 KEB Hana Bank (Deutschland) AG

KEBDAG was established in Frankfurt, Germany on December 29, 1992 to provide financial services to Korean companies and residents in Frankfurt and the surrounding area. The Bank holds 100% stake of the subsidiary as of March 31, 2019. Its paid-in capital is 23,008 thousand euro as of March 31, 2019.

1.2.6 PT Bank KEB Hana

PT Bank KEB Hana was established in Jakarta, Indonesia on November 5, 1990 to provide financial services to Korean companies and residents in Jakarta. In accordance with the regulations of the Bank Indonesia, 2 or more local banks with the same ultimate parent company are prohibited to operate as an independent entity in Indonesia. Accordingly, PT Bank KEB Indonesia (KEBI), a subsidiary of the Bank, and PT Bank Hana, a subsidiary of Hana Bank, have completed a merger process on February 20, 2014 and changed the name to PT Bank KEB Hana. PT. Bank KEB Hana incorporated into a subsidiary of KEB on February 28, 2014 since KEB owned the major shares of PT. Bank KEB Hana after the acquisition. The Bank holds 89.01% stake of the subsidiary as of March 31, 2019.

1.2.7 Banco KEB Hana Do Brasil S.A. (KEBB)

KEBB was incorporated on May 21, 1999 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the subsidiary as of March 31, 2019. By increasing capital in 2012, its paid-in capital is 69,726 thousand real as of March 31, 2019.

1.2.8 KEB Hana NY Financial Corp. (NYFinCo)

NYFinCo was established in New York, USA on April 8, 2004 to provide financial services to Korean companies and residents in New York and the surrounding area. The Bank holds 100% stake of the subsidiary as of March 31, 2019. Its paid-in capital is 1 dollar as of March 31, 2019.

1.2.9 KEB Hana LA Financial Corp. (LAFinCo)

LAFinCo was established in Los Angeles, USA on April 8, 2004 to provide financial services to Korean companies and residents in Los Angeles and the surrounding area. The Bank holds 100% stake of the subsidiary as of March 31, 2019. Its paid-in capital is 2 dollars as of March 31, 2019.

1.2.10 KEB Hana Global Finance Limited (KAF)

KAF was established on July 2, 2009 in Hong Kong to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the subsidiary as of March 31, 2019. Its paid-in capital is 50,000 thousand dollars as of March 31, 2019.

1.2.11 KEB RUS LLC

KEB launched a Moscow representative office in 2008 to provide financial information and consulting services for Korean and local companies in Russia. KEB RUS LLC was established on August 15, 2014 after obtaining permission to operate corporation from Russian supervisory authorities in order to expand the business area. The Bank holds 99.99% stake of the subsidiary as of March 31, 2019. Its paid-in capital is 1 billion roubles as of March 31, 2019.

1.2.12 Hana Bancorp, Inc.

Hana Bancorp, Inc. (formerly, BNB Financial Service Corporation) was incorporated on April 8, 1988 to engage in the bank business. HFG acquired ownership of BNB Financial Service Corporation and incorporated Hana Bancorp, Inc. as its subsidiary on August 30, 2013 and changed the name to Hana Bancorp, Inc. The Bank purchased the securities from HFG on March 28, 2016, and issued capital. The Bank holds 90.56% stake of the subsidiary as of March 31, 2019. Its paid-in capital is 16,571 thousand dollars as of March 31, 2019.

1.2.13 KEB Hana Bank Mexico

KEB Hana Bank Mexico was established in Mexico City on November 3, 2017 to engage in provision of financial services to Korean companies and local corporations. At the end of the reporting period, the Bank holds 99.99% interest in the entity. On January 31, 2019, the Bank obtained approval to start operations from local regulatory authority and on February 22, 2019, the Bank increased capital of 35 million Mexican peso and started operations.

1.3 Structured entities

1.3.1 Consolidated structured entities

1.3.1.1 DGB Leading Solution PEF Investment Trust 143 and a set of 3 other private equity investment vehicles

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 4 private equity investment vehicles were included in consolidation scope, because the Group has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Group's returns from its involvement with the investee.

1.3.1.2 Sevenstar Co., Ltd. and 8 other special purpose entities

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 9 special purpose companies were included in consolidation scope, because the Group has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Group's returns from its involvement with the investee.

1.3.1.3 Trust accounts

In accordance with KIFRS 1110 *Consolidated Financial Statements*, trust accounts are included in consolidation scope because the Group has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Group's returns from its involvement with the investee.

1.3.1.4 Contractual commitments to consolidated structured entities

The consolidated structured company for the securitization of assets is established for the securitization of non-performing loans (NPL). The Group is involved in the acquisition of subordinated bonds issued by the consolidated structured company and is exposed to the risk of not being able to recover the acquisition amounts based on the investment performance. Characteristics and intentions of contractual commitments offered by the Group to the consolidated structured entities are as follows:

Entity	The characteristics and purposes	Intention
Trust accounts guaranteeing the repayment of principal	The Group offers principal conservation commitment to trust accounts. The Group is required to conserve the deficit amount in case the trust account stands below the principal as a result of the operation.	Credit risk mitigation on financial management of trust account
Antakya Co., Ltd.	The Group partially purchased ABCP (purchase commitment of ₩50,000 million) from Antakya Co., Ltd.	Operating activities
Hana Display First Co., Ltd.	The Group partially purchased ABCP (purchase commitment of ₩200,000 million) from Hana Display First Co., Ltd.	Operating activities
OCEAN BETTS THE FIRST CO., LTD	The Group partially purchased ABCP (purchase commitment of ₩50,000 million) from OCEAN BETTS THE FIRST CO., LTD	Operating activities

1.3.2 Unconsolidated structured entities

1.3.2.1 The nature of the Group's interests in unconsolidated structured entities

Details of the nature of the Group's interests in unconsolidated structured entities as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Type	Characteristics and purposes	Financing arrangement	Total assets March 31, 2019	Total assets December 31, 2018
Special purpose company	Securitization of backed asset	Issuing ABL/ABCP and others	₩ 10,388,427	₩ 10,597,822
Real estate finance	Operation for real estate (including SOC) development	Investment and borrowing	15,581,356	15,633,077
Shipping finance and primary market finance	Building or purchasing ships and NPL purchase, M&A	Investment and borrowing	27,065,794	26,204,314
Investment fund and trust	Managing investment property	Issuing beneficiary certificates	78,851,626	78,278,432

1.3.2.2 Maximum exposure to loss from interests in unconsolidated structured entities (Korean won in millions)

Classification	March 31, 2019			
	Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund and trust
Assets				
Loans (A)	₩ 738,393	₩ 1,155,046	₩ 795,706	₩ 606,120
Securities (B)	15	68,836	-	7,050,332
Derivatives (C)	10,376	12,371	11,163	186
Others (D)	3,005	3,353	4,364	122
Liabilities				
Derivative liabilities	386	2,605	344	44
Provision	416	3,761	1,003	-
Others	128	27	137	8
Net asset	₩ 750,859	₩ 1,233,213	₩ 809,749	₩ 7,656,708
Maximum exposure to loss	₩ 1,917,754	₩ 1,768,440	₩ 1,013,629	₩ 7,677,877
Financial assets (A+B+C+D)	751,789	1,239,606	811,233	7,656,760
Credit and other commitment	1,165,965	528,834	202,396	21,117

Classification	December 31, 2018			
	Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund and trust
Assets				
Loans (A)	₩ 802,663	₩ 1,137,787	₩ 857,421	₩ 620,053
Securities (B)	739	74,299	-	6,620,809
Derivatives (C)	7,130	12,160	1,067	8,655
Others (D)	2,898	2,288	3,893	6
Liabilities				
Derivative liabilities	1,513	4,614	4,155	7,509
Provision	958	2,939	333	38
Others	84	26	10	104
Net asset	₩ 810,875	₩ 1,218,955	₩ 857,883	₩ 7,241,872
Maximum exposure to loss	₩ 2,545,296	₩ 1,775,367	₩ 1,053,925	₩ 7,270,800
Financial assets (A+B+C+D)	813,430	1,226,534	862,381	7,249,523
Credit and other commitment	1,731,866	548,833	191,544	21,277

2. Scope and principles of consolidation

The Group prepares statutory consolidated financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Act on External Audit of Stock Companies, etc.*

2.1 Subsidiaries

The Bank has the ability to determine the financial and operating policies of subsidiaries. Generally, the Bank classified the entity as subsidiary in case the Bank has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Group's returns from its involvement with the investee. Subsidiaries are fully consolidated from the date on which the control is transferred to the Group.

2.2 Offset of the investment accounts of the Group and the corresponding equity accounts

The investment accounts of the Group and the corresponding equity accounts of the subsidiaries are eliminated in consolidation.

2.3 Process of difference between the costs of investment

The consolidated financial statements reflect on only the share of the consolidated subsidiaries post–application of purchase accounting method. The difference between the cost of investment and the Group's share of the fair value of identifiable net assets and liabilities of the subsidiaries at the date of purchase accounting method application is presented as goodwill or negative goodwill. A review of impairment is performed at the end of each reporting date.

If the controlling company additionally acquires the subsidiaries' share, the elimination of subsidiaries' equity account is based on the acquisition date of shares. The difference between the investment accounts of the Group and the corresponding equity accounts of the subsidiaries is amounted to the consolidated capital surplus (or capital adjustment).

2.4 Elimination of intercompany transactions and the unrealized gain or loss, etc.

All significant intercompany transactions and the account balances among the consolidated companies are eliminated on consolidation. Unrealized gains or losses included in loans and borrowings arising from transactions between consolidated companies are eliminated on consolidation. The related accounts receivable and payable are also eliminated on consolidation.

2.5 Investments in associates

Investments in entities over which the Group has control or significant influence are accounted for using the equity method. Under the equity method of accounting, the Group's initial investment in an investee is recorded at acquisition cost. Subsequently, the carrying amount of the investment is adjusted to reflect the Group's share of income or loss of the investee in the statement of comprehensive income and share of changes in equity that have been recognized directly in the equity of the investee in the related equity account of the Group on the statement of financial position. If the Group's share of losses of the investee equals or exceeds its interest in the investee, it suspends recognizing its share of further losses. However, if the Group has other long–term interests in the investee, it continues recognizing its share of further losses to the extent of the carrying amount of such long–term interests. The Group resumes the application of the equity method if the Group's share of income or change in equity of an investee exceeds the Group's share of losses accumulated during the period of suspension of the equity method of accounting.

2.5 Investments in associates (cont'd)

At the date of acquisition, the excess of the cost of the investment over the Group's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as goodwill or negative goodwill. The amortization expenses are included as a part of valuation gain or loss on the equity method investments in the statement of comprehensive income. The difference related to goodwill is recorded as the carrying amount. Goodwill is reviewed for the impairment when signs of damage arise and is not amortized over its useful life. Further, the Group's share of any difference between the net fair value of the investee's identifiable assets and liabilities, and the net book value of such assets and liabilities are amortized based on the investee's accounting treatments on the related assets and liabilities and charged or credited to the valuation gain or loss on the equity method investments in the statement of comprehensive income.

The Group's share in the investee's unrealized profits and losses resulting from transactions between the Group and its investee are eliminated to the extent of the interest in the investee.

2.6 Special reserve on trust accounts

A special reserve provided for the possible future losses on certain trust accounts under the arrangement of guaranteed fixed rate of return and repayment of the principal and guaranteed repayment of the principal is included under the retained earnings in the consolidated financial statements.

2.7 Non-controlling interests

Subsidiaries' equity which is not included in the Group's share is accounted as non-controlling interests. In case subsidiaries' non-controlling interests is below "0", minus non-controlling interests is presented as deduction of equity.

3. Basis of preparation and significant accounting policies

3.1 Basis of preparation

The Group prepares statutory consolidated financial statements in the Korean language in accordance with KIFRS enacted by the *Act on External Audits of Stock Companies, etc*. The accompanying consolidated financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors' review report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

3.2 Changes in accounting policies and disclosures

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Group's annual financial statements for the year ended December 31, 2018, except for the adoption of new standards and interpretation as of January 1, 2019.

The nature and the impact of each new standard or amendment are described below:

3.2.1 Amendments to KIFRS 1116 *Leases*

The Group has lease contracts for various items of real estates, vehicles and others assets. The Group generally enters into a lease contract with a fixed term, which may also include termination and extension options as described in the Note below. Lease terms are negotiated on an individual basis and contain a wide range of different terms and conditions. There are no other restrictions placed in accordance with lease contracts but lease assets shall not be used as security for particular borrowings.

Prior to the current reporting period, all lease of property and equipment were classified as operating leases. Lease payments from operating leases (net of incentives provided by the lessor) were recognized on a straight-line basis over the lease term in profit or loss.

Beginning on or after January 1, 2019, the Group has recognized right-of-use assets and corresponding lease liabilities at the commencement date of which the underlying asset is made available for use. Each lease payment is allocated as the repayment and financial cost of lease liabilities. Interest on the lease liability in each period during the lease term is the amount that produces a constant periodic rate of interest on the remaining balance of the lease liability and is recognized in profit or loss as finance cost. Right-of-use assets are depreciated from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term.

Assets and liabilities arising from leases are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- Fixed payments (including in-substance fixed payments), less any lease incentives receivable
- Variable lease payments that depend on an index or a rate
- Amounts expected to be payable by the lessee under residual value guarantees
- The exercise price of a purchase option if the lessee is reasonably certain to exercise that option
- Payments of penalties for terminating the lease, if the lease term reflects the lessee exercising an option to terminate the lease

The lease payments shall be discounted using the interest rate implicit in the lease, if that rate can be readily determined. If the interest rate implicit in the lease cannot be readily determined, the lessee's incremental borrowing rate is used, which is the interest rate that would have to be paid if the lessee borrowed the funds needed to obtain the asset with similar collateral over a similar period of time in a similar economic environment.

The cost of the right-of-use asset comprise:

- The amount of the initial measurement of the lease liability
- Any lease payments made at or before the commencement date, less any lease incentive received
- Any initial direct costs incurred by the lessee
- An estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset

3.2.1 Amendments to KIFRS 1116 Leases (cont'd)

The Group applies the recognition exemption for leases of low-value assets (e.g., office supplies and IT equipment) but does not apply recognition exemption for short-term leases (i.e., leases with a lease term of 12 months or less). Lease payments related to low-value assets are recognized in profit or loss.

(Note) Extension and termination options: The Group has various real-estate lease contracts that contain options to extend or terminate the lease. These terms and conditions are used to maximize the operational flexibility in terms of contract management. The majority of extension and termination options held are exercisable only by the Group and not by the respective lessors.

3.2.1.1 Financial impact of KIFRS 1116 *Leases*

The impact of the adoption of KIFRS 1116 on the Group's consolidated statement of financial position as of January 1, 2019 is as follows (Korean won in millions):

Classification		Underlying amounts
Right-of-use asset:		
Right-of-use asset- real estate	₩	499,621
Right-of-use asset- vehicle		16,702
Leasehold improvements_prepaid expenses		31,250
Leasehold improvements_provision		19,307
Others		339
	₩	567,219
Lease liability:		
Lease liability- real estate	₩	499,621
Lease liability- Vehicles		16,702
Others		339
	₩	516,662

The amounts recognized in the Group's consolidated statement of comprehensive income for the three-month period ended March 31, 2019 in accordance with the adoption of KIFRS 1116 are as follows (Korean won in millions):

Classification		Amounts
Interest expenses on lease liability:		
Real estate	₩	2,511
Vehicles		94
Others		2
		2,607
Depreciation of right-of-use asset:		
Real estate		54,986
Vehicles		1,775
Others		25
		56,786
	₩	59,393

3.2.2 *IFRIC Interpretation 23 Uncertainty over Income Tax Treatment*

The Interpretation provides guidance on determining the accounting tax position when there is uncertainty over income tax treatments. The Interpretation requires an entity to determine whether uncertain tax positions are assessed separately or as a group and assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings. If probable, the entity should determine its accounting tax position consistently with the tax treatment used or planned to be used in its income tax filings. If not probable, the entity should reflect the effect of uncertainty which is measured using either the most likely amount or the expected value method, depending on which method better predicts the resolution of the uncertainty. The interpretation is effective for annual reporting periods beginning on or after January 1, 2019, with early application permitted. On initial application, the Group shall apply this interpretation retrospectively or retrospectively with the cumulative effect of initially applying the interpretation recognized at the date of initial application. The amendments have no significant impact on the consolidated financial statements of the Group.

3.2.3 Amendments to KIFRS 1109: *Prepayment Features with Negative Compensation*

Under KIFRS 1109, a debt instrument can be measured at amortized cost or at fair value through other comprehensive income, provided that the contractual cash flows are ‘solely payments of principal and interest on the principal amount outstanding’ (the SPPI criterion) and the instrument is held within the appropriate business model for that classification. The amendments to KIFRS 1109 clarify that a financial asset passes the SPPI criterion regardless of the event or circumstance that causes the early termination of the contract and irrespective of which party pays or receives reasonable compensation for the early termination of the contract. The amendments are effective from January 1, 2019, with early application permitted. The amendments have no significant impact on the consolidated financial statements of the Group.

3.2.4 Amendments to KIFRS 1028: *Long-term interests in associates and joint ventures*

The amendments clarify that an entity applies KIFRS 1109 to long-term interests in an associate or joint venture to which the equity method is not applied but that, in substance, form part of the net investment in the associate or joint venture (long-term interests). The amendments also clarified that, in applying KIFRS 1109, an entity does not take account of any losses of the associate or joint venture, or any impairment losses on the net investment, recognized as adjustments to the net investment in the associate or joint venture that arise from applying KIFRS 1028 *Investments in Associates and Joint Ventures.* The amendments should be applied retrospectively and are effective from January 1, 2019, with early application permitted. The amendments have no significant impact on the consolidated financial statements of the Group.

3.2.5 Amendments to KIFRS 1019: *Plan Amendment, Curtailment or Settlement*

The amendments apply to plan amendments, curtailments, or settlements occurring on or after the beginning of the first annual reporting period that begins on or after January 1, 2019, with early application permitted. The amendments have no significant impact on the consolidated financial statements of the Group.

3.2.6 Amendments to KIFRS 1103 *Business Combinations*

The amendments clarify that if a party to a joint arrangement retains obligations to the assets and liabilities relating to the joint operation and obtains control of the joint operation (i.e. meeting the definition of a business), the transaction shall apply the requirements for a business combination achieved in stages. In this case, the acquirer shall remeasure all of its previously held interests in the joint operation. The amendments are applicable for business combinations for which the acquisition date falls after annual periods beginning on or after January 1, 2019. Early application is permitted with appropriate notes explaining the early application. The amendments have no significant impact on the consolidated financial statements of the Group as there were no transaction obtaining the control of the joint operation.

3.2.7 Amendments to KIFRS 1111 *Joint Operations*

A joint operating party that participates in a joint operation, but does not have joint control of that joint operation may obtain joint control of that joint operation (in case when the business activity is defined under business under KIFRS 1103). This amendment clarifies that, in this case, previously held interests in the joint operation are not remeasured. The amendments are applicable for transactions for which the acquisition of joint operation falls after annual periods beginning on or after January 1, 2019. Early application is permitted with appropriate notes explaining the early application. The amendments have no significant impact on the consolidated financial statements of the Group as there were no transaction obtaining the joint control.

3.2.8 Amendments to KIFRS 1012 *Income Taxes*

The amendment clarifies that the tax consequences of dividends are more directly related to past transactions or events that generate distributable profits than to distributions to owners. Consequently, the entity recognizes the tax consequences of dividends in profit or loss, other comprehensive income or equity, depending on the items it originally recognized in relation to the past transaction or event. The amendments are effective for annual reporting periods beginning on or after January 1, 2019, with early application permitted. If the amendment is applied for the first time, it shall be applied to the tax consequences of dividends recognized after the earliest comparative period. The Group's current accounting treatment does not differ from the amendments, and thus there is no effect on the consolidated financial statements.

3.2.9 Amendments to KIFRS 1023 *Borrowing Costs*

The amendment clarifies that when the qualifying asset is ready to use or sell for its intended use on a subsequent basis, all borrowings, intended for acquisition of qualifying assets, are included in the funds borrowed for general purposes. The entity shall apply those amendments to borrowing costs that arise after the annual period in which it applies for the first time. An entity shall apply those amendments for annual periods beginning on or after January 1, 2019. The consolidation entity's current accounting treatment does not differ from the amendments and has no effect on the financial statements. The amendment is effective for annual reporting periods beginning on or after January 1, 2019, with early application permitted. The Group's current accounting treatment does not differ from the amendments, and thus there is no effect on the consolidated financial statements.

3.3 Foreign currency transaction

3.3.1 Functional currency

When preparing for the consolidated financial statements, the Group measures and recognizes all items and transactions according to the functional currency. The term, functional currency, is defined as the monetary unit of account of the principal economic environment in which the entity operates, and trades between entities using its own functional currency and other currencies which are converted to the Group's functional currency to be measured and recognized.

3.3.2 Transactions and balances at the end of the reporting period

Transactions in foreign currencies are initially recorded at the spot rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the spot rate of exchange at the reporting date. Non–monetary items measured at fair value in a foreign currency are translated at the exchange rates at the end of reporting date. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss. Non–monetary items not measured at fair value in a foreign currency are translated using the exchange rates as of the dates of the initial transactions and thus there are no exchange differences.

The Group may have a monetary item that is receivable from or payable to a foreign operation. An item for which settlement is neither planned nor likely to occur in the foreseeable future is, in substance, a part of the entity's net investment in that foreign operation. Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

3.3.3 Translation of the presentation currency

As of the reporting date, the assets and liabilities of overseas branches are translated into the Group's presentation currency, Korean won (KRW), at the rate of exchange as of the reporting date, and their statements of comprehensive income and equity are translated using the exchange rates at transaction date or the average exchange rates for the period. Exchange differences arising on translation are taken directly to a separate component of equity. On disposal of a foreign entity, the deferred cumulative amount recognized in equity related to that particular foreign operation is recognized in 'Other operating expenses' or 'Other operating income' in the statements of comprehensive income.

3.4 Cash and cash equivalents

Cash and cash equivalents in the statements of financial position comprise of cash at Banks and on hand and short–term deposits with an original maturity of three months or less. The purpose of cash and cash equivalents is to make short–term investments and to meet short–term cash demands. Cash and cash equivalents are highly liquid, easily convertible and subject to changes in value.

3.5 Financial assets – classification and subsequent measurement

At initial recognition, financial assets and liabilities are classified as measured at FVTPL, FVOCI and amortized cost, in accordance with their characteristics and purposes.

All financial assets are initially recognized on the trade date, i.e., the date that the Group becomes a party to the contractual provisions of the instrument. This includes 'Regular way trades': purchases or sales of financial assets that require delivery of assets within the time frame generally established by regulation or convention in the market place.

Financial assets and liabilities are initially measured at fair value, and the transaction costs directly attributable to the acquisition of financial assets (liabilities) are added to (deducted from) the fair value at initial recognition if they are not measured at FVTPL. The fair value of the financial assets and liabilities is defined as the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The fair value of financial instruments is measured at the transaction price (the fair value of the consideration received or transferred) at initial recognition.

3.5.1 Financial assets measured at FVTPL

Financial assets measured at fair value through profit or loss include financial assets held-for-trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held-for-trading if they are acquired for the purpose of selling or repurchasing in the short term.

Also, financial assets can be designated at FVTPL if assets or liabilities are measured in accordance with different standards or in order to get rid of or reduce accounting mismatch.

Financial assets measured at FVTPL are measured at fair value and the gain or loss on valuation is recognized as profit or loss. Dividends and interest income from the financial assets are also recognized as profit or loss.

3.5.2 Financial assets measured at FVOCI

The Group measures financial assets measured at FVOCI if they meet the following conditions: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. Financial assets at FVOCI are measured at fair value after initial recognition. Gain or loss from changes in the fair value is recognized as other comprehensive income except for interest income in accordance with the effective interest rate method, dividends and foreign exchange differences on monetary assets directly recognized as profit or loss.

When financial assets measured at FVOCI are disposed of, the cumulative income recognized in other comprehensive income is transferred to the current profit or loss. However, the cumulative income recognized for equity securities designated as financial assets measured at FVOCI is not transferred to the current profit or loss.

The fair value of financial assets measured at FVOCI presented in foreign currencies is translated using the exchange rate as of the end of the reporting period. Changes in the fair value from exchange differences due to changes in amortized cost are recognized in the current profit or loss, while other changes are recognized directly in equity.

3.5.3 Financial assets measured at amortized cost

Financial assets that meet the following two conditions must be measured at amortized cost: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the objective of the entity's business model is to hold the financial asset to collect the contractual cash flows. After initial recognition, the financial assets are recognized at amortized cost using the effective interest rate, net of the allowance for doubtful accounts.

The Group defers LOF/LOCs associated with originating loans and LOCs that have future economic benefits. Loan balances are reported net of these LOF/LOCs. The deferred LOF/LOCs are amortized based on the effective interest rate method with the amortization recognized as adjustments to interest income.

3.6 Derivative financial instruments and hedge accounting

Derivative financial instruments are classified as trading derivatives or hedging derivatives depending on whether hedge accounting is applied or not, and are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Any gains or losses arising from changes in fair value on derivatives are taken directly to the statement of comprehensive income, except for the effective portion of cash flow hedges or hedges of net investment in a foreign operation, which is recognized in other comprehensive income.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment (except for foreign currency risk)
- Cash flow hedges when hedging exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or also the foreign currency risk in an unrecognized firm commitment

At the inception of a hedge relationship, the Group formally designates and documents the hedge relationship to which the Group wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the entity will assess the effectiveness of changes in the hedging instrument's fair value in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

Hedges which meet the strict criteria for hedge accounting are accounted for as follows:

3.6.1 Fair value hedges

When fair value hedge accounting is applied, the unrealized gain or loss on hedged items that are attributable to a hedged risk and hedging instruments is symmetrically recognized in the consolidated financial statements as current income or other comprehensive income for the same reporting period to ensure that changes in the fair value of the hedged items are offset by changes in the fair value of the hedging instruments. If an application of hedge accounting is no longer valid, the Group discontinues the hedge accounting prospectively. Any adjustment to the carrying amount of hedged items is amortized to profit or loss in the consolidated statement of comprehensive income over the remaining maturity using the effective interest rate method.

3.6.2 Cash flow hedges

When cash flow hedge accounting is applied, the effective portion of the unrealized gain or loss on the hedging instrument is directly recognized in other comprehensive income (loss) in the consolidated statement of financial position to ensure that changes in the cash flows of the hedged items are offset by changes in the cash flows of the hedging instruments while any ineffective portion is recognized immediately in the consolidated statement of comprehensive income. Amounts recognized as other comprehensive income are transferred to the consolidated statements of comprehensive income when the hedged transaction affects profit or loss. If an application of hedge accounting is no longer valid, the Group discontinues the hedge accounting prospectively and the cumulative gain or loss on the hedging instrument previously recognized in other comprehensive income are transferred to profit or loss in the consolidated statement of comprehensive income.

3.6.3 Hedge accounting of net investment in a foreign operation

When applying hedge accounting of net investment in a foreign operation, the effective portion of changes in fair value of the hedging instrument is recognized in other comprehensive income, and the ineffective portion of the hedge is recognized as current profit or loss in order to offset changes in the fair value of the hedged item caused by the hedging with changes in the fair value of the hedging instrument. The effective portion of hedge recognized in other comprehensive income will be re- classified from other comprehensive income to current profit or loss in accordance with KIFRS 1021 *The Effects of Changes in Foreign Exchange Rates* at the time of disposal of a foreign operation or disposal of a portion of its foreign operations in the future.

3.6.4 Embedded derivatives

Derivatives embedded in other financial instruments or other host contracts are accounted for as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVPTL.

3.6.5 'Day 1' profit or loss

In case of derivatives in level 3 (see Note 5), whose fair value is determined using data which is not observable from markets, the difference between the transaction price and fair value at initial recognition (a 'Day 1' profit or loss) is deferred and amortized over the life of the associated instrument using the straight–line method and the amortization is recognized in the statement of comprehensive income.

3.6.6 Credit risk valuation adjustment

When assessing derivatives at fair value, expected loss from credit risk is measured and deducted from derivative assets to reflect credit risk of counterparties.

3.7 Expected credit loss for financial assets

Loss allowance is recognized for financial assets measured at FVOCI and amortized cost using the expected credit loss model.

The expected credit loss (ECL) is the weighted average amount of possible outcomes within a certain range, reflecting the time value of money, estimates on the past, current and future situations, and information accessible without excessive cost of effort.

The ECL can be measured in three followings ways:
- General approach: when financial assets do not fall into below two categories and are off-balance-sheet undrawn commitments
- Simplified approach: when financial assets are trade receivables, contract assets or lease receivables
- Credit-impaired approach: when financial assets are credit-impaired at initial recognition

The general approach is applied differently depending on the significance of the increase of the credit risk. If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, an entity shall measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If the credit risk on that financial instrument has increased significantly since initial recognition, an entity shall measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses at each reporting date.

The loss allowance is measured at an amount equal to lifetime expected credit losses for the simplified approach, and an entity shall only recognize the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for purchased or originated credit-impaired financial assets at each reporting date for the credit-impaired approach.

The following non-exhaustive list of information may be relevant in assessing changes in credit risk:

- Significant changes in internal price indicators of credit risk as a result of a change in credit risk since inception
- Other changes in the rates or terms of an existing financial instrument that would be significantly different
- An actual or expected significant change in the financial instrument's external credit rating
- An actual or expected internal credit rating downgrade for the borrower or decrease in behavioral scoring used to assess credit risk internally
- An actual or expected significant change in the operating results of the borrower
- Past due information

3.7 Expected credit loss for financial assets (cont'd)

3.7.1 Forward-looking information

The Group measures the significance of the increase of the credit risk and the expected credit loss using forward-looking information.

The Group assumes that the risk component is correlated with changes in market conditions, and calculates the expected credit loss using the forward-looking information by modelling macroeconomic variables and risk components.

The forward-looking information used to measure the expected credit loss is derived from 'stress-case' or 'worst-case' scenarios.

3.7.2 Measurement of expected credit loss for financial assets measured at amortized cost

Expected credit loss for financial assets measured at amortized cost is measured as the difference between the present value of the cash flows expected to be received and the cash flow expected to pay. For this purpose, the Group calculates expected cash flows for individually significant financial assets (Individual valuation allowance).

Financial assets insignificant in value individually are measured on a collective basis with financial assets with similar credit risks (collective loss allowance).

3.7.2.1 Loss allowance on an individual assessment basis

Loss allowance on an individual assessment basis is based on the best estimates of management in regards to the present value of cash flows expected to be recovered from receivables. In estimating the cash flows, the Group uses all available information including the financial conditions such as the operating cash flows of counterparties and the net realizable value of collateral provided.

3.7.2.2 Loss allowance on a collective assessment basis

Loss allowance on a collective assessment basis uses the estimation model that accounts for the forward-looking information based on the past loss rate to measure the expected credit loss. The model considers the probability of default (PD) and the loss given default (LGD) reflecting the type of instruments and borrowers, credit rating, portfolio size and collection period. Also, certain assumptions are applied to model the expected credit loss measurement and to determine input variables based on past experiences and forward-looking information. Methodologies and assumptions for this model are regularly reviewed to minimize the difference between the loss allowance and the actual loss.

The expected credit loss for financial assets measured at amortized cost is recognized as the loss allowance, and when the financial asset is determined to be irrecoverable, the carrying amount and loss allowance are decreased. If financial assets previously written off are recovered, the loss allowance is increased and the difference is recognized in the current profit or loss.

3.7.3 Expected credit loss measurement for financial assets measured at fair value through other comprehensive income

The measurement method is the same as the one for financial assets measured at amortized cost, but the change in the loss allowance is recognized as other comprehensive income. The loss allowance for financial assets measured at fair value through other comprehensive income is reclassified from other comprehensive income to current profit or loss when the assets are disposed of or repaid.

3.8 Derecognition of financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired.
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'Pass–through' arrangement; and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Group has transferred its rights to receive cash flows from an asset or has entered into a pass–through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all the risks and rewards of the asset, nor transferred control of the asset, the asset is recognized to the extent of the Group's continuing involvement in the asset. In that case, the Group also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Group has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Group could be required to repay.

3.9 Recognition and measurement of financial liabilities

All financial liabilities are classified as financial liabilities at FVTPL, borrowings or others and measured initially at their fair value plus transaction costs, except in the case of financial liabilities recorded at FVTPL.

3.9.1 Financial liabilities at FVTPL

Financial liabilities at fair value through profit or loss include financial liabilities held-for-trading and financial liabilities designated upon initial recognition as of fair value through profit or loss. Financial liabilities are classified as held-for-trading if they are acquired for the purpose of selling in the near term. All financial liabilities including an embedded derivative separated from the host contract are reclassified as financial liabilities at fair value through profit or loss except for financial liabilities designated as effective hedging instruments or financial guarantee contracts. After initial recognition, the changes in the fair value of the financial liabilities at fair value through profit or loss and the related interest expenses are recognized as profit or loss.

The Group performs securities lending and borrowing classified to FVTPL. When the Group borrows securities from Korea Securities Depository, securities borrowed are managed as memorandum value and when selling them, they are recorded as securities sold. At closing, the difference in the price securities are sold and the market price prevailing on the closing date is taken into account as valuation gain or loss on securities sold, and at the time of selling the securities, the difference in book value and the price securities are purchased is recorded as trading gain or loss on securities sold.

3.9.2 Deposits, borrowings, and debentures

After initial recognition, interest bearing deposits, borrowings and debentures are subsequently measured at amortized cost using the EIR. Gains and losses are recognized in the statements of comprehensive income when the liabilities are derecognized as well as through the EIR amortization process.

3.10 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the statement of comprehensive income.

3.11 Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.

3.12 Provisions

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The provision is used only for expenditures for which the provision was originally recognized. If the effect of the time value of money is material, provisions are stated at present value.

Confirmed acceptances and guarantees, unconfirmed acceptances and guarantees and bills endorsed are not recognized on the statement of financial position, but are disclosed as off–statement financial position items in the notes to the financial statements. The Group provides a provision for such off–statement financial position items, applying a Cash Conversion Factor (Cash CF) and provision rates, and records the provision as a reserve for possible losses on acceptances and guarantees. The Group provides an allowance for possible losses on a certain portion of unused credit line. The Group records the provision for such unused balances as an allowance for possible losses on unused commitments which are calculated by applying a Credit Conversion Factor (CCF) and provision rates.

3.13 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument and is measured at fair value on date of initial recognition. After initial recognition, the Group, as an issuer of such a contract, measures it at the higher of (i) the amount determined in accordance with KIFRS 1037 and (ii) the amount initially recognized less, when appropriate, cumulative amortization recognized in accordance with KIFRS 1018.

3.14 Bonds purchased under resale agreements and bonds sold under repurchase agreements

Bonds purchased under resale agreements and bonds sold under repurchase agreements are included in loans and borrowings, respectively, in the accompanying statement of financial position. Interest income and expenses from purchase or sale are recognized as interest income on loan receivables and interest expenses on borrowings.

3.15 Property and equipment

Property and equipment are stated at historical cost, less accumulated depreciation. Such cost includes an expenditure which has directly occurred for the acquisition of the asset.

The initial and subsequent costs are recognized as an asset when it is probable that future economic benefits associated with the asset will flow to the Group and the costs of the asset can be measured reliably. The other maintenances and repairs are expensed in the year in which they are incurred and the carrying amount of certain parts that are replaced is derecognized.

Land is not depreciated. For depreciation of other assets, amount of acquisition cost less residual value is calculated on a straight-line and declining balance basis over the following estimated useful life of the asset.

Classification	Depreciation method	Years
Buildings	Straight–line method	5 to 55
Leasehold improvements	Straight–line method	3 to 10
Equipment and vehicles	Declining balance method	3 to 20

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is immediately reduced to its recoverable amount. The residual value and economic useful life are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for if necessary. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognized in ‘other operating income' in the consolidated statement of comprehensive income in the year the asset is derecognized.

3.16 Investment properties

Investment properties are measured initially at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met; and excludes the costs of day–to–day servicing of an investment property. Subsequent to initial recognition, investment properties are stated using the cost model.

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of comprehensive income in the period of derecognition, and transfers are made to or from investment property only when there is a change in use. Depreciation method to measure buildings which are classified as investment properties is the straight–line method with useful lives ranging from 5 to 55 years.

3.17 Intangible assets

An intangible asset which comprises industrial property right, software, development costs and others is recognized as an asset only if it is probable that future economic benefits associated with the asset will flow to the Group and the costs of the asset can be measured reliably. Intangible assets acquired individually are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as of the date of acquisition in accordance to KIFRS 1103 "*Business Combination*." Amortization of intangible assets with definite useful lives is calculated on the following amortization method over the estimated useful life of the assets.

Classification	Depreciation method	Years
Industrial property right, software, system development costs	Straight–line method	5
Other intangible assets	Straight–line method	1 to 27

Intangible assets with indefinite useful lives are not amortized but are annually tested for impairment or whenever there is an indication that the intangible asset may be impaired. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable.

3.18 Impairment of non–financial assets

The Group assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Group estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash–generating unit's (CGU) fair value less costs to sell and its value in use. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

3.19 Net defined benefit liabilities (assets)

The Group calculates defined benefit liabilities and pension benefit expenses based on defined benefit plan and defined contribution plan when an employee retires in accordance to pension related regulations. For defined benefit plans, the cost of retirement benefits is measured by an actuary services company, using the projected unit credit method. The present value of defined benefit obligation is computed by discounting expected future cash outflows with market rate of return measured against the yield of high-graded corporate bond whose date of payment and maturity is similar to that of a defined benefit obligation. Actuarial gains and losses, incurred from the change in actuarial assumptions and the difference between the assumptions and the actual results, are recognized in other comprehensive income for the period. Past service cost is recognized immediately to the extent that the benefits are already vested and otherwise is amortized on a straight-line basis over the period until the benefits become vested.

The Group has entered into retirement trust fund and retirement pension plan agreements to pay retirement benefits to its employees. The retirement benefit obligation represents the present value of the defined benefit obligation as adjusted for unrecognized past service cost and as reduced by the fair value of plan assets. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

3.20 Share–based payment transactions

Employees (including senior executives) of the Group receive remuneration in the form of share–based payment transactions, whereby employees render services as consideration for equity instruments, or they are granted share appreciation rights, which can only be settled in cash. If the goods or services provided cannot be reliably measured, the endowed equity is indirectly estimated at fair value and the Group accounts for compensation costs and equity.

3.20 Share–based payment transactions (cont'd)

The cost of cash–settled transactions is measured initially at fair value at the grant date, taking into account the terms and conditions upon which the instruments were granted. This fair value is expensed over the period until vesting with recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to and including the settlement date, which changes in fair value recognized in the statement of comprehensive income. Also, in the case of a selectable share–based payment transaction in which the employees have a choice between a cash–settled transaction and an equity–settled transaction, the Group records the amount depending on its materiality.

3.21 Employee benefits

3.21.1 Short-term employee benefits

When employees have rendered services to the Group during an accounting period, the Group recognizes the undiscounted amount of short-term employee benefits. This amount is expected to be settled in whole before twelve months after the end of the reporting period, in exchange for those services.

3.21.2 Termination benefits

The Group recognizes expenses for termination benefits when an employee accepts the offer or when a restriction on the Group's ability to withdraw the offer takes effect.

3.22 Income tax expenses and deferred tax assets and liabilities

Income taxes comprise of current and deferred taxes. All items related to taxes, other than those recognized directly in equity, are accounted for in the statement of comprehensive income. Accordingly, items recognized directly in equity and the related taxes are accounted for as other comprehensive income in the consolidated statements of comprehensive income. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Group operates and generates taxable income. If the applied tax laws require an interpretation, the Group calculates income tax payable expected to be paid to the taxation authorities based on the opinion made when the taxes were reported.

Deferred tax is provided on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit loss.
- In respect of taxable temporary differences associated with investments in subsidiaries and associates, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences to the extent that taxable profit will be available against which the deductible temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the years when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and taxation authority.

3.22 Income tax expenses and deferred tax assets and liabilities (cont'd)

The Group offsets deferred assets and liabilities if, and only if (a) the Group has a legally enforceable right to set off current tax assets against current tax liabilities and, (b) the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either on (i) the same taxable entity or (ii) different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3.23 Equity

3.23.1 Classification of equity

The Group classifies financial instruments at initial recognition as either financial liabilities or financial equity depending on the contractual materiality. In the case where it is possible to avoid the related contractual obligations, the financial item is classified as a financial equity. An equity is any contract that evidences a residual interest in the assets of the Group after deducting all of its liabilities.

3.23.2 Stock issuance costs

New stock issuance costs or incremental costs related to the stock issuance for business combinations are recorded as a deduction from paid–in capital net of tax effects.

3.24 Earning per share

Basic and diluted earnings per share are computed by dividing net income by the weighted average number of shares of common stock outstanding during the year.

3.25 Accounting basis for trust accounts

The Group separately maintains the books of accounts and financial statements in connection with the trust operations (the "trust accounts") from those of the Bank's accounts in accordance with the *Financial Investment Services and Capital Markets Act* ("FSCMA"). When surplus funds are generated through the management of trust assets, such funds are deposited with the Bank and are recorded as due to trust accounts of the Bank's accounts. Also, the borrowings from the Bank's accounts are recorded as due from trust accounts of the Bank's accounts. The Group receives fees for operation and management of the trust business and accounts for them as fee and commission income from trust accounts.

With respect to certain trust account products, the Group guarantees the repayment of principal and interest of these trust accounts, in certain cases, with a fixed rate of return. If income from such trust accounts is insufficient to pay the guaranteed amount, such a deficiency is satisfied by using special reserves maintained in these trust accounts, offsetting trust fee payable to the Bank's accounts and receiving compensation contributions from the Bank's accounts. If the Group pays compensating contributions to the guaranteed return trusts to cover such deficiencies, these contributions are reflected as fee and commission expenses from trust accounts in the Group's consolidated statements of comprehensive income.

3.26 Lease accounting

Under KIFRS 1116 *Lease*, the Group applies a single recognition and measurement method for all leases except for leases of low-value assets. This Standard provides guidance on specific requirements and simplified methods applied by an entity.

The Group recognized the right-to-use asset and the liability that were previously classified as operating lease, except for leases of low-value assets. Right-of-use assets, for most leases, were recognized as carrying amounts measured as if they had been applying this standards from the inception of the lease, except that they were discounted at the lessee's incremental borrowing rate as of the date of initial application.
The practical expedients that the Company applied are as follow:

- Application of a single discount rate to a portfolio of leases with significantly similar characteristics
- Replacement of impairment review by determining whether leases are onerous before the initial application date
- Exclusion of initial direct costs from the measurement of the right-of-use asset at the initial application date
- Using hindsight for lessee

3.27 Merchant banking account

As permitted by the *Restructuring of Financial Institutions Act*, the Bank may continue its merchant banking operations, including leasing business, until the existing contracts acquired from the Korea International Merchant Bank upon merger are terminated.

Significant accounting policies applied to the Bank’s merchant banking operations are summarized as follows:

3.27.1 Revenue recognition on discounted notes

Interest income on discounted notes is accrued over the term of the notes. Income from the sale of discounted notes is recognized at the date of transaction based on the difference between the purchase prices and sales prices of the notes, adjusted for interest earned during the holding period.

3.27.2 Cash Management Accounts (CMA)

The Group recognizes interest income from CMA investments and interest expenses from CMA deposits as operating income and operating expenses, respectively.

3.28 Interest income and interest expense

Interest income and interest expenses are recognized over time using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expenses over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Group estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. Cash flows at the time of the calculation include all the fees and points paid to or received from parties to the contract that are an integral part of the effective interest rate, including transaction costs, and all other premiums or discounts.

If income recognition on an accrual basis is deemed inappropriate due to low possibility of realizing interest income, the interest income is recognized when interest is actually received.

3.29 Fees and commission income

The Group's revenue recognition standard varies depending on the type of service provided to customers. Fee income, which is an integral part of the effective interest rate (EIR) of financial instruments, is adjusted using the EIR and recognized as interest income.

Fee income is recognized using the five-stage revenue recognition model (Identification of a contract with a customer → Identification of performance obligations in the contract → Determination of the transaction price → Allocation of the transaction price to the separate performance obligations in the contract → Recognition of revenue upon satisfying the performance obligations) in accordance with KIFRS 1115.

3.30 Dividend income

Dividend income is recognized when the Group’s right to receive the payment is established.

4. Significant judgments and accounting estimates

In the application of the Group’s accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily observable from objective sources. The estimation and assumption are based on other factors that are related to historical experience. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

In the process of applying the Group’s accounting policies, management has made the following judgments that have a significant effect on the amounts recognized in the consolidated financial statements:

4.1 Fair value of financial instruments

The fair value of financial instruments is determined by referencing quoted market prices in active markets in the first place. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques including (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models.

4.2 Expected credit loss of financial assets

The Group recognizes impairment losses on debt instruments, lease receivables, contract assets, loan commitment, and financial guarantee contracts that were accounted for at amortized cost, or FVOCI, based on the expected credit loss (ECL) model using a three-stage model for 12-month expected credit losses, or lifetime expected credit losses based on changes in credit risk since initial recognition of financial assets.

Classification		Loss allowance
Stage 1	Credit risk on a financial instrument has not increased significantly since initial recognition.	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date
Stage 2	Credit risk on a financial instrument has increased significantly since initial recognition.	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument
Stage 3	Credit-impaired	

The cumulative changes in lifetime expected credit losses since initial recognition are recognized as loss allowance for a financial asset that is considered credit-impaired at initial recognition.

4.3 Provision for severance and retirement benefits

The cost of providing benefits under the defined benefit plans is determined using the actuarial valuation. Actuarial assumptions were made for the discount rate, and an increase in the future pay rate. Severance and retirement benefits include significant uncertainties in the estimates due to the long-term duration.

4.4 Impairment of non–financial assets

The Group assesses, at each reporting date, whether there is an indication that an asset may be impaired. Intangible asset with indefinite useful life is tested for impairment annually or tested whenever there is an indication that the intangible asset may be impaired. Other non-financial assets are tested for impairment whenever there is indication that the book value cannot be recovered. For the calculation of value in use, management estimates expected future cash flow incurred from the asset or cash generating unit (CGU). For the calculation of present value of the expected future cash flow, appropriate discount rate is selected.

4.5 Income taxes

Different taxation laws that the Group’s foreign subsidiaries are exposed to require judgment in determining the amount of tax expenses that can be recognized. In addition, there has been various transactions and tax accounting methods which have made computing the final tax expenses for the period uncertain. The contingent liability from any future tax assessments is based on the estimates of the likelihood of additional taxes imposed and has been included in the Group’s consolidated financial statements for the current period. When the finalized tax expenses assessments are different from the appropriated amounts, the differences, if any, are recognized in current deferred tax assets, liabilities, and expenses for the period.

5. Fair value measurement of financial assets and liabilities

The standards the Group applies when measuring fair values of financial assets and liabilities are described below:

A. Quoted market prices as of the settlement date in an active market are the best evidence of fair value and should be used when available.
B. If a market for a financial instrument is not active, the Group establishes fair value by using a valuation technique that makes maximum use of market inputs and includes (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models. An acceptable valuation technique incorporates all factors that market participants would consider in setting a price and is consistent with accepted economic methodologies for pricing financial instruments.
C. When determining fair value using the valuation techniques, comparison with the current market transaction of another instrument that is substantially the same as the financial instrument needed to be objectively substantiated or inclusion of variables in the marketable data must be performed. Not all of the significant market variables are observable and in relevant cases, the reasonable estimates or assumptions are required to determine the fair value.
D. For an investment in equity instruments which quoted market price is not available in an active market or derivative linked to such instruments which fair values are not measured reliably, fair values are measured at cost.

5.1 Fair value hierarchy of financial instruments

Fair value hierarchy of financial instruments as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019 (*)			
Classification	Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets measured at FVTPL				
Equity securities	₩ 63,346	₩ -	₩ 6,524	₩ 69,870
Debt securities	1,588,786	3,296,018	325,799	5,210,603
Derivative assets held-for-trading	-	3,732,250	8,706	3,740,956
Convertible privately-placed bonds	-	-	404,170	404,170
	1,652,132	7,028,268	745,199	9,425,599
Financial assets measured at FVOCI				
Equity securities	367,443	-	646,473	1,013,916
Debt securities	18,652,065	16,774,185	4,684	35,430,934
	19,019,508	16,774,185	651,157	36,444,850
Derivative assets designated as hedging instruments	-	30,516	-	30,516
	₩ 20,671,640	₩ 23,832,969	₩ 1,396,356	₩ 45,900,965
Financial liabilities				
Financial liabilities measured at FVTPL				
Derivative liabilities held-for-trading	₩ -	₩ 3,433,117	₩ 8,291	₩ 3,441,408
Financial liabilities designated as measured at FVTPL	-	506,606	-	506,606
	-	3,939,723	8,291	3,948,014
Derivative liabilities designated as hedging instruments	-	40,966	6,955	47,921
	₩ -	₩ 3,980,689	₩ 15,246	₩ 3,995,935

(*) The Group recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

	December 31, 2018 (*)			
Classification	Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets measured at FVTPL				
Equity securities	₩ 56,441	₩ -	₩ 6,271	₩ 62,712
Debt securities	1,445,998	2,868,924	310,503	4,625,425
Derivative assets held-for-trading	-	3,334,594	7,994	3,342,588
Convertible privately-placed bonds	-	-	389,381	389,381
	1,502,439	6,203,518	714,149	8,420,106
Financial assets measured at FVOCI				
Equity securities	418,206	-	649,111	1,067,317
Debt securities	19,212,155	14,560,973	4,615	33,777,743
	19,630,361	14,560,973	653,726	34,845,060
Derivative assets designated as hedging instruments	-	6,748	7	6,755
	₩ 21,132,800	₩ 20,771,239	₩ 1,367,882	₩ 43,271,921
Financial liabilities				
Financial liabilities measured at FVTPL				
Derivative liabilities held-for-trading	₩ -	₩ 3,082,443	₩ 7,441	₩ 3,089,884
Financial liabilities designated as measured at FVTPL	-	500,692	-	500,692
	-	3,583,135	7,441	3,590,576
Derivative liabilities designated as hedging instruments	-	82,575	16,222	98,797
	₩ -	₩ 3,665,710	₩ 23,663	₩ 3,689,373

(*) The Group recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

5.1 Fair value hierarchy of financial instruments (cont'd)

The Group uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation techniques:

- Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: Other techniques in which all significant inputs and significant value drivers are observable in active markets
- Level 3: Techniques, such as pricing models, discounted cash flow methodologies, or similar techniques based on significant unobservable inputs, as well as management judgments or estimates that are significant to valuation

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are measured at fair value as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Fair value March 31, 2019	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets			
Financial assets measured at FVTPL			
Debt securities	₩ 3,296,018	Net asset value model	Underlying asset prices such as bond, stock, etc.
Derivative assets held-for-trading	3,732,250	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, stock Index, volatility, swap yield curve, swaption volatility, yield curve of each currency
	7,028,268		
Financial assets measured at FVOCI			
Debt securities	16,774,185	DCF model	Discount rate
Derivative assets designated as hedging instruments	30,516	Hull-White 1 factor model	Exchange rate, swap yield curve, swaption volatility, yield curve of each currency
	₩ 23,832,969		
Financial liabilities			
Financial liabilities measured at FVTPL			
Derivative liabilities held-for-trading	3,433,117	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, stock Index, volatility, swap yield curve, swaption volatility, yield curve of each currency
Financial liabilities designated as measured at FVTPL	506,606	Hull-white 1 factor model	Swap yield curve, swaption volatility
	3,939,723		
Derivative liabilities designated as hedging instruments	40,966	Hull-white 1 factor model	Exchange rate, swap yield curve, swaption volatility, yield curve of each currency
	₩ 3,980,689		

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2018	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets			
Financial assets measured at FVTPL			
Debt securities	₩ 2,868,924	Net asset value model	Underlying asset prices such as bond, stock, etc.
Derivative assets held-for-trading	3,334,594	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, stock index, volatility, swap yield curve, swaption volatility, yield curve of each currency
	6,203,518		
Financial assets measured at FVOCI			
Debt securities	14,560,973	DCF model	Discount rate
Derivative assets designated as hedging instruments	6,748	Hull-White 1 factor model	Exchange rate, swap yield curve, swaption volatility, yield curve of each currency
	₩ 20,771,239		
Financial liabilities			
Financial liabilities measured at FVTPL			
Derivative liabilities held-for-trading	3,082,443	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, stock index, volatility, swap yield curve, swaption volatility, yield curve of each currency
Financial liabilities designated as measured at FVTPL	500,692	Hull-white 1 factor model	Swap yield curve, swaption volatility
	3,583,135		
Derivative liabilities designated as hedging instruments	82,575	Hull-white 1 factor model	Exchange rate, swap yield curve, swaption volatility, yield curve of each currency
	₩ 3,665,710		

5.1 Fair value hierarchy of financial instruments (cont'd)

Details of fair value, valuation technique, input to valuation, and significant unobservable inputs used to develop those measurements classified into level 3 assets and liabilities that are measured at fair value as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Fair value March 31, 2019	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range (%)	The effect of changes in unobservable Inputs on fair value
Financial assets						
Financial assets measured at FVTPL						
Equity securities	₩ 6,524	DCF model, Comparison with similar business, Dividend discount model	Growth rate, Discount rate, Liquidating value	Growth rate	0.00	Positive
				Discount rate	4.41~12.14	Negative
				Liquidating value	0.00	Positive
Debt securities	325,799	DCF model, Net asset value model, Binomial model	Discount rate, Liquidating value Underlying asset price, Volatility of underlying assets	Discount rate	6.34	Negative
				Liquidating value	0.00	Positive
				Volatility of underlying assets	23.84~24.87	Positive
Derivative assets held-for-trading	8,706	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, Yield curve of each currency, Correlation within evaluation model	Correlation within evaluation model	-94.39~-83.89	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Convertible privately-placed bonds	404,170	Binomial model	Underlying asset price, Volatility of underlying assets, Discount rate	Volatility of underlying assets	17.15~38.93	Positive
	745,199					
Financial assets measured at FVOCI						
Equity securities	646,473	DCF model, Comparison with similar business, Net asset value model, Binomial model	Growth rate, Discount rate, Liquidating value Underlying asset price, Volatility of underlying assets	Growth rate	0.00	Positive
				Discount rate	7.82~17.52	Negative
				Liquidating value	0.00	Positive
				Correlation within underlying assets	19.75~24.87	Positive
Debt securities	4,684	DCF model	Discount rate	Discount rate	7.54	Negative
	651,157					
	₩ 1,396,356					

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value March 31, 2019	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range (%)	The effect of changes in unobservable Inputs on fair value
Financial liabilities						
Financial liabilities measured at FVTPL						
Derivative liabilities held-for-trading	8,291	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, Yield curve of each currency, Correlation within evaluation model	Correlation within evaluation model	-93.31~ -83.89	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Derivative liabilities designated as hedging instruments	6,955	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, Yield curve of each currency, Correlation within evaluation model	Correlation within evaluation model	-93.31~ -89.06	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 15,246					

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2018	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range (%)	The effect of changes in unobservable Inputs on fair value
Financial assets						
Financial assets measured at FVTPL						
Equity securities	₩ 6,271	DCF model, Comparison with similar business	Growth rate, Discount rate	Growth rate	0.00	Positive
				Discount rate	11.13 ~12.36	Negative
Debt securities	310,503	Binomial model	Underlying asset price, Volatility of underlying assets	Volatility of underlying assets	23.96	Positive
Derivative assets held-for-trading	7,994	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, Yield curve of each currency, Correlation within evaluation model	Correlation within evaluation model	-94.39 ~ -86.01	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Convertible privately-placed bonds	389,381	Binomial model	Underlying asset price, Volatility of underlying assets, Discount rate	Volatility of underlying assets	17.13 ~41.37	Positive
	714,149					
Financial assets measured at FVOCI						
Equity securities	649,111	DCF model, Comparison with similar business, Net asset value model, Binomial model	Growth rate, Liquidating value, Discount rate	Growth rate Liquidating value Discount rate	0.00 0.00 7.15 ~17.40	Positive Positive Negative
			Underlying asset price, Volatility of underlying assets, Discount rate	Volatility of underlying assets	24.11 ~25.62	Positive
Debt securities	4,615	DCF model	Discount rate	Discount rate	7.80	Negative
	653,726					
Derivative assets designated as hedging instruments	7	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, Yield curve of each currency, Correlation within evaluation model	Correlation within evaluation model	-98.17	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 1,367,882					

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2018	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range (%)	The effect of changes in unobservable Inputs on fair value
Financial liabilities						
Financial liabilities measured at FVTPL						
Derivative liabilities held-for-trading	7,441	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, Yield curve of each currency, Correlation within evaluation model	Correlation within evaluation model	-94.39 ~ -86.01	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Derivative liabilities designated as hedging instruments	16,222	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, Yield curve of each currency, Correlation within evaluation model	Correlation within evaluation model	-95.07 ~ -80.15	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 23,663					

5.2 Changes in the fair value of financial instruments categorized as Level 3

Changes in the fair value of financial instruments categorized as Level 3 of the fair value hierarchy of financial instruments that are measured at fair value in the statements of financial position for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month periods ended March 31, 2019						
	Financial assets measured at FVTPL			Financial assets measured at FVOCI		Net derivative instruments	
Classification	Equity securities	Debt securities	Convertible privately-placed bonds	Equity securities	Debt securities	Held-for-trading	Used for hedging
January 1, 2019	₩ 6,271	₩ 310,503	₩ 389,381	₩ 649,111	₩ 4,615	₩ 553	₩ (16,215)
Total profit or loss							
Profit or loss	(16)	5,635	939	-	-	(138)	9,260
Other comprehensive income	-	-	-	(971)	69	-	-
Buy / issue	269	16,442	43,835	-	-	-	-
Sell / settlement	-	(6,781)	(29,985)	(1,667)	-	-	-
March 31, 2019	₩ 6,524	₩ 325,799	₩ 404,170	₩ 646,473	₩ 4,684	₩ 415	₩ (6,955)

	For the three-month periods ended March 31, 2018						
	Financial assets measured at FVTPL			Financial assets measured at FVOCI		Net derivative instruments	
Classification	Equity securities	Debt securities	Convertible privately-placed bonds	Equity securities	Debt securities	Held-for-trading	Used for hedging
January 1, 2018	₩ 7,706	₩ 252,969	₩ 164,718	₩ 573,663	₩ 7,738	₩ 1,327	₩ (10,453)
Total profit or loss							
Profit or loss	70	4,925	1,231	-	-	(1,153)	48
Other comprehensive income	-	-	-	26,440	1,033	-	-
Buy / issue	-	10,833	15,616	-	-	-	(6,931)
Sell / settlement	(3,874)	(2,469)	(3,686)	-	-	-	-
March 31, 2018	₩ 3,902	₩ 266,258	₩ 177,879	₩ 600,103	₩ 8,771	₩ 174	₩ (17,336)

5.3 Current gains or losses recognized from changes in Level 3 financial instruments measured at fair value.

Current gains or losses recognized from changes in Level 3 financial instruments measured at fair value for the three-month periods ended March 31, 2019 and 2018 are recorded in the statements of comprehensive income as follows (Korean won in millions):

	For the three-month periods ended March 31, 2019	
Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Gain (loss) on financial instruments measured at FVTPL	₩ 6,420	₩ 5,107
Gain (loss) related to derivative instruments designated as hedging instruments	9,260	4,590
	₩ 15,680	₩ 9,697

	For the three-month periods ended March 31, 2018	
Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Gain (loss) on financial instruments measured at FVTPL	₩ 5,073	₩ 6,228
Gain (loss) related to derivative instruments designated as hedging instruments	48	48
	₩ 5,121	₩ 6,276

5.4 Transfers between fair value hierarchy

There is no transfer into or out of Level 3 of the fair value hierarchy for the three-month periods ended March 31, 2019 and 2018.

5.5 Sensitivity analysis

Sensitivity of the fair value measurement for the each Level 3 financial instrument upon the changes in significant unobservable input, whose results are favorable and unfavorable changes in profit or loss or other comprehensive income as of March 31, 2019 and 2018 are as follows (Korean won in millions): The sensitivity analysis of financial instruments classified as level 3 amounting to ₩686,296 million and ₩663,744 million as of March 31, 2019 and December 31, 2018, respectively, is impossible in practice and thus are excluded.

Classification	March 31, 2019 Favorable changes	March 31, 2019 Unfavorable changes
Financial assets		
Financial assets measured at FVTPL		
Equity securities (*2)	₩ 220	₩ (113)
Debt securities (*3)	1,067	(955)
Convertible privately-placed bonds (*4)	1,633	(1,117)
Derivative assets held-for-trading (*1)	474	(403)
	3,394	(2,588)
Financial assets measured at FVOCI		
Equity securities (*2)	99,911	(39,261)
Debt securities (*3)	87	(85)
	99,998	(39,346)
	₩ 103,392	₩ (41,934)
Financial liabilities		
Derivative liabilities held-for-trading (*1)	904	(324)
Derivative liabilities designated as hedging instruments (*1)	951	(815)
	₩ 1,855	₩ (1,139)

(*1) Unfavorable and favorable changes in fair value are calculated by increasing/decreasing by 10% of 1) correlation between rates of interest rate swap of KRW, 2) correlation between rates of interest rate swap of KRW and USD, 3) correlation between rates of interest rate swap of USD and exchange rates of KRW/USD, 4) correlation between stock index and individual stock, and 5) correlation within evaluation model.

(*2) Changes in fair value of equity securities are calculated by increasing/decreasing growth rate (0.0~1.0%) and discount rate (-1.0%~1.0%), which are main unobservable inputs.

(*3) Changes in fair value of debt securities are calculated by increasing/decreasing discount rate (-1.0~1.0%), which is the main unobservable input. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by increasing/decreasing discount rate of lease cash flow (-1.0~1.0%) and rate of increase in selling price of real estate (-1.0~1.0%), under limited circumstances when they are consisted of real estate. However, it is impossible in practice to calculate sensitivity of beneficiary securities based on changes in inputs.

(*4) For convertible privately-placed bonds, favorable and unfavorable changes in fair value are calculated by increasing or decreasing the price (-10.0~10.0%) and variability (-10.0~10.0%) of underlying assets, which are the main unobservable inputs.

5.5 Sensitivity analysis (cont'd)

Classification	December 31, 2018 Favorable changes	December 31, 2018 Unfavorable changes
Financial assets		
Financial assets measured at FVTPL		
Equity securities (*2)	₩ 241	₩ (122)
Debt securities (*3)	145	(121)
Convertible privately-placed bonds (*4)	1,849	(1,286)
Derivative assets held-for-trading (*1)	409	(454)
	2,644	(1,983)
Financial assets measured at FVOCI		
Equity securities (*2)	106,157	(40,639)
Debt securities (*3)	96	(94)
	106,253	(40,733)
Derivative assets used for hedging (*1)	7	(51)
	₩ 108,904	₩ (42,767)
Financial liabilities		
Derivative liabilities held-for-trading (*1)	454	(409)
Derivative liabilities designated as hedging instruments (*1)	1,170	(1,068)
	₩ 1,624	₩ (1,477)

(*1) Unfavorable and favorable changes in fair value are calculated by increasing/decreasing by 10% of 1) correlation between rates of interest rate swap of KRW, 2) correlation between rates of interest rate swap of KRW and USD, 3) correlation between rates of interest rate swap of USD and exchange rates of KRW/USD, 4) correlation between stock index and individual stock, and 5) correlation within evaluation model.

(*2) Changes in fair value of equity securities are calculated by increasing/decreasing growth rate (0.0~1.0%) and discount rate (-1.0%~1.0%), which are main unobservable inputs.

(*3) Changes in fair value of debt securities are calculated by increasing/decreasing discount rate (-1.0~1.0%), which is the main unobservable input. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by increasing/decreasing discount rate of lease cash flow (-1.0~1.0%) and rate of increase in selling price of real estate (-1.0~1.0%), under limited circumstances when they are consisted of real estate. However, it is impossible in practice to calculate sensitivity of beneficiary securities based on changes in inputs.

(*4) For convertible privately-placed bonds, favorable and unfavorable changes in fair value are calculated by increasing or decreasing the price (-10.0~10.0%) and variability (-10.0~10.0%) of underlying assets, which are the main unobservable inputs.

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed

Fair value hierarchy of financial instruments measured at amortized cost as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019							
	Levels of the fair value hierarchy							
Classification	Level 1		Level 2		Level 3		Total	
Financial assets:								
Cash and due from banks	₩	2,143,286	₩	12,351,435	₩	-	₩	14,494,721
Securities measured at amortized cost		1,631,731		12,671,087		-		14,302,818
Loans		-		-		247,447,867		247,447,867
Others		-		-		16,637,983		16,637,983
Merchant banking account assets		-		-		3,307,085		3,307,085
	₩	3,775,017	₩	25,022,522	₩	267,392,935	₩	296,190,474
Financial liabilities:								
Deposits	₩	-	₩	29,437,502	₩	218,778,071	₩	248,215,573
Borrowings		-		973,958		13,896,113		14,870,071
Debentures		-		24,910,369		-		24,910,369
Others		-		-		25,465,961		25,465,961
Merchant banking account liabilities		-		-		3,157,808		3,157,808
	₩	-	₩	55,321,829	₩	261,297,953	₩	316,619,782

	December 31, 2018							
	Levels of the fair value hierarchy							
Classification	Level 1		Level 2		Level 3		Total	
Financial assets:								
Cash and due from banks	₩	2,120,840	₩	18,331,283	₩	-	₩	20,452,123
Securities measured at amortized cost		1,545,278		12,163,077		-		13,708,355
Loans		-		-		244,644,502		244,644,502
Others		-		-		11,160,464		11,160,464
Merchant banking account assets		-		-		2,940,272		2,940,272
	₩	3,666,118	₩	30,494,360	₩	258,745,238	₩	292,905,716
Financial liabilities:								
Deposits	₩	-	₩	29,628,826	₩	218,051,939	₩	247,680,765
Borrowings		-		629,350		14,652,749		15,282,099
Debentures		-		24,921,174		-		24,921,174
Others		-		-		21,636,135		21,636,135
Merchant banking account liabilities		-		-		2,339,383		2,339,383
	₩	-	₩	55,179,350	₩	256,680,206	₩	311,859,556

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are not measured at fair value as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019			
Classification		Fair value	Valuation technique	Inputs
Financial assets				
Cash and due from banks	₩	12,351,435	DCF model	Discount rate
Securities measured at amortized cost		12,671,087	DCF model	Discount rate
		25,022,522		
Financial liabilities				
Deposits		29,437,502	DCF model	Discount rate
Borrowings		973,958	DCF model	Discount rate
Debentures		24,910,369	DCF model	Discount rate
	₩	55,321,829		

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	December 31, 2018			
Classification		Fair value	Valuation technique	Inputs
Financial assets				
Cash and due from banks	₩	18,331,283	DCF model	Discount rate
Securities measured at amortized cost		12,163,077	DCF model	Discount rate
		30,494,360		
Financial liabilities				
Deposits		29,628,826	DCF model	Discount rate
Borrowings		629,350	DCF model	Discount rate
Debentures		24,921,174	DCF model	Discount rate
	₩	55,179,350		

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 3 assets and liabilities disclosed but not measured at fair value as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019			
	Fair value		Valuation technique	Inputs
Financial assets				
Loans	₩	247,447,867	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets		16,637,983	DCF model	Discount rate
Merchant banking account assets		3,307,085	(*)	
	₩	267,392,935		
Financial liabilities				
Deposits	₩	218,778,071	DCF model	Other spread, rate of advanced redemption
Borrowings		13,896,113	DCF model	Other spread
Other financial liabilities		25,465,961	DCF model	Discount rate
Merchant banking account liabilities		3,157,808	(*)	
	₩	261,297,953		

Classification	December 31, 2018			
	Fair value		Valuation technique	Inputs
Financial assets				
Loans	₩	244,644,502	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets		11,160,464	DCF model	Discount rate
Merchant banking account assets		2,940,272	(*)	
	₩	258,745,238		
Financial liabilities				
Deposits	₩	218,051,939	DCF model	Other spread, rate of advanced redemption
Borrowings		14,652,749	DCF model	Other spread
Other financial liabilities		21,636,135	DCF model	Discount rate
Merchant banking account liabilities		2,339,383	(*)	
	₩	256,680,206		

(*) Other financial assets and liabilities are temporary accounts derived from various transactions. The book value of these assets and liabilities are regarded as their fair value without applying DCF method because their maturities are not fixed or short.

5.7 Gain and loss on deferred Day 1

Changes in gain (loss) on deferred Day 1 for the three-month periods ended March 31, 2019 and 2018 are summarized as follows (Korean won in millions):

Classification	For the three-month periods ended March 31, 2019		For the three-month periods ended March 31, 2018	
January 1	₩	(175)	₩	(188)
Amounts recognized as current profit or loss		3		3
March 31	₩	(172)	₩	(185)

5.8 Transferred financial assets and related liabilities not eliminated as a whole as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019			
	Book value		Fair value	
Transferred assets				
Financial assets measured at FVTPL	₩	17,039	₩	17,039
Financial assets measured at FVOCI (*)		357,484		357,484
Financial assets measured at amortized cost (*)		238,410		238,227
Related liabilities				
Bonds sold under repurchase agreements	₩	424,319	₩	424,349

(*) The financial assets measured at FVOCI-lent and the Securities measured at amortized cost-lent, of which related liabilities are not appropriated, amounting to ₩351,685 million and ₩39,799 million, respectively, as of March 31, 2019, are included.

Classification	December 31, 2018			
	Book value		Fair value	
Transferred assets				
Financial assets measured at FVOCI (*)	₩	2,000,001	₩	2,000,001
Financial assets measured at amortized cost (*)		442,526		436,312
Related liabilities				
Bonds sold under repurchase agreements		449,928		449,692

(*) The financial assets measured at FVOCI-lent and the Securities measured at amortized cost-lent, of which related liabilities are not appropriated, amounting to ₩1,876,199 million and ₩47,574 million, respectively, as of December 31, 2018, are included.

6. Fair value of financial instruments

Fair values of financial instruments as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019		December 31, 2018	
	Book value	Fair value	Book value	Fair value
Financial assets				
Cash and due from banks	₩ 14,494,721	₩ 14,494,721	₩ 20,452,123	₩ 20,452,123
Financial assets measured at FVTPL	9,425,599	9,425,599	8,420,106	8,420,106
Financial assets measured at FVOCI	36,444,850	36,444,850	34,845,060	34,845,060
Securities measured at amortized cost	14,139,936	14,302,818	13,582,381	13,708,355
Loans	246,911,576	247,447,867	244,468,590	244,644,502
Derivative assets used for hedging	30,516	30,516	6,755	6,755
Other financial assets	16,638,183	16,637,983	11,160,654	11,160,464
Merchant banking account assets	3,307,085	3,307,085	2,940,272	2,940,272
	₩ 341,392,466	₩ 342,091,439	₩ 335,875,941	₩ 336,177,637
Financial liabilities				
Financial liabilities measured at FVTPL	3,948,014	3,948,014	3,590,576	3,590,576
Deposits	248,131,430	248,215,573	246,754,859	247,680,765
Borrowings	14,866,444	14,870,071	15,280,970	15,282,099
Debentures	24,619,078	24,910,369	24,668,613	24,921,174
Derivative liabilities used for hedging	47,921	47,921	98,797	98,797
Other financial liabilities	25,465,961	25,465,961	21,636,135	21,636,135
Merchant banking account liabilities	3,157,808	3,157,808	2,339,383	2,339,383
	₩ 320,236,656	₩ 320,615,717	₩ 314,369,333	₩ 315,548,929

The following standards are applied in measuring the fair value of financial instruments.

A. Loans and receivable: Expected cash flows, current market interest rates and discount rates including borrowers' credit risks are factors to calculate the fair value of loans and receivables. For lines of credit and loans that have a short-term maturity (less than three months), it is assumed that the carrying amounts approximate to their fair value.

B. Financial investment assets: The fair value of financial assets held-to-maturity are as stated by the market, broker, or by credible sources. If none of the information from these entities is usable, published market price of financial instruments with similar credit rating, maturity, and ROI is used to estimate the fair value.

C. Depository liabilities: For deposits without an explicit maturity period including deposits with no interests, deposits that have a short-term maturity (less than three months), and deposits with a floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest-bearing deposits is based on discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

D. Borrowings: For borrowings that have a short-term maturity (less than three months) and borrowings with floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest-bearing borrowings is based on and discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

E. Debentures: For quoted debt issued, the fair values are determined based on quoted market prices. For those notes issued where quoted market prices are not available, a discounted cash flow model is used based on a current interest rate yield curve appropriate for the remaining term to maturity and credit spreads.

7. Categories of financial assets and financial liabilities

7.1 The Group categorizes its financial assets as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019				
	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Derivatives for hedging	Total
Cash and due from banks	₩ -	₩ -	₩ 14,494,721	₩ -	₩ 14,494,721
Financial assets measured at FVTPL	9,425,599	-	-	-	9,425,599
Financial assets measured at FVOCI	-	36,444,850	-	-	36,444,850
Securities measured at amortized cost	-	-	14,139,936	-	14,139,936
Loans	-	-	246,911,576	-	246,911,576
Derivative assets used for hedging	-	-	-	30,516	30,516
Others	-	-	16,638,183	-	16,638,183
Merchant banking account assets	-	-	3,307,085	-	3,307,085
	₩ 9,425,599	₩ 36,444,850	₩ 295,491,501	₩ 30,516	₩ 341,392,466

	December 31, 2018				
	Financial assets measured at FVTPL	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Derivatives for hedging	Total
Cash and due from banks	₩ -	₩ -	₩ 20,452,123	₩ -	₩ 20,452,123
Financial assets measured at FVTPL	8,420,106	-	-	-	8,420,106
Financial assets measured at FVOCI	-	34,845,060	-	-	34,845,060
Securities measured at amortized cost	-	-	13,582,381	-	13,582,381
Loans	-	-	244,468,590	-	244,468,590
Derivative assets used for hedging	-	-	-	6,755	6,755
Others	-	-	11,160,654	-	11,160,654
Merchant banking account assets	-	-	2,940,272	-	2,940,272
	₩ 8,420,106	₩ 34,845,060	₩ 292,604,020	₩ 6,755	₩ 335,875,941

7.2 The Group categorizes its financial liabilities as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019				
Classification	Financial liabilities measured at FVTPL	Financial liabilities designated as measured at FVTPL	Financial liabilities measured at amortized cost	Derivatives for hedging	Total
Financial liabilities measured at FVPL	₩ 3,441,408	₩ 506,606	₩ -	₩ -	₩ 3,948,014
Deposits	-	-	248,131,430	-	248,131,430
Borrowings	-	-	14,866,444	-	14,866,444
Debentures	-	-	24,619,078	-	24,619,078
Derivative liabilities used for hedging	-	-	-	47,921	47,921
Others	-	-	25,465,961	-	25,465,961
Merchant banking account liabilities	-	-	3,157,808	-	3,157,808
	₩ 3,441,408	₩ 506,606	₩ 316,240,721	₩ 47,921	₩ 320,236,656

	December 31, 2018				
Classification	Financial liabilities measured at FVTPL	Financial liabilities designated as measured at FVTPL	Financial liabilities measured at amortized cost	Derivatives for hedging	Total
Financial liabilities measured at FVPL	₩ 3,089,884	₩ 500,692	₩ -	₩ -	₩ 3,590,576
Deposits	-	-	246,754,859	-	246,754,859
Borrowings	-	-	15,280,970	-	15,280,970
Debentures	-	-	24,668,613	-	24,668,613
Derivative liabilities used for hedging	-	-	-	98,797	98,797
Others	-	-	21,636,135	-	21,636,135
Merchant banking account liabilities	-	-	2,339,383	-	2,339,383
	₩ 3,089,884	₩ 500,692	₩ 310,679,960	₩ 98,797	₩ 314,369,333

8. Offsetting of financial assets and liabilities

8.1 Financial assets offset, the executable master netting arrangements and financial assets subject to a similar agreement as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019					
				Related amounts not offset		
Classification	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,771,472	₩ -	₩ 3,771,472	₩ (2,452,353)	₩ (522,413)	₩ 796,706
Securities lent	391,484	-	391,484	-	(391,484)	-
Bonds purchased under resale agreement	7,537,220	-	7,537,220	-	(7,537,220)	-
Spot exchange that has not been received or settled	8,656,920	-	8,656,920	(8,652,474)	-	4,446
Domestic exchange settlement debit	19,489,892	16,404,076	3,085,816	-	-	3,085,816
Other accounts receivable	2,505,986	2,502,253	3,733	-	-	3,733
	₩ 42,352,974	₩ 18,906,329	₩ 23,446,645	₩ (11,104,827)	₩ (8,451,117)	₩ 3,890,701

	December 31, 2018					
				Related amounts not offset		
Classification	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,349,343	₩ -	₩ 3,349,343	₩ (2,439,315)	₩ (420,992)	₩ 489,036
Securities lent	1,923,773	-	1,923,773	-	(1,923,773)	-
Bonds purchased under resale agreement	8,021,732	-	8,021,732	-	(8,021,732)	-
Spot exchange that has not been received or settled	4,822,022	-	4,822,022	(4,818,379)	-	3,643
Domestic exchange settlement debit	24,390,516	21,168,932	3,221,584	-	-	3,221,584
Other accounts receivable	945	778	167	-	-	167
	₩ 42,508,331	₩ 21,169,710	₩ 21,338,621	₩ (7,257,694)	₩ (10,366,497)	₩ 3,714,430

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

8.2 Financial liabilities offset, the executable master netting arrangements and financial liabilities subject to a similar agreement as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019					
				Related amounts not offset		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,489,329	₩ -	₩ 3,489,329	₩ (2,871,828)	₩ (212,308)	₩ 405,193
Bonds sold under repurchase agreements	424,319	-	424,319	(424,319)	-	-
Spot exchange that has not been received or settled	8,657,996	-	8,657,996	(8,652,474)	-	5,522
Domestic exchange settlement credit	17,793,954	16,404,076	1,389,878	(1,389,878)	-	-
Other accounts payable	2,511,818	2,502,253	9,565	-	-	9,565
	₩ 32,877,416	₩ 18,906,329	₩ 13,971,087	₩ (13,338,499)	₩ (212,308)	₩ 420,280

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

	December 31, 2018					
				Related amounts not offset		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,188,681	₩ -	₩ 3,188,681	₩ (2,733,584)	₩ (111,818)	₩ 343,279
Bonds sold under repurchase agreements	449,928	-	449,928	(449,928)	-	-
Spot exchange that has not been received or settled	4,821,771	-	4,821,771	(4,818,379)	-	3,392
Domestic exchange settlement credit	24,888,173	21,168,932	3,719,241	(3,719,241)	-	-
Other accounts payable	778	778	-	-	-	-
	₩ 33,349,331	₩ 21,169,710	₩ 12,179,621	₩ (11,721,132)	₩ (111,818)	₩ 346,671

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

9. Risk management

The Group is exposed to credit risk, liquidity risk, market risk and various operating risks. The objectives of risk management are to pursue economic benefits by managing the associated risk in the changing financial environment and to utilize capital efficiently.

The basic principles of risk management are as follows:

- Minimize the rapid fluctuation in profit by balancing the risks and the income.
- Maximize long–term shareholder value.
- Comply with procedures to ensure operating activities are confined to allowable risk limits.
- Examine the type and size of risk in accordance with the changes in potential economic value of portfolios for the efficient use and distribution of assets and to establish risk management strategy.

The basic policies in order to realize the basic principles of risk management are as follows:

- Set and comply with allowable limits for each risk type.
- Establish an appropriate balance between income and associated risk.
- When a conflict between income and associated risk exists, the Group pursues income while complying with the allowable risk limits.
- Prioritize the distribution of risk in order to avoid risk concentration in certain areas.
- Analyse the effect of various market fluctuations on parts or the entire portfolio on a regular basis.
- Separate risk management segments, operational segments, and other segments which deal with trade confirmations and payments in order to maintain independence.

9.1. Strategy and procedure of risk management

(1) Operation of and setting risk limits: The Group established and operates a limit management system to maintain the appropriate level of risk relative to the equity capital held. The Risk Management Committee approves total risk limits and limits by types of risks, taking into account of capital, business plans, risk management regulations, and institutional changes within the risk level that the Bank can manage. The Risk Management Operation Committee sets up and allocates other operational limits (e.g., by organization, product, investment, and loss) to comply with allowable limits for each type of risk, approved by the Risk Management Committee and periodically checks the status of limit management.

(2) Risk measurement and management: The Group prepares the appropriate risk measurement methods considering the nature of risks, and measures them by the types of risks. Risk measurement and evaluation results are regularly reviewed, and reported to the Risk Management Committee, Risk Management Operation Committee, and management. Risk measurement and evaluation results are also used for daily business management activities such as establishment of business plan and management strategy.

(3) Operation of risk management information system: In order to provide advanced risk management in a rapidly changing financial environment, the Group has established a company-wide risk management system that meets the new BIS standards. The Group operates credit risk internal grading (changes are approved in November 2008 and September 2016), advanced operational risk measurement method (changes are approved in November 2008 and September 2016) and market risk internal model (changes are approved in April 2008 and August 2016 [retrospective application in June 2016]).

(4) Operation of crisis management system: The Group operates a crisis management system that can respond effectively to the crisis caused by drastic changes in the internal and external management environment. The Group operates an early warning system in order to respond to the drastic changes in the financial market in a consistent and systematic manner. In the event of an anomaly, the holding company declares the level of crisis at the group level, and the Bank analyzes the impact on the portfolio in accordance with the step-by-step plan and carries out the countermeasures.

9.2. Organization and structure of risk management

The risk management organization consists of the Risk Management Committee, Risk Management Operation Committee under the Risk Management Committee, the risk management officer, and the organization in charge of risk management, which are the top decision-making bodies for the risk management. The organization in charge of risk management, independent from operating segment, manages risk limits and risk management policies.

(1) Risk Management Committee: The Risk Management Committee regularly holds meeting once every quarter and resolves the establishment and management of allowable limits for risks, establishment and changes in risk management policies, and reviews the results of the management of allowable risk limits and suitability tests of risk management system.

(2) Risk Management Operation Committee: The Risk Management Operation Committee is responsible for setting and allocating specific operational limits for compliance with the allowable limits for each type of risk as resolved by the Risk Management Committee, adjusting the internal capital limit between business units within the same risk type, and carrying out risk management policies and strategies set by the Risk Management Committee, including preliminary deliberations on the agenda items.

(3) Organization in charge of risk management: The Risk Management Group is comprised of Comprehensive Risk Management Team, Credit Risk Management Team, and Credit Supervision Team. The Risk Management Group is independent of sales and investment sector and manages the execution of risk management policies. The Comprehensive Risk Management Team oversees the market, interest rate, liquidity, operational risk, and middle office, and supports the Risk Management Committee and Risk Management Operation Committee. The Credit Risk Management Team oversees credit risk and credit concentration risk. The Credit Supervision Team oversees the loans and early warning system.

9.3. Credit risk

Credit risk is a risk incurred when the Group faces a loss because its customers or counterparties fail to discharge their contractual obligations. Credit risk arises from on–balance and off–balance accounts including loans, derivatives, securities, financial guarantees, and acceptances and guarantees.

9.3.1 Management of Credit risk

9.3.1.1 Loans

9.3.1.1.1 Measurement of Credit risk

To determine the possibility of bankruptcy for its customers or counterparties, the Group uses various methods comprehensively. Risks pertaining to the retail sector compared to those pertaining to the corporate sector are relatively easy to predict but cyclical and seasonal factors may influence the outcomes. The frequency of impairment loss in the overall retail sector is relatively high but in terms of individual cases, the loss rate is lower than in the corporate sector. Based on these differences, the Group manages each segment differently in terms of credit rating, pricing and subsequent management.

As for the business customers, the branch managers and credit rating team carries out the credit risk assessment by using a detailed valuation model depending on the size and the nature of the industry. The corporate financial valuation model is further subdivided based on the characteristics of the loans and is a combination of statistical and expert valuation models. Also, the Loan Review team of the Credit Risk Management regularly performs the subsequent reviews in order to establish adequacy of the credit grading. As for the retail sector, a Credit Scoring System is used to compute the credit scores of the borrower. The system includes an Application Scoring Model which is used for the application of loans and a Behavioral Scoring Model which has been used after handling of the loans.

Expected loss is calculated using the expected default rate based upon the historical default rate and the estimated loss rate gives a rise to the default rate from a collection of historical information. A measured expected loss is reflected on the client’s interest rate and allowances when applying or renewing a loan.

Unexpected loss takes into account the allowance for potential volatility in the actual loss. Unexpected loss is calculated using the inner Credit Metrics model with 99.9% of the confidence level and the measured figure is used as a credit risk reference value and is used as part of the unexpected loss when calculating interest rates.

9.3.1.1.2 Management of Credit risk

9.3.1.1.2.1 Management process

Both retail and corporate sectors are developing and operating a credit risk management system appropriately designed for each sector. The Credit Risk Management Committee and Credit Rating Team measure and manage credit risks for the corporate sector; Credit Risk Management Committee and Personal Loans Committee measure and manage credit risks for the retail sector. The Group manages as well as controls the credit risk by setting the limits on the amount of risk willing to accept for individual counterparties and for geographical and industry concentration, and by monitoring exposures relating to such limits. The Group reviews on a monthly basis in accordance with the economic conditions and industry characteristics and examines the adequacy of the limits on a semi-annual basis. The Group continuously manages credit rating models for retail and corporate sectors and examines the adequacy of LGD (loss given default) and EAD (exposure at default), and any related information.

9.3.1.1.2.2 Credit limits management and capital allocation

The Group annually performs a comprehensive analysis on economic conditions and changes in the economic environment in order to appropriately assess the credit quality of financial assets by setting credit limits on same entities, industries, countries, and financial instruments. In addition, for the unexpected loss management, the Group regularly sets, distributes and checks for the compliance maintenance of internal capital limits according to the corporate and household sectors and the size of clients through the risk management system.

9.3.1.1.2.3 Risk monitoring and early warning system

The Group measures and manages the risk indicators such as delinquency rate, roll–rate, and vintage rate of each operating segment. Also, in order to assess the credit quality of the assets, the Group operates an early warning system and regularly examines companies whose credit rating is likely to degrade.

9.3.1.1.2.4 Credit rating system

In order to separately evaluate the characteristics of clients in the corporate sector, the Group operates a detailed valuation model based on the external and non–external audit and is in the process of continuing the stability of the corporate credit rating system through the subsequent examinations and performance improvements. The Group operates a detailed valuation model based on the credit rating model and the activity rating model for the household sector in accordance with the client’s characteristics. The Group improves the efficiency of the model through the subsequent examinations and performance improvements. Credit rating on new clients as well as an automatic renewal and adjustments to the credit limits are managed by the household and SOHO credit extension system.

9.3.1.1.2.5 Examination of credit

For a large amount of credit line, after the approval of credit extension, the Group regularly examines the borrower’s credit status and the adequacy of the borrower’s credit rating as in part of the subsequent management process. In addition, the Group significantly focuses on industries by increasing credit risks based on the analysis of the risk indicators and examines the sample for smaller credit extensions.

9.3.1.1.2.6 Risk mitigation policy

The Group obtains the collateral for the granted loans in order to reduce risks. The amount and type of the collateral required depends on an assessment of the credit risk of the counterparty. Guidelines are implemented regarding the acceptability of types of collateral and valuation parameters. The main types of the collateral obtained are as follows:

- For retail lending, mortgages over residential properties
- For commercial lending, charges over real estate properties, inventory and trade receivables
- For securities lending and reverse repurchase transactions, cash, or securities

9.3.1.2 Debt securities

The Group trades the debt securities above the Investment–Grade Status level in order to manage the credit risks and manage the exposure of credit ratings to maintain credit quality of the assets.

9.3.1.3 Derivative financial instruments

The credit risk arising from the derivative financial instruments is, at any time, limited to those with the positive fair values, as recorded on the statement of financial position. The Group manages the exposure as a part of the unused commitment of loans.

9.3.2 Significant increase in credit risk

The Group measures the expected credit loss for debt instruments measured at amortized cost or fair value through other comprehensive income in three stages as described below:

9.3.2.1 Stage 1: 12-month expected credit loss

For financial assets of which the credit risk has not increased significantly since initial recognition, expected credit losses that result from default events that are possible within 12 months after the reporting date are recognized.

9.3.2.2 Stage 2: Lifetime expected credit loss

For financial assets of which the credit risk has increased significantly since initial recognition, expected credit losses that result from all possible default events over the expected life of the financial instrument are recognized.

9.3.2.3 Stage 3: Lifetime expected credit loss

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Lifetime ECL is recognized for credit- impaired financial assets, and interest income is recognized using the EIR on amortized cost.

The Group assesses at each reporting date whether the significant of the increase of the credit risk compared to that of initial recognition, using internal and external credit rating information, early warning system and number of days past due.

9.3.2.4 Default

The Group considers that a default has occurred for financial assets on following situations:

A) When receivables are sold despite of an economic loss

B) When receivables have decreased due to adjustments resulting in an exemption of principal, interest or related fees or delayed payments

C) When the borrower has been declared bankruptcy, or has declared bankruptcy or has taken other similar measures to delay or avoid repayments

9.3.2.5 Methodology for determining whether a financial asset is credit-impaired

A financial item is deemed impaired if, and only if, there is objective evidence of impairment as a result of one or more events which have occurred after the initial recognition of the item (an incurred ‘loss event’) and that loss event (or events) has an impact on the estimated future cash flows, such as changes in arrears or economic conditions which correlate with defaults, delinquency in interest for more than 90 days, credit deterioration resulting in misleading information, damages incurred due to poor exposure and significant financial difficulty of the issuer or obligor.

9.3.3 Measurement of ECL

Expected credit losses are a probability-weighted estimate of credit losses (i.e. the present value of all cash shortfalls) over the expected life of the financial instrument. A cash shortfall is the difference between the cash flows that are due to an entity in accordance with the contract and the cash flows that the entity expects to receive.

Historical information is an important anchor or base from which to measure expected credit losses. However, the Group adjusts historical data, such as credit loss experience, on the basis of current observable data to reflect the effects of the current conditions and its forecasts of future conditions that did not affect the period on which the historical data is based, and to remove the effects of the conditions in the historical period that are not relevant to the future contractual cash flows. Also, the Group measures ECL using the macroeconomic factors such as the growth rate, interest rate and stock indices. The methodology for future economic forecasts is regularly reviewed.

If the credit risk on financial instruments, for which lifetime expected credit losses have been recognized, subsequently improves so that the requirement for recognizing lifetime expected credit losses is no longer met, the loss allowance should be measured at an amount equal to 12-month expected credit losses.

9.3.4 Write-off

Financial assets are written off when an entity has no reasonable expectations of recovering the contractual cash flows on a financial asset in its entirety or a portion thereof. Generally, financial assets are written off when it is determined that the Group is not able to generate sufficient cash flows to make repayments. However, financial assets written off can be recovered by the Group.

9.3.5 The maximum exposure to credit risk

The maximum exposure to credit risk as of March 31, 2019 and December 31, 2018 are as follows. The following table shows the maximum exposure to credit risk for the components of the statement of financial position, including derivatives, by geography of counterparty and by industry before the effect of mitigation through the use of master netting and collateral agreements. Equity securities in financial assets at FVTPL, financial assets measured at FVTPL, financial assets available–for–sale and financial assets measured at FVOCI are excluded. (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
On–balance-sheet items		
Due from banks	₩ 12,351,435	₩ 18,331,283
Financial assets measured at FVTPL		
Debt securities	2,668,742	2,484,378
Derivative assets held for trading	3,740,956	3,342,588
Convertible privately-placed bonds	404,170	389,381
	6,813,868	6,216,347
Financial assets measured at FVOCI	35,430,934	33,777,743
Securities measured at amortized cost	14,139,936	13,582,381
Derivative assets used for hedging	30,516	6,755
Loans	246,911,576	244,468,590
Others	16,638,183	11,160,654
Merchant banking account assets	3,307,085	2,940,272
	₩ 335,623,533	₩ 330,484,025
Off–balance-sheet items		
Financial guarantees	₩ 498,346	₩ 501,694
Guarantee contracts	16,046,514	15,879,982
Commitment	84,517,331	80,951,728
Merchant banking account-commitment	1,149,000	1,199,000
	₩ 102,211,191	₩ 98,532,404

9.3.6 Details of collateral management and credit risk mitigation

Details of collateral management and credit risk mitigation as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019			
	Impaired loan			
Classification	Individual assessment		Collective assessment	
Guarantees	₩	38,921	₩	85,241
Deposits		55,698		6,950
Real estates		458,635		232,981
Securities		6,885		21
Others		2,325		1,208
	₩	562,464	₩	326,401

	December 31, 2018			
	Impaired loan			
Classification	Individual assessment		Collective assessment	
Guarantees	₩	44,752	₩	86,630
Deposits		56,078		7,118
Real estates		397,273		193,469
Securities		6,885		7,601
Others		63		14,318
	₩	505,051	₩	309,136

9.3.6.1 Financial assets with collaterals that do not recognize the allowance for losses amounted to ₩ 60,242 million as of March 31, 2019. (₩ 63,111 million as of December 31, 2018)

9.3.6.2 There is no change in the collateral policy of the Group.

9.3.7 Credit risk exposure

9.3.7.1 Loans

As of March 31, 2019 and December 31, 2018, carrying amounts of loans by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

	March 31, 2019				
Classification	12-month expected credit loss	Life time expected credit loss: Non credit-impaired loans	Life time expected credit loss: Credit-impaired loans	Subject to the application of credit-impaired approach	Total
Household loans					
Grade 1	₩ 78,764,306	₩ 9,851,966	₩ -	₩ -	₩ 88,616,272
Grade 2	3,814,706	14,180,994	-	-	17,995,700
Grade 3	149,494	400,912	241,861	-	792,267
	₩ 82,728,506	₩ 24,433,872	₩ 241,861	₩ -	₩ 107,404,239
Corporate loans					
Grade 1	80,868,949	2,443,112	-	-	83,312,061
Grade 2	44,478,248	8,149,140	-	-	52,627,388
Grade 3	157,317	2,340,645	1,325,374	778,679	4,602,015
	₩ 125,504,514	₩ 12,932,897	₩ 1,325,374	₩ 778,679	₩ 140,541,464
	₩ 208,233,020	₩ 37,366,769	₩ 1,567,235	₩ 778,679	₩ 247,945,703

	December 31, 2018				
Classification	12-month expected credit loss	Life time expected credit loss: Non credit-impaired loans	Life time expected credit loss: Credit-impaired loans	Subject to the application of credit-impaired approach	Total
Household loans					
Grade 1	₩ 76,968,888	₩ 8,175,771	₩ -	₩ -	₩ 85,144,659
Grade 2	3,456,645	18,112,858	-	-	21,569,503
Grade 3	95,271	420,049	232,606	-	747,926
	₩ 80,520,804	₩ 26,708,678	₩ 232,606	₩ -	₩ 107,462,088
Corporate loans					
Grade 1	81,612,332	4,534,934	-	-	86,147,266
Grade 2	39,133,181	7,997,842	-	-	47,131,023
Grade 3	266,807	2,405,720	1,282,121	777,180	4,731,828
	₩ 121,012,320	₩ 14,938,496	₩ 1,282,121	₩ 777,180	₩ 138,010,117
	₩ 201,533,124	₩ 41,647,174	₩ 1,514,727	₩ 777,180	₩ 245,472,205

Deferred loan fees, net of expenses are not reflected in the carrying amounts above.

As of March 31, 2019 and December 31, 2018, The Group classifies the grade of loan in accordance with the credit rating chart below, based on the credit worthiness of borrowers.

	March 31, 2019		
Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.90% of PD	Less or equal to 0.60% of PD	Less or equal to 1.70% of PD
Grade 2	From 0.90% to 22.02% of PD	From 0.60% to 13.12% of PD	From 1.70% to 20.87% of PD
Grade 3	From 22.02% to 100% of PD	From 13.12% to 100% of PD	From 20.87% to 100% of PD

	December 31, 2018		
Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.93% of PD	Less or equal to 0.58% of PD	Less or equal to 1.78% of PD
Grade 2	From 0.93% to 19.65% of PD	From 0.58% to 12.43% of PD	From 1.78% to 21.02% of PD
Grade 3	From 19.65% to 100% of PD	From 12.43% to 100% of PD	From 21.02% to 100% of PD

9.3.7.2 Off-balance-sheet items

As of March 31, 2019 and December 31, 2018, exposures of off-balance-sheet items by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

	March 31, 2019							
			Lifetime expected credit losses					
Classification		12 month expected credit loss		Non credit-impaired loans		Credit-impaired loans		Total
Financial guarantees								
Grade 1	₩	278,437	₩	51,760	₩	-	₩	330,197
Grade 2		74,600		93,399		-		167,999
Grade 3		-		137		13		150
		353,037		145,296		13		498,346
Guarantee contracts								
Grade 1		11,567,109		910,873		-		12,477,982
Grade 2		2,183,417		1,188,330		-		3,371,747
Grade 3		5,634		114,958		76,193		196,785
		13,756,160		2,214,161		76,193		16,046,514
Commitment								
Grade 1		66,684,772		1,650,197		-		68,334,969
Grade 2		8,892,898		6,729,325		-		15,622,223
Grade 3		18,372		439,201		102,566		560,139
		75,596,042		8,818,723		102,566		84,517,331
	₩	89,705,239	₩	11,178,180	₩	178,772	₩	101,062,191

	December 31, 2018							
			Lifetime expected credit losses					
Classification		12 month expected credit loss		Non credit-impaired loans		Credit-impaired loans		Total
Financial guarantees								
Grade 1	₩	281,036	₩	62,912	₩	-	₩	343,948
Grade 2		63,998		93,631		-		157,629
Grade 3		-		117		-		117
		345,034		156,660		-		501,694
Guarantee contracts								
Grade 1		12,123,842		1,413,618		-		13,537,460
Grade 2		1,398,832		556,082		-		1,954,914
Grade 3		7,955		306,074		73,579		387,608
		13,530,629		2,275,774		73,579		15,879,982
Commitment								
Grade 1		62,577,795		3,998,914		-		66,576,709
Grade 2		6,913,754		6,862,802		-		13,776,556
Grade 3		10,675		483,613		104,175		598,463
		69,502,224		11,345,329		104,175		80,951,728
	₩	83,377,887	₩	13,777,763	₩	177,754	₩	97,333,404

9.3.7.2 Off-balance-sheet items

As of March 31, 2019 and December 31, 2018, the credit rating classification of off-balance-sheet items of the Group based on internal rating used by the Bank and credit rating by external rating agencies is as follows:

	March 31, 2019		
Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.90% of PD	Less or equal to 0.60% of PD	Less or equal to 1.70% of PD
Grade 2	From 0.90% to 22.02% of PD	From 0.60% to 13.12% of PD	From 1.70% to 20.87% of PD
Grade 3	From 22.02% to 100% of PD	From 13.12% to 100% of PD	From 20.87% to 100% of PD

	December 31, 2018		
Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.93% of PD	Less or equal to 0.58% of PD	Less or equal to 1.78% of PD
Grade 2	From 0.93% to 19.65% of PD	From 0.58% to 12.43% of PD	From 1.78% to 21.02% of PD
Grade 3	From 19.65% to 100% of PD	From 12.43% to 100% of PD	From 21.02% to 100% of PD

9.3.7.3 Debt securities

As of March 31, 2019 and December 31, 2018, carrying amounts of debt securities by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

	March 31, 2019			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt	Credit-impaired debt	Total
Loans and receivables at amortized cost				
Grade 1	₩ 14,143,013	₩ -	₩ -	₩ 14,143,013
Grade 2	-	-	-	-
Grade 3	-	-	-	-
	14,143,013	-	-	14,143,013
Financial assets at FVOCI				
Grade 1	35,430,934	-	-	35,430,934
Grade 2	-	-	-	-
Grade 3	-	-	-	-
	35,430,934	-	-	35,430,934
	₩ 49,573,947	₩ -	₩ -	₩ 49,573,947

	December 31, 2018			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt	Credit-impaired debt	Total
Loans and receivables at amortized cost				
Grade 1	₩ 13,585,330	₩ -	₩ -	₩ 13,585,330
Grade 2	-	-	-	-
Grade 3	-	-	-	-
	13,585,330	-	-	13,585,330
Financial assets at FVOCI				
Grade 1	33,777,743	-	-	33,777,743
Grade 2	-	-	-	-
Grade 3	-	-	-	-
	33,777,743	-	-	33,777,743
	₩ 47,363,073	₩ -	₩ -	₩ 47,363,073

The credit ratings of debt securities based on the internal rating used by the Group and credit ratings by external credit rating agencies are as follows:

			Overseas rating agencies	
Classification	Internal credit rating	Domestic rating agencies	Moody's	Fitch
Grade 1	A1 ~ A7	AAA ~ A–	Aaa ~ Baa2	AAA ~ BBB
Grade 2	B1 ~ B6	BBB+ ~ BB	Baa3 ~ B3	BBB– ~ B–
Grade 3	C1 ~ C3	BB– ~ B–	Caa1 ~ Caa3	CCC+ ~ CCC–

9.3.8 Credit risk concentration

9.3.8.1 Credit risk concentration in each major industry as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

		March 31, 2019	
Classification	Industry	Amounts	Ratio (%)
On balance sheet items			
Due from banks	Financial services	₩ 12,351,435	100.0
Financial assets measured at FVTPL	Financial services	1,130,720	36.8
	Manufacturing	564,372	18.4
	Public administration	1,343,495	43.7
	Wholesale & retail	20,144	0.7
	Others	14,181	0.4
		3,072,912	100.0
Financial assets measured at FVOCI	Financial services	18,372,015	51.9
	Manufacturing	133,406	0.3
	Public administration	15,113,186	42.7
	Construction	103,600	0.3
	Others	1,708,727	4.7
		35,430,934	100.0
Securities measured at amortized cost	Financial services	8,690,351	61.4
	Public administration	2,942,162	20.8
	Construction	259,985	1.8
	Others	2,250,515	16.0
		14,143,013	100.0
Loans	Household loans	107,404,239	43.3
	Corporate loans		
	Financial services	22,039,293	8.9
	Manufacturing	35,739,205	14.4
	Construction	3,750,291	1.5
	Wholesale & retail	16,154,016	6.5
	Real estate rental	32,098,970	12.9
	Others	30,759,689	12.4
	Deferred loan fees and expenses	301,543	0.1
		248,247,246	100.0
		₩ 313,245,540	

9.3.8.1 Credit risk concentration in each major industry as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd)

		March 31, 2019	
Classification	Industry	Amounts	Ratio (%)
Off balance sheet items			
Financial guarantees	Financial services	₩ 100,273	20.1
	Manufacturing	151,268	30.3
	Construction	12,306	2.5
	Wholesale & retail	99,129	19.9
	Real estate rental	59,176	11.9
	Others	76,194	15.3
		498,346	100.0
Guarantee contracts	Household	62,461	0.4
	Financial services	1,235,342	7.7
	Manufacturing	7,767,020	48.4
	Construction	1,955,113	12.2
	Wholesale & retail	2,064,793	12.9
	Real estate rental	143,254	0.9
	Others	2,818,531	17.5
		16,046,514	100.0
Commitment	Household	23,214,845	27.4
	Corporate Commitment		
	Financial services	8,006,982	9.5
	Manufacturing	28,297,776	33.5
	Construction	2,760,774	3.3
	Wholesale & retail	7,528,404	8.9
	Real estate rental	2,298,003	2.7
	Others	12,410,547	14.7
		84,517,331	100.0
		₩ 101,062,191	

9.3.8.1 Credit risk concentration in each major industry as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd)

Classification	Industry	December 31, 2018		
			Amounts	Ratio (%)
On balance sheet items				
Due from banks	Financial services	₩	18,331,283	100.0
Financial assets measured at FVTPL	Financial services		998,430	34.7
	Manufacturing		549,696	19.1
	Public administration		1,291,567	44.9
	Wholesale & retail		20,007	0.7
	Others		14,059	0.6
			2,873,759	100.0
Financial assets measured at FVOCI	Financial services		16,575,951	49.1
	Manufacturing		160,420	0.5
	Public administration		15,450,982	45.7
	Construction		81,305	0.2
	Wholesale & retail		16,444	0.1
	Others		1,492,641	4.4
			33,777,743	100.0
Securities measured at amortized cost	Financial services		8,474,741	62.4
	Public administration		3,041,114	22.4
	Construction		593,661	4.4
	Others		1,475,814	10.8
			13,585,330	100.0
Loans	Household loans		107,462,088	43.7
	Corporate loans			
	Financial services		19,996,420	8.1
	Manufacturing		36,587,992	14.9
	Construction		3,314,603	1.3
	Wholesale & retail		15,726,317	6.4
	Real estate rental		31,641,752	12.9
	Others		30,743,033	12.6
	Deferred loan fees and expenses		304,547	0.1
			245,776,752	100.0
		₩	314,344,867	

9.3.8.1 Credit risk concentration in each major industry as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd)

Classification	Industry	December 31, 2018 Amounts	December 31, 2018 Ratio (%)
Off balance sheet items			
Financial guarantees	Manufacturing	₩ 145,539	29.0
	Construction	10,054	2.0
	Wholesale & retail	93,610	18.7
	Financial services	97,895	19.5
	Real estate rental	59,163	11.8
	Others	95,433	19.0
		501,694	100.0
Guarantee contracts	Household	58,332	0.4
	Manufacturing	8,253,245	52.0
	Construction	1,973,896	12.4
	Wholesale & retail	2,082,637	13.1
	Financial services	1,214,159	7.6
	Real estate rental	114,653	0.7
	Others	2,183,060	13.8
		15,879,982	100.0
Commitment	Household	23,460,288	29.0
	Corporate Commitment		
	Manufacturing	3,483,161	4.3
	Construction	676,171	0.8
	Wholesale & retail	3,246,997	4.0
	Financial services	2,248,922	2.8
	Real estate rental	1,489,394	1.8
	Others	46,346,795	57.3
		80,951,728	100.0
		₩ 97,333,404	

9.3.8.2 Credit risk concentration in each major country as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions, ratio in %):

		March 31, 2019	
Classification	Country	Amounts	Ratio (%)
On balance sheet items			
Due from banks	Korea	₩ 7,815,687	63.3
	China	1,491,896	12.1
	U.S	413,286	3.3
	Japan	666,018	5.4
	Hong Kong	17,617	0.1
	Others	1,946,931	15.8
		12,351,435	100.0
Financial assets measured at FVTPL	Korea	3,068,731	99.9
	Others	4,181	0.1
		3,072,912	100.0
Financial assets measured at FVOCI	Korea	32,216,152	90.9
	China	1,175,157	3.3
	U.S	451,102	1.3
	Japan	73,980	0.2
	Hong Kong	51,708	0.1
	Others	1,462,835	4.2
		35,430,934	100.0
Securities measured at amortized cost	Korea	13,132,694	92.9
	China	469,056	3.3
	U.S	40,271	0.3
	Others	500,992	3.5
		14,143,013	100.0
Loans	Korea	226,835,824	91.4
	China	4,016,326	1.6
	U.S	1,972,921	0.8
	Japan	1,069,474	0.4
	Hong Kong	2,671,714	1.1
	Others	11,379,444	4.6
	Deferred loan fees and expenses	301,543	0.1
		248,247,246	100.0
		₩ 313,245,540	

9.3.8.2 Credit risk concentration in each major country as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions, ratio in %): (cont'd)

		March 31, 2019	
Classification	Country	Amounts	Ratio (%)
Off balance sheet items			
Financial guarantees	Korea	498,346	100.0
Guarantee contracts	Korea	12,418,479	77.4
	China	2,026,948	12.6
	U.S	69,698	0.4
	Japan	32,517	0.2
	Others	1,498,872	9.4
		16,046,514	100.0
Commitment	Korea	81,142,884	96.0
	China	1,197,449	1.4
	U.S	323,164	0.4
	Japan	79,152	0.1
	Others	1,774,682	2.1
		84,517,331	100.0
		₩ 101,062,191	

9.3.8.2 Credit risk concentration in each major country as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions, ratio in %): (cont'd)

Classification	Country	December 31, 2018 Amounts	December 31, 2018 Ratio (%)
On balance sheet items			
Due from banks	Korea	₩ 14,224,458	77.6
	China	1,649,719	9.0
	U.S	332,156	1.8
	Japan	130,885	0.7
	Hong Kong	131,129	0.7
	Others	1,862,936	10.2
		18,331,283	100.0
Financial assets measured at FVTPL	Korea	2,869,700	99.9
	Others	4,059	0.1
		2,873,759	100.0
Financial assets measured at FVOCI	Korea	30,667,572	90.8
	China	941,634	2.8
	U.S	484,303	1.4
	Japan	97,228	0.3
	Others	1,587,006	4.7
		33,777,743	100.0
Securities measured at amortized cost	Korea	12,648,401	93.1
	China	434,733	3.2
	U.S	39,569	0.3
	Others	462,627	3.4
		13,585,330	100.0
Loans	Korea	225,865,678	91.9
	China	3,748,338	1.5
	U.S	2,155,550	0.9
	Japan	943,580	0.4
	Hong Kong	2,381,680	1.0
	Others	10,377,379	4.2
	Deferred loan fees and expenses	304,547	0.1
		245,776,752	100.0
		₩ 314,344,867	

9.3.8.2 Credit risk concentration in each major country as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions, ratio in %): (cont'd)

		December 31, 2018	
Classification	Country	Amounts	Ratio (%)
Off balance sheet items			
Financial guarantees	Korea	501,694	100.0
Guarantee contracts	Korea	12,517,756	78.8
	China	1,678,983	10.6
	U.S	60,712	0.4
	Japan	35,883	0.2
	Others	1,586,648	10.0
		15,879,982	100.0
Commitment	Korea	77,420,624	95.6
	China	1,114,217	1.4
	U.S	1,061,045	1.3
	Japan	42,891	0.1
	Others	1,312,951	1.6
		80,951,728	100.0
		₩ 97,333,404	

9.4 Liquidity risk

Liquidity risk is defined as the risk that the Group will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. Liquidity risk arises because of the possibility that the Group might be unable to meet its payment obligations when they fall due under both normal and stress circumstances.

9.4.1 Measurement of liquidity risk

The Group maintains a limit management indicator to measure the liquidity coverage ratio, loan to deposit ratio in Korean won, the liquidity coverage ratio in foreign currency, net stable funding ratio and long–term access to financing ratio in foreign currency in accordance with the guidelines and standards of the Financial Supervisory Service. In addition, the Group maintains a monitoring indicator to measure unbalance of funding, etc. to manage the liquidity risk, and manages early warning indicators in order to identify worsening trends in early stage to respond in a timely manner.

9.4.2 Management of liquidity risk

At an early stage, the Group identifies factors affecting liquidity in order to manage liquidity risks and has achieved an adequate level of liquidity via performing a systematic management.

The Group has the following basic principles for liquidity risk management:

－Comply with limits and early warning indicators set for its liquidity risk
－Regularly execute an analysis of stress tests and prepare an emergency procurement plan in case of liquidity
－Focus on maintaining a diversified portfolio in order to avoid excessive concentrations of risks
－Evaluate and manage the effect of a large amount of money which is loaned out, invested, or procured on liquidity risks

In order to manage the liquidity risks, the Group is building the internal control systems for each department. In order to comply with Liquidity ratios and the maturity mismatch ratio set by the Financial Supervisory Service, the Comprehensive Risk Management monitors the ratios based on the calculated univariate liquidity ratio and maturity mismatch ratios. Liquidity risk status is reported to the Risk Management Operation Committee on a monthly basis and to the Risk Management Committee on a quarterly basis.

In order to maintain the liquidity risk management indicators to stay within the acceptable limits, the Treasury Department and the International Finance Department recommends the necessary measures in relation to the procurement and operation of the assets and liabilities traded in the capital market. In addition, the emergency planning in stages has been established in order to respond to liquidity emergencies. Financial planning department has established a portfolio management strategy based on the internal and external liquidity risk management requirements, procurement, and an outlook on the operating markets.

9.4.3 Contractual maturities analysis of financial liabilities

9.4.3.1 Analysis criteria

The details of the remaining contractual maturities of financial liabilities are analyzed by the earliest maturity date when the Group would be required to pay, based on the undiscounted cash outflows of the Group's financial liabilities. In addition, financial liabilities at fair value through profit or loss and depository liabilities (payment on demand) are shown at fair value in the immediate payment column. All derivatives used for hedging purposes are interest rate swaps, and those are shown in net cash flows as all interest rate swaps are paid by the net amount.

9.4.3.2 The remaining contractual maturities of financial liabilities

The remaining contractual maturities of financial liabilities as of March 31, 2019 and December 31, 2018 are summarized as follows (Korean won in millions):

	March 31, 2019						
Classification	On demand	Less than 1 month	1–3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities measured at FVTPL	₩ 3,441,408	₩ -	₩ -	₩ -	₩ -	₩ 720,675	₩ 4,162,083
Deposits	105,804,097	21,133,091	30,309,106	82,843,139	8,696,213	2,116,625	250,902,271
Borrowings	2,680,585	3,901,046	2,614,401	2,969,503	2,327,824	470,513	14,963,872
Debentures	767	870,000	2,234,573	6,934,328	12,893,342	2,539,875	25,472,885
Derivative liabilities used for hedging purposes	-	786	(2,531)	4,786	16,712	(177,462)	(157,709)
Other liabilities	7,217,279	15,688,962	10,086	42,997	4,098	-	22,963,422
Merchant banking account liabilities	3,157,808	-	-	-	-	-	3,157,808
	122,301,944	41,593,885	35,165,635	92,794,753	23,938,189	5,670,226	321,464,632
Off-balance sheet items							
Finance guarantee	498,346	-	-	-	-	-	498,346
Loan commitment	84,517,331	-	-	-	-	-	84,517,331
Merchant banking account-commitment	1,149,000	-	-	-	-	-	1,149,000
	₩ 86,164,677	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 86,164,677

9.4.3.2 The remaining contractual maturities of financial liabilities (cont'd)

	December 31, 2018						
Classification	On demand	Less than 1 month	1–3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities at FVTPL	₩ 3,089,884	₩ -	₩ -	₩ -	₩ -	₩ 720,675	₩ 3,810,559
Deposits	101,632,255	22,307,060	29,137,822	84,914,686	9,580,029	1,943,045	249,514,897
Borrowings	2,758,515	2,992,641	1,877,148	5,140,794	2,155,092	468,608	15,392,798
Debentures	623	750,000	1,546,715	7,935,979	12,723,870	2,501,441	25,458,628
Derivative liabilities used for hedging purposes	-	(154)	(2,305)	6,660	28,891	(165,575)	(132,483)
Other liabilities	6,233,528	13,132,943	3,001	53,427	11,488	-	19,434,387
Merchant banking account liabilities	1,038,392	1,300,532	-	-	-	-	2,338,924
	114,753,197	40,483,022	32,562,381	98,051,546	24,499,370	5,468,194	315,817,710
Off-balance sheet items							
Finance guarantee	501,694	-	-	-	-	-	501,694
Loan commitment	80,951,728	-	-	-	-	-	80,951,728
Merchant banking account-commitment	1,199,000	-	-	-	-	-	1,199,000
	₩ 82,652,422	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 82,652,422

Assets available for use in carrying out unused loan commitments after redeeming all financial liabilities are cash and bank deposits, debt securities, equity securities, and loans. In addition, the Group is able to cope with unexpected cash flows through the sale of securities and the additional sources of funding, similar to the asset backed securitization.

9.5 Market risk

Market risk is risk incurred in assets and liabilities subject to management based on the changes in market prices such as interest rate, stocks and foreign exchange, etc.

9.5.1 Market risk management

The purpose of market risk management is to manage the loss of assets and liabilities incurred due to changes in market variables such as interest rates, foreign exchanges and equity prices to remain within the allowable limits in order to ensure the profitability and stability.

9.5.2 Market risk management targets

Market risk management targets include marketable securities, foreign currency net positions, derivatives and other assets and liabilities with embedded market risks. The Group classifies exposures to market risk into either trading or non–trading positions and manages each of those portfolios separately.

9.5.3 Management of market risk related to trading position

9.5.3.1 Trading position classification

The trading position includes interest rate positions, equity price positions, commodity positions, and all foreign exchange positions:

- Financial instruments for the purpose of acquiring the differences incurred due to short–term trading or price fluctuations
- Financial instruments for the purpose of hedging risks
- Financial instruments for the purpose of acquiring arbitrages
- Financial instruments for the purpose of acquisition, mediation and market creation
- Derivatives which are not applied to fair value hedge accounting under KIFRS
- All foreign exchange and gold positions in accordance with Regulations on Supervision of Banking Business Appendix 3–2

9.5.3.2 Management of the trading position limits

The Risk Management Committee divides capital, annual loss, exposure and VaR limit in relation to market risks of the trading position by business unit (division) annually. Within the given limit, the Risk Management Operation Committee further subdivides the limits by business units (divisions) and desks. The Risk Management Group provides information necessary for deliberation and review by the Committee, reports trading limits, and measures risks. The Middle Office performs the mark–to–market measures, monitors trade violations and compliance with the limits. The Middle Office has established regulations and policies of trading and comply with them. It measures market risks in relation to trading position and daily inspects for compliance of limits by risks. Moreover, it daily monitors changes in exposure subject to management, verifies for compliance of limits, performs expost facto verification and analyses urgent situations and reports to the management.

The Group regularly measures the degree of market risks and complies with the allowable limits set for the various areas of the trading position. In addition, the Group reviews the adequacy of the risk–reward ratio by evaluating risks and related profits and losses on a regular basis and complies with the established trading policy regulations. The Group separately examines and analyses the change in exposures with checking its compliance of the limits and emergency situations, and reports to the management on a daily basis.

9.5.3.3 Value at Risk

Value at Risk (VaR) is a method that manages and measures the degree of market risks of the trading position subject to exposure. The Group calculates the VaR by applying Historical Simulation Method for 10 days in the 99% confidence level. Furthermore, the stress test is performed to measure the size of the loss in order to account for the method’s limited use in extreme cases.

9.5.3.4 Back test

Back–testing is performed daily on trading units to verify the predictive power of the value–at risk calculations. When back–testing is performed, the Group compares the daily profits and losses with VaR of the previous day and reports the result of subsequent examinations separately to the director of the Risk Management Group. The Group analyses the result of subsequent examination and reports to the Financial Supervisory Service and management.

9.5.3.5 Details of market risk VaR

Details of market risk 10 Day VaR (including 10 Day Stressed VaR) by risk type as of March 31, 2019 and December 31, 2018 are summarized as follows (Korean won in millions):

		March 31, 2019		Average		Min		Max		December 31, 2018
Interest rates risk	₩	28,045	₩	25,791	₩	20,446	₩	32,702	₩	21,884
Foreign exchange rates risk		138,401		135,753		128,704		142,244		129,672
Stock price risk		19,137		17,409		14,202		21,379		21,098
Option risk		1,785		2,802		1,785		4,556		4,500
Total risk (*)	₩	135,800	₩	131,974	₩	120,001	₩	142,909	₩	121,657

(*) The calculation of the total risk VaR takes into consideration the correlation and diversification effects between each risk factor and therefore, it is not the same as the total VaRs.

9.5.4 Management of market risk related to non-trading position

9.5.4.1 Interest rate risk

Interest rate risk of non-trading position is a risk of losses in financial assets and liabilities with interest rates due to adverse changes in interest rates and is incurred when maturity structure does not match interest rate setting cycle of the related assets and liabilities. The Group manages the interest rate risks of non-trading position in order to maintain the stability of net interest income and net asset value based on changes in interest rates. The following is subject to the Group's management of interest rate risk.

- Financial assets with interest rates such as bank deposits, debt securities, and loans
- Financial liabilities with interest rates such as depository liabilities, borrowings, and debentures
- Interest-related financial derivatives such as interest rate swaps

Interest rate risk is calculated using the interest rate gaps. The interest rate risks measure the interest rate gap ratio as a primary indicator, and the interest rate EaR, VaR and duration are used as secondary indicators. The Risk Committee establishes the interest risk limits on an annual basis; the Risk Committee as well as the Risk Management Committee measures the interest rate risk indicators on a monthly basis and reports the compliance with the limits to management.

The interest rate VaR is an estimated maximum loss of net asset due to the adverse changes of the interest rate. Details of the interest rate VaR as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019	Average	Min	Max	December 31, 2018
Interest rate VaR	₩ 471,830	₩ 421,363	₩ 345,005	₩ 471,830	₩ 337,150

The interest rate VaR is calculated by using the maturity bucket reprising gap, the interest maturity bucket on modified duration, and the expected gap due to the interest rate fluctuation in accordance with BIS standards. Assets below the substandard and amounts in checking accounts are excluded from the calculated amount.

9.5.4.2 Equity price risk

Equity price risk is a risk incurred when the fair value of equities results in changes in the level of related revenue and capital. Fluctuation in equity reflects the sensitivity of each equity. Effects on capital due to the fluctuation in equity price risk as of March 31, 2019 are as follows (Korean won in millions):

	March 31, 2019			
Classification	20% decline	10% decline	10% rise	20% rise
Equity price risk	₩ (73,964)	₩ (36,982)	₩ 36,982	₩ 73,964

9.5.5 Currency risk concentration

Currency risk is a risk incurred when the value of a financial instrument or future cash flows fluctuates due to the changes in foreign exchange rates. Currency risk arises from the financial instruments expressed in currencies other than the functional currency. Currency risk does not arise from the financial instruments expressed in the functional currency or in non–monetary items measured by using the historical foreign exchange rates. In order to establish the stop loss and limits, the Group manages the foreign exchange net exposure amount of the trading and non–trading positions by each currency.

9.5.5 Currency risk concentration (cont'd)

Significant foreign currency assets and liabilities denominated in Korean won as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019						
Classification	USD	JPY	EUR	CNY	IDR	Others	Total
Assets							
Cash and due from bank	₩ 2,677,905	₩ 366,859	₩ 620,949	₩ 1,479,279	₩ 163,196	₩ 853,663	₩ 6,161,851
Financial assets measured at FVTPL	86,079	419	6,569	138,492	-	6,845	238,404
Financial assets measured at FVOCI	4,554,101	-	-	1,155,562	187,337	681,573	6,578,573
Securities measured at amortized cost	982,746	-	46,152	468,547	160,899	224,539	1,882,883
Loans	21,877,794	1,345,970	3,375,246	4,784,049	1,849,688	2,099,816	35,332,563
Derivative assets used for hedging	21,762	-	-	-	-	-	21,762
Others	4,226,478	195,053	192,718	1,190,396	27,778	451,559	6,283,982
	₩ 34,426,865	₩ 1,908,301	₩ 4,241,634	₩ 9,216,325	₩ 2,388,898	₩ 4,317,995	₩ 56,500,018
Liabilities							
Financial liabilities measured at FVTPL	₩ 78,511	₩ 119	₩ 3,065	₩ 3,158	₩ -	₩ -	₩ 84,853
Deposits	17,899,059	1,644,739	2,734,100	6,681,050	1,646,901	3,419,913	34,025,762
Borrowings	8,345,621	27,278	480,734	59,438	140,561	72,427	9,126,059
Debentures	5,428,834	-	56,735	220,079	80,961	462,206	6,248,815
Derivative liabilities used for hedging	38,980	-	-	-	-	-	38,980
Others	6,006,823	648,520	808,479	1,341,720	15,637	558,547	9,379,726
	₩ 37,797,828	₩ 2,320,656	₩ 4,083,113	₩ 8,305,445	₩ 1,884,060	₩ 4,513,093	₩ 58,904,195

9.5.5 Currency risk concentration (cont'd)

Classification	December 31, 2018						
	USD	JPY	EUR	CNY	IDR	Others	Total
Assets							
Cash and due from bank	₩ 4,393,996	₩ 366,034	₩ 439,873	₩ 1,610,995	₩ 180,140	₩ 906,390	₩ 7,897,428
Financial assets measured at FVTPL	79,443	1,729	2,920	67,252	-	5,882	157,226
Financial assets measured at FVOCI	4,613,081	-	-	925,377	132,079	879,661	6,550,198
Securities measured at amortized cost	966,250	-	46,447	434,260	132,895	215,269	1,795,121
Loans	20,841,546	1,112,142	3,390,940	4,607,085	1,687,296	2,256,150	33,895,159
Derivative assets used for hedging	1,575	-	-	-	-	-	1,575
Others	2,813,675	187,989	101,402	528,893	40,261	597,651	4,269,871
	₩ 33,709,566	₩ 1,667,894	₩ 3,981,582	₩ 8,173,862	₩ 2,172,671	₩ 4,861,003	₩ 54,566,578
Liabilities							
Financial liabilities measured at FVTPL	₩ 66,203	₩ 42	₩ 1,082	₩ 3,363	₩ 335	₩ -	₩ 71,025
Deposits	18,951,824	1,826,124	2,495,062	5,956,135	1,331,435	3,415,089	33,975,669
Borrowings	8,940,443	54,243	475,139	128,949	201,954	360,545	10,161,273
Debentures	4,626,845	-	56,681	212,376	77,795	528,230	5,501,927
Derivative liabilities used for hedging	82,068	-	-	-	-	-	82,068
Others	3,662,947	235,282	285,030	730,544	29,561	254,244	5,197,608
	₩ 36,330,330	₩ 2,115,691	₩ 3,312,994	₩ 7,031,367	₩ 1,641,080	₩ 4,558,108	₩ 54,989,570

9.6 Operating risk

Operational risk is the risk of loss arising from system failure, human error, fraud or other external events. Risks related to legal or regulatory implications are identified as operational risks but risks related to the strategy of damaging reputation are excluded from operational risks. Operational risk includes losses from internal operational problems and externalities, such as natural disasters, etc., and legal lawsuit, but excludes losses from policy decision errors or unmeasurable reputation damage, etc. Operational risk does not have a direct correlation with income and the Group needs to mitigate such risk through internal controls and insurance.

The Group calculates the operational risk capital on a consolidation basis. The Group uses the Advanced Measurement Approach (AMA) and the subsidiary uses the basic indicator to manage total capital. Length of the period in which the AMA is in use is one year with a 99.9% confidence level. The Group uses the loss distribution approach to measure 9 different business units and 7 operational risk event types. In addition, the Group combines the loss distribution of the internal and external data on losses with results of the scenario analysis to calculate the amount of capital and takes into account business environment and changes in the controls in order to adjust the amount of capital. The Group uses the basic indicator by applying specific coefficient to the average profit of 3 years.

The Risk Management Committee determines the operational risk limits. In case the excess limit is expected, the management plan for the excess of internal capital limits should be reported to the Risk Management Operation Committee, and if additional limits are given, an approval from the Risk Management Committee is needed beforehand. If under exceptional case where the limit is exceeded, an expost facto approval from the Risk Management Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

9.7 Capital management

The Group implements the BIS capital requirement system in order to secure the capital adequacy and comply with the supervisory regulations. By BIS (Bank for International Settlements) regulation, the Group keeps its BIS capital adequacy ratio (hereinafter BIS ratio) above the minimum BIS for risk-weighted assets. In addition, the Group performs a capital adequacy assessment in order to cope with an unexpected loss.

Risk–weighted assets which are calculated per each risk type when calculating BIS ratio are as follows:

- Risk–weighted assets of credit risk are calculated using the Basic Internal Ratings–Based Approach (IRB). The Group uses the Standardized Approach (SA) for governments, banks, public institutes, overseas exposure, other assets, and etc.
- Risk–weighted assets of market risk are calculated by adding higher of (1) the VaR measured on the previous business day and the average VaR measured in the last 60 business days times (3+multiplier) and (2) the sVaR measured on the previous business day under emergency and the averages VaR measured in the last 60 business days times (3+multiplier) under emergency, to the separate risk calculated by using a standardized model. The FSS provides multiplier to each bank based on the results of verification and the level of meeting the requirements.
- Risk–weighted assets of the operational risk are calculated by multiplying 12.5 to the amount of operational risk capital calculated by Advanced Measurement Approach (AMA) for the Bank and Basic Indicator Approach (BIA) for its subsidiaries.

Regulatory capital in accordance with the Regulations on the Supervision of Banking Business for calculating BIS ratio is as follows:

- Common equity: Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments, retained earnings, accumulated other comprehensive income and other capital surplus, capital adjustments, non-controlling interest on common shares issued by banks, affiliated subsidiaries, etc.
- Other basic capital: The capital securities to meet accreditation requirements of other basic capital, capital surplus associated with the issuance of the other basic capital, non-qualifying capital securities and the accredited amount as other basic capital of a non-controlling interest on equity securities issued by a subsidiary, etc.
- Supplementary capital: The capital securities to meet supplementary capital accreditation requirements, capital surplus associated with the issuance of supplementary capital, the accredited amount of supplementary capital of non-qualifying capital securities, the accredited amount as supplementary capital of a non-controlling interest on equity securities issued by a subsidiary, eligible allowance for possible loan losses on "normal" or "precautionary" category assets, allowance for possible loan losses in excess of the total amount of expected losses, etc.

9.7.1 Internal capital adequacy assessment and management

Internal capital is the amount which allows for continuous operation of business while accounting for all risks. Internal capital is defined as the size of capital needed to cope with unexpected loss under a certain rate. The purpose of managing the internal capital is to compare the size of internal capital and available capital (Tier 1) and to serve as a measure of financial strength. Managing the internal capital also provides the amount of risk–adjusted capital and basic measurement. The indicators are composed of the risk appetite ratio as well as exhaustion ratio of foreign holding limits. The risk appetite ratio is an internal capital ratio established after taking into consideration a capital buffer in Tier 1 capital. The exhaustion ratio of foreign holding limits is a ratio used to measure the amount of internal capital used against the internal capital limits.

Internal capital limits are established after accounting for the size of current and subsequent Tier 1 capital as well as the components, quality, risk appetite, target credit rating, operational strategy and business plans. The Risk Committee determines risk types and the internal capital limits for the Group more than once a year. In the case where new operations or the expansion of operations result in the amount exceeding the internal capital limits, an approval from the Risk Committee is needed beforehand. If such a situation occurs in cases outlined as exceptions, an approval from the Risk Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

10. Operating segment information

10.1 General information

In order to set strategies to achieve goal and efficiently conduct performance assessment, the business sectors of the Bank are divided by the operations as follows:
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A. Operating group segment: It consists of 4 groups (Center1, Center2, Chungcheong, Yeong-nam, and Ho-nam). It offers household loans and deposit, retirement pension benefit, company loans and deposit, etc.,
B. Capital market segment: This segmentation offers investment and operation of securities, purchasing and selling of public bonds, development and operation of derivatives.
C. Others segment: It consists of overseas business segment, headquarter supporting segment, trust segment, risk segment, audit segment and after-management segment.

In December 2018, the Group reorganized its central sales group 1 and central sales group 2 and reorganized its existing sales support group to reinforce on-site sales.

10.2 Profit or loss by operating segment

10.2.1 Details of net income by operating segments for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019								
	Operating group segments					Finance sector and other sector	Subtotal	Adjustments	Total
	Center1	Center2	Chungcheong	Yeongnam	Honam				
Operating income									
Net interest income	₩ 423,137	₩ 365,202	₩ 105,314	₩ 141,039	₩ 47,234	₩ 254,970	₩ 1,336,896	₩ 1,720	₩ 1,338,616
Net fee and commission income (loss)	73,227	68,530	14,518	24,249	7,659	49,437	237,620	(72,085)	165,535
Net other operating income (loss)	(219,703)	(186,466)	(61,156)	(83,381)	(25,923)	(568,748)	(1,145,377)	270,824	(874,553)
Net segment profit (loss)	276,661	247,266	58,676	81,907	28,970	(264,341)	429,139	200,459	629,598
Income tax expenses (income)	66,952	59,838	14,200	19,821	7,011	(63,292)	104,530	43,969	148,499
Net segment income (loss)	₩ 209,709	₩ 187,428	₩ 44,476	₩ 62,086	₩ 21,959	₩ (201,049)	₩ 324,609	₩ 156,490	₩ 481,099

	For the three-month period ended March 31, 2018							
	Operating group segments				Finance sector and other sector	Subtotal	Adjustments	Total
	Center	Chungcheong	Yeongnam	Honam				
Operating income								
Net interest income	₩ 791,843	₩ 101,105	₩ 139,679	₩ 44,491	₩ 209,745	₩ 1,286,863	₩ (16,455)	₩ 1,270,408
Net fee and commission income (loss)	148,182	14,616	21,324	7,676	39,124	230,922	(65,778)	165,144
Net other operating income (loss)	(420,589)	(59,255)	(78,645)	(25,208)	(351,828)	(935,525)	340,656	(594,869)
Net segment profit (loss)	519,436	56,466	82,358	26,959	(102,959)	582,260	258,423	840,683
Income tax expenses (income)	125,704	13,665	19,931	6,524	(50,720)	115,104	91,570	206,674
Net segment income (loss)	₩ 393,732	₩ 42,801	₩ 62,427	₩ 20,435	₩ (78,110)	₩ 441,285	₩ 192,724	₩ 634,009

10.2.2 Revenue from external customers in each operating sector for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019								
	Operating group segments								
Classification	Center1	Center2	Chungcheong	Yeongnam	Honam	Finance sector and other sector	Subtotal	Adjustments	Total
Revenue from external customers	₩ 449,519	₩ 416,842	₩ 106,832	₩ 149,772	₩ 50,794	₩ 392,737	₩ 1,566,496	₩ 12,678	₩ 1,579,174

	For the three-month period ended March 31, 2018							
	Operating group segments							
Classification	Center	Chungcheong	Yeongnam	Honam	Finance sector and other sector	Subtotal	Adjustments	Total
Revenue from external customers	₩ 880,773	₩ 103,477	₩ 148,094	₩ 48,705	₩ 338,307	₩ 1,519,356	₩ (8,796)	₩ 1,510,560

10.2.3 Significant non–cash transactions included in income of operating segments for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

For the three-month period ended March 31, 2019

Classification	Operating group segments					Finance sector and other sector	Subtotal	Adjustment	Total
	Center1	Center2	Chungcheong	Yeongnam	Honam				
Earnings from equity method investments	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 32,267	₩ 32,267	₩ 7	₩ 32,274
Depreciation and amortization	(12,171)	(21,992)	(4,437)	(3,245)	(1,332)	(58,618)	(101,795)	(2,881)	(104,676)
	₩ (12,171)	₩ (21,992)	₩ (4,437)	₩ (3,245)	₩ (1,332)	₩ (26,351)	₩ (69,528)	₩ (2,874)	₩ (72,402)

For the three-month period ended March 31, 2018

Classification	Operating group segments				Finance sector and other sector	Subtotal	Adjustment	Total
	Center	Chungcheong	Yeongnam	Honam				
Earnings from equity method investments	₩ -	₩ -	₩ -	₩ -	₩ 25,750	₩ 25,750	₩ -	₩ 25,750
Depreciation and amortization	(6,083)	(2,858)	(719)	(374)	(37,424)	(47,458)	70	(47,388)
	₩ (6,083)	₩ (2,858)	₩ (719)	₩ (374)	₩ (11,674)	₩ (21,708)	₩ 70	₩ (21,638)

10.3 Information about revenue by geographic region

Revenue by geographic region from the external customers for the three-month periods ended March 31, 2019 and 2018 and non–current assets by region as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Revenue from external customers (*1) For the three-month period ended March 31, 2019	Revenue from external customers (*1) For the three-month period ended March 31, 2018	Non–current assets (*2) March 31, 2019	Non–current assets (*2) December 31, 2018
Domestic	₩ 1,402,798	₩ 1,374,519	₩ 3,001,935	₩ 2,610,472
Foreign				
Hong Kong	15,588	16,122	474	484
Singapore	7,134	6,610	736	762
U.S	8,360	9,429	5,625	5,849
Japan	4,986	3,868	2,795	2,788
China	48,650	38,577	67,954	26,427
Indonesia	32,180	33,275	57,344	11,100
U.K	4,759	3,747	1,770	1,838
Canada	8,885	7,028	14,669	6,219
Myanmar	1,930	-	646	-
Others	31,226	26,182	3,043	3,082
	163,698	144,838	155,056	58,549
Adjustments	12,678	(8,797)	11,099	6,131
	₩ 1,579,174	₩ 1,510,560	₩ 3,168,090	₩ 2,675,152

(*1) Income from external customers is divided into categories of domestic and overseas based on the locations of operating branches.
(*2) Non-current assets consist of property and equipment, investment property, and intangible asset and are divided into categories of domestic and overseas based on the location of assets.

11. Cash and due from banks

11.1 Cash and due from banks as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Counterparty		March 31, 2019		December 31, 2018
Cash		₩	2,143,286	₩	2,120,840
Due from banks in Korean won					
Reserve with central bank and others	Bank of Korea ("BOK")		5,228,663		10,308,514
Monetary stabilization account	BOK		1,450,000		430,000
Time deposits and others	Bank of Communications		100,000		100,000
Other deposits	Other financial institutions		129,948		219,508
			6,908,611		11,058,022
Due from banks in foreign currencies					
Due from foreign banks	BOK and other banks		3,163,245		4,890,744
Time deposits	Bayern LB, etc.		970,377		1,043,465
Other due from banks	Other financial institutions		1,309,202		1,339,052
			5,442,824		7,273,261
		₩	14,494,721	₩	20,452,123

11.2 Restricted balances in due from banks as of March 31, 2019 and December 31, 2018 are summarized as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018	Restriction
Due from banks in Korean won					
Reserve deposits, etc.	₩	5,228,663	₩	10,308,514	Required under the *Banking Act* and other related regulations.
Monetary stabilization account		1,450,000		430,000	Required by the *Bank of Korea* for the purpose of liquidity management.
Investor's deposits		96,978		157,478	Required under the *Financial Investment Services and Capital Markets Act.*
Other deposits		500		500	Pledge creation and etc.
		6,776,141		10,896,492	
Due from banks in foreign currencies					
Due from banks on demand		1,336,610		3,334,662	Reserve deposits required under the *Banking Act* and other related regulations.
Due from others on demand		882,723		1,035,058	Deposits received for guarantees as margin for derivatives.
		2,219,333		4,369,720	
	₩	8,995,474	₩	15,266,212	

12. Financial assets measured at fair value through profit or loss

12.1 Financial assets mandatorily measured at fair value through profit or loss as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019		December 31, 2018	
Stocks	₩	130,910	₩	121,514
Government and public bonds		1,283,319		1,221,452
Financial bonds		491,803		451,431
Corporate bonds		889,439		807,436
Beneficiary certificates		1,555,031		1,342,349
Securities denominated in foreign currencies		746,336		572,238
Derivative assets held for trading		3,740,956		3,342,588
Other securities (Investment, etc.)		183,635		171,717
Convertible privately-placed bonds		404,170		389,381
	₩	9,425,599	₩	8,420,106

12.2 As of March 31, 2019 and December 31, 2018, the Group does not hold any financial assets designated as measured at fair value through profit or loss.

13. Financial assets measured at fair value through other comprehensive income

13.1 As of March 31, 2019 and December 31, 2018, measured at fair value through other comprehensive income are as follows (Korean won in millions):

Classification	Counterparty	Fair value (book value) March 31, 2019	Fair value (book value) December 31, 2018
Stocks	Daewoo Shipbuilding & Marine Engineering Co., Ltd., etc.	₩ 766,464	₩ 813,951
Investments in Partnership	Impact Finance Korea	170	173
Government and public bonds	Treasury bonds	10,705,726	11,399,359
	Housing bonds	3,326,219	3,246,004
	Other local bonds	60,278	19,873
		14,092,223	14,665,236
Finance bonds	Monetary stabilization securities	8,645,006	7,812,796
	Deposit bank bonds	329,677	338,850
	Small and medium-sized business banking bonds	570,451	388,808
	Industrial financial bonds	856,626	615,789
	Export-import credit bonds	30,206	16,674
		10,431,966	9,172,917
Corporate bonds and others	State owned entity bonds	3,877,525	2,950,617
	Corporate bonds	450,647	438,775
		4,328,172	3,389,392
Other securities	STX Engine Co., Ltd.	14,771	18,601
Securities denominated in foreign currencies	Equity securities in foreign currencies	232,511	234,592
	Bonds in foreign currencies	6,578,573	6,550,198
		6,811,084	6,784,790
		₩ 36,444,850	₩ 34,845,060

13.2 As of March 31, 2019 and December 31, 2018, details of equity instruments included in financial assets measured at FVOCI are as follows (Korean won in millions):

	March 31, 2019	
Counterparty	Book value	Fair value
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	₩ 251,985	₩ 251,985
CM International Financing Leasing Co., Ltd.	226,422	226,422
Consumer Credit Assistant Fund Co., Ltd.	125,821	125,821
UAMCO., Ltd.	115,229	115,229
The Korea Securities Finance Corporation	62,436	62,436
Taihan Electric Wire Co., Ltd.	44,924	44,924
Dongbu Steel Co., Ltd.	18,914	18,914
Korea Asset Management Corporation	15,737	15,737
STX Engine Co., Ltd.	14,771	14,771
Hyundai Merchant Marine Co., Ltd.	14,533	14,533
BC Card Co., Ltd.	11,735	11,735
ChinHung International, Inc.	11,572	11,572
Koramco REITs Management and Trust Co., Ltd.	10,715	10,715
Kumho Tire Co., Ltd.	10,608	10,608
Korea Enterprise Data Co., Ltd.	10,306	10,306
HJC Inc.	8,663	8,663
Daiyang Metal Co., Ltd.	8,501	8,501
Korea Money Brokerage Corp.	7,694	7,694
Mirae Credit Information Co., Ltd.	4,105	4,105
KHE Co., Ltd.	4,083	4,083
CLS Group Holdings AG	4,018	4,018
Korea Development Corporation, etc.	31,144	31,144
	₩ 1,013,916	₩ 1,013,916

Equity instruments that are held for strategic alliances, converted from debt instruments and acquired for access rights of systems and facilities are designated as measured at FVOCI.

13.2 As of March 31, 2019 and December 31, 2018, details of equity instruments included in financial assets measured at FVOCI are as follows (Korean won in millions): (cont'd)

	December 31, 2018	
Counterparty	Book value	Fair value
Daewoo Shipbuilding & Marine Engineering Co., Ltd.	₩ 307,881	₩ 307,881
CM International Financing Leasing Co., Ltd.	228,540	228,540
Consumer Credit Assistant Fund Co., Ltd.	121,313	121,313
UAMCO., Ltd.	118,130	118,130
The Korea Securities Finance Corporation	60,614	60,614
Taihan Electric Wire Co., Ltd.	43,131	43,131
STX Engine Co., Ltd.	18,601	18,601
Korea Asset Management Corporation	15,737	15,737
Dongbu Steel Co., Ltd.	15,028	15,028
Hyundai Merchant Marine Co., Ltd.	14,753	14,753
Kumho Tire Co., Ltd.	12,890	12,890
ChinHung International, Inc.	12,678	12,678
BC Card Co., Ltd.	11,430	11,430
Koramco REITs Management and Trust Co., Ltd.	10,481	10,481
Korea Enterprise Data Co., Ltd.	10,461	10,461
HJC Inc.	8,521	8,521
Korea Money Brokerage Corp.	7,237	7,237
Daiyang Metal Co., Ltd.	5,476	5,476
KHE Co., Ltd.	4,178	4,178
Mirae Credit Information Co., Ltd.	4,030	4,030
CLS Group Holdings AG	4,018	4,018
Korea Development Corporation	3,538	3,538
DB Asset Management Co., Ltd., etc.	28,651	28,651
	₩ 1,067,317	₩ 1,067,317

Equity instruments that are held for strategic alliances, converted from debt instruments and acquired for access rights of systems and facilities are designated as measured at FVOCI.

13.3 Details of equity instruments included in the financial assets measured at FVOCI derecognized for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Counterparty		March 31, 2019 Book value		For the three-month period ended March 31, 2019 Cumulative valuation gain (loss)	Reason for disposal
Taihan Electric Wire Co., Ltd.	₩	128	₩	(265)	Decision of the Board of Directors
AJIN P&P Co., Ltd.		275		(43)	Exercising right to sell stock by the Board of Directors
Zyle Motor Sales Co., Ltd.		1,392		107	Sale based on purchase proposal by existing shareholders
Hana Financial Group Inc.		2		-	Sales of stocks exchanged from merger
	₩	1,797	₩	(201)	

Counterparty		March 31, 2018 Book value		For the three-month period ended March 31, 2018 Cumulative valuation gain (loss)	Reason for disposal
Taihan Electric Wire Co., Ltd.	₩	550	₩	(1,169)	Decision of the Board of Directors
Oriental Precision & Engineering Co., Ltd.		708		(8,727)	Decision of the Board of Directors
JY Solutec Co., Ltd.		114		81	Sale of shares after the end of workout
	₩	1,372	₩	(9,815)	

13.4 There are no dividends recognized due to the equity instruments measured at FVOCI derecognized for the three-month period ended March 31, 2019. Dividends recognized in relation to the equity instruments measured at FVOCI held as of March 31, 2019 amount to ₩5,524 million.

13.5 Changes in the loss allowance in relation to financial assets measured at FVOCI for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019			
	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired debt securities	Credit-impaired debt securities	
Beginning balance	₩ 6,582	₩ -	₩ -	₩ 6,582
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision (reversal) for possible loan losses	754	-	-	754
New debt securities executed or purchased	-	-	-	-
Removed debt securities	(634)	-	-	(634)
Exchange rate fluctuation and others	(189)	-	-	(189)
Ending balance	₩ 6,513	₩ -	₩ -	₩ 6,513

Classification	For the three-month period ended March 31, 2018			
	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired debt securities	Credit-impaired debt securities	
Beginning balance	₩ 7,868	₩ 723	₩ -	₩ 8,591
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision (reversal) for possible loan losses	(212)	-	-	(212)
New debt securities executed or purchased	-	-	-	-
Exchange rate fluctuation and others	18	-	-	18
Ending balance	₩ 7,674	₩ 723	₩ -	₩ 8,397

13.6. Changes in the total book value in relation to financial assets measured at FVOCI for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 33,777,743	₩ -	₩ -	₩ 33,777,743
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
New financial assets executed or purchased	4,826,764	-	-	4,826,764
Removed debt securities	(3,477,992)	-	-	(3,477,992)
Exchange rate fluctuation and others	304,419	-	-	304,419
Ending balance	₩ 35,430,934	₩ -	₩ -	₩ 35,430,934

	For the three-month period ended March 31, 2018			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 40,659,546	₩ 7,588	₩ -	₩ 40,667,134
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
New financial assets executed or purchased	1,202,895	-	-	1,202,895
Removed debt securities	(2,520,328)	-	-	(2,520,328)
Exchange rate fluctuation and others	(76,095)	-	-	(76,095)
Ending balance	₩ 39,266,018	₩ 7,588	₩ -	₩ 39,273,606

14. Securities measured at amortized cost

14.1 Details of securities measured at amortized cost as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Category	Book value March 31, 2019	Book value December 31, 2018
Government and public bonds	Treasury bonds	₩ 410,086	₩ 400,847
	Housing bonds	1,230,385	1,328,502
	Other local government bonds	47,700	-
		1,688,171	1,729,349
Finance bonds	Deposit bank bonds	220,657	230,711
	Small and medium-sized business banking bonds	649,882	649,858
	Industrial financial debenture	1,873,135	1,861,640
	Export-import credit bond	210,588	210,623
		2,954,262	2,952,832
Corporate bonds and others	State owned entity bonds	7,536,724	7,037,213
	Corporate bonds	80,143	70,040
		7,616,867	7,107,253
Securities denominated in foreign currencies	Bonds in foreign currencies	1,883,713	1,795,896
Allowance for possible loan losses		(3,077)	(2,949)
		₩ 14,139,936	₩ 13,582,381

14.2 There is no profit or loss from disposal of securities measured at amortized cost for the three-month period ended March 31, 2019.

14.3 Changes in the loss allowance in relation to securities measured at amortized cost for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 2,949	₩ -	₩ -	₩ 2,949
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision for possible loan losses	377	-	-	377
Removed debt securities	(40)	-	-	(40)
Exchange rate fluctuation and others	(209)	-	-	(209)
Ending balance	₩ 3,077	₩ -	₩ -	₩ 3,077

	For the three-month period ended March 31, 2018			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 1,523	₩ -	₩ -	₩ 1,523
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision for possible loan losses	537	-	-	537
New debt securities executed or purchased	-	-	-	-
Exchange rate fluctuation and others	(229)	-	-	(229)
Ending balance	₩ 1,831	₩ -	₩ -	₩ 1,831

14.4 Changes in the carrying amounts of securities measured at amortized cost for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019			
		Lifetime expected credit losses		
	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 13,585,330	₩ -	₩ -	₩ 13,585,330
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
New debt securities executed or purchased	788,027	-	-	788,027
Removed debt securities	(294,392)	-	-	(294,392)
Effective interest rate amortization	18,626	-	-	18,626
Exchange rate fluctuation and others	45,422	-	-	45,422
Ending balance	₩ 14,143,013	₩ -	₩ -	₩ 14,143,013

Classification	For the three-month period ended March 31, 2018			
		Lifetime expected credit losses		
	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 6,174,861	₩ -	₩ -	₩ 6,174,861
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
New debt securities executed or purchased	1,466,910	-	-	1,466,910
Removed debt securities	(31,843)	-	-	(31,843)
Effective interest rate amortization	1,778	-	-	1,778
Exchange rate fluctuation and others	1,481	-	-	1,481
Ending balance	₩ 7,613,187	₩ -	₩ -	₩ 7,613,187

15. Pledged assets

15.1 Assets pledged as collateral as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

		Book value			
Classification	Category		March 31, 2019		December 31, 2018
Financial assets measured at FVTPL	Korea Exchange RP	₩	17,039	₩	-
Financial assets measured at FVOCI	Intraday overdraft		600,645		600,064
	Securities lent in Korean won		335,155		1,859,927
	Borrowings		1,019,621		1,017,965
	Foreign currency borrowing		-		118,219
	BOK payment		1,672,852		1,688,711
	Futures		177,151		186,219
	Others		796,118		468,066
			4,601,542		5,939,171
Securities measured at amortized cost	Futures		180,577		180,346
	BOK payment		983,977		1,058,662
	Intraday overdraft		55,671		55,690
	Borrowings		536,228		408,460
	Foreign currency borrowing		198,125		385,243
	Others		72,515		74,919
			2,027,093		2,163,320
		₩	6,645,674	₩	8,102,491

15.2 The fair value of collateral that is available for sale and re-pledge, irrespective of default as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019			
Classification	Fair value of collateral		Fair value of collateral sold or re-pledged	
Securities	₩	7,298,886	₩	-

	December 31, 2018			
Classification	Fair value of collateral		Fair value of collateral sold or re-pledged	
Securities	₩	8,041,844	₩	-

16. Loans and receivables

16.1 Loans and receivables as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018
Loans				
Loans in Korean won	₩	204,176,521	₩	202,127,586
Loans denominated in foreign currencies		21,703,738		20,427,575
Domestic import usance		3,440,188		3,616,403
Call loans		4,109,159		3,153,690
Bills purchased in Korean won		108,524		88,303
Bills purchased denominated in foreign currencies		4,503,596		5,662,188
Advance payments on acceptances and guarantees		43,337		23,869
Bonds purchased under resale agreement		7,537,220		8,021,732
Privately-placed corporate bonds		1,658,921		1,605,466
Others		664,499		745,393
		247,945,703		245,472,205
Plus (less)				
Deferred loan fees and expenses		301,543		304,547
Allowance for possible loan losses		(1,335,670)		(1,308,162)
		(1,034,127)		(1,003,615)
	₩	246,911,576	₩	244,468,590

16.2 Loans and receivables by customer as of March 31, 2019 and December 31, 2018 are listed as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018
Corporate loans				
Large–sized businesses	₩	34,472,239	₩	33,844,730
Small and medium–sized businesses		86,572,656		85,499,115
Public sector and others		19,496,569		18,666,272
Household loans		107,404,239		107,462,088
		247,945,703		245,472,205
Plus (less)				
Deferred loan fees, net of expenses		301,543		304,547
Allowance for possible loan losses		(1,335,670)		(1,308,162)
		(1,034,127)		(1,003,615)
	₩	246,911,576	₩	244,468,590

16.3 Changes in allowance for possible loan losses for the three-month periods ended March 31, 2019 and 2018 are summarized as follows (Korean won in millions):

	For the three-month period ended March 31, 2019				
		Lifetime expected credit losses			
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Subject to the application of credit impairment model	Total
Beginning balance	₩ 288,193	₩ 402,242	₩ 607,865	₩ 9,862	₩ 1,308,162
Transfer to 12 month expected credit loss	20,377	(14,902)	(5,475)	-	-
Transfer to non credit-impaired loan	(6,743)	9,438	(2,695)	-	-
Transfer to credit-impaired loan	(1,629)	(19,776)	21,405	-	-
Provisions (reversal) of allowance of possible loan losses	16,795	42,450	55,014	862	115,121
Write–offs	-	-	(118,250)	-	(118,250)
Recovering of loans written-off	-	-	29,754	-	29,754
Exchange rate fluctuation and others	(16,692)	(7,126)	24,708	(7)	883
Ending balance	₩ 300,301	₩ 412,326	₩ 612,326	₩ 10,717	₩ 1,335,670

	For the three-month period ended March 31, 2018				
		Lifetime expected credit losses			
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Subject to the application of credit impairment model	Total
Beginning balance	₩ 236,924	₩ 364,240	₩ 839,405	₩ 12,081	₩ 1,452,650
Transfer to 12 month expected credit loss	11,223	(10,159)	(1,064)	-	-
Transfer to non credit-impaired loan	(5,756)	7,867	(2,111)	-	-
Transfer to credit-impaired loan	(1,844)	(15,140)	16,984	-	-
Provisions (reversal) of allowance of possible loan losses	2,859	25,118	321	319	28,617
Write–offs	-	-	(126,978)	-	(126,978)
Disposal of non–performing loans	-	-	(2,415)	-	(2,415)
Debt–to–equity swap	-	-	(69)	-	(69)
Exchange rate fluctuation and others	1,455	(51)	51,828	-	53,232
Ending balance	₩ 244,861	₩ 371,875	₩ 775,901	₩ 12,400	₩ 1,405,037

16.4 Changes in the carrying amounts of loans for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019				
		Lifetime expected credit losses			
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Subject to the application of credit impairment model	Total
Beginning balance	₩ 201,533,124	₩ 41,647,175	₩ 1,514,726	₩ 777,180	₩ 245,472,205
Transfer to 12 month expected credit loss	3,640,793	(3,628,949)	(11,844)	-	-
Transfer to non credit-impaired loan	(1,765,271)	1,788,456	(23,185)	-	-
Transfer to credit-impaired loan	(70,611)	(237,534)	308,145	-	-
New loans executed or purchased	31,612,331	1,220,922	77,214	75,239	32,985,706
Write–offs	-	-	(118,250)	-	(118,250)
Removed loans	(25,856,181)	(2,887,730)	(99,612)	(73,740)	(28,917,263)
Exchange rate fluctuation and others	(861,166)	(535,569)	(79,960)	-	(1,476,695)
Ending balance	₩ 208,233,019	₩ 37,366,771	₩ 1,567,234	₩ 778,679	₩ 247,945,703

	For the three-month period ended March 31, 2018				
		Lifetime expected credit losses			
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Subject to the application of credit impairment model	Total
Beginning balance	₩ 158,375,264	₩ 63,960,067	₩ 2,191,301	₩ 498,900	₩ 225,025,532
Transfer to 12 month expected credit loss	2,341,795	(2,339,356)	(2,439)	-	-
Transfer to non credit-impaired loan	(1,618,401)	1,644,312	(25,911)	-	-
Transfer to credit-impaired loan	(63,237)	(157,367)	220,604	-	-
New loans executed or purchased	30,675,332	758,811	124,839	86,646	31,645,628
Write–offs	-	-	(126,978)	-	(126,978)
Removed loans	(20,826,619)	(4,557,124)	(158,758)	(69,008)	(25,611,509)
Disposal of non–performing loans	-	-	(2,547)	-	(2,547)
Debt–to–equity swap	-	-	(271)	-	(271)
Exchange rate fluctuation and others	(1,723,359)	(1,239,679)	(63,277)	4,110	(3,022,153)
Ending balance	₩ 167,160,775	₩ 58,069,664	₩ 2,156,563	₩ 520,648	₩ 227,907,650

16.5 Amortized costs before changes in contractual cash flows of loans (contractual cash flows changed for the three-month period ended March 31, 2019) for which allowance for doubtful accounts have been measured at the lifetime ECL and net loss recognized based on the changes in contractual cash flows are as follows (Korean won in millions):

Classification	Amount
Amortized cost before change	₩ 19,289
Net loss due to change	1,112

16.6 Loans whose contractual cash flows changed for which the measurement of allowance for doubtful accounts changed from the lifetime ECL to 12-month ECL on initial recognition during the reporting period are ₩147 million and ₩100 million as of March 31, 2019 and December 31, 2018, respectively.

16.7 The uncollected contractual amounts of loans written off during the three-month periods ended March 31, 2019 and 2018 but the Group continues to recover, are ₩118,228 million and ₩126,810 million, respectively.

17. Derivative instruments

17.1 Details of amounts of the unsettled derivative contract and fair value of derivatives held by the Group as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

			Accumulated valuation gain (loss)			
	Amounts of unsettled contract		March 31, 2019		December 31, 2018	
Classification	March 31, 2019	December 31, 2018	Assets	Liabilities	Assets	Liabilities
Currency						
Forward	₩ 204,541,732	₩ 219,058,713	₩ 2,289,197	₩ 2,131,473	₩ 1,950,839	₩ 1,881,382
Swap	68,331,051	67,117,113	944,004	828,815	952,394	772,364
Options purchased	173,837	234,609	4,628	-	4,710	-
Options sold	171,303	215,109	-	3,608	-	3,684
Futures	1,378,650	1,364,831	-	-	-	-
	274,596,573	287,990,375	3,237,829	2,963,896	2,907,943	2,657,430
Interest						
Swap	86,771,781	83,210,036	500,674	431,766	433,164	389,423
Options purchased	470,000	470,000	9,401	-	9,276	-
Options sold	2,092,394	2,249,479	-	45,370	-	42,721
Futures	711,135	389,405	-	-	-	-
	90,045,310	86,318,920	510,075	477,136	442,440	432,144
Stock						
Options purchased	25,949	25,949	959	-	1,043	-
Options sold	26,172	26,488	-	376	-	310
Futures	4,177	193	-	-	-	-
	56,298	52,630	959	376	1,043	310
Others						
Credit spread adjustment, etc.	-	-	(7,907)	-	(8,838)	-
	₩ 364,698,181	₩ 374,361,925	₩ 3,740,956	₩ 3,441,408	₩ 3,342,588	₩ 3,089,884

17.2 Details of valuation gain (loss) of the derivatives for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Classification	Net valuation gain	Net valuation loss	Net valuation gain	Net valuation loss
Currency				
Forward	₩ 1,692,950	₩ 1,549,366	₩ 737,848	₩ 748,496
Swap	550,070	628,521	288,675	273,901
Options purchased	760	-	266	-
Options sold	-	539	-	212
	2,243,780	2,178,426	1,026,789	1,022,609
Interest				
Forward	-	-	-	6
Swap	133,671	106,936	115,714	81,021
Options purchased	1,101	-	3,039	-
Options sold	-	4,514	-	851
	134,772	111,450	118,753	81,878
Stock				
Options purchased	13	-	59	-
Options sold	-	167	-	4
	13	167	59	4
Others				
Credit spread adjustment, etc.	932	-	2,413	-
	₩ 2,379,497	₩ 2,290,043	₩ 1,148,014	₩ 1,104,491

17.3 Fair value hedge

17.3.1 Details of items subject to fair value hedge as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

		Book value		Accumulated fair value adjustments		For the three-month period ended
		March 31, 2019				March 31, 2019
Classification	Hedged items	Assets	Liabilities	Assets	Liabilities	Fair value fluctuation
Application of hedge accounting						
Interest	Depository liabilities in Korean won	₩ -	₩ 634,980	₩ -	₩ (5,020)	₩ (3,322)
	Depository liabilities denominated in foreign currencies	-	508,962	-	(14,426)	(18,476)
	Finance debentures in Korean won	-	100,317	-	317	(215)
	Finance debentures denominated in foreign currencies	-	3,353,207	-	(3,303)	(39,944)
		-	4,597,466	-	(22,432)	(61,957)
Currency	Equity securities measured at FVOCI	227,560	-	8,560	-	3,940
Currency and interest	Finance debentures denominated in foreign currencies	-	614,701	-	10,806	(2,898)
		₩ 227,560	₩ 5,212,167	₩ 8,560	₩ (11,626)	₩ (60,915)

17.3.1 Details of items subject to fair value hedge as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd)

		Book value		Accumulated fair value adjustments		For the year ended
		December 31, 2018				December 31, 2018
Classification	Hedged items	Assets	Liabilities	Assets	Liabilities	Fair value fluctuation
Application of hedge accounting						
Interest	Depository liabilities in Korean won	₩ -	₩ 511,658	₩ -	₩ (8,342)	₩ (5,486)
	Depository liabilities denominated in foreign currencies	-	532,658	-	(37,573)	25,314
	Finance debentures in Korean won	-	100,102	-	102	(102)
	Finance debentures denominated in foreign currencies	-	2,584,266	-	(43,269)	22,506
		-	3,728,684	-	(89,082)	42,232
Currency	Equity securities measured at FVOCI	223,620	-	4,620	-	9,340
Currency and interest	Finance debentures denominated in foreign currencies	-	675,673	-	14,696	(7,930)
		₩ 223,620	₩ 4,404,357	₩ 4,620	₩ (74,386)	₩ 43,642

As of March 31, 2019, interest rate swap or currency swap is designated as hedging instrument and the fair value hedge accounting is applied in order to hedge fair value fluctuation risk incurred due to interest rate fluctuations and foreign exchange rate fluctuations in finance debentures issued and depository liabilities.

17.3.2 Derivative instruments used for hedging purposes edging and related assets and liabilities as of March 31, 2019 and December 31, 2018 are as follows. And valuation of fair value and gain and loss on valuation for the three-month ended March 31, 2019 and for the year ended December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019	For the three-month period ended March 31, 2019	March 31, 2019	
Classification	Unsettled contract amounts	Valuation Gain(Loss)	Assets	Liabilities
Currency				
Currency swaps	₩ 603,894	₩ 3,966	₩ 6,646	₩ 2,129
Interest				
Interest rate swaps	4,619,898	62,141	23,870	45,792
	₩ 5,223,792	₩ 66,107	₩ 30,516	₩ 47,921

	December 31, 2018	2018	December 31, 2018	
Classification	Unsettled contract amounts	Valuation Gain(Loss)	Assets	Liabilities
Currency				
Currency swaps	₩ 660,977	₩ 696	₩ 3,766	₩ 7,075
Interest				
Interest rate swaps	3,817,766	(43,014)	2,989	91,722
	₩ 4,478,743	₩ (42,318)	₩ 6,755	₩ 98,797

Derivative transactions of which purchase and sale incur simultaneously like foreign exchange forward transaction, currency futures and currency swap, do not distinguish purchase contract amount from sale contract amount. For a derivative transaction involving both Korean won and foreign currencies, the contract amount based on foreign currencies is denominated using a fair exchange rate prevailing at the end of reporting period. For a derivative transaction involving only foreign currencies, the contract amount based on foreign currencies purchased are denominated using a fair exchange rate prevailing at the end of reporting period.

17.3.3 Fair values of non-derivative financial instruments designated as hedging instrument as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Fair value March 31, 2019		Fair value December 31, 2018	
Debentures denominated in foreign currencies	₩	227,560	₩	223,621

17.3.4 Ineffective portion of gain or loss on derivatives designated as hedging instrument for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	Ineffective portion of the hedge recognized as current profit or loss: For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Currency	₩	1,068	₩	8,206
Interest		184		(336)
	₩	1,252	₩	7,870

17.4 Hedges of net investment in foreign operations

17.4.1 Details of hedges of net investment in foreign operations as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019: Fair value fluctuation		Comprehensive income of hedges of net investment in foreign operations	
Currency (Exchange rate risk)	₩	11,127	₩	(4,304)

Classification	December 31, 2018: Fair value fluctuation		Comprehensive income of hedges of net investment in foreign operations	
Currency (Exchange rate risk)	₩	12,343	₩	3,763

17.4.2 Details of fair values of financial instruments designated as hedging instrument of net investment of foreign operations as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	Book value				
	Assets	Liabilities	Fair value fluctuation	The effective portion of changes in fair value recognized in other comprehensive income	Ineffective portion of the hedge recognized as current profit or loss
Classification	March 31, 2019		For the three-month period ended March 31, 2109		
Debentures denominated in foreign currencies	₩ -	₩ 642,366	₩ (11,127)	₩ (11,127)	₩ -

	Book value				
	Assets	Liabilities	Fair value fluctuation	The effective portion of changes in fair value recognized in other comprehensive income	Ineffective portion of the hedge recognized as current profit or loss
Classification	March 31, 2018		For the year ended December 31, 2018		
Debentures denominated in foreign currencies	₩ -	₩ 631,239	₩ (12,343)	₩ (12,343)	₩ -

17.5 Average hedging ratios of future nominal cash flows by the type of risk hedge as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019						
Classification	1 year	2 years	3 years	4 years	5 years	More than 5 years	Total
Fair value hedge							
Nominal amounts of items subject to hedge	₩ 1,023,083	₩ 444,544	₩ 919,401	₩ 20,000	₩ 776,916	₩ 2,267,408	₩ 5,451,352
Nominal amounts of hedging instrument	1,023,083	444,544	919,401	20,000	776,916	2,267,408	5,451,352
Average hedging ratio	100.14%	99.72%	100.17%	100.00%	99.45%	99.75%	99.80%
Hedge of net investment in foreign operations							
Nominal amounts of items subject to hedge	-	-	-	-	-	642,366	642,366
Nominal amounts of hedging instrument	-	-	-	-	-	642,366	642,366
Average hedging ratio	-	-	-	-	-	100.00%	100.00%

	December 31, 2018						
Classification	1 year	2 years	3 years	4 years	5 years	More than 5 years	Total
Fair value hedge							
Nominal amounts of items subject to hedge	₩ 1,019,085	₩ 101,714	₩ 956,314	₩ 20,000	₩ 428,730	₩ 2,176,521	₩ 4,702,364
Nominal amounts of hedging instrument	1,019,085	101,714	956,314	20,000	428,730	2,176,521	4,702,364
Average hedging ratio	100.50%	99.92%	100.30%	100.00%	98.13%	100.50%	100.00%
Hedge of net investment in foreign operations							
Nominal amounts of items subject to hedge	-	-	-	-	-	631,239	631,239
Nominal amounts of hedging instrument	-	-	-	-	-	631,239	631,239
Average hedging ratio	-	-	-	-	-	100.00%	100.00%

18. Investments in associates

18.1 Details of investments in associates as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Country	Reporting date	Industry	Owner-ship (%) Mar 31, 2019	Owner-ship (%) Dec 31, 2018	Book value March 31, 2019	Book value December 31, 2018
Bank of Jilin (*1)	China	March 31, 2019	Bank	16.98	16.98	756,234	694,609
Hana Equity Partners I, L.P	Korea	March 31, 2019	Other financial services	29.97	29.97	1,040	5,281
Korea Credit Bureau (*1)	Korea	March 31, 2019	Credit investigation and Collection agency	9.00	9.00	6,542	6,485
Darby Hana Infrastructure Fund Management (*1)	Korea	March 31, 2019	Asset Management Company	9.90	9.90	1,565	1,482
CM International financing leases	China	March 31, 2019	Other financial services	25.00	25.00	206,864	202,173
Beijing Langzi Asset Management Co., Ltd. (*1)(*3)	China	December 31, 2018	Credit financial business	15.00	17.70	45,295	46,258
Somesevit Corporation (*1) (*2)	Korea	March 31, 2019	Construction	1.92	1.92	-	-
Midan City Development Co., Ltd. (*1) (*2) (*3)	Korea	March 31, 2019	Construction	2.17	2.17	-	-
Masan Marine New Town Co., Ltd. (*1)	Korea	March 31, 2019	Construction	10.00	10.00	101	101
Company KStartup winwin fund	Korea	March 31, 2019	Investment	23.81	23.80	6,641	6,931
BSK-6 Patent Technology Investment Association	Korea	March 31, 2019	Investment	20.00	20.00	1,995	813
Fidelis Private Equity Fund No.2	Korea	March 31, 2019	Investment	29.70	29.70	3,608	3,005
Koramco Professional Investment Type Real Estate No.73	Korea	March 31, 2019	Investment	25.76	25.76	1,631	1,683
Koramco Professional Investment Type Real Estate No.87	Korea	March 31, 2019	Investment	21.13	21.13	1,500	1,500
KEB Hana – KVIC Unicorn Fund of Funds (*4)	Korea	March 31, 2019	Investment	90.90	90.90	763	857
Ourcrowd international invest (*3)	Virgin Islands	December 31, 2018	Investment	22.19	22.19	14,561	14,049
Hana Alternative Energy Infra No.3-1	Korea	March 31, 2019	Investment	50.00	-	35	-
Hana Alternative Energy Infra No.3-2	Korea	March 31, 2019	Investment	50.00	-	15	-
PT Sinarmas Hana Finance	Indonesia	March 31, 2019	Financial services	30.00	30.00	3,237	3,118
						₩ 1,051,627	₩ 988,345

(*1) These entities are presented as investments in associates as the Group exercises a significant influence on the investee's Board of Directors.
(*2) The equity method is no longer appropriate because the current balances for the investments are below "0"
(*3) As the financial statements as of March 31, 2019 could not be obtained, the most recent financial statements available from the closing date were used. The effect of significant transactions or events incurred between the end of the reporting period of the associate and that of the Bank was reviewed and reflected.
(*4) As of March 31, 2019, the Group classified the investee as investment in associates as it is a limited partner and thus, cannot exercise control over the investee.

18.2 Condensed financial statements as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019						
Classification	Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income (loss)	Dividends income
Bank of Jilin	₩ 60,366,807	₩ 55,999,638	₩ 4,367,169	₩ 543,360	₩ 170,476	₩ 179,149	₩ -
Hana First Private Equity Fund	3,554	86	3,468	293	670	670	-
Korea Credit Bureau Co., Ltd.	88,291	21,647	66,644	19,539	1,559	1,559	135
Darby Hana Infrastructure Fund Management	18,360	2,557	15,803	1,540	1,017	962	-
CM International financing leases	4,304,562	3,477,105	827,457	54,675	(9,886)	(11,894)	-
Beijing Langzi Asset Management	467,461	165,502	301,959	15,472	5,140	5,114	-
Somesevit Corporation	81,135	127,862	(46,727)	2,659	228	228	-
Midan City Development Co., Ltd.	662,631	686,733	(24,102)	-	-	-	-
Masan Marine New Town Co., Ltd.	134,467	133,457	1,010	70	1	1	-
Company K startup winwin fund	28,028	133	27,895	87	(66)	(1,216)	-
BSK-6 Patent Technology Investment Association	10,069	94	9,975	4	(91)	(91)	-
Fidelis Private Equity Fund No.2	12,979	828	12,151	3,000	2,848	2,848	246
Koramco Professional Investment Type Real Estate No.73	6,437	9	6,428	1	(9)	(9)	-
Koramco Professional Investment Type Real Estate No.87	7,100	9	7,091	-	(2)	(2)	-
KEB Hana-KVIC Unicorn Fund of Funds	947	108	839	3	(105)	(105)	-
Ourcrowd international invest	66,592	973	65,619	38	(544)	548	-
Hana Alternative Energy Infra No.3-1	70	-	70	-	-	-	-
Hana Alternative Energy Infra No.3-2	31	-	31	-	-	-	-
PT Sinarmas Hana Finance	60,674	50,140	10,534	2,272	(166)	(166)	-

18.2 Condensed financial statements as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2018						
	Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income (loss)	Dividends income
Bank of Jilin	₩ 56,868,945	₩ 52,861,480	₩ 4,007,465	₩ 1,348,642	₩ 186,925	₩ 409,668	₩ -
Hana First Private Equity Fund	22,322	4,702	17,620	809	(15,545)	(15,545)	-
Korea Credit Bureau Co., Ltd.	88,797	22,788	66,009	78,018	9,901	9,901	113
Darby Hana Infrastructure Fund Management	17,063	2,099	14,964	5,990	2,531	2,531	79
CM International financing leases	4,493,521	3,684,828	808,693	316,370	8,541	8,541	-
Beijing Langzi Asset Management	509,420	248,063	261,357	39,553	15,847	15,847	1,690
Somesevit Corporation	81,464	127,963	(46,499)	10,765	(649)	(649)	-
Midan City Development Co., Ltd.	662,631	686,733	(24,102)	-	(321)	(321)	-
Masan Marine New Town Co., Ltd.	135,026	134,018	1,008	280	2	2	-
Company K startup winwin fund	29,696	586	29,110	2,467	(131)	854	-
BSK-6 Patent Technology Investment Association	4,067	2	4,065	20	(360)	(360)	-
Fidelis Private Equity Fund No.2	10,123	4	10,119	1,343	1,170	1,170	342
Koramco Professional Investment Type Real Estate No.73	6,437	4	6,433	(167)	(167)	(167)	-
Koramco Professional Investment Type Real Estate No.87	7,100	-	7,100	-	-	-	-
KEB Hana-KVIC Unicorn Fund of Funds	1,104	161	943	4	(158)	(158)	-
Ourcrowd international invest	52,091	1,391	50,700	42	(429)	1,236	-
PT Sinarmas Hana Finance	53,820	43,534	10,286	5,552	657	657	-

18.3 Changes in the investment in an associate for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019										
						Equity method valuation					
Classification	Owner Ship (%)	Beginning balance	Acquisition, and others	Dividend	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩ 694,609	₩ -	₩ -	₩ 694,609	₩ 32,811	₩ -	₩ 28,814	₩ -	₩ -	₩ 756,234
Hana First Private Equity Fund	29.97	5,281	-	-	5,281	205	-	-	-	(4,446)	1,040
Korea Credit Bureau Co., Ltd.	9.00	6,485	-	(135)	6,350	192	-	-	-	-	6,542
Darby Hana Infrastructure Fund Management	9.90	1,482	-	-	1,482	83	-	-	-	-	1,565
CM International financing leases	25.00	202,173	-	-	202,173	(2,589)	-	7,280	-	-	206,864
Beijing Langzi Asset Management	15.00	46,258	-	-	46,258	910	-	1,798	-	(3,671)	45,295
Somesevit Corporation	1.92	-	-	-	-	-	-	-	-	-	-
Midan City Development Co., Ltd.	2.17	-	-	-	-	-	-	-	-	-	-
Masan Marine New Town Co., Ltd.	10.00	101	-	-	101	-	-	-	-	-	101
Company K startup winwin fund	23.81	6,931	-	-	6,931	(16)	-	(274)	-	-	6,641
BSK-6 Patent Technology Investment Association	20.00	813	1,200	-	2,013	(18)	-	-	-	-	1,995
Fidelis Private Equity Fund No.2	29.70	3,005	-	(246)	2,759	849	-	-	-	-	3,608
Koramco Professional Investment Type Real Estate No.73	25.76	1,683	-	-	1,683	(52)	-	-	-	-	1,631
Koramco Professional Investment Type Real Estate No.87	21.13	1,500	-	-	1,500	-	-	-	-	-	1,500
KEB Hana-KVIC Unicorn Fund of Funds	90.90	857	-	-	857	(94)	-	-	-	-	763
Ourcrowd international invest Co., Ltd.	22.19	14,049	-	-	14,049	-	-	512	-	-	14,561
Hana Alternative Energy Infra No.3-1	50.00	-	35	-	35	-	-	-	-	-	35
Hana Alternative Energy Infra No.3-2	50.00	-	15	-	15	-	-	-	-	-	15
PT Sinarmas Hana Finance	30.00	3,118	-	-	3,118	(7)	-	-	126	-	3,237
		₩ 988,345	₩ 1,250	₩ (381)	₩ 989,214	₩ 32,274	₩ -	₩ 38,130	₩ 126	₩ (8,117)	₩ 1,051,627

18.3 Changes in the investment in an associate for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions): (cont'd)

	For the three-month period ended March 31, 2018										
						Equity method valuation					
Classification	Owner ship (%)	Beginning balance	Acquisition and others	Dividends	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩ 644,252	₩ -	₩ -	₩ 644,252	₩ 24,936	₩ -	₩ 32,566	₩ -	₩ -	₩ 701,754
Hana First Private Equity Fund	29.97	16,586	-	-	16,586	(3,243)	-	-	-	-	13,343
Korea Credit Bureau Co., Ltd.	9.00	5,601	-	(113)	5,488	305	-	-	-	-	5,793
Darby Hana Infrastructure Fund Management	9.90	1,241	-	-	1,241	92	-	-	-	-	1,333
CM International financing leases	25.00	201,064	-	-	201,064	3,248	-	7,009	-	-	211,321
Beijing Langzi Asset Management LC.	25.00	45,113	-	-	45,113	1,039	-	1,538	-	-	47,690
Somesevit Corporation	1.92	-	-	-	-	-	-	-	-	-	-
Midan City Development Co., Ltd.	2.17	-	-	-	-	-	-	-	-	-	-
Masan Marine New Town Co., Ltd.	10.00	101	-	-	101	-	-	-	-	-	101
Company KStartup winwin fund	23.81	9,643	-	-	9,643	(853)	-	(253)	-	(1,299)	7,238
Darby Latin American Private Debt Fund III	24.99	6,770	1,034	-	7,804	(199)	-	(34)	-	-	7,571
Darby Latin American Private Debt Fund IIIA	24.97	1,045	-	-	1,045	(6)	-	5	-	(245)	799
BSK-6 Patent Technology Investment Association	20.00	885	-	-	885	(18)	-	-	-	-	867
Fidelis Private Equity Fund No.2	29.70	-	3,000	(342)	2,658	383	-	-			3,041
KEB Mirae Asset First Securitization Specialty LC.	40.00	-	-	-	-	-	-	-	-	-	-
KEB Mirae Asset Second Securitization Specialty LC.	45.00	-	-	-	-	-	-	-	-	-	-
PT Sinarmas Hana Finance	30.00	3,253	-	-	3,253	67	-	-	(149)	-	3,171
		₩ 935,554	₩ 4,034	₩ (455)	₩ 939,133	₩ 25,751	₩ -	₩ 40,831	₩ (149)	₩ (1,544)	₩ 1,004,022

18.4 The Group discontinued recognizing its losses in shares since the balance of investments in associates was "0" and the losses which are accumulated for the current year and before the current year are as follows (Korean won in millions):

	March 31, 2019	
Company	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (4)	₩ (897)
Midan City Development Co., Ltd.	-	(523)
	₩ (4)	₩ (1,420)

	December 31, 2018	
Company	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (13)	₩ (893)
Midan City Development Co., Ltd.	(103)	(523)
	₩ (116)	₩ (1,416)

18.5 Details of adjustments from net assets of associates to carrying values of shares thereof as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019				
Classification	Net assets	Ownership (%)	Share of net assets	Goodwill, Etc. (*).	Carrying value
Bank of Jilin	₩ 4,367,169	16.98	₩ 741,562	₩ 14,672	₩ 756,234
Hana First Private Equity Fund	3,468	29.97	1,040	-	1,040
Korea Credit Bureau Co., Ltd.	66,644	9.00	5,998	544	6,542
Darby Hana Infrastructure Fund Management	15,803	9.90	1,565	-	1,565
CM International financing leases	827,457	25.00	206,864	-	206,864
Beijing Langzi Asset Management LC.	301,959	15.00	45,295	-	45,295
Somesevit Corporation	(46,727)	1.92	(897)	897	-
Midan City Development Co., Ltd.	(24,102)	2.17	(523)	523	-
Masan Marine New Town Co., Ltd.	1,010	10.00	101	-	101
Company K startup winwin fund	27,895	23.81	6,641	-	6,641
BSK-6 Patent Technology Investment Association	9,975	20.00	1,995	-	1,995
Fidelis Private Equity Fund No.2	12,151	29.70	3,608	-	3,608
Koramco Professional Investment Type Real Estate No.73	6,428	25.76	1,656	(25)	1,631
Koramco Professional Investment Type Real Estate No.87	7,091	21.13	1,500	-	1,500
KEB Hana-KVIC Unicorn Fund of Funds	839	90.90	763	-	763
Ourcrowd international invest Co., Ltd.	65,619	22.19	14,561	-	14,561
Hana Alternative Energy Infra No.3-1	70	50.00	35	-	35
Hana Alternative Energy Infra No.3-2	31	50.00	15	-	15
PT Sinarmas Hana Finance	10,534	30.00	3,160	77	3,237

(*) Others include fair value adjustments incurred at acquisition of equity shares and unrecognized accumulated loss due to discontinuance of equity method as the investment balance became zero.

18.5 Details of adjustments from net assets of associates to carrying values of shares thereof as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd):

	December 31, 2018				
Classification	Net assets	Ownership (%)	Share of net assets	Goodwill, Etc. (*).	Carrying value
Bank of Jilin	₩ 4,007,465	16.98	₩ 680,483	₩ 14,126	₩ 694,609
Hana First Private Equity Fund	17,620	29.97	5,281	-	5,281
Korea Credit Bureau	66,009	9.00	5,941	544	6,485
Darby Hana Infrastructure Fund Management	14,964	9.90	1,482	-	1,482
CM International financing leases	808,693	25.00	202,173	-	202,173
Beijing Langzi Asset Management	261,357	17.70	46,258	-	46,258
Somesevit Corporation	(46,499)	1.92	(893)	893	-
Midan City Development Co., Ltd.	(24,102)	2.17	(523)	523	-
Masan Marine New Town Co., Ltd.	1,008	10.00	101	-	101
Company K startup winwin fund	29,110	23.80	6,931	-	6,931
BSK-6 Patent Technology Investment Association	4,065	20.00	813	-	813
Fidelis Private Equity Fund No.2	10,119	29.70	3,005	-	3,005
Koramco Professional Investment Type Real Estate No.73	6,433	25.76	1,657	26	1,683
Koramco Professional Investment Type Real Estate No.87	7,100	21.13	1,500	-	1,500
KEB Hana-KVIC Unicorn Fund of Funds	943	90.90	857	-	857
Ourcrowd international invest Co., Ltd.	50,700	22.19	11,250	2,799	14,049
PT Sinarmas Hana Finance	10,286	30.00	3,086	32	3,118

(*) Others include fair value adjustments incurred at acquisition of equity shares and unrecognized accumulated loss due to discontinuance of equity method as the investment balance became zero.

19. Property and equipment

19.1 Property and equipment as of March 31, 2019 and December 31, 2018 consist of the following (Korean won in millions):

	March 31, 2019							
	Acquisition cost		Accumulated depreciation		Government grants		Book value	
Land	₩	882,007	₩	-	₩	-	₩	882,007
Buildings		849,201		(253,928)		-		595,273
Leasehold improvements		337,248		(277,618)		-		59,630
Equipment and vehicles		880,120		(753,943)		-		126,177
Construction in progress		30,652		-		-		30,652
Others		69,451		-		-		69,451
Right-of-use asset- real estate		582,038		(74,538)		-		507,500
Right-of-use asset- equipment and vehicles		17,584		(1,742)		-		15,842
Right-of-use asset- others		350		(25)		-		325
	₩	3,648,651	₩	(1,361,794)	₩	-	₩	2,286,857

	December 31, 2018							
	Acquisition cost		Accumulated depreciation		Government grants		Book value	
Land	₩	925,512	₩	-	₩	-	₩	925,512
Buildings		885,197		(259,954)		-		625,243
Leasehold improvements		377,835		(295,994)		-		81,841
Equipment and vehicles		872,545		(742,486)		-		130,059
Construction in progress		29,393		-		-		29,393
Others		69,574		-		-		69,574
	₩	3,160,056	₩	(1,298,434)	₩	-	₩	1,861,622

19.2 Changes in property and equipment for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019						
Classification	January 1	Additions	Disposal	Depreciation	Transfer out	Others	March 31
Land	₩ 925,512	₩ -	₩ -	₩ -	₩ (43,549)	₩ 44	₩ 882,007
Buildings	625,243	1,148	(17)	(6,676)	(24,629)	204	595,273
Leasehold improvements	62,534	2,025	(59)	(5,363)	-	493	59,630
Equipment and vehicles	130,059	8,432	(157)	(12,990)	211	622	126,177
Construction in progress	29,393	2,628	-	-	(1,370)	1	30,652
Others	69,574	-	(123)	-	-	-	69,451
Right-of-use asset- real estate	550,179	17,989	(9,126)	(54,986)	-	3,444	507,500
Right-of-use asset- equipment and vehicles	16,702	1,237	(341)	(1,775)	-	19	15,842
Right-of-use asset- others	339	-	-	(25)	-	11	325
	₩ 2,409,535	₩ 33,459	₩ (9,823)	₩ (81,815)	₩ (69,337)	₩ 4,838	₩ 2,286,857

	For the three-month period ended March 31, 2018						
Classification	January 1	Additions	Disposal	Depreciation	Transfer out	Others	March 31
Land	₩ 854,024	₩ -	₩ (13,227)	₩ -	₩ 133,034	₩ 35	₩ 973,866
Buildings	476,808	803	(1,004)	(4,807)	185,902	(2,754)	654,948
Leasehold improvements	75,233	4,220	(1,691)	(6,072)	-	590	72,280
Equipment and vehicles	143,924	9,430	(1,181)	(14,979)	-	1,749	138,943
Construction in progress	15,555	2,929	-	-	(305)	134	18,313
Others	69,808	-	(7)	-	-	-	69,801
	₩ 1,635,352	₩ 17,382	₩ (17,110)	₩ (25,858)	₩ 318,631	₩ (246)	₩ 1,928,151

20. Investment properties

20.1 Details of investment property as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019							
	Acquisition cost		Accumulated depreciation		Accumulated impairment loss		Book value	
Land	₩	403,019	₩	-	₩	(2)	₩	403,017
Buildings		303,039		(110,917)		(645)		191,477
	₩	706,058	₩	(110,917)	₩	(647)	₩	594,494

Classification	December 31, 2018							
	Acquisition cost		Accumulated depreciation		Accumulated impairment loss		Book value	
Land	₩	359,470	₩	-	₩	(2)	₩	359,468
Buildings		264,289		(95,444)		(645)		168,200
	₩	623,759	₩	(95,444)	₩	(647)	₩	527,668

20.2 Changes in investment property for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019							
	January 1		Depreciation		Transfer (*)		March 31	
Land	₩	359,468	₩	-	₩	43,549	₩	403,017
Buildings		168,200		(2,511)		25,788		191,477
	₩	527,668	₩	(2,511)	₩	69,337	₩	594,494

Classification	For the three-month period ended March 31, 2018							
	January 1		Depreciation		Transfer (*)		March 31	
Land	₩	455,701	₩	-	₩	(133,034)	₩	322,667
Buildings		330,453		(2,985)		(185,597)		141,871
	₩	786,154	₩	(2,985)	₩	(318,631)	₩	464,538

(*) The amount represents the change in the carrying amount of investment properties held by the Group due to the change in the ratio of lease occupancy.

20.3 Rental income and operating expenses arising from the Group's investment properties for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Rental income	₩	4,181	₩	4,258
Operating cost directly related to Investment property that generate rental income		604		151

21. Intangible assets

21.1 Intangible assets as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019			
Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ -	₩ -	₩ 892
Industrial proprietary rights	1,604	(889)	-	715
Core deposits	4,980	(1,545)	-	3,435
Software	195,777	(139,247)	-	56,530
Systems development costs	777,488	(664,191)	-	113,297
Memberships	21,614	-	(3,199)	18,415
Others	196,900	(103,416)	(29)	93,455
	₩ 1,199,255	₩ (909,288)	₩ (3,228)	₩ 286,739

	December 31, 2018			
Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ -	₩ -	₩ 892
Industrial proprietary rights	1,604	(825)	-	779
Core deposits	4,980	(1,545)	-	3,435
Software	190,460	(133,848)	-	56,612
Systems development costs	775,420	(653,243)	-	122,177
Memberships	21,555	-	(3,198)	18,357
Others	183,117	(99,478)	(29)	83,610
	₩ 1,178,028	₩ (888,939)	₩ (3,227)	₩ 285,862

21.2 Changes in the carrying amount of intangible assets for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019					
Classification	January 1	Acquisition	Disposal	Amortization	Others	March 31
Goodwill	₩ 892	₩ -	₩ -	₩ -	₩ -	₩ 892
Industrial proprietary rights	779	-	-	(64)	-	715
Core deposits	3,435	-	-	-	-	3,435
Software	56,612	4,605	-	(4,909)	222	56,530
Systems development costs	122,177	1,793	-	(10,949)	276	113,297
Memberships	18,357	-	-	-	58	18,415
Others	83,610	14,219	-	(4,429)	55	93,455
	₩ 285,862	₩ 20,617	₩ -	₩ (20,351)	₩ 611	₩ 286,739

	For the three-month period ended March 31, 2018					
Classification	January 1	Acquisition	Disposal	Amortization	Others	March 31
Goodwill	₩ 892	₩ -	₩ -	₩ -	₩ -	₩ 892
Industrial proprietary rights	667	12	-	(51)	-	628
Core deposits	3,435	-	-	-	-	3,435
Software	51,786	219	(196)	(4,202)	246	47,853
Systems development costs	121,182	2,661	(178)	(10,346)	(28)	113,291
Memberships	18,917	-	-	-	28	18,945
Others	45,798	53,146	-	(3,946)	(1,006)	93,992
	₩ 242,677	₩ 56,038	₩ (374)	₩ (18,545)	₩ (760)	₩ 279,036

22. Non-current assets held for sale

Details of non-current assets held-for-sale as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Acquisition cost (*)	₩ 468,878	₩ 466,117
Accumulated impairment loss	-	-
Book value	₩ 468,878	₩ 466,117
Net fair value	₩ 689,028	₩ 709,802

(*) Acquisition cost is presented as net of accumulated depreciation before classification as non-current assets held-for-sale.

Non-current assets held-for-sale are composed of 22 collaterals acquired for the purpose of repayment of loans and one office building located in Myeong dong, which the Bank uses as its head office. These are classified as a non-current assets held-for-sale based on the management's decision to sell them, and the sale is in progress.

23. Other assets and merchant banking account assets

23.1 Details of other assets as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Guarantee deposits paid	₩ 831,206	₩ 838,445
Accounts receivable	11,614,112	6,101,995
Accrued income	1,081,561	975,227
Prepaid expenses	191,350	119,206
Suspense payments	48,394	43,072
Expenditures	1,255	1,594
Deposit money to court	8,820	9,415
Domestic exchange settlement debit	3,085,816	3,221,584
Other miscellaneous assets	43,507	39,739
Allowance for possible loan losses for other assets	(9,895)	(9,653)
	₩ 16,896,126	₩ 11,340,624

23.2 Changes in the allowance for possible losses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Beginning balance	₩ 9,653	₩ 10,900
Write-offs	(465)	(1,108)
Provision(reversal) of allowance of possible losses	776	(570)
Collection of loans written-off in prior period	101	245
Interest income on impaired assets	(8)	(1)
Exchange rate fluctuation and others	(162)	(209)
Ending balance	₩ 9,895	₩ 9,257

23.3 Details of merchant banking account assets as of March 31, 2019 and December 2018 are as follows (Korean won in millions):

Classification		March 31, 2019
On-balance-sheet items:		
Merchant banking account-loans measured at FVTPL	₩	3,995
Merchant banking account-debt securities measured at FVTPL		2,150,889
CMA assets:		
Loans measured at FVTPL		-
Debt securities measured at FVTPL		1,152,201
		1,152,201
Allowance for possible loan losses		
	₩	3,307,085
Off-balance-sheet items:		
Commitment	₩	1,149,000

Classification		December 31, 2018
On-balance-sheet items:		
Merchant banking account loans	₩	3,995
Merchant banking account trading bonds		1,938,409
CMA assets:		
Loans measured at FVTPL		-
Debt securities measured at FVTPL		997,868
		997,868
Allowance for possible loan losses		
	₩	2,940,272
Off-balance-sheet items:		
Commitment	₩	1,199,000

24. Deposits

24.1 Deposit liabilities as of March 31, 2018 and December 31, 2018 are as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018
Demand deposits				
Demand deposits in Korean won	₩	10,246,950	₩	9,975,626
Demand deposits in foreign currency		19,190,550		19,653,200
		29,437,500		29,628,826
Time and savings deposits				
Time and savings deposits in Korean won		199,080,847		196,769,035
Time and savings deposits in foreign currency		14,835,212		14,322,469
		213,916,059		211,091,504
Certificate of deposits		4,777,871		6,034,529
	₩	248,131,430	₩	246,754,859

25. Financial liabilities at fair value through profit or loss

25.1 As of March 31, 2019 and December 31, 2018, details of financial liabilities measured at FVTPL are as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018
Derivative liabilities held-for-trading	₩	3,441,408	₩	3,089,884

25.2 As of March 31, 2019 and December 31, 2018, details of financial liabilities designated as measured at FVTPL are as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018
Deposits	₩	506,606	₩	500,692

Financial liabilities are measured at FVTPL in order to eliminate or significantly reduce a measurement or recognition inconsistency.

25.3 Difference between the book value and maturity amount of the financial liabilities designated as measured at fair value through profit or loss as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018
Book value		506,606		500,692
Maturity amount		510,000		510,000
Difference	₩	(3,394)	₩	(9,308)

26. Borrowings

Borrowings as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Lender	Annual interest rate (%)	March 31, 2019	December 31, 2018
Borrowings in Korean won				
BOK borrowings	BOK	0.50~0.75	₩ 1,533,430	₩ 1,315,139
Government borrowings	On-lending borrowings	0.50~2.49	1,363,211	1,376,437
Other borrowings	Korea Energy Management Corporation, etc.	0.00~3.90	2,547,982	2,379,337
			5,444,623	5,070,913
Borrowings denominated in foreign currencies				
Bank overdrafts	Foreign banks, etc.	1.50~7.50	123,304	308,313
Other borrowings	JP Morgan bank, etc.	0.01~12.00	7,853,903	8,773,902
			7,977,207	9,082,215
Call money				
Call money in foreign currencies	Woori Bank, etc.	-0.27~7.15	973,958	629,350
			973,958	629,350
Bonds sold under repurchase agreements				
Bonds sold under repurchase agreements in Korean won	SUGAYAYOSHIKO, etc.	0.00~1.23	249,425	220
Bonds sold under repurchase agreements in foreign currencies	ING Bank	0.00~3.05	174,894	449,708
			424,319	449,928
Others				
Bills sold	General customers	0.00~1.68	46,337	48,564
			₩ 14,866,444	₩ 15,280,970

27. Debentures

Debentures as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	Lenders	Annual interest rate (%)	March 31, 2019	December 31, 2018
Debentures in Korean won				
Debentures	Institutions	1.33~3.15	₩ 13,700,000	₩ 14,410,000
Subordinated debentures	Institutions, etc.	2.45~8.00	4,690,450	4,780,500
Net gain (loss) on fair value hedges (current period)			215	102
Net gain (loss) on fair value hedges (previous periods)			102	-
Less present value discount			(20,504)	(23,916)
			18,370,263	19,166,686
Debentures in foreign currencies				
Debentures	Institutions	1.75~4.75	5,245,760	4,551,084
Subordinated debentures	Institutions, etc.	4.25~9.95	1,010,944	991,019
Net gain (loss) on fair value hedges (current period)			42,842	(14,576)
Net gain (loss) on fair value hedges (previous periods)			(35,360)	(13,996)
Less present value discount			(15,371)	(11,604)
			6,248,815	5,501,927
			₩ 24,619,078	₩ 24,668,613

28. Net defined benefit liability

28.1 Details of net defined benefit liability

Details of net defined benefit liability as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Present value of defined benefit obligation deposited to plan assets	₩ 1,642,969	₩ 1,650,155
Fair value of plan assets	(1,467,778)	(1,511,664)
Net defined benefit liability	175,191	138,491

28.2 Defined benefit obligations

28.2.1 Changes in present value of defined benefit obligation

Changes in present value of defined benefit obligation for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Beginning balance	₩	1,650,155	₩	1,358,685
Current service cost		35,613		31,101
Interest cost		9,224		9,082
Benefits paid		(52,197)		(7,604)
Changes due to transference between affiliates		177		-
Others		(3)		(74)
Ending Balance	₩	1,642,969	₩	1,391,190

28.2.2 Total costs recognized in accordance to defined benefit plans

Total costs incurred in relation to defined benefit pension plans for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Current service cost	₩	35,613	₩	31,101
Interest cost		9,224		9,082
Interest income on plan assets		(7,472)		(8,457)
	₩	37,365	₩	31,726

28.3 Plan assets

Changes in the fair value of plan assets plans for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Beginning balance	₩	1,511,664	₩	1,398,060
Employer contributions		-		2
Interest income on plan assets		7,472		8,457
Remeasurements of the net defined benefit liability		(1,072)		(2,198)
Benefit provided		(50,379)		(6,340)
Changes due to transference between affiliates		94		240
Others		(1)		(143)
Ending Balance	₩	1,467,778	₩	1,398,078

29. Contingent liabilities, agreements, and provisions

29.1 Details of provisions as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Allowance for possible losses on acceptances and guarantees:		
Financial acceptances and guarantees (*)	₩ 346	₩ 260
Non–financial acceptances and guarantees	45,555	66,720
Bills endorsed	91	75
	45,992	67,055
Allowances for unused commitments	56,225	59,690
Other allowance:		
Allowances for asset retirement obligation	65,000	64,211
Allowance for lawsuits	7,907	6,868
Others	29,238	37,363
	102,145	108,442
	₩ 204,362	₩ 235,187

(*) The Group recognizes the amount exceeding the unamortized amount of the initial fair value at subsequent measurement of the financial guarantee contract as provisions for guarantees. The Group recognizes the unamortized amount as financial guarantee contract liabilities in the amount of ₩15,557 million and ₩13,603 million as of March 31, 2019 and December 31, 2018, respectively.

29.2 Changes in unused commitments for the three-month periods ended March 31, 2019 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019			
	Unused commitments			
	12 month expected credit loss	Lifetime expected credit losses		
Classification		Non credit-impaired loan	Credit-impaired loan	Total
Beginning balance	₩ 27,622	₩ 18,824	₩ 13,244	₩ 59,690
Transfer to 12-month expected credit loss	2,901	(845)	(2,056)	-
Transfer to non credit-impaired loan	(132)	134	(2)	-
Transfer to credit-impaired loan	(1)	(21)	22	-
Provision (reversal)	(2,072)	94	(1,594)	(3,572)
Exchange rate fluctuation	42	65	-	107
Ending balance	₩ 28,360	₩ 18,251	₩ 9,614	₩ 56,225

29.2 Changes in unused commitments for the three-month periods ended March 31, 2019 are as follows (Korean won in millions): (Cont'd)

Classification	For the three-month period ended March 31, 2018			
	Unused commitments			
	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loan	Credit-impaired loan	
Beginning balance	₩ 29,997	₩ 18,494	₩ 15,787	₩ 64,278
Transfer to 12-month expected credit loss	294	(288)	(6)	-
Transfer to non credit-impaired loan	(362)	504	(142)	-
Transfer to credit-impaired loan	(5)	(33)	38	-
Reversal	(1,217)	(2,217)	(3,379)	(6,813)
Exchange rate fluctuation	17	-	-	17
Other	22	-	-	22
Ending balance	₩ 28,746	₩ 16,460	₩ 12,298	₩ 57,504

29.3 Changes in financial acceptances and guarantees for the three-month period ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019			
	Financial acceptances and guarantees			
	12 month expected credit loss	Lifetime expected credit losses		Total
		Non credit-impaired loan	Credit-impaired loan	
Beginning balance	₩ 237	₩ 23	₩ -	₩ 260
Transfer to 12-month expected credit loss	5	(5)	-	-
Transfer to non credit-impaired loan	-	-	-	-
Transfer to credit-impaired loan	(4)	-	4	-
Provision	60	22	1	83
Exchange rate fluctuation	3	-	-	3
Ending balance	₩ 301	₩ 40	₩ 5	₩ 346

29.3 Changes in financial acceptances and guarantees for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions): (Cont'd)

	For the three-month period ended March 31, 2018			
	Financial acceptances and guarantees			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Total
Beginning balance	₩ 408	₩ 69	₩ -	₩ 477
Transfer to 12-month expected credit loss	2	(2)	-	-
Transfer to non credit-impaired loan	(25)	25	-	-
Transfer to credit-impaired loan	(2)	-	2	-
Provision(reversal)	81	(13)	60	128
Exchange rate fluctuation	-	-	-	-
Ending balance	₩ 464	₩ 79	₩ 62	₩ 605

29.4 Changes in other provisions for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019				
Classification	January 1	Provision (reversal)	Use	Other	March 31
Non–financial acceptances and guarantees	₩ 66,795	₩ (22,130)	₩ -	₩ 981	₩ 45,646
Other allowance:					
Allowances for asset retirement obligation	64,211	170	540	79	65,000
Allowance for lawsuits	6,869	1,020	-	18	7,907
Others	37,363	(8,780)	(310)	965	29,238
	108,443	(7,590)	230	1,062	102,145
	₩ 175,238	₩ (29,720)	₩ 230	₩ 2,043	₩ 147,791

	For the three-month period ended March 31, 2018				
Classification	January 1	Provision (reversal)	Use	Other	March 31
Non–financial acceptances and guarantees	₩ 79,252	₩ (3,642)	₩ -	₩ 64	₩ 75,674
Other allowance:					
Allowances for asset retirement obligation	55,071	219	(585)	-	54,705
Allowance for lawsuits	68,943	(10,973)	-	(5)	57,965
Others	18,726	3,355	(301)	(11)	21,769
	142,740	(7,339)	(886)	(16)	134,439
	₩ 221,992	₩ (11,041)	₩ (886)	₩ 48	₩ 210,113

29.5 Details of guarantees as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Financial guarantees in Korean won:		
Collateral for loans	₩ 94,145	₩ 97,079
Purchasing loans	327,334	328,152
	421,479	425,231
Financial guarantees in foreign currencies:		
Local financial acceptances and guarantees	76,867	76,462
Confirmed acceptance and guarantees in Korean won	1,588,045	1,578,011
Confirmed acceptance and guarantees in foreign currencies:		
Acceptance on letter of credit	935,386	924,390
Acceptance on letter of guarantees	108,269	106,636
Others	9,219,833	9,108,738
	10,263,488	10,139,764
Contingent acceptance and guarantees:		
Letters of credit	3,471,295	3,495,006
Others	687,274	642,324
	4,158,569	4,137,330
Bills endorsed	36,412	24,878
	₩ 16,544,860	₩ 16,381,676

29.6 Commitments

Details of unused commitments as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Commitments on loans in Korean won	₩ 57,245,712	₩ 56,868,640
Commitments on loans in foreign currencies	24,477,040	21,342,457
Commitments on credit lines on asset–backed securities	795,068	881,283
Commitments on purchase of securities	1,999,511	1,859,348
	₩ 84,517,331	₩ 80,951,728

29.7 Lawsuits

As of March 31, 2019, the Group is involved in 381 lawsuits as a plaintiff and 147 lawsuits as a defendant. The aggregate amounts of claims as plaintiff and defendant are ₩446,659 million and ₩163,728 million, respectively. The Group's major lawsuits in progress as a defendant are summarized as follows (Korean won in millions):

Plaintiff	Amount	Status of lawsuit		Content
		First trial	On appeal	
F********Bankruptcy administrator	₩ 38,222	In-progress	-	Return of an illicit gain
**** Securities Co., Ltd.,	37,136	In-progress	-	Compensation for damages
**** Investments Co., Ltd.	16,798	In-progress	-	Compensation for damages

30. Other liabilities and merchant banking account liabilities

30.1 Details of other liabilities as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Borrowing from trust accounts	₩ 7,057,699	₩ 5,984,610
Foreign exchanges settlement credits	604,199	494,080
Domestic exchange settlement credits	1,389,878	3,719,241
Accounts payables	11,996,299	6,500,410
Accrued expenses payables	2,184,331	1,995,654
Income in advance	64,035	67,544
Deferred income	271	337
Deposits for letter of guarantees and others	234,598	332,626
Suspense receipt	325,528	268,626
Withholding taxes	68,211	73,684
Security deposits received	13,140	207,312
Accounts for agency businesses	111,578	269,884
Liability incurred by agency relationship	1,854,410	2,248,377
Lease liabilities	477,334	-
Financial acceptance and guarantees	15,557	13,603
Other liabilities	15,912	17,247
	₩ 26,412,980	₩ 22,193,235

30.2 Details of merchant banking account liabilities as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Merchant banking account deposits	₩ 3,156,780	₩ 2,338,924
Other Merchant banking account liabilities (*)	1,028	459
	₩ 3,157,808	₩ 2,339,383

(*) Including accrued expenses, unearned income and others.

30.3 Details of lease liabilities as of March 31, 2019 are as follows (Korean won in millions):

Classification	Face amount	Present value discount	Book value
Real estate for business purpose	₩ 479,231	₩ (18,117)	₩ 461,114
Equipment and vehicles	16,344	(450)	15,894
Others	337	(11)	326
	₩ 495,912	₩ (18,578)	₩ 477,334

30.4 Changes in lease liabilities for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	Beginning book value	Increase	Depreciation	Paid (*)	Others	Ending book value
Real estate for business purpose	₩ 499,621	₩ 17,989	₩ 2,511	₩ (61,822)	₩ 2,815	₩ 461,114
Equipment and vehicles	16,702	1,237	94	(2,124)	(15)	15,894
Others	339	-	2	-	(15)	326
	₩ 516,662	₩ 19,226	₩ 2,607	₩ (63,946)	₩ 2,785	₩ 477,334

(*) Total cash outflows related to lease liabilities as of March 31, 2019 is ₩63,910 million.

30.5 The details of composition by maturity according to the remaining maturity of the contractual cash flows before discounting the lease liability as of March 31, 2019 are as follows (Korean won in millions):

Classification	Less than 1 month	1–3 months	3–6 month	6 months–1 year	1 year– 5 years	More than 5 years	Total
Real estate for business purpose	₩ 526	₩ 1,285	₩ 5,465	₩ 32,780	₩ 379,021	₩ 60,154	₩ 479,231
Equipment and vehicles	18	5	255	662	15,309	95	16,343
Others	-	-	-	-	327	10	337
	₩ 544	₩ 1,290	₩ 5,720	₩ 33,442	₩ 394,657	₩ 60,259	₩ 495,911

31. Capital stock and other paid-in capital

31.1 Issued capital as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019		December 31, 2018	
Number of shares authorized		2,000,000,000		2,000,000,000
Par value per share (Korean won)	₩	5,000	₩	5,000
Number of shares issued		1,071,915,717		1,071,915,717
Common stock	₩	5,359,578	₩	5,359,578

31.2 Other paid-in capital as of March 31, 2019 and December 31, 2018 are as follows (Korea won in millions):

Classification	March 31, 2019		December 31, 2018	
Capital surplus (*1)	₩	9,670,357	₩	9,670,357
Hybrid securities (*2)		179,737		179,737
Capital adjustments				
Stock option		(9,585)		(9,638)
Others		(32,255)		(32,257)
		(41,840)		(41,895)
	₩	9,808,254	₩	9,808,199

(*1) The amount recognized as other capital surplus as of March 31, 2019 consists of the amount recognized for business combinations under common control and stock options that are not exercised and recognized as capital adjustments.

(*2) There is expiry date of hybrid securities but the Group has the right to continuously extend the maturity and accordingly, the requirements for capital are fulfilled.

32. Accumulated other comprehensive income

Changes in accumulated other comprehensive income for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019					
Classification	January 1	Increase and decrease	Reclassification (*)	Transfer of retained earnings	Tax effects	March 31
Gain (loss) on valuation of Financial assets measured at FVOCI	₩ (121,341)	₩ 82,630	₩ (7,495)	₩ 200	₩ (19,771)	₩ (65,777)
Changes in equities of investments in associates	(60,021)	37,997	-	-	(10,449)	(32,473)
Gain (loss) on valuation of net investment hedges of foreign operations	3,763	(11,127)	-	-	3,060	(4,304)
Exchange differences on translation of foreign operations	(355,051)	89,138	-	-	(1,968)	(267,881)
Gain(loss) on valuation of fair value hedges	(6,772)	(3,940)	-	-	1,084	(9,628)
Remeasurement of the net defined benefit plan	(331,391)	167	-	-	(46)	(331,270)
	₩ (870,813)	₩ 194,865	₩ (7,495)	₩ 200	₩ (28,090)	₩ (711,333)

(*) Gain (loss) on valuation of financial assets measured at FVOCI recognized as accumulated other comprehensive income is reclassified due to disposal of financial assets measured at FVOCI.

32. Accumulated other comprehensive income (cont'd)

	For the three-month period ended March 31, 2018					
Classification	January 1	Increase and decrease	Reclassification (*)	Transfer of retained earnings	Tax effects	March 31
Gain (loss) on valuation of financial assets measured at FVOCI	₩ (474,258)	₩ 152,721	₩ (3,540)	₩ 8,712	₩ (44,073)	₩ (360,438)
Changes in equities of investments in associates	(81,977)	40,831	-	-	(11,229)	(52,375)
Gain (loss) on valuation of net investment hedges of foreign operations	12,712	3,122	-	-	(859)	14,975
Exchange differences on translation of foreign operations	(341,805)	22,345	-	-	(847)	(320,307)
Gain(loss) on valuation of fair value hedges	-	981	-	-	(270)	711
Remeasurement of the net defined benefit plan	(237,291)	(2,198)	-	-	604	(238,885)
	₩ (1,122,619)	₩ 217,802	₩ (3,540)	₩ 8,712	₩ (56,674)	₩ (956,319)

(*) Gain (loss) on valuation of available-for-sale financial assets recognized as accumulated other comprehensive income is reclassified due to disposal or recognition of impairment of available-for-sale financial assets.

33. Retained earnings

33.1 Details of retained earnings as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification		March 31, 2019		December 31, 2018
Legal reserve				
Earned surplus reserve (*1)	₩	1,417,500	₩	1,223,000
Voluntary reserve				
Revaluation reserves on tangible assets (*2)		409,574		411,081
Other reserves (*3)		174,910		177,103
Regulatory reserve for bad debts (*4)		2,048,540		1,843,898
Other voluntary reserves		4,546,567		3,588,194
		7,179,591		6,020,276
Unappropriated retained earnings		1,116,031		2,879,378
	₩	9,713,122	₩	10,122,654

(*1) The *Banking Law* of the Republic of Korea requires the Group to appropriate at least 10% of net income after income tax to legal reserve, until such reserve equals 100% of its paid-in capital. This reserve is restricted to the payment of cash dividends; however, it can be used to reduce deficit or be transferred to capital.
(*2) The Group records gains from revaluation of property and equipment previously recognized as other comprehensive income to the voluntary reserve, as it applies the revaluation amount as deemed cost at the first-time adoption of KIFRS. The reserve is recognized in distributable retained earnings when the relevant property and equipment are disposed.
(*3) Relevant Japanese regulations require the Group's overseas branches located in Japan to appropriate a minimum of 10% of net income for the period as a legal reserve, until such reserve equals ¥2,000 million. This reserve is restricted to be used upon liquidation of the Japanese branches. Singapore, Hong Kong and Hanoi branches' statutory reserves are included in other reserves in accordance with the relevant regulations.
(*4) The Group has provided allowances for possible loan losses in accordance with KIFRS. The difference in this amount and the provision of allowance accumulated in accordance with the minimum accumulation ratio required by FSS has been accounted for as regulatory reserve for bad debts.

33.2 Changes in appropriated retained earnings for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Beginning balance	₩	10,122,654	₩	8,735,759
Effect of changes in accounting standards		-		297,679
Net income		479,853		631,875
Dividends		(886,800)		(972,600)
Dividends on hybrid securities		(2,440)		(2,439)
Reclassification of valuation gain or loss on equity securities measured at FVOCI upon derecognition		(145)		(6,316)
Ending balance	₩	9,713,122	₩	8,683,958

34. Regulatory reserve for bad debts

Regulatory reserve for bad debt is calculated and disclosed in accordance with Article 29, Section 1 and 2 of supervision of Banking Business of the Republic of Korea.

34.1 Details of regulatory reserve for bad debts as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Beginning balance	₩ 2,139,549	₩ 1,934,322
Planned provision for bad debts	23,897	205,227
Ending balance	₩ 2,163,446	₩ 2,139,549

34.2 Provisions for bad debt reserve and income adjusted for deductions of provisions for bad debt for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Net income attributable to equity holders of the parent before deducting provisions for bad debt	₩ 479,853	₩ 631,875
Provision of bad debt reserve	(23,897)	(49,475)
Adjusted income after deducting provisions for bad debt	₩ 455,956	₩ 582,400
Basic earnings per share adjusted after reflecting reserve for bad debt (*1) (Korean won)	₩ 425	₩ 543
Diluted earnings per share adjusted after reflecting reserve for bad debt (*2) (Korean won)	₩ 425	₩ 543

(*1) The dividend on hybrid equity securities in the amount of ₩2,440 million and ₩2,439 million for the three-month periods ended March 31, 2019 and 2018 were deducted from the adjusted income after reflecting the bad debt reserve for the calculation of earnings per share after reflecting reserve for bad debt for each period.
(*2) Because it does not have dilutive potential ordinary stock, basic earnings per share is the same as diluted earnings per share.

35. Operating income and operating expenses

35.1 Operating income for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Interest income	₩	2,504,134	₩	2,169,023
Fees and commission income		213,357		209,916
Gains on financial instruments measured at FVTPL		3,591,768		2,396,758
Gains on fair value hedging derivative instruments		83,004		73,626
Gains on financial instruments measured at FVOCI		9,855		5,601
Changes in credit risk loss for financial instruments		-		782
Other operating income		873,698		1,138,060
	₩	7,275,816	₩	5,993,766

35.2 Operating expenses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Interest expenses	₩	1,165,518	₩	898,615
Fees and commission expenses		47,822		44,772
Losses on financial instruments measured at FVTPL		3,520,692		2,312,401
Losses on fair value hedging derivative instruments		72,245		61,842
Losses on financial instruments measured at FVOCI		149		1,557
Changes in credit risk loss for financial instruments		116,354		29,154
General and administrative expenses		850,093		671,431
Other operating expenses		890,215		1,163,236
	₩	6,663,088	₩	5,183,008

36. Net interest income

36.1 Interest income for the three-month periods ended March 31, 2019 and 2018 is as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Interest income calculated using effective interest rate method				
Interest income on due from banks	₩	38,072	₩	35,430
Interest income on loans		2,198,980		1,890,736
Interest income on financial assets measured at FVOCI		165,818		178,820
Interest income on securities measured at amortized cost		84,050		49,732
		2,486,920		2,154,718
Interest income on financial assets measured at FVTPL		17,214		14,305
	₩	2,504,134	₩	2,169,023

36.2 Interest expenses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Interest expenses on deposit liabilities	₩ 885,693	₩ 682,295
Interest expenses on borrowings	78,393	50,306
Interest expenses on financial liabilities measured at FVTPL	3,242	2,832
Interest expenses of debentures	169,131	135,728
Others	29,059	27,454
	₩ 1,165,518	₩ 898,615

37. Net fees and commission income

37.1 Fees and commission income for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Commissions received from loans and others	₩ 142,940	₩ 138,414
Commissions received on guarantee	17,527	17,190
Commissions related foreign exchange	52,890	54,312
	₩ 213,357	₩ 209,916

37.2 Fees and commission expenses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Commissions paid borrowings and others	₩ 46,692	₩ 35,213
Commissions related foreign exchange	1,130	9,559
	₩ 47,822	₩ 44,772

38. Net gain (loss) from financial instruments at FVTPL

38.1 Details of gain (loss) on financial assets and liabilities measured at FVTPL for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Gains from financial instruments at FVTPL		
Financial assets and liabilities measured at FVTPL		
Gain on valuation	₩ 33,911	₩ 36,738
Gain on disposal	9,164	14,486
	43,075	51,224
Derivatives instruments held-for-trading		
Gain on valuation of derivatives		
Currency related derivatives	2,243,780	1,026,789
Interest related derivatives	134,772	118,753
Stock related derivatives	13	59
Others	932	2,413
	2,379,497	1,148,014
Gain on transaction of derivatives		
Currency related derivatives	919,327	877,315
Interest related derivatives	248,269	314,483
Stock related derivatives	1,517	1,521
	1,169,113	1,193,319
Gain on securities sold	36	5
	3,591,721	2,392,562
Loss from financial instruments measured at FVTPL		
Financial instruments measured at FVTPL		
Loss on valuation	14,028	23,751
Loss on disposal	3,320	32,512
Others	70	369
	17,418	56,632
Derivatives instruments held-for-trading		
Loss on valuation of derivatives		
Currency related derivatives	2,178,426	1,022,609
Interest related derivatives	111,450	81,878
Stock related derivatives	167	4
	2,290,043	1,104,491
Loss on transaction of derivatives		
Currency related derivatives	942,959	821,732
Interest related derivatives	262,867	328,095
Stock related derivatives	1,372	1,348
	1,207,198	1,151,175
Loss on securities sold	77	57
	3,514,736	2,312,355
	₩ 76,985	₩ 80,207

38.2 Details of gain (loss) on financial assets and liabilities designated as measured at FVTPL for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Gain on financial assets and liabilities designated as measured at FVTPL		
Deposits		
Gain on valuation	₩ 47	₩ 4,196
	47	4,196
Loss on financial assets and liabilities designated at FVTPL		
Deposits		
Loss on valuation	5,956	46
	5,956	46
	₩ (5,909)	₩ 4,150

39. Gain (loss) from derivative financial instruments used for hedging

Gain (loss) from derivative instruments used for hedging for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31 2019	For the three-month period ended March 31 2018
Gain from derivative instruments used for hedging		
Hedged item		
Gain on valuation		
Gain on valuation of debentures	₩ 184	₩ 37,278
Gain on valuation of deposits	636	23,013
	820	60,291
Gain on transaction		
Gain on transaction of debentures	6,787	464
	6,787	464
Derivative instruments used for hedging		
Gain on valuation of derivatives		
Gain on valuation of currency related derivatives	5,203	8,660
Gain on valuation of interest related derivatives	62,804	761
	68,007	9,421
Gain on transaction of derivatives		
Gain on transaction of currency related derivatives	2,720	3,450
Gain on transaction of interest related derivatives	4,670	-
	7,390	3,450
	83,004	73,626
Loss from derivative instruments used for hedging		
Hedged item		
Loss on valuation		
Loss on valuation of debentures	43,241	1,110
Loss on valuation of deposits	22,434	107
	65,675	1,217
Loss on transaction		
Loss on transaction of deposits	4,670	-
	4,670	-
Derivative instruments used for hedging		
Loss on valuation of derivatives		
Loss on valuation of currency related derivatives	1,237	249
Loss on valuation of interest related derivatives	663	60,376
	1,900	60,625
	72,245	61,842
	₩ 10,759	₩ 11,784

40. Gain (loss) from financial instruments measured at FVOCI

Details of gain (loss) on financial assets and liabilities designated as measured at FVOCI for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Gain on disposal of financial instruments measured at FVOCI	₩ 9,855	₩ 5,601
Loss on disposal of financial instruments measured at FVOCI	149	1,557
	₩ 9,706	₩ 4,044

41. Impairment loss on financial assets

Impairment loss on financial assets for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Provision(reversal) of credit loss of debt securities measured at FVOCI	₩	120	₩	(212)
Provision for possible loan loss for debt securities measured at amortized cost		337		537
Provision for possible loan losses		115,121		28,617
Provision(reversal) for possible other asset losses		776		(570)
	₩	116,354	₩	28,372

42. General and administrative expenses

General and administrative expenses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Salaries	₩	393,898	₩	359,055
Retirement benefits – Defined benefits plans		37,365		31,682
Retirement benefits – Defined contribution plans		46		44
Termination benefits		131,698		4,010
Employee welfare benefits		23,402		19,858
Depreciation		84,326		28,843
Amortization		20,350		18,545
Rental expenses (*)		16,565		60,274
Entertainment expenses		4,085		3,954
Taxes and dues		27,419		24,360
Advertising expenses		11,114		26,718
Others		99,825		94,088
	₩	850,093	₩	671,431

(*) Rental expenses include ₩239 million of expense related to the lease of low-value assets.

43. Other operating income

Other operating income for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Gain on disposal of loans	₩	2,238	₩	5,472
Reversal of acceptance and guarantees		22,047		3,514
Reversal of allowances for unused commitments		3,572		6,813
Reversal of other provisions		7,590		7,399
Trust commissions		44,906		49,509
Gain on foreign exchange transaction		757,768		1,026,488
Gain on merchant banking accounts(*)		18,023		14,718
Dividends		6,978		9,017
Others		10,576		15,130
	₩	873,698	₩	1,138,060

(*) Details of gain on merchant banking accounts for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Interest income	₩	12,870	₩	10,211
Fee and commission income		147		97
Gain on disposal of debt securities measured at FVTPL		211		198
Gain on valuation of debt securities measured at FVTPL		225		398
Gain on valuation of CMA securities		97		3
Gain on disposal of bills		4,473		3,811
	₩	18,023	₩	14,718

44. Other operating expenses

Other operating expenses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Loss on disposal of loans	₩	44	₩	-
Contribution to Korea Credit Guarantee Fund		71,539		60,225
Insurance fee on deposit		83,356		80,247
Loss on foreign exchange transaction		721,321		1,012,163
Loss on merchant banking accounts (*)		12,984		9,716
Others		971		885
	₩	890,215	₩	1,163,236

(*) Details of loss on merchant banking accounts for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Interest expenses	₩	12,984	₩	9,716

45. Other non-operating income

Other non–operating income for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Rental fee income	₩	4,181	₩	4,258
Gain on disposal of property and equipment		445		5,749
Gain on disposal of intangible asset		-		59
Gain on equity method		32,274		30,068
Others		4,736		3,832
	₩	41,636	₩	43,966

46. Other non-operating expenses

Other non–operating expenses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Loss on disposal of property and equipment	₩	126	₩	612
Loss on equity method		-		4,318
Collection expenses for written-off claims		322		535
Collection commissions for written-off claims		942		975
Loss on disposal of investments in associates		348		6
Donations		19,933		1,561
Others		3,095		6,034
	₩	24,766	₩	14,041

47. Income tax expenses

47.1 The components of income tax expenses for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification		For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018
Current income taxes				
Income taxes	₩	87,419	₩	203,351
Prior year's income tax adjustments recognized in the current year		(12,771)		(5,555)
Changes in deferred income tax assets (liabilities)		71,834		79,764
Current and deferred income taxes recognized directly to equity		14,135		(51,915)
Tax effect of consolidated tax returns		(12,118)		(18,971)
Income tax expenses	₩	148,499	₩	206,674

47.2 Temporary differences and deferred income tax assets (liabilities) as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019 Deductible (taxable) temporary differences	March 31, 2019 Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 344,096	₩ 94,626
Valuation of investment in associates	(468,334)	(128,792)
Gain on valuation of derivatives	(333,010)	(91,578)
Deemed dividends	156,565	43,055
Deferred loan fees, net of expenses	(316,877)	(87,141)
Accrued interest income	(292,549)	(80,451)
Accrued expenses	65,571	18,020
Provisions on acceptance and guarantees	43,791	12,043
Severance and retirement insurance	(1,466,313)	(403,240)
Severance and retirement benefit liabilities	1,523,343	418,916
Other provisions	96,780	26,614
Loans written-off	674,169	185,352
Depreciation	(13,334)	(3,667)
Fair value valuation resulting from merger	32	9
Dormant deposits	24,884	6,843
Allowance for advanced depreciation	(180,315)	(49,587)
Deemed cost for property and equipment	(914,566)	(251,506)
Gain on valuation of financial instruments measured at FVOCI	100,732	27,696
Net loss carried over	68,662	15,106
Investment in kind	18,479	5,082
Financial guarantee contract	4,122	1,133
Deferred reward points income	271	74
Others	336,819	90,763
	₩ (526,982)	₩ (150,630)
Domestic deferred income tax liabilities		(150,630)
Foreign deferred tax assets (*)		51,767
Foreign deferred tax liabilities (*)		(101,490)
		₩ (200,353)

47.2 Temporary differences and deferred income tax assets (liabilities) as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2018 Deductible (taxable) temporary differences	December 31, 2018 Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 384,953	₩ 105,862
Valuation of investment in associates	(461,574)	(126,933)
Gain on valuation of derivatives	(283,487)	(77,959)
Deemed dividends	156,718	43,097
Deferred loan fees, net of expenses	(319,524)	(87,869)
Accrued interest income	(306,074)	(84,170)
Accrued expenses	139,583	38,384
Provisions on acceptance and guarantees	58,047	15,963
Severance and retirement insurance	(1,511,444)	(415,588)
Severance and retirement benefit liabilities	1,519,582	417,817
Other provisions	108,600	29,865
Loans written-off	690,642	189,178
Depreciation	(12,764)	(3,510)
Fair value valuation resulting from merger	32	9
Dormant deposits	17,556	4,828
Allowance for advanced depreciation	(180,315)	(49,587)
Deemed cost for property and equipment	(914,566)	(251,506)
Gain on valuation of financial instruments measured at FVOCI	170,659	46,963
Net loss carried over	71,188	15,661
Investment in kind	18,479	5,082
Financial guarantee contract	1,775	488
Deferred reward points income	337	93
Others	314,914	85,436
	₩ (336,683)	₩ (98,396)
Domestic deferred income tax liabilities		(98,396)
Foreign deferred tax assets (*)		55,845
Foreign deferred tax liabilities (*)		(85,968)
		₩ (128,519)

(*) Deferred tax assets of foreign branches are not offset against the deferred tax liabilities due to the differences in tax jurisdictions.

The effective income tax rate of 27.5% as of March 31, 2019, is applied when calculating deferred tax assets or liabilities. Also, deferred income tax assets are recognized when it is foreseeable that future taxable income will be incurred and that future tax credits will be realized.

47.3 Details of deferred income taxes charged (credited) directly to equity as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019			
	Before tax amounts		Deferred income tax assets (liabilities)	
Gain (loss) on valuation of financial assets measured at FVOCI	₩	(103,363)	₩	28,425
Changes in equity in equity method		(44,791)		12,317
Exchange differences on translation of foreign operations		(38,509)		10,590
	₩	(186,663)	₩	51,332

Classification	December 31, 2018			
	Before tax amounts		Deferred income tax assets (liabilities)	
Gain (loss) on valuation of financial assets measured at FVOCI	₩	(173,869)	₩	47,814
Changes in equity in equity method		(82,788)		22,767
Exchange differences on translation of foreign operations		(45,665)		12,558
	₩	(302,322)	₩	83,139

48. Earnings per share

48.1 Weighted-average number of ordinary shares for the three-month periods ended March 31, 2019 and 2018 are as follows (shares in units):

Classification	Periods	Number of shares	Weights	Weighted-average number of ordinary shares
March 31, 2019	2019.01.01~2019.03.31	1,071,915,717	90/90	1,071,915,717
March 31, 2018	2018.01.01~2018.03.31	1,071,915,717	90/90	1,071,915,717

Since the Group does not have potentially dilutive ordinary stock, the weighted average number of shares of ordinary stock outstanding per basic share is the same as the weighted average number of shares of ordinary stock outstanding per diluted share.

48.2 The Group's basic earnings per share for the three-month periods ended March 31, 2019 and 2018 are calculated as follows (Korean won in millions except per share amounts):

Classification	For the three-month periods ended March 31, 2019		For the three-month periods ended March 31, 2018	
Net income attributable to equity holders of the parent for the three-month periods	₩	479,853	₩	631,875
Dividends on hybrid equity securities		(2,439)		(2,439)
Net income attributable to common stock		477,414		629,436
Weighted-average number of shares of ordinary stocks outstanding		1,071,915,717		1,071,915,717
Basic earnings per share (Korean won) (*)	₩	445	₩	587

(*) Basic earnings per share (EPS) are the same as diluted EPSs for the three-month periods ended March 31, 2019 and 2018.

49. Share-based payment

When the stock options are exercised, the Group has the option to settle either through issuance of new shares or treasury stock or through payment of cash equivalents to the difference between the market price and the exercise price. The number of exercisable stock option is determined in accordance with management performance and the calculation criteria for the number of exercisable shares. Also, the Group granted the equity-linked special incentive (Rose Bonus and/or Rose Share) to employees for the purpose of motivation to improve long-term performance. The equity-linked special incentive is settled in cash. It can be exercised from 1 to 3 years after the grant date for the following 3 to 4 years.

Details of liabilities related to share-based payment and total intrinsic value of rights accounted for as accounts payable in case that option holders achieve rights to receive cash or other assets as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Book value of liabilities related to share-based payment		
Stock options	₩ 8	₩ 23
Equity-linked special incentives (granted by the Bank)	14,452	11,301
Equity-linked special incentives (granted by HFG)	33,747	33,915
	₩ 48,207	₩ 45,239

The compensation costs for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Costs recognized due to share-based payment		
Stock options	₩ (15)	₩ (102)
Equity-linked special incentive (granted by the Bank)	3,230	2,966
Equity-linked special incentive (granted by HFG)	(95)	536
	₩ 3,120	₩ 3,400

49.1 Stock options

Details of the share-based payment as of March 31, 2019 are as follows. Stock options are measured at fair value based on Black-Scholes model (in Korean won and share in units):

Grant date (unaudited)	Exercise period	Risk-free rate	Expected service period	Volatility of the underlying stock price	Expected dividends	Stock price at grant date	Fair value
2011-08-10	2015-08-11 ~ 2019-08-10	0.63%	8.01	23.85%	₩ 1,900	₩ 8,060	₩ 16
2011-08-26	2015-08-27 ~ 2019-08-26	0.71%	8.01	23.08%	1,900	7,720	50
2011-09-02	2015-09-03 ~ 2019-09-02	0.74%	8.01	22.83%	1,900	7,930	61

The Group used the volatility of the past stock price in the expected exercise period as the expected volatility, and used the stock price as of March 31, 2019 as the stock price of the underlying asset, and calculated the fair value by using the average dividend rate for the past three years as the expected dividend rate.

Changes in shares of stock options for the three-month periods ended March 31, 2019 are as follows (Korean won and share):

Grant date	Shares at the beginning	Exercise	Divesture	Extinction at maturity	Shares at the end	Stock option outstanding	Exercise price
2011-08-10	333,000	-	-	-	333,000	333,000	₩ 9,100
2011-08-26	42,290	-	-	-	42,290	42,290	8,500
2011-09-02	11,250	-	-	-	11,250	11,250	8,400
	386,540	-	-	-	386,540	386,540	

There is no exercise of the stock options for the three-month period ended March 31, 2019.

Weighted average residual expiration of exercisable stock options is 0.37 years as of March 31, 2019.

49.2 Equity-linked special incentives

Equity-linked special incentives are measured at fair value based on the binomial model and become exercisable from 1 to 3 years after the grant date for the following 3 to 4 years. There is no equity-linked special incentive provided by the Bank to the employees as of March 31, 2019.

There is no changes in shares of equity linked special incentives for the three-month period ended March 31, 2019

49.3 Performance-linked share-based compensation

Hana Financial Group (HFG) and the Bank operate performance share plan, granting the executives and department head of the Bank with performance-linked stocks. Details of performance-linked stocks granted to the executives and department head of the Bank as of March 31, 2019 are as follows:

Classification	5th	6th	7th	8th	9th
Granted by	Hana Financial Group	Hana Financial Group	Hana Bank	Hana Bank	Hana Bank
Grant date	2015-01-01	2016-01-01	2017-01-01	2018-01-01	2019-01-01
Payment date	2017-12-31	2018-12-31	2019-12-31	2020-12-31	2021-12-31
Grant period	2015-01-01~ 2017-12-31	2016-01-01~ 2018-12-31	2017-01-01~ 2019-12-31	2018-01-01~ 2020-12-31	2019-01-01~ 2021-12-31
Grace period	2018-01-01~ 2018-12-31	2019-01-01~ 2019-12-31	2020-01-01~ 2020-12-31	2021-01-01~ 2021-12-31	2022-01-01~ 2022-12-31
Payment period	Within 2019-04-30	Within 2020-04-30	Within 2021-04-30	Within 2022-04-30	Within 2023-04-30
Grant method	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price	Payment of cash equivalents to the difference between the market price and the exercise price	Payment of cash equivalents to the difference between the market price and the exercise price
Shares at settlement date (*)	346,714	453,553	265,124	100,556	20,480

(*) Hana Financial Group (HFG) and the Bank provide the executives and department head of the Bank with the right to receive stocks. The amount of stocks paid is adjusted based on the performance. The amounts of 5th and 6th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income) is 60%. The amounts of 7th, 8th and 9th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income, soundness) is 60%.

50. Cash flow information

50.1 Details of cash and cash equivalents as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

Classification	March 31, 2019	December 31, 2018
Cash	₩ 2,143,286	₩ 2,120,840
Due from banks in Korean won	6,908,611	11,058,022
Due from banks in foreign currencies	5,442,824	7,273,261
	14,494,721	20,452,123
Less: Restricted balances	8,995,474	15,266,212
Deposits which have a maturity period of three months or above	765,549	812,820
	₩ 4,733,698	₩ 4,373,091

50.2 Significant non–cash transactions for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019	For the three-month period ended March 31, 2018
Initial recognition of right-of-use assets/lease liabilities	₩ 516,662	₩ -
Transfer from prepaid rental expense to right-of-use assets	31,250	-
Transfer from leasehold improvements to right-of-use assets	19,307	-
Gain(loss) on valuation of financial assets measured at FVOCI	75,590	(15,170)
Transfer from property and equipment to investment properties	69,337	318,631
Changes in capital from valuation of equity method for investments in associates	37,997	-
Exchange differences on translation of foreign operations	91,282	21,356

50.3 Changes in liabilities arising from financing activities for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019					
	January 1, 2019	Financing activities	Exchange rate fluctuation	Fair value hedging	Other	March 31, 2019
Borrowings	₩ 15,280,970	₩ (678,229)	₩ 263,703	₩ -	₩ -	₩ 14,866,444
Debentures	24,668,613	(146,853)	29,212	58,124	9,982	24,619,078
Lease liabilities	516,662	(63,910)	-	-	24,582	477,334
	₩ 40,466,245	₩ (888,992)	₩ 292,915	₩ 58,124	₩ 34,564	₩ 39,962,856

Classification	For the three-month period ended March 31, 2018					
	January 1, 2018	Financing activities	Exchange rate fluctuation	Fair value hedging	Other	March 31, 2018
Borrowings	₩ 13,774,502	₩ 536,763	₩ 32,544	₩ -	₩ -	₩ 14,343,809
Debentures	22,311,737	1,111,079	(19,909)	(40,269)	15,056	23,377,694
	₩ 36,086,239	₩ 1,647,842	₩ 12,635	₩ (40,269)	₩ 15,056	₩ 37,721,503

51. Related parties

51.1 Transactions with related parties for the three-month periods ended March 31, 2019 and 2018 are summarized as follows (Korean won in millions):

	For the three-month period ended March 31, 2019						
	Income			Expenses			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company:							
Hana Financial Group (HFG)	₩ -	₩ 691	₩ 442	₩ -	₩ 11	₩ -	₩ -
Associates:							
Bank of Jilin	8	-	2	-	-	-	-
CM International financing leases	2,068	-	-	3,725	-	-	-
Beijing Langzi Asset Management Co., Ltd.	209	73	-	16	30	-	-
PT Sinarmas Hana Finance	418	1	-	2	16	-	-
Hana First Private Equity Fund	-	-	-	-	9	-	-
Korea Credit Bureau	-	-	-	-	56	-	-
Darby Hana Infrastructure Fund Management	-	-	-	-	62	-	-
Masan Marine New Town Co., Ltd.	23	-	-	-	1	-	-
KEB Hana-KVIC Unicorn Fund of Funds	-	-	-	-	3	-	-
	2,726	74	2	3,743	177	-	-
Entities under common control:							
Hana Financial Investment Co., Ltd.	47	3	2,499	6	482	-	4,413
Hana Card Co., Ltd.	-	18,483	1,170	19	553	447	-
Hana Capital Co., Ltd.	-	93	46	1	74	-	144
Hana Asset Trust Co., Ltd.	-	13	-	-	474	-	-
Hana Alternative Asset Management Co., Ltd.	-	2	173	-	83	-	-
Hana TI Co., Ltd.	-	1	-	-	106	1,685	14,458
Hana Life Insurance Co., Ltd	-	3,396	315	-	12	-	1,227
Hana Savings Bank	-	3	8	-	-	-	-
Hana Investors Services Company	-	-	247	-	29	-	-
Hana Ventures Inc.	-	-	-	-	152	-	-
	₩ 47	₩ 21,994	₩ 4,458	₩ 26	₩ 1,965	₩ 2,132	₩ 20,242

51.1 Transactions with related parties for the three-month periods ended March 31, 2019 and 2018 are summarized as follows (Korean won in millions): (cont'd)

	For the three-month period ended March 31, 2019						
	Income			Expenses			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties:							
Gunsan BIO Energy Co., Ltd.	₩ -	₩ -	₩ -	₩ -	₩ 5	₩ -	₩ -
Finnq Co., Ltd.	-	145	2	-	2	-	-
Mirae Credit Information Services Corp.	19	11	-	-	7	257	-
UBS Hana Asset Management Co., Ltd.	-	-	13	-	35	-	-
F&U Credit Information Co., Ltd.	-	-	-	-	3	-	-
BNP Asset Development Co., Ltd.	57	-	-	-	-	-	-
Lotte Accelerator Corporation	-	-	-	-	12	-	-
Hana Power Infrastructure No. 1 Private Investment Co., Ltd.	174	-	-	(150)	9	-	-
Hanon Private Investment Co., Ltd.	-	-	-	-	1	-	-
Myoungshin Co., Ltd.	1	-	-	-	-	-	-
Petra6 Alpha Private Investment Co., Ltd.	-	-	-	-	1	-	-
	251	156	15	(150)	75	257	-
Key management	7	-	-	(3)	15	-	-
	₩ 3,031	₩ 22,915	₩ 4,917	₩ 3,616	₩ 2,243	₩ 2,389	₩ 20,242

51.1 Transactions with related parties for the three-month periods ended March 31, 2019 and 2018 are summarized as follows (Korean won in millions): (cont'd)

	For the three-month period ended March 31, 2018						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company:							
Hana Financial Group (HFG)	₩ -	₩ 697	₩ 478	₩ -	₩ 4	₩ -	₩ -
Associates:							
Korea Credit Bureau	-	-	-	-	23	-	-
Darby Hana Infrastructure Fund Management	-	-	-	-	46	-	-
Hana First Private Equity Fund	-	2	-	-	-	-	-
Company K startup winwin fund	-	-	-	-	19	-	-
Bank of Jilin (*)	1,124	-	-	(12)	-	-	-
CM International financing leases (*)	1,619	-	-	132	-	-	-
Beijing Langzi Asset Management Co., Ltd. (*)	234	81	-	154	-	-	-
PT Sinarmas Hana Finance (*)	393	-	-	(24)	15	-	-
	3,370	83	-	250	103	-	-
Entities under common control							
Hana Financial Investment Co., Ltd.	8	384	3,587	-	299	-	2,282
Hana Card Co., Ltd.	-	19,119	1,039	-	384	323	23
Hana Capital Co., Ltd.	9	80	36	-	31	4	-
Hana Asset Trust Co., Ltd.	-	19	-	-	345	-	-
Hana Alternative Asset Management Co., Ltd.	-	2	170	-	107	-	-
Hana TI Co., Ltd.	-	1	449	-	1	11,269	4,781
Hana Savings Bank	-	3	-	-	-	-	-
Hana Life Insurance Co., Ltd.	-	3,781	274	-	-	-	-
Hana Investors Services Company	-	-	-	-	49	-	-
	₩ 17	₩ 23,389	₩ 5,555	₩ -	₩ 1,216	₩ 11,596	₩ 7,086

51.1 Transactions with related parties for the three-month periods ended March 31, 2019 and 2018 are summarized as follows (Korean won in millions): (cont'd)

	For the three-month period ended March 31, 2018						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties:							
Gunsan BIO Energy Co., Ltd.	₩ -	₩ -	₩ -	₩ -	₩ 4	₩ -	₩ -
Finnq Co., Ltd.	-	63	-	-	1	-	-
Mirae Credit Information Services Corp.	55	10	-	(3)	13	233	-
Hana AIM Investment Management Inc.	-	-	-	-	5	-	-
BNP Asset Development Co., Ltd.	49	-	-	(15)	-	-	-
Thehue Company Ltd.	-	-	-	(245)	-	-	-
GMHB (*)	-	1	-	-	-	-	-
Hana Power Infrastructure No. 1 Private Investment Co., Ltd. (*)	185	-	-	608	2	-	-
	289	74	-	345	25	233	-
Key management	22	-	-	-	5	-	-
	₩ 3,698	₩ 24,243	₩ 6,033	₩ 595	₩ 1,353	₩ 11,829	₩ 7,086

(*) Significant transactions with related parties for the three-month period ended March 31, 2018, were restated by reflecting the partial errors in the transactions of the Group and overseas affiliated companies. Due to such restatement to the notes to the financial statements, revenue, transfer (reversal) of allowance for doubtful accounts, and expenses increased by ₩3,659 million, ₩858 million, and ₩43 million, respectively.

51.2 Significant transactions with related parties for the three-month periods ended March 31, 2019 and 2018 are as follows:

51.2.1 Details of significant borrowings and investment in cash to related parties for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

Classification	For the three-month period ended March 31, 2019					
	Borrowings (*1)					Investment in cash
	Beginning	Increase	Decrease	Others (*2)	Ending	
Associates:						
Bank of Jilin	₩ 1,200	₩ 31,300	₩ (30,700)	₩ -	₩ 1,800	₩ -
CM International financing leases	127,982	-	(48,357)	3,951	83,576	-
Beijing Langzi Asset Management Co., Ltd.	14,630	-	(844)	565	14,351	-
PT Sinarmas Hana Finance	17,627	7,191	(6,083)	712	19,447	-
Masan Marine New Town Co., Ltd.	1,513	-	-	-	1,513	-
Hana Alternative Investment specialized Real Estate Investment Trust No. 3-1	-	-	-	-	-	35
Hana Alternative Investment specialized Real Estate Investment Trust No. 3-2	-	-	-	-	-	15
BSK-6 Patent Technology Investment Association	-	-	-	-	-	1,200
	162,952	38,491	(85,984)	5,228	120,687	1,250
Entities under common control:						
Hana Financial Investment Co., Ltd.	500	-	-	2,276	2,776	-
	500	-	-	2,276	2,776	-
Other related parties:						
Odin2 LLC	2,237	-	-	-	2,237	-
Mirae Credit Information Services Corp.	2,000	-	-	-	2,000	-
BNP Asset Development Co., Ltd.	4,900	-	-	-	4,900	-
Hana Power Infrastructure No. 1 Private Investment Co., Ltd.	16,512	-	(1,163)	-	15,349	-
Thehue Company Ltd.	-	-	-	-	-	-
Myoungshin Co., Ltd.	184	-	(184)	-	-	-
	25,833	-	(1,347)	-	24,486	-
Key management	1,748	-	(1,130)	-	618	-
	₩ 191,033	₩ 38,491	₩ (88,461)	₩ 7,504	₩ 148,567	₩ 1,250

(*1) Intraday overdrafts are excluded.
(*2) Others include the effect of exchange rate fluctuation.

51.2.1 Details of significant borrowings and investment in cash to related parties for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions): (cont'd)

Classification	For the three-month period ended March 31, 2018					
	Borrowings (*1)					Investment in cash
	Beginning	Increase	Decrease	Others (*2)	Ending	
Associates:						
Bank of Jilin	₩ 194,333	₩ 64,662	₩ (257,866)	₩ (1,129)	₩ -	₩ -
CM International financing leases	137,205	-	(7,999)	2,596	131,802	-
Beijing Langzi Asset Management Co., Ltd.	16,399	-	(848)	557	16,108	-
PT Sinarmas Hana Finance	16,195	78	-	390	16,663	-
Masan Marine New Town Co., Ltd.	1,513	-	-	-	1,513	-
Darby Latin American Private Debt Fund III	-	-	-	-	-	1,034
Fidelis Private Equity Fund No.2	-	-	-	-	-	3,000
	365,645	64,740	(266,713)	2,414	166,086	4,034
Other related parties:						
Odin2 LLC	2,237	-	-	-	2,237	-
Mirae Credit Information Services Corp.	7,000	-	-	-	7,000	-
BNP Asset Development Co., Ltd.	4,900	-	-	-	4,900	-
Thehue Company Ltd.	5,250	-	(160)	-	5,090	-
Hana Power Infrastructure No. 1 Private Investment Co., Ltd.	16,511	-	-	-	16,511	-
	35,898	-	(160)	-	35,738	-
Key management	5,715	-	(744)	-	4,971	-
	₩ 407,258	₩ 64,740	₩ (267,617)	₩ 2,414	₩ 206,795	₩ 4,034

(*1) Intraday overdrafts are excluded.
(*2) Others include the effect of exchange rate fluctuation.

51.2.2 Details of significant deposits with related parties for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions):

	For the three-month period ended March 31, 2019				
	Deposits (*1)				
Classification	Beginning	Increase	Decrease	Others (*2)	Ending
Associates:					
PT Sinarmas Hana Finance	₩ 806	₩ 839	₩ (839)	₩ 33	₩ 839
Korea Credit Bureau Co., Ltd.	11,000	-	(5,000)	-	6,000
Darby Hana Infrastructure Fund Management	14,000	3,000	(3,000)	-	14,000
	25,806	3,839	(8,839)	33	20,839
Entities under common control:					
Hana Financial Investment Co., Ltd.	5,000	-	-	-	5,000
Hana Card Co., Ltd.	3,505	3,000	(3,000)	-	3,505
Hana Asset Trust	55,000	60,000	(27,000)	-	88,000
Hana Alternative Asset Management Co., Ltd.	6,632	52,000	(10,500)	-	48,132
Hana TI Co., Ltd.	922	972	(959)	37	972
Hana Investors Services Company	11,000	-	(11,000)	-	-
Hana Ventures Inc.	26,000	6,000	(6,000)	-	26,000
	108,059	121,972	(58,459)	37	171,609
Other related parties:					
UBS Hana Asset Management Co., Ltd	-	10,000	-	-	10,000
F&U Credit information Co., Ltd.	500	-	-	-	500
BNP Asset Development Co., Ltd.	10	-	(10)	-	-
Smartscore Co., Ltd.	101	-	-	-	101
Lotte Accelerator Corporation	3,000	2,000	(3,000)	-	2,000
Hanon Private Investment Co., Ltd.	-	230	-	-	230
Petra6 Alpha Private Investment Co., Ltd.	1,175	227	(1,402)	-	-
	4,786	12,457	(4,412)	-	12,831
Key management	3,920	-	(1,385)	-	2,535
	₩ 142,571	₩ 138,268	₩ (73,095)	₩ 70	₩ 207,814

(*1) Deposits/withdrawals arising from operations between related parties are excluded.
(*2) Others include the effect of exchange rate fluctuation.

51.2.2 Details of significant deposits with related parties for the three-month periods ended March 31, 2019 and 2018 are as follows (Korean won in millions): (cont'd)

Classification	For the three-month period ended March 31, 2018				
	Deposits (*1)				
	Beginning	Increase	Decrease	Others (*2)	Ending
Associates:					
PT Sinarmas Hana Finance	₩ 790	₩ 39	₩ -	₩ (15)	₩ 814
Korea Credit Bureau Co., Ltd.	6,000	-	-	-	6,000
Darby Hana Infrastructure Fund Management	11,100	3,000	(2,100)	-	12,000
Company KStartup winwin fund	4,020	13,642	(17,261)	-	401
	21,910	16,681	(19,361)	(15)	19,215
Entities under common control:					
Hana Financial Investment Co., Ltd.	15,000	-	(10,000)	-	5,000
Hana Card Co., Ltd.	3,005	3,000	(3,000)	-	3,005
Hana Asset Trust	52,000	20,000	-	-	72,000
Hana Alternative Asset Management Co., Ltd.	9,630	11,500	(6,500)	-	14,630
Hana Investors Services Company	12,500	8,500	(8,500)	-	12,500
	92,135	43,000	(28,000)	-	107,135
Other related parties:					
Hana AIM Investment Management Inc.	2,006	-	-	-	2,006
BNP Asset Development Co., Ltd.	-	10	-	-	10
	2,006	10	-	-	2,016
Key management	9,735	-	(5,215)	-	4,520
	₩ 125,786	₩ 59,691	₩ (52,576)	₩ (15)	₩ 132,886

(*1) Deposits/withdrawals arising from operations between related parties are excluded.
(*2) Others include the effect of exchange rate fluctuation.

51.3 Outstanding balances with related parties arising from the above transactions as of March 31, 2019 and December 31, 2018 are summarized as follows (Korean won in millions):

Classification	March 31, 2019				
	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company:					
Hana Financial Group (HFG)	₩ -	₩ 212	₩ -	₩ 7,475	₩ 332,193
Associates:					
Bank of Jilin	1,800	-	-	32	-
CM International financing leases	83,576	-	4,284	21	-
Beijing Langzi Asset Management LC	14,351	-	227	2,905	-
PT Sinarmas Hana Finance	19,447	30	27	848	-
Hana First Private Equity Fund	-	-	-	2,008	-
Korea Credit Bureau Co., Ltd.	-	-	-	6,041	-
Darby Hana Infrastructure Fund Management	-	-	-	15,530	-
Midan City Development Co., Ltd.	-	-	-	2	-
Masan Marine New Town Co., Ltd.	1,513	-	2	818	-
Fidelis Private Equity Fund No.2	-	-	-	2,879	-
KEB Hana-KVIC Unicorn Fund of Funds.	-	-	-	947	-
	120,687	30	4,540	32,031	-
Entities under common control:					
Hana Financial Investment Co., Ltd.	2,776	9,046	79	265,623	11,415
Hana Card Co., Ltd.	-	13	136	145,930	55,569
Hana Capital Co., Ltd.	-	1,774	87	85,131	6,422
Hana Asset Trust	-	-	-	123,413	111
Hana Alternative Asset Management Co., Ltd.	-	-	-	70,683	644
Hana TI Co., Ltd.	-	14,927	-	5,484	14,993
Hana Life Insurance Co., Ltd.	-	1,363	-	-	2,553
Hana Saving Bank Co., Ltd.	-	-	-	-	54
Hana Investors Services Company	-	-	-	1,403	827
Hana Ventures Inc.	-	-	-	28,427	153
	2,776	27,123	302	726,094	92,741
Other related parties:					
Odin2. LLC	2,237	-	2,237	-	-
Gunsan bio-energy Corp.	-	-	-	3,462	-
Finnq Co., Ltd.	-	-	-	1,660	-
Mirae Credit Information Services Corp.	2,000	-	-	2,275	-
UBS Hana Asset Management Co., Ltd	-	-	-	10,432	-
F&U Credit Information Co., Ltd.	-	-	-	732	-
BNP Asset Development Co., Ltd.	4,900	-	40	14	-
Hana Lantern Energy Factory Private Equity Fund	-	-	-	466	-
Smartscore Co., Ltd.	-	-	-	190	-
Lotte Accelerator Corporation	-	-	-	2,010	-
Hana Power Infrastructure No. 1 Private Investment Co., Ltd.	15,349	-	542	2,243	-
Hanon Private Investment Co., Ltd.	-	-	-	353	-
DangsandongPFV Co., Ltd.	-	-	-	2,637	-
Fresheasy Co., Ltd.	-	-	-	12,251	-
Dowon development Co., Ltd.	-	-	-	158	11
	24,486	-	2,819	38,883	11
Key management	618	-	-	3,789	-
	₩ 148,567	₩ 27,365	₩ 7,661	₩ 808,272	₩ 424,945

51.3 Outstanding balances with related parties arising from the above transactions as of March 31, 2019 and December 31, 2018 are summarized as follows (Korean won in millions): (cont'd)

Classification	December 31, 2018				
	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company:					
Hana Financial Group (HFG)	₩ -	₩ -	₩ -	₩ 4,385	₩ 270,460
Associates:					
Korea Credit Bureau Co., Ltd.	-	-	-	11,147	-
Darby Hana Infrastructure Fund Management	-	-	-	14,309	-
Hana First Private Equity Fund	-	2	-	592	-
Masan Marine New Town Co., Ltd.	1,513	-	2	811	-
Midan City Development Co., Ltd.	-	-	-	5	-
Fidelis Private Equity Fund No.2	-	-	-	35	-
KEB Hana-KVIC Unicorn Fund of Funds	-	-	-	1,104	-
Bank of Jilin (*)	1,200	-	-	18	-
CM International financing leases (*)	127,982	-	559	2,373	-
Beijing Langzi Asset Management LC	14,630	-	211	1	-
PT Sinarmas Hana Finance	17,627	30	25	815	-
	162,952	32	797	31,210	-
Entities under common control:					
Hana Financial Investment Co., Ltd.	500	10,532	74	264,361	9,672
Hana Card Co., Ltd.	-	18	117	170,581	68,749
Hana Capital Co., Ltd.	-	-	86	20,240	4,737
Hana Asset Trust	-	-	-	114,748	376
Hana Alternative Asset Management Co., Ltd.	-	-	-	18,507	648
Hana TI Co., Ltd.	-	-	-	2,796	1,371
Hana Saving Bank Co., Ltd.	-	8	-	-	53
Hana Life Insurance Co., Ltd.	-	1,020	-	-	2,495
Hana Investors Services Company	-	-	-	12,855	811
Hana Ventures Inc.	-	-	-	29,213	44
	₩ 500	₩ 11,578	₩ 277	₩ 633,301	₩ 88,956

51.3 Outstanding balances with related parties arising from the above transactions as of March 31, 2019 and December 31, 2018 are summarized as follows (Korean won in millions): (cont`d)

	December 31, 2018				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Other related parties:					
Odin2. LLC	₩ 2,237	₩ -	₩ 2,237	₩ -	₩ -
Gunsan bio-energy Corp.	-	-	-	3,844	-
Finnq Co., Ltd.	-	-	-	9,748	-
Mirae Credit Information Services Corp.	2,000	-	-	1,809	-
UBS Hana Asset Management Co., Ltd	-	-	-	312	-
F&U Credit Information Co., Ltd.	-	-	-	529	-
BNP Asset Development Co., Ltd.	4,900	-	41	335	-
Hana Lantern Energy Factory Private Equity Fund (*)	-	-	-	207	-
Smartscore Co., Ltd.	-	-	-	351	-
Lotte Accelerator Corporation	-	-	-	3,043	-
Myoungshin Co., Ltd.	184	-	1	3	-
Hana Power Infrastructure No. 1 Private Investment Co., Ltd. (*)	16,512	-	692	28,274	-
Petra 6th Private Equity Fund	-	-	-	1,175	-
	25,833	-	2,971	49,630	-
Key management	1,748	-	-	3,920	-
	₩ 191,033	₩ 11,610	₩ 4,045	₩ 722,428	₩ 359,416

(*) Receivables and payables from significant transactions with related parties for the year ended December 31, 2018, were restated by reflecting the partial errors in the transactions of the Group and overseas affiliated companies. Due to such restatement to the notes to the financial statements, receivables, allowance for doubtful accounts, and payables increased by ₩16,512 million, ₩688 million and ₩32,004 million, respectively.

51.4 Guarantees and acceptances and collateral provided between controlling company and subsidiaries as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions):

	March 31, 2019			
Company	Classification		Limit	Counterparty
The Bank	Unused limit related to loan commitments in Korean won	₩	130,580	Hana Financial Investment Co., Ltd.
	Commitment to purchase securities		8,474	
	Import L/C opended		117	
	Unused limit related to loan commitments in foreign currencies		98	
	Guarantees and acceptances denominated in foreign currencies		2,276	Hana Card Co., Ltd.
	Unused limit related to loan commitments in Korean won		500,000	
	Unused limit related to loan commitments in Korean won		260,000	Hana Capital Co., Ltd.
	Unused limit related to factoring bond commitments in Korean won		116	Myoungshin Co., Ltd.
	Unused limit related to loan commitments in Korean won		327	Masan Marine New Town Co., Ltd.
	Commitment to purchase securities		900	BSK-6 Patent Technology Investment Association
	Guarantees and acceptances denominated in foreign currencies		21,949	Beijing Langzi Asset Management LC
	Commitment to purchase securities		99,000	KEB Hana - KVIC Unicorn Fund of Funds
PT Bank KEB Hana	Unused limit related to loan commitments in foreign currencies		2,925	PT Sinarmas Hana Finance
Hana Card Co., Ltd.	Collateral provided		3,800	The Bank
	Unused limit related to loan commitments in Korean won		143,523	
Hana Capital Co., Ltd	Collateral provided		391,170	
Hana Financial Investment Co., Ltd. (*)	Unsettled arrangements (Currency forward)		7,327	
	Unsettled arrangements (Interest rate swaps)		96,890	

(*) The Group is provided with additional investment or supplementary funding for the forward exchange or currency swap of the investment trust from swap bank Hana Financial Investment Co., Ltd. of the investment trust, which is a participant in the purchase of private equity.

51.4 Guarantees and acceptances and collateral provided between controlling company and subsidiaries as of March 31, 2019 and December 31, 2018 are as follows (Korean won in millions): (cont'd)

Company	December 31, 2018 Classification	Limit		Counterparty
The Bank	Unused limit related to loan commitments in Korean won	₩	500,000	Hana Card Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies		2,236	
	Unused limit related to loan commitments in Korean won		260,000	Hana Capital Co., Ltd.
	Unused limit related to loan commitments in Korean won		130,500	Hana Financial Investment Co., Ltd.
	Commitment to purchase securities		13,263	
	Unused limit related to loan commitments in Korean won		327	Masan Marine New Town Co., Ltd.
	Commitment to purchase securities		2,100	BSK-6 Patent Technology Investment Association
	Guarantees and acceptances denominated in foreign currencies		21,132	Beijing Langzi Asset Management LC
	Commitment to purchase securities		99,000	KEB Hana - KVIC Unicorn Fund of Funds
	Unused limit related to factoring bond commitments in Korean won		151	Myoungshin Co., Ltd.
PT Bank KEB Hana	Unused limit related to loan commitments in foreign currencies		3,908	PT Sinarmas Hana Finance
Hana Card Co., Ltd.	Collateral provided		3,800	The Bank
	Unused limit related to loan commitments in Korean won		141,865	
Hana Capital Co., Ltd	Collateral provided		392,911	
Hana Financial Investment Co., Ltd. (*)	Unsettled arrangements (Currency forward)		7,246	
	Unsettled arrangements (Interest rate swaps)		95,905	

(*) The Group is provided with additional investment or supplementary funding for the forward exchange or currency swap of the investment trust from swap bank Hana Financial Investment Co., Ltd. of the investment trust, which is a participant in the purchase of private equity.

51.5 Details of compensation for standing directors and executive officers for the three-month periods ended March 31, 2019 and 2018 are summarized as follows (Korean won in millions of people in units):

Classification	For the three-month period ended March 31, 2019		For the three-month period ended March 31, 2018	
Short–term employee payment	₩	1,926	₩	1,351
Severance payment		265		232
Stock options		1,765		746

Hana Financial Group

KEB Hana Bank and its subsidiaries

Consolidated financial statements
for the years ended December 31, 2018 and 2017
with the independent auditor's report

KEB Hana Bank

Contents

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Independent auditor's report

The Stockholders and Board of Directors
KEB Hana Bank and its subsidiaries

Opinion

We have audited the accompanying consolidated financial statements of KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Company"), which comprise the consolidated statements of financial position as of December 31, 2018 and 2017, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects the financial position of the Company as of December 31, 2018 and 2017, and its financial performance and its cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Basis for opinion

We conducted our audits in accordance with Korean Auditing Standards (KGAAS). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audits of the consolidated financial statements in the Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of management and those charged with governance for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Korean Auditing Standards (KGAAS) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Korean Auditing Standards (KGAAS), we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Company to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Ernst & Young Han Young

March 6, 2019

This audit report is effective as of March 6, 2019, the independent auditor's report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's report to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

KEB Hana Bank and its subsidiaries

Consolidated financial statements
for the years ended December 31, 2018 and 2017

“The accompanying consolidated financial statements, including all footnotes and disclosures, have been prepared by, and are the responsibility of, the Company" .

Young Joo Ham
Chief Executive Officer
KEB Hana Bank Co., Ltd.

KEB Hana Bank and its subsidiaries
Consolidated statements of financial position
as of December 31, 2018 and 2017

(Korean won in millions)

	Notes		2018		2017
Assets					
Cash and due from banks	5, 6, 7, 9, 11 and 56	₩	20,452,123	₩	19,983,916
Financial assets at FVTPL (KIFRS 1039)	5, 6, 7, 8, 9, 12 and 20		-		9,443,614
Financial assets measured at FVTPL (KIFRS 1109)	5, 6, 7, 8, 9, 13 and 20		8,420,106		-
Derivative assets used for hedging	5, 6, 7, 8, 9 and 20		6,755		11,760
Available-for-sale financial assets	5, 6, 7, 8, 9, 14 and 18		-		44,322,512
Financial assets measured at FVOCI	5, 6, 7, 8, 9, 15 and 18		34,845,060		-
Held-to-maturity financial assets	5, 6, 7, 8, 9, 16 and 18		-		6,160,922
Securities measured at amortized cost	5, 6, 7, 8, 9, 17 and 18		13,582,381		-
Loans	5, 6, 7, 8, 9, 18 and 19		244,468,590		224,096,709
Investments in subsidiaries and associates	21		988,345		935,555
Property and equipment	10 and 22		1,861,622		1,635,352
Investment property	10 and 23		527,668		786,154
Intangible assets	10 and 24		285,862		242,677
Net defined benefit assets	32		-		44,545
Current tax assets			11,173		10,390
Deferred tax assets	53		55,845		62,639
Other assets	5, 6, 7, 8, 9 and 26		11,340,624		9,733,946
Merchant banking account assets	5, 6, 7, 9 and 26		2,940,272		2,966,019
Non-current assets held for sale	25		466,117		457,699
Total assets		₩	340,252,543	₩	320,894,409
Liabilities and equity					
Liabilities					
Deposits	5, 6, 7, 9 and 27	₩	246,754,859	₩	230,410,494
Financial liabilities at FVTPL (KIFRS 1039)	5, 6, 7, 8, 9 and 28		-		6,839,559
Financial liabilities measured at FVTPL (KIFRS 1109)	5, 6, 7, 8, 9 and 29		3,590,576		-
Derivative liabilities used for hedging	5, 6, 7, 8, 9 and 20		98,797		73,024
Borrowings	5, 6, 7, 9, 30 and 56		15,280,970		13,774,502
Debentures	5, 6, 7, 9, 31 and 56		24,668,613		22,311,737
Net defined benefit liabilities	32		138,491		5,170
Provisions	33		235,186		286,959
Current tax liabilities			258,650		619,535
Deferred tax liabilities	53		184,364		52,852
Other liabilities	5, 6, 7, 8, 9 and 34		22,193,235		21,263,075
Merchant banking account liabilities	5, 6, 7, 9 and 34		2,339,383		2,018,346
Total liabilities			315,743,124		297,655,253
Equity					
Issued capital	35		5,359,578		5,359,578
Capital surplus	35		9,670,357		9,668,863
Hybrid equity securities	35		179,737		179,737
Capital adjustments	35		(41,895)		(42,624)
Retained earnings	37		10,122,654		8,735,759
(Regulatory reserve for bad debts in the amount of ₩1,934,322 and ₩1,915,033 as of December 31, 2018 and 2017, respectively)					
(Required provision for (reversal of) bad debts in the amount of ₩205,227 and ₩19,289 as of December 31, 2018 and 2017, respectively)					
(Planned provision for bad debts in the amount of ₩205,227 and ₩19,289 as of December 31, 2018 and 2017, respectively)	38				
Accumulated other comprehensive income	36		(870,813)		(751,704)
Equity attributable to equity holder of the parent			24,419,618		23,149,609
Non-controlling shareholders' equity			89,801		89,547
Total equity			24,509,419		23,239,156
Total liabilities and equity		₩	340,252,543	₩	320,894,409

The accompanying notes are an integral part of the consolidated financial statements.

KEB Hana Bank and its subsidiaries

Consolidated statements of comprehensive income

for the years ended December 31, 2018 and 2017

(Korean won in millions, except per share amounts)

	Notes	2018	2017
Net interest income	10, 39 and 40		
Interest income		₩ 9,378,701	₩ 8,111,335
Interest expenses		(4,081,500)	(3,297,163)
		5,297,201	4,814,172
Net fee and commission income	10, 39 and 41		
Fee and commission income		835,895	835,420
Fee and commission expenses		(195,502)	(199,107)
		640,393	636,313
Net loss on financial instruments at FVTPL (KIFRS 1039)	39 and 42	-	(135,199)
Net gain on financial instruments measured at FVTPL (KIFRS 1109)	39 and 43	264,871	-
Net gain (loss) on derivative financial instruments used for hedging	39 and 44	(12,003)	23,550
Net gain on available-for-sale financial assets	39 and 45	-	533,795
Net gain on financial instruments measured at FVOCI	39 and 46	7,289	-
Impairment loss	39 and 47	(181,167)	(669,129)
General and administrative expenses	10, 39 and 48	(3,025,472)	(3,091,795)
Net other operating income			
Other operating income	39 and 49	4,144,724	4,512,008
Other operating expenses	39 and 50	(4,264,930)	(3,948,138)
		(120,206)	563,870
Operating income		2,870,906	2,675,577
Net non-operating income			
Non-operating income	10 and 51	92,775	209,115
Non-operating expenses	10 and 52	(92,981)	(131,674)
		(206)	77,441
Net income before income tax expenses		2,870,700	2,753,018
Income tax expenses	10 and 53	(778,268)	(640,779)
Net income		2,092,432	2,112,239
Net income			
Equity holder of the parent		2,085,920	2,103,510
(Adjusted income after regulatory reserve for bad debt in the amount of ₩1,889,615 and ₩2,084,221 for the years ended December 31, 2018 and 2017, respectively)	34		
Non-controlling interests		6,512	8,729
		2,092,432	2,112,239
Other comprehensive income (loss)	36		
Items that may be reclassified subsequently to profit or loss:			
Loss on valuation of available-for-sale financial assets		-	(259,664)
Gain on valuation of debt securities measured at FVOCI		240,243	-
Exchange differences on translation of foreign operations		(9,028)	(217,820)
Changes in capital from valuation of equity method for investments in associates		30,284	(78,315)
Gain (Loss) on valuation of net investment hedges of foreign operations		(12,344)	55,972
Loss on valuation of fair value hedges		(9,340)	-
Tax effect		(76,026)	105,146
		163,789	(394,681)
Items that will not be reclassified subsequently to profit or loss:			
Remeasurements of the defined benefit plan		(130,393)	41,121
Gain on valuation of equity securities measured at FVOCI		222,315	-
Tax effect		(25,279)	(9,951)
		66,643	31,170
		230,432	(363,511)
Total comprehensive income		₩ 2,322,864	₩ 1,748,728
Equity holder of the parent		2,319,300	1,747,129
Non-controlling interests		3,564	1,599
Earnings per share	54		
Basic earnings per share		₩ 1,937	₩ 1,953
Diluted earnings per share		₩ 1,937	₩ 1,953

The accompanying notes are an integral part of the consolidated financial statements.

KEB Hana Bank and its subsidiaries

Consolidated statements of changes in equity

for the years ended December 31, 2018 and 2017

(Korean won in millions)

	Issued capital	Capital surplus	Hybrid equity securities	Capital adjustments	Retained earnings	Accumulated other comprehensive income	Equity attributable to equity holder of the parent	Non-controlling shareholders' equity	Total
As of January 1, 2017	₩ 5,359,578	₩ 9,668,897	₩ 179,737	₩ (30,785)	₩ 7,242,262	₩ (395,323)	₩ 22,024,366	₩ 88,250	₩ 22,112,616
Dividends	-	-	-	-	(600,200)	-	(600,200)	-	(600,200)
Dividends on hybrid equity securities	-	-	-	-	(9,813)	-	(9,813)	(2,010)	(11,823)
Share-based payment transactions	-	-	-	(9,972)	-	-	(9,972)	-	(9,972)
Acquisition of subsidiaries	-	-	-	(1,710)	-	-	(1,710)	1,710	-
Other	-	(34)	-	(157)	-	-	(191)	(2)	(193)
	5,359,578	9,668,863	179,737	(42,624)	6,632,249	(395,323)	21,402,480	87,948	21,490,428
Net income for the period	-	-	-	-	2,103,510	-	2,103,510	8,729	2,112,239
Gain (Loss) on valuation of available-for-sale financial assets	-	-	-	-	-	(180,173)	(180,173)	1,162	(179,011)
Exchange differences on transaction of foreign operations	-	-	-	-	-	(194,363)	(194,363)	(8,292)	(202,655)
Changes in equity on investments in associates	-	-	-	-	-	(55,442)	(55,442)	-	(55,442)
Gain on valuation of net investment hedges of foreign operations	-	-	-	-	-	42,427	42,427	-	42,427
Changes in remeasurement of the defined benefit plan	-	-	-	-	-	31,170	31,170	-	31,170
Total comprehensive income for the period	-	-	-	-	2,103,510	(356,381)	1,747,129	1,599	1,748,728
As of December 31, 2017	₩ 5,359,578	₩ 9,668,863	₩ 179,737	₩ (42,624)	₩ 8,735,759	₩ (751,704)	₩ 23,149,609	₩ 89,547	₩ 23,239,156
As of January 1, 2018	₩ 5,359,578	₩ 9,668,863	₩ 179,737	₩ (42,624)	₩ 8,735,759	₩ (751,704)	₩ 23,149,609	₩ 89,547	₩ 23,239,156
Effect of changes in accounting standards	-	-	-	-	301,831	(370,931)	(69,100)	(1,300)	(70,400)
Dividends	-	-	-	-	(972,600)	-	(972,600)	-	(972,600)
Dividends on hybrid equity securities	-	-	-	-	(9,814)	-	(9,814)	(2,010)	(11,824)
Share-based payment transactions	-	1,494	-	729	-	-	2,223	-	2,223
Reclassification of valuation gain or loss on equity securities measured at FVOCI upon derecognition	-	-	-	-	(17,905)	17,905	-	-	-
Other	-	-	-	-	(537)	537	-	-	-
	5,359,578	9,670,357	179,737	(41,895)	8,036,734	(1,104,193)	22,100,318	86,237	22,186,555
Net income for the period	-	-	-	-	2,085,920	-	2,085,920	6,512	2,092,432
Gain on valuation of financial assets measured at FVOCI	-	-	-	-	-	335,029	335,029	(1,756)	333,273
Exchange differences on transaction of foreign operations	-	-	-	-	-	(13,246)	(13,246)	(1,295)	(14,541)
Loss on valuation of net investment hedges of foreign operations	-	-	-	-	-	(8,948)	(8,948)	-	(8,948)
Loss on valuation of fair value hedges	-	-	-	-	-	(6,772)	(6,772)	-	(6,772)
Changes in remeasurement of the defined benefit plan	-	-	-	-	-	(94,639)	(94,639)	103	(94,536)
Changes in equity on investments in associates	-	-	-	-	-	21,956	21,956	-	21,956
Total comprehensive income for the period	-	-	-	-	2,085,920	233,380	2,319,300	3,564	2,322,864
As of December 31, 2018	₩ 5,359,578	₩ 9,670,357	₩ 179,737	₩ (41,895)	₩ 10,122,654	₩ (870,813)	₩ 24,419,618	₩ 89,801	₩ 24,509,419

The accompanying notes are an integral part of the consolidated financial statements.

KEB Hana Bank and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2018 and 2017

(Korean won in millions)

		2018		2017
Operating activities				
Net income before income tax expenses	₩	2,870,700	₩	2,753,018
Adjustments to income:				
Interest expenses		4,081,500		3,297,163
Interest income		(9,378,701)		(8,111,335)
Dividend income		(12,724)		(58,223)
		(5,309,925)		(4,872,395)
Adjustments to non-cash items:				
Net gain on valuation of financial instruments at FVTPL (KIFRS 1039)		-		(104,673)
Net gain on valuation of financial instruments measured at FVTPL (KIFRS 1109)		(248,250)		-
Net loss on disposal of financial instruments measured at FVTPL (KIFRS 1109)		21,195		-
Net loss (gain) on valuation of derivative financial instruments used for hedging		8,016		(23,530)
Net gain on disposal of available-for-sale financial assets		-		(533,795)
Impairment loss on available-for-sale financial assets		-		140,663
Net gain on disposal of financial instruments measured at FVOCI		(7,289)		-
Loss on credit risk of financial instruments measured at FVOCI transferred in (reversed)		(1,956)		-
Allowance for securities measured at amortized cost transferred in		2,418		-
Provision of allowance		180,705		528,466
Loss on disposal of investments in subsidiaries and associates		387		-
Impairment loss on investment in subsidiaries and associates		-		226
Net gain on valuation of equity method investments		(21,687)		(103,465)
Depreciation and amortization		203,654		203,686
Net gain on disposal of property and equipment and intangible assets		(14,292)		(18,881)
Impairment loss of property and equipment and intangible assets		-		1,810
Retirement benefits		207,839		137,103
Share-based payment expenses		7,588		8,665
Net provisions transferred in (reversed)		(49,960)		(5,003)
Net loss on foreign exchange transactions		(319,092)		(431,758)
Others		33		(69,849)
		(30,691)		(270,335)
Changes in operating assets and liabilities:				
Financial assets at FVTPL (KIFRS 1039)		-		(739,951)
Financial assets measured at FVTPL (KIFRS 1109)		3,671,995		-
Derivative assets used for hedging		2,340		15,294
Loans		(20,325,536)		(13,886,539)
Net defined benefit assets		(160,334)		-
Other assets		(1,484,092)		1,210,577
Merchant banking account assets		25,719		(368,945)
Deposits		16,092,934		13,631,620
Financial liabilities at FVTPL (KIFRS 1039)		-		490,447
Financial liabilities measured at FVTPL (KIFRS 1109)		(3,136,594)		-
Derivative assets used for hedging		(15,264)		(11,882)
Net defined benefit liability		-		(178,431)
Provisions		(2,190)		(16,734)
Other liabilities		1,448,291		(1,748,066)
Merchant banking account liabilities		321,136		(387,923)
		(3,561,595)		(1,990,533)
Cash received from operating activities:				
Interest receipts		9,279,719		7,923,578
Dividend receipts		14,947		91,456
		9,294,666		8,015,034
Cash payment for operating activities:				
Interest payments		4,623,627		3,250,818
Payment of income tax		1,077,013		258,077
		(5,700,640)		(3,508,895)
Net cash provided by (used in) operating activities		(2,437,485)		125,894

(Continued)

KEB Hana Bank and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2018 and 2017

(Korean won in millions) (Continued)

		2018		2017
Investing activities				
Increase in restricted due from banks, net	₩	(3,459,485)	₩	6,392,899
Increase in financial assets measured at FVTPL (KIFRS 1109)		(6,500,728)		-
Decrease in financial assets measured at FVTPL (KIFRS 1109)		7,364,421		-
Increase in available-for-sale financial assets		-		(31,446,596)
Decrease in available-for-sale financial assets		-		24,096,349
Increase in financial assets measured at FVOCI		(5,764,284)		-
Decrease in financial assets measured at FVOCI		12,624,626		-
Increase in held-to-maturity financial assets		-		(3,101,936)
Decrease in held-to-maturity financial assets		-		856,011
Increase in securities measured at amortized cost		(8,046,303)		-
Decrease in securities measured at amortized cost		657,040		-
Increase in investments in subsidiaries and associates		(31,026)		(51,512)
Decrease in investments in subsidiaries and associates		9,305		2,665
Acquisition of property and equipment		(137,353)		(265,045)
Proceeds from disposal of property and equipment		55,295		131,134
Acquisition of intangible assets		(119,759)		(88,918)
Proceeds from disposal of intangible assets		1,072		7,762
Increase in non-current assets held for sale		(22,474)		(37,535)
Disposal of non-current assets held for sale		14,050		97,380
Increase in guarantee deposits paid, net		71,157		111,507
Net cash used in investing activities		(3,284,446)		(3,295,835)
Financing activities				
Increase in borrowings, net		1,373,999		(243,485)
Issuance of debentures		10,678,388		11,066,707
Redemption of debentures		(8,463,741)		(7,817,939)
Dividends paid		(972,600)		(600,200)
Dividends on hybrid equity securities		(11,824)		(11,823)
Net cash flows provided by financing activities		2,604,222		2,393,260
Net increase (decrease) in cash and cash equivalents		(3,117,709)		(776,681)
Cash and cash equivalents at the beginning of the period		7,439,041		8,613,796
Effect of exchange rate changes on cash and cash equivalents		51,759		(398,074)
Cash and cash equivalents at the end of the period (Note 56)	₩	4,373,091	₩	7,439,041

The accompanying notes are an integral part of the consolidated financial statements.

1. Company information

General information on KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Company") in accordance with KIFRS 1110 is as follows.

1.1 The Bank

The Bank was established on January 30, 1967, as a government-controlled bank to engage in foreign exchange and trade finance business under the *Korea Exchange Bank Act* enacted on July 28, 1966. On December 30, 1989, the *Korea Exchange Bank Act* was repealed, and the Bank was reorganized as a corporation under the Commercial Code of the Republic of Korea. On April 4, 1994, the Bank was listed on the Korea Exchange (formerly, Korea Stock Exchange). On February 28, 2004, the Bank merged its subsidiary, Korea Exchange Bank Credit Service Co., Ltd. On August 31, 2014, the Bank spun off its credit card division.

On February 9, 2012, Hana Financial Group Inc. ("HFG") acquired 52.27% equity interest in the Bank, and later on April 5, 2013, the Bank became a wholly owned subsidiary of HFG after HFG acquired the remaining interest in the Bank through the mutual exchange of the shares.

The Bank changed to its current name on September 1, 2015 following the merger of Korea Exchange Bank ("KEB Bank") and Hana Bank.

The Bank provides commercial banking service, trust banking service, merchant banking service, foreign exchange and other related services as permitted under the *Banking Act* of the Republic of Korea. As of September 30, the Bank's headquarters is located in Seoul, with its 753 domestic branches (including 73 satellite offices) and 24 overseas branches (including 2 satellite offices and 5 offices).

The Bank is authorized to issue 2,000 million shares of common stock, and as of December 31, 2018, after a number of capital increases and decreases, stock splits and conversion of preferred shares to common shares, the Bank has 1,071,915,717 shares of common stock issued and outstanding with the total paid-in capital amounting to ₩5,359,578 million.

The accompanying 2018 consolidated financial statements were approved at the meeting of the Board of Directors held on March 4, 2019.

1.2 Scope and overview of consolidation

The Company's ownership percentages in its consolidated subsidiaries as of December 31, 2018 are summarized as follows (ownership in %):

Investee	Country	Major business	Share ratio (%)	Reporting date
Subsidiaries of KEB Hana Bank				
Hana Bank (China) Co., Ltd.	China	Bank	100.00	December 31, 2018
Hana Micro Finance Ltd.	Myanmar	Other financial business	99.99	December 31, 2018
DGB Leading Solution PEF Invest Trust 143 (*)	Korea	Asset management company	100.00	December 31, 2018
Hana UBS Power PEF Invest Trust 21 (*)	Korea	Asset management company	100.00	December 31, 2018
Hyundai Trust PEF Invest 16 (*)	Korea	Asset management company	100.00	December 31, 2018
Kyobo AXA Tomorrow PEF Invest Trust KH-1 (*)	Korea	Asset management company	100.00	December 31, 2018
Sevenstar Co., Ltd. (*)	Korea	Other financial business	-	December 31, 2018
Marine Solution Co., Ltd. (*)	Korea	Other financial business	-	December 31, 2018
Joong-ang star Co., Ltd. (*)	Korea	Other financial business	-	December 31, 2018
Antakya Co., Ltd. (*)	Korea	Other financial business	-	December 31, 2018
Cosmosolution Co., Ltd. (*)	Korea	Other financial business	-	December 31, 2018
Hana Display First Co., Ltd. (*)	Korea	Other financial business	-	December 31, 2018
Hana Indonesia Green Forest Co., Ltd (*)	Korea	Other financial business	-	December 31, 2018
Bulls Hana 1st Co., Ltd. (*)	Korea	Other financial business	-	December 31, 2018

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
Trust accounts guaranteeing the repayment of principal (*)	Korea	Trust account	-	December 31, 2018
Hana F&I Inc.	Korea	Other financial business	99.58	December 31, 2018
KEB Hana Bank Canada	Canada	Financial business	100.00	December 31, 2018
KEB Hana Bank (Deutschland) A.G. (KEBDAG)	Germany	Financial business	100.00	December 31, 2018
PT Bank KEB Hana (KEBI)	Indonesia	Financial business	89.01	December 31, 2018
Banco KEB Hana Do Brasil S.A. (KEBB)	Brazil	Financial business	100.00	December 31, 2018
KEB Hana NY Financial Corp (NYFinCo)	USA	Financial business	100.00	December 31, 2018
KEB Hana LA Financial Corp (LAFinCo)	USA	Financial business	100.00	December 31, 2018
KEB Hana Global Finance Limited (KAF)	Hongkong	Financial business	100.00	December 31, 2018
KEB RUS LLC.	Russia	Financial business	99.99	December 31, 2018
Hana Bancorp, Inc.	USA	Financial business	90.56	December 31, 2018
KEB Hana Bank Mexico	Mexico	Financial business	99.99	December 31, 2018
Subsidiaries of Hana F&I Inc.				
KEBW First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2018
KEB Pepper First Securitization Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2018
KEBI First Securitization Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
KEBS Third Securitization Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2018
KEBT First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2018
KEB The Loft Co., Ltd. (*)	Korea	Asset securitization	-	December 31, 2018
HFS First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2018
Hana Stone First Co., Ltd. (*)	Korea	Asset securitization	-	December 31, 2018
Hana Stone Second Co., Ltd. (*)	Korea	Asset securitization	-	December 31, 2018
HFT Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2018
Hana Sinji First, Inc. (*)	Korea	Asset securitization	-	December 31, 2018
Hana SH First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2018
HFS Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2018
Hana K First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2018
HFD First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2018
HFDG Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2018
HFS 73A Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFS 73B Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFW 73 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFK 74 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFSCN 81 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFB 81 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
Fine5th Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
Fine6th Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFS 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFF 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFN 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFDD 82 Co., Ltd. (*)	Korea	Asset securitization	-	December 31, 2018
HFI 83 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFS 84 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFF 84 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
HFK 84 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2018
Subsidiaries of Hana Bancorp, Inc.				
KEB Hana Bank USA	USA	Bank	100.00	December 31, 2018

(*) Although the entity is a structured SPC, the Company recognized the entity as a subsidiary considering its exposure to variable returns and knowledge with regards to its activities.

1.2 Scope and overview of consolidation (cont'd)

Condensed financial statements as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018					
Classification	Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩ 8,107,138	₩ 7,160,464	₩ 946,674	₩ 393,877	₩ 54,371	₩ 52,706
Hana Micro Finance., Ltd.	31,210	15,035	16,175	6,785	2,036	488
Hana F&I Inc. (*)	890,918	768,327	122,591	47,470	11,211	10,629
KEB Hana Bank Canada	1,220,144	1,034,755	185,389	68,138	7,700	172
KEB Hana Bank (Deutschland) A.G.	717,648	619,876	97,772	34,082	5,567	5,556
PT Bank KEB Hana	3,578,994	3,082,675	496,319	267,714	43,761	15,735
Banco KEB Hana Do Brasil S.A.	184,908	145,705	39,203	12,448	1,488	(3,222)
KEB Hana NY Financial Corp.	171,462	109,740	61,722	10,814	2,248	4,767
KEB Hana LA Financial Corp.	259,805	195,534	64,271	14,858	3,870	6,453
KEB Hana Global Finance Limited.	237,855	169,941	67,914	11,781	4,695	7,413
KEB Hana Bank Russia	265,801	248,338	17,463	119,222	860	(3,048)
Hana Bancorp, Inc.(*)	253,222	205,165	48,057	9,986	(3,777)	(1,650)
KEB Hana Bank Mexico	33,919	-	33,919	2,730	(1,650)	(47)
Trust accounts guaranteeing the repayment of principal	1,807,660	1,764,113	43,547	51,424	3,055	3,055

	December 31, 2017					
Classification	Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩ 8,297,563	₩ 7,389,211	₩ 908,352	₩ 330,758	₩ 37,326	₩ (18,903)
Hana Micro Finance., Ltd.	17,282	1,595	15,687	4,256	1,178	(1,623)
Hana F&I Inc. (*)	601,718	488,792	112,926	38,785	8,216	7,534
KEB Hana Bank Canada	1,241,767	1,056,800	184,967	54,739	4,857	(4,148)
KEB Hana Bank (Deutschland) A.G.	852,509	760,518	91,991	49,976	4,202	5,013
PT Bank KEB Hana	3,089,878	2,596,898	492,980	266,775	63,395	5,109
Banco KEB Hana Do Brasil S.A.	197,873	155,446	42,427	19,520	3,207	(2,916)
KEB Hana NY Financial Corp.	304,127	247,602	56,525	13,874	4,906	(1,991)
KEB Hana LA Financial Corp.	321,583	264,057	57,526	12,268	3,503	(3,618)
KEB Hana Global Finance Limited.	190,609	130,183	60,426	7,952	806	(7,130)
KEB RUS LLC.	216,159	196,870	19,289	67,743	352	10
Hana Bancorp, Inc. (*)	223,459	173,751	49,708	10,988	(3,335)	(8,437)
KEB Hana Bank Mexico	33,966	-	33,966	-	-	(1,206)
Trust accounts guaranteeing the repayment of principal	1,785,563	1,745,071	40,492	48,629	3,765	3,618

(*) The amounts presented are based on consolidation.

The following entity is excluded from the Company's scope of consolidation as of December 31, 2018 even though the Company holds a majority of voting rights.

Investee	Country	Major business	Share ratio(%)
KEB Hana - KVIC Unicorn Fund of Funds	Korea	Investment	90.9

1.2 Scope and overview of consolidation (cont'd)

Subsidiaries included in and excluded from the consolidation scope for the year ended December 31, 2018 are as follows:

Company	Reasons
Included in scope of consolidation:	
Subsidiaries of KEB Hana Bank	
Hana Display First Co., Ltd.	Newly invested
Hana Indonesia Green Forest Co., Ltd.	Newly invested
Bulls Hana 1st Co., Ltd.	Newly invested
Subsidiaries of Hana F&I Inc.	
HFSCN 81 Securitization Specialty Co., Ltd.	Newly invested
HFB 81 Securitization Specialty Co., Ltd.	Newly invested
Fine5th Securitization Specialty Co., Ltd.	Newly invested
Fine6th Securitization Specialty Co., Ltd.	Newly invested
HFS 82 Securitization Specialty Co., Ltd.	Newly invested
HFF 82 Securitization Specialty Co., Ltd.	Newly invested
HFN 82 Securitization Specialty Co., Ltd.	Newly invested
HFDD 82 Co., Ltd.	Newly invested
HFI 83 Securitization Specialty Co., Ltd.	Newly invested
HFS 84 Securitization Specialty Co., Ltd.	Newly invested
HFF 84 Securitization Specialty Co., Ltd.	Newly invested
HFK 84 Securitization Specialty Co., Ltd.	Newly invested
Excluded from the scope of consolidation:	
Subsidiaries of KEB Hana Bank	
Okea Co., Ltd.	Excluded due to the disposal
HS First Co., Ltd.	Excluded due to the disposal
Subsidiaries of Hana F&I Inc.	
Shinseung Building Co., Ltd.	Excluded due to the disposal
Hana Stone Fifth, Inc.	Excluded due to the disposal
KEB Veritas Second Securitization Co., Ltd.	Excluded due to the disposal
Hyundai Veritas First Co., Ltd.	Excluded due to the disposal
Subsidiaries of Hana Bancorp, Inc.	
BNB Statutory Trust I	Excluded due to the liquidation
Subsidiaries of KEB Hana Bank USA	
BNB Funding Corp.	Excluded due to the liquidation

1.2.1 Hana Bank (China) Co., Ltd. (Hana Bank China)

Hana Bank China was incorporated to engage in commercial banking, foreign currency exchanges and other related operations in China on December 14, 2007. The Bank contributed the assets and liabilities of the branches in Shanghai and Shenyang and its interests in the International Bank of Qingdao, which is the subsidiary of the Bank, to the Hana Bank China in the form of equity contributions on December 24, 2007. Hana Bank (China) Co., Ltd., one of subsidiaries in China, acquired and merged with KEB China, one of affiliates in the Hana Financial Group, on December 15, 2014. (Before the merger, equity interests in Hana Bank China were 59.7% for Hana Bank, 40.3% for Korea Exchange Bank). Its paid-in capital is 3.35 billion yuan as of December 31, 2018.

1.2.2 Hana Micro Finance, Ltd.

Hana Micro Finance Ltd., a subsidiary established in Yangon, Myanmar on August 7, 2014, is doing a small-loan finance service. The objective of the service is to satisfy low incomers' demand for small-loan finance and at the same time to lay the foundation for a retail market with excellent growth potential. As of December 31, 2018, its paid-in capital is 17.5 billion kyat and it owns a head office in Yangon.

1.2.3 Hana F&I Inc.

Hana F&I Inc. (former, KEB F&I) was established on September 11, 1989, to engage in equipment rental and other relevant businesses under the Specialized Credit Financial Business Act (formerly, Equipment Rental Business Act) and was listed on the Korea Securities Dealers Automated Quotation (“KOSDAQ”) on January 15, 1995. KEB F&I has changed its name to KEB F&I Inc. KEB is restricted to control a company which runs the specialized credit financial business in accordance with the Financial Holding Companies Act Article 19 as on and after January 31, 2014. On October 17, 2013, KEB F&I’s Board of Directors approved to change business field to investment in asset backed securities and asset management business in Asset-Backed Securitization Act. It changed its name from KEB F&I to Hana F&I Co. Ltd. on September 1, 2015. Its paid-in capital is 125,400 million won as of December 31, 2018.

1.2.4 KEB Hana Bank Canada

KEBOC was established in Toronto, Canada on October 6, 1981 to provide financial services to Korean companies and residents in Toronto and the surrounding area. The Bank holds 100% stake of the company as of December 31, 2018. Korea Exchange Bank of Canada has gone through numerous capital increases after the establishment. Its paid-in capital is 83,400 thousand Canadian dollars as of December 31, 2018.

1.2.5 KEB Hana Bank (Deutschland) AG

KEBDAG was established in Frankfurt, Germany on December 29, 1992 to provide financial services to Korean companies and residents in Frankfurt and the surrounding area. The Bank holds 100% stake of the company as of December 31, 2018. Its paid-in capital is 23,008 thousand euro as of December 31, 2018.

1.2.6 PT Bank KEB Hana

PT Bank KEB Hana was established in Jakarta, Indonesia on November 5, 1990 to provide financial services to Korean companies and residents in Jakarta. In accordance with the regulations of the Bank Indonesia, 2 or more local banks with the same ultimate parent company are prohibited to operate as an independent entity in Indonesia. Accordingly, PT Bank KEB Indonesia (KEBI), a subsidiary of the Bank, and PT Bank Hana, a subsidiary of Hana Bank, have completed a merger process on February 20, 2014 and changed the name to PT Bank KEB Hana. PT. Bank KEB Hana incorporated into a subsidiary of KEB on February 28, 2014 since KEB owned the major shares of PT. Bank KEB Hana after the acquisition. The Bank holds 89.01% stake of the company as of December 31, 2018.

1.2.7 Banco KEB Hana Do Brasil S.A. (KEBB)

KEBB was incorporated on May 21, 1999 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as of December 31, 2018. By increasing capital in 2012, its paid-in capital is 69,726 thousand real as of December 31, 2018.

1.2.8 KEB Hana NY Financial Corp. (NYFinCo)

NYFinCo was established in New York, USA on April 8, 2004 to provide financial services to Korean companies and residents in New York and the surrounding area. The Bank holds 100% stake of the company as of December 31, 2018. Its paid-in capital is 1 dollar as of December 31, 2018.

1.2.9 KEB Hana LA Financial Corp. (LAFinCo)

LAFinCo was established in Los Angeles, USA on April 8, 2004 to provide financial services to Korean companies and residents in Los Angeles and the surrounding area. The Bank holds 100% stake of the company as of December 31, 2018. Its paid-in capital is 2 dollar as of December 31, 2018.

1.2.10 KEB Hana Global Finance Limited (KAF)

KAF was established on July 2, 2009 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as of December 31, 2018. Its paid-in capital is 50,000 thousand dollars as of December 31, 2018.

1.2.11 KEB RUS LLC

KEB launched a Moscow representative office in 2008 to provide financial information and consulting services for Korean and local companies in Russia. KEB RUS LLC was established on August 15, 2014 after obtaining permission to operate corporation from Russian supervisory authorities in order to expand the business area. The Bank holds 99.99% stake of the company as of December 31, 2018. Its paid-in capital is 1 billion roubles as of December 31, 2018.

1.2.12 Hana Bancorp, Inc.

Hana Bancorp, Inc. (formerly, BNB Financial Service Corporation) was incorporated on April 8, 1988 to engage in the bank business. HFG acquired ownership of BNB Financial Service Corporation and incorporated Hana Bancorp, Inc. as its subsidiary on August 30, 2013 and changed the name to Hana Bancorp, Inc. The Bank purchased the securities from HFG on March 28, 2016, and issued capital. The Bank holds 90.56% stake of the company as of December 31, 2018. Its paid-in capital is 16,571 thousand dollars as of December 31, 2018.

1.2.13 KEB Hana Bank Mexico

KEB Hana Bank Mexico was established in Mexico City on November 3, 2017 to engage in provision of financial services to Korean companies and local corporations. At the end of the reporting period, the Bank holds 99.99% interest in the entity. At the end of the reporting period, the local regulatory authority has not given permission to start the operations of KEB Hana Bank Mexico yet.

1.3 Structured entities

1.3.1 Consolidated structured entities

1.3.1.1 DGB Leading Solution PEF Investment Trust 143 and a set of 3 other private equity investment vehicles

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 4 private equity investment vehicles were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.2 Sevenstar Co., Ltd. and 7 other special purpose entities

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 8 special purpose companies were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.3 Trust accounts

In accordance with KIFRS 1110 *Consolidated Financial Statements*, trust accounts are included in consolidation scope because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.4 Contractual commitments to consolidated structured entities

The consolidated structured company for the securitization of assets is established for the securitization of non-performing loans (NPL). The Company is involved in the acquisition of subordinated bonds issued by the consolidated structured company and is exposed to the risk of not being able to recover the acquisition amounts based on the investment performance. Characteristics and intentions of contractual commitments offered by the Company to the consolidated structured entities are as follows:

Entity	The characteristics and purposes	Intention
Trust accounts guaranteeing the repayment of principal	The Company offers principal conservation commitment to trust accounts. The Company is required to conserve the deficit amount in case the trust account stands below the principal as a result of the operation.	Credit risk mitigation on financial management of trust account
Antakya Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩50,000 million) from Antakya Co., Ltd.	Operating activities
Hana Display First Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩200,000 million) from Hana Display First Co., Ltd.	Operating activities

1.3.2 Unconsolidated structured entities

1.3.2.1 The nature of the Company's interests in unconsolidated structured entities

Details of the nature of the Company's interests in unconsolidated structured entities as of December 31, 2018 and 2017 are as follows (Korean won in millions):

			Total assets	
Type	Characteristics and purposes	Financing arrangement	December 31, 2018	December 31, 2017
Special purpose company	Securitization of backed asset	Issuing ABL/ABCP and others	₩ 10,597,822	₩ 14,197,661
Real estate finance	Operation for real estate (including SOC) development	Investment and borrowing	15,633,077	21,989,657
Shipping finance and primary market finance	Building or purchasing ships and NPL purchase, M&A	Investment and borrowing	26,204,314	10,003,122
Investment fund and trust	Managing investment property	Issuing beneficiary certificates	78,278,432	70,517,729

1.3.2.2 Maximum exposure to loss from interests in unconsolidated structured entities (Korean won in millions)

Classification	December 31, 2018							
	Special purpose company		Real estate finance		Shipping finance and primary market finance		Investment fund and trust	
Assets								
Loans (A)	₩	802,663	₩	1,137,787	₩	857,421	₩	620,053
Securities (B)		739		74,299		-		6,620,809
Derivatives (C)		7,130		12,160		1,067		8,655
Others (D)		2,898		2,288		3,893		6
Liabilities								
Derivative liabilities		1,513		4,614		4,155		7,509
Provision		958		2,939		333		38
Others		84		26		10		104
Net asset	₩	810,875	₩	1,218,955	₩	857,883	₩	7,241,872
Maximum exposure to loss	₩	2,545,296	₩	1,775,367	₩	1,053,925	₩	7,270,800
Financial assets (A+B+C+D)		813,430		1,226,534		862,381		7,249,523
Credit and other commitment		1,731,866		548,833		191,544		21,277

Classification	December 31, 2017							
	Special purpose company		Real estate finance		Shipping finance and primary market finance		Investment fund and trust	
Assets								
Loans (A)	₩	1,120,816	₩	1,301,989	₩	553,848	₩	716,512
Securities (B)		744		66,595		-		6,114,844
Derivatives (C)		469		13,475		12,600		4,572
Others (D)		3,450		2,463		2,103		415
Liabilities								
Derivative liabilities		6,901		7,494		18,174		35,619
Provision		1,381		37		271		2
Others		3		24		168		20
Net asset	₩	1,117,194	₩	1,376,967	₩	549,938	₩	6,800,702
Maximum exposure to loss	₩	3,124,189	₩	1,470,701	₩	790,318	₩	6,841,445
Financial assets (A+B+C+D)		1,125,479		1,384,522		568,551		6,836,343
Credit and other commitment		1,998,710		86,179		221,767		5,102

2. Scope and principles of consolidation

The Company prepares statutory consolidated financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Act on External Audit of Stock Companies.*

2.1 Subsidiaries

The Bank has the ability to determine the financial and operating policies of subsidiaries. Generally the Bank classified the entity as subsidiary in case the Bank has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee. Subsidiaries are fully consolidated from the date on which the control is transferred to the Company.

2.2 Offset of the investment accounts of the Company and the corresponding equity accounts

The investment accounts of the Company and the corresponding equity accounts of the subsidiaries are eliminated in consolidation.

2.3 Process of difference between the cost of investment

The consolidated financial statements reflect on only the share of the consolidated subsidiaries post–application of purchase accounting method. The difference between the cost of investment and the Company's share of the fair value of identifiable net assets and liabilities of the subsidiaries at the date of purchase accounting method application is presented as goodwill or negative goodwill. A review of impairment is performed at the end of each reporting date.

If the controlling company additionally acquires the subsidiaries' share, the elimination of subsidiaries' equity account is based on the acquisition date of shares. The difference between the investment accounts of the Company and the corresponding equity accounts of the subsidiaries is amounted to the consolidated capital surplus (or capital adjustment).

2.4 Elimination of intercompany transactions and the unrealized gain or loss, etc.

All significant intercompany transactions and the account balances among the consolidated companies are eliminated on consolidation. Unrealized gains or losses included in loans and borrowings arising from transactions between consolidated companies are eliminated on consolidation. The related accounts receivable and payable are also eliminated on consolidation.

2.5 Investments in associates

Investments in entities over which the Company has control or significant influence are accounted for using the equity method. Under the equity method of accounting, the Company's initial investment in an investee is recorded at acquisition cost. Subsequently, the carrying amount of the investment is adjusted to reflect the Company's share of income or loss of the investee in the statement of comprehensive income and share of changes in equity that have been recognized directly in the equity of the investee in the related equity account of the Company on the statement of financial position. If the Company's share of losses of the investee equals or exceeds its interest in the investee, it suspends recognizing its share of further losses. However, if the Company has other long–term interests in the investee, it continues recognizing its share of further losses to the extent of the carrying amount of such long–term interests. The Company resumes the application of the equity method if the Company's share of income or change in equity of an investee exceeds the Company's share of losses accumulated during the period of suspension of the equity method of accounting.

2.5 Investments in associates (cont'd)

At the date of acquisition, the excess of the cost of the investment over the Company's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as goodwill or negative goodwill. The amortization expenses is included as a part of valuation gain or loss on the equity method investments in the statement of comprehensive income. The difference related to goodwill is recorded as the carrying amount. Goodwill is reviewed for the impairment when signs of damage arise and is not amortized over its useful life. Further, the Company's share of any difference between the net fair value of the investee's identifiable assets and liabilities, and the net book value of such assets and liabilities are amortized based on the investee's accounting treatments on the related assets and liabilities and charged or credited to the valuation gain or loss on the equity method investments in the statement of comprehensive income.

The Company's share in the investee's unrealized profits and losses resulting from transactions between the Company and its investee are eliminated to the extent of the interest in the investee.

2.6 Special reserve on trust accounts

A special reserve provided for the possible future losses on certain trust accounts under the arrangement of guaranteed fixed rate of return and repayment of the principal and guaranteed repayment of the principal is included under the retained earnings in the consolidated financial statements.

2.7 Non-controlling interests

Subsidiaries' equity which is not included in the Company's share is accounted as non-controlling interests. In case subsidiaries' non-controlling interests is below "0", minus non-controlling interests is presented as deduction of equity.

3. Basis of preparation and significant accounting policies

3.1 Basis of preparation

The Company prepares statutory consolidated financial statements in the Korean language in accordance with KIFRS enacted by the *Act on External Audit of Stock Companies*. The accompanying consolidated financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors' review report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

3.2 Changes in accounting policies and disclosures

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Company's annual financial statements for the year ended December 31, 2017, except for the adoption of new standards and interpretation as of January 1, 2018.

The nature and the impact of each new standard or amendment are described below:

3.2.1 Amendments to KIFRS 1115 *Revenue from Contracts with Customers*

The amendments to KIFRS 1115 *Revenue from Contracts with Customers* are effective for annual periods beginning on or after 1 January 2018, with early application permitted. The new standard will supersede the following KIFRS: KIFRS 1018 *Revenue*, KIFRS 1011 *Construction Contracts*, KIFRS 2031 *Revenue-Barter Transactions Involving Advertising Services*, KIFRS 2113 *Customer Loyalty Programmes*, KIFRS *2115 Agreements for the Construction of Real Estate*, and KIFRS 2118 *Transfers of Assets from Customers.*

The current KIFRS 1018 provides the criteria for recognition of revenue relating to sale of goods, rendering of services, interest income, royalties, dividends and construction contracts. However, under the new KIFRS 1115, revenue is recognized by applying a five-stage revenue recognition model (Identification of a contract with a customer → Identification of performance obligations in the contract → Determination of the transaction price → Allocation of the transaction price to the separate performance obligations in the contract → Recognition of revenue upon satisfying the performance obligations) to all of its contracts with customers.

The adoption of KIFRS 1115 has no significant impact on the consolidated financial statements of the Company.

3.2.2 Amendments to KIFRS 2122 *Foreign Currency Transactions and Advance Consideration*

The Interpretation clarifies that, in determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, then the entity must determine the transaction date for each payment or receipt of advance consideration. However, since the Company's current practice is in line with the Interpretation, the Company does not expect any effect on its consolidated financial statements.

3.2.3 Amendments to KIFRS 1040 *Transfers of Investment Property*

The amendments clarify when an entity should transfer property, including property under construction or development into, or out of investment property. The amendments state that a change in use occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in use. A mere change in management's intentions for the use of a property does not provide evidence of a change in use. The amendments have no impact on the Company's consolidated financial statements.

3.2.4 Amendments to KIFRS 1102 *Classification and Measurement of Share-based Payment Transactions*

The KASB issued amendments to KIFRS 1102 *Share-based Payment* that address three main areas: the effects of vesting conditions on the measurement of a cash-settled share-based payment transaction; the classification of a share-based payment transaction with net settlement features for withholding tax obligations; and accounting where a modification to the terms and conditions of a share-based payment transaction changes its classification from cash settled to equity settled. On adoption, entities are required to apply the amendments without restating prior periods, but retrospective application is permitted if elected for all three amendments and other criteria are met. These amendments have no impact on the Company's consolidated financial statements as there is no share-based payment transaction with net settlement features for withholding tax obligations, and modification to the terms and conditions of a share-based payment transaction that changes its classification from cash settled to equity settled.

3.2.5 Amendments to KIFRS 1028 *Investments in Associates and Joint Ventures* – Clarification that measuring investees at fair value through profit or loss is an investment-by-investment choice

The amendments clarify that:

- An entity that is a venture capital organization, or other qualifying entity, may elect, at initial recognition on an investment-by-investment basis, to measure its investments in associates and joint ventures at fair value through profit or loss.
- If an entity, that is not itself an investment entity, has an interest in an associate or joint venture that is an investment entity, the entity may, when applying the equity method, elect to retain the fair value measurement applied by that investment entity associate or joint venture to the investment entity associate's or joint venture's interests in subsidiaries. This election is made separately for each investment entity associate or joint venture, at the later of the date on which: (a) the investment entity associate or joint venture is initially recognized; (b) the associate or joint venture becomes an investment entity; and (c) the investment entity associate or joint venture first becomes a parent. These amendments have no impact on the financial statements of the Company.

3.2.6 KIFRS 1101 First-time Adoption of Korean International Financial Reporting Standards - Deletion of short-term exemptions for first-time adopters

Short-term exemptions in paragraphs E3 ~ E7 of KIFRS 1101 were deleted because they have now served their intended purpose. This amendment is not applicable to the Company.

3.2.7 KIFRS 1109 *Financial Instruments*

The KASB issued the final version of KIFRS 1109 *Financial Instruments* that replaces KIFRS 1039 *Financial Instruments*: *Recognition and Measurement* and all previous versions. KIFRS 1109 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. Also, KIFRS 1107 *Financial Instruments*: *Disclosures* has been amended in accordance with KIFRS 1109.

The Company's accounting policies have been changed and the amounts recognized in the financial statements have been modified as a result of the adoption of KIFRS 1109 on January 1, 2018. In accordance with transitional provisions, the consolidated financial statements for the year ended December 31, 2017 have not been restated.

The main features of the standard include: a business model for the managing financial assets; classification and measurement of financial assets based on contractual cash flow characteristics of financial assets; an impairment model for financial instruments based on expected credit losses; the hedged item that meet the requirements of hedge accounting, increases in hedging instruments, or changes in the evaluation method for hedge effectiveness.

3.2.7.1 Financial asset classification and measurement

KIFRS 1109 requires a financial instrument to be classified and measured subsequently at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL), on the basis of the holder's business model and instrument's contractual cash flow characteristics as shown below. The requirements should be applied to an entire financial asset, even if it contains an embedded derivative.

	Contractual cash flow characteristics	
Business model	Composed solely of principal and interest	Other
Purpose of collecting contractual cash flows	Measured at amortized cost (*1)	
Purpose of collecting and selling contractual cash flows	Measured at FVOCI (*1)	Measured at FVTPL (*2)
Purpose of selling, others	Measured at FVTPL	

(*1) can be irrevocably designated at FVTPL in order to get rid of or reduce accounting mismatch.
(*2) can be irrevocably designated at FVOCI in case of equity securities not for held-for-trading purpose.

3.2.7.2 Financial liabilities classification and measurement

In KIFRS 1109, fair value changes of financial liabilities designated at FVTPL attributable to changes in credit risk of the financial liability shall be presented in other comprehensive income, not in profit or loss. Amounts presented in other comprehensive income shall not be subsequently recycled to profit or loss. However, the new standard allows the recognition of the full amount of change in the fair value in profit or loss only if the presentation of the changes in the financial liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss.

3.2.7.3 Impairment: financial assets and contract assets

In KIFRS 1039, impairment is recognized only when there is objective evidence of impairment based on incurred loss model. In the new KIFRS 1109, impairment of debt instruments, lease bonds, contract assets, loan commitments and financial guarantee contracts that are measured at amortized costs or at FVOCI is recognized based on the expected credit loss (ECL) model.

KIFRS 1109 outlines a 'three-stage' model for impairment based on changes in credit risk since initial recognition. Loss allowance is measured based on the 12-month ECL or life-time ECL.

Classification		Loss allowance
Stage 1	Assets with no significant increase in credit risk since initial recognition	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date.
Stage 2	Assets with significant increase in credit risk since initial recognition	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument.
Stage 3	Credit-impaired assets	

In KIFRS 1109, accumulated changes in the life-time ECL after initial recognition are taken into account as loss allowance in case credit is impaired at initial recognition of financial assets.

3.2.7.4 Hedge accounting

The KIFRS 1109 maintains mechanics of hedge accounting (fair value hedge, cash flow hedge and a hedge of a net investment in a foreign operation) as set forth in KIFRS 1039. However, unlike requirements in KIFRS 1039 that are too complex and strict, KIFRS 1109 is more practical, principle based and less strict and focuses on the entity's risk management activities. Also, KIFRS 1109 allows broader range of hedged items and hedging instruments. Under KIFRS 1039, a hedge is assessed to be highly effective only if the offset is in the range of 80-125 percentage by performing numerical test of effectiveness. In KIFRS 1109, such requirements are alleviated.

3.2.7.5 Changes in the Company's retained earnings and accumulated other comprehensive income (loss) as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions):

Classification	Amounts			
Beginning retained earnings (Under KIFRS 1039)			₩	8,735,759
Adjustment of retained earnings due to the adoption of KIFRS 1109				301,831
Reclassified from available-for-sale financial assets to financial assets measured at FVTPL	₩	12,157		
Revaluation of impairment loss on equity securities measured at FVOCI		511,114		
Remeasurement of financial assets measured at FVTPL		4,866		
Measurement of credit losses of loan receivable measured at amortized cost		(96,657)		
Measurement of credit losses of other financial assets measured at amortized cost		(170)		
Credit losses measurement of debt securities measured at amortized cost		(1,519)		
Credit losses measurement of loan agreements and financial guarantee contracts		(206)		
Remeasurement of merchant banking account loans receivable and loan arrangements		105		
Credit losses measurement of financial assets measured at FVOCI		(8,566)		
Changes in equity method gains and losses for associates and joint ventures		(4,175)		
Tax effect		(115,118)		
Beginning retained earnings (Under KIFRS 1109)			₩	9,037,590

3.2.7.5 Changes in the Company's retained earnings and accumulated other comprehensive income as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions): (cont'd)

Classification	Amounts			
Beginning accumulated other comprehensive income (loss) (Under KIFRS 1039)			₩	(751,704)
Adjustment of accumulated other comprehensive income (loss) due to the adoption of KIFRS 1109				(370,931)
Reclassified from available-for-sale financial assets to financial assets measured at FVTPL	₩	(13,222)		
Revaluation of impairment loss on equity securities measured at FVOCI		(511,114)		
Credit losses measurement of debt securities measured at FVOCI		8,566		
Changes in equity method gains and losses for associates and joint ventures		4,175		
Tax effect		140,664		
Beginning accumulated other comprehensive income (loss) (Under KIFRS 1109)			₩	(1,122,635)

3.2.7.6 Adjustments in the statements of financial position as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions):

Classification	December 31, 2017 Amounts under KIFRS 1039	Adjustments: Reclassification	Adjustments: Remeasurement	January 1, 2018 Amounts under KIFRS 1109
Financial assets:				
Cash and due from banks				
Book value (KIFRS 1039, 1109)	₩ 19,983,916	₩ -	₩ -	₩ 19,983,916
Financial assets at FVTPL				
Book value (Under KIFRS 1039)	9,443,614	-	-	-
Reclassified as financial assets measured at FVTPL	-	(9,443,614)	-	-
Book value (Under KIFRS 1109)	-	-	-	-
Derivatives assets for hedging				
Book value (KIFRS 1039, 1109)	11,760	-	-	11,760
Available-for-sale financial assets - Equity securities				
Book value (Under KIFRS 1039)	4,052,304	-	-	-
Reclassified as financial assets measured at FVTPL	-	(3,212,717)	-	-
Reclassified as financial assets measured at FVOCI	-	(839,587)	-	-
Book value (Under KIFRS 1109)	-	-	-	-
Available-for-sale financial assets - Debt securities				
Book value (Under KIFRS 1039)	40,270,208	-	-	-
Reclassified as financial assets measured at FVTPL	-	(2,562)	-	-
Reclassified as financial assets measured at amortized cost	-	(13,940)	-	-
Reclassified as financial assets measured at FVOCI	-	(40,253,706)	-	-
Book value (Under KIFRS 1109)	-	-	-	-
Held-to-maturity financial assets				
Book value (Under KIFRS 1039)	6,160,922	-	-	-
Reclassified as financial assets measured at amortized cost	-	(6,160,922)	-	-
Book value (Under KIFRS 1109)	-	-	-	-
Loans				
Book value (Under KIFRS 1039)	224,096,709	-	-	-
Reclassified as financial assets measured at FVTPL	-	(159,605)	-	-
Remeasurement : Expected credit losses	-	-	(98,189)	-
Book value (Under KIFRS 1109)	-	-	-	223,838,915
Other financial assets				
Book value (Under KIFRS 1039)	9,585,105	-	-	-
Remeasurement : Expected credit losses	-	-	(170)	-
Book value (Under KIFRS 1109)	-	-	-	9,584,935

3.2.7.6 Adjustments in the statements of financial position as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2017 Amounts under KIFRS 1039	Adjustments Reclassification	Adjustments Remeasurement	January 1, 2018 Amounts under KIFRS 1109
Merchant banking account assets				
Book value (Under KIFRS 1039)	₩ 2,966,019	₩ -	₩ -	₩ -
Reclassified as financial assets measured at FVTPL	-	(3,995)	-	-
Reclassified from loans and receivables	-	3,995	-	-
Remeasurement: Adjustment of fair value assessment	-	-	5	-
Book value (Under KIFRS 1109)	-	-	-	2,966,024
Financial assets measured at FVTPL				
Book value (Under KIFRS 1039)	-	-	-	-
Reclassified from financial assets at FVTPL	-	9,443,614	-	-
Reclassified from available-for-sale financial assets – Equity securities	-	3,212,717	-	-
Reclassified from available-for-sale financial assets – Debt securities	-	2,562	-	-
Reclassified from loans and receivables	-	159,605	-	-
Remeasurement: Adjustment of fair value assessment, etc.	-	-	3,808	-
Book value (Under KIFRS 1109)	-	-	-	12,822,306
Financial assets measured at FVOCI				
Book value (Under KIFRS 1039)	-	-	-	-
Reclassified from available-for-sale financial assets - Equity securities	-	839,587	-	-
Reclassified from available-for-sale financial assets - Debt securities	-	40,253,706	-	-
Remeasurement : Expected credit losses	-	-	-	-
Book value (Under KIFRS 1109)	-	-	-	41,093,293
Securities measured at amortized cost				
Book value (Under KIFRS 1039)	-	-	-	-
Reclassified from available-for-sale financial assets - Debt securities	-	13,940	-	-
Reclassified from held-to-maturity financial assets	-	6,160,922	-	-
Remeasurement : Expected credit losses	-	-	(1,524)	-
Book value (Under KIFRS 1109)	-	-	-	6,173,338
Total	₩ 316,570,557	₩ -	₩ (96,070)	₩ 316,474,487

3.2.7.6 Adjustments in the statements of financial position as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2018 Amounts under KIFRS 1039	Adjustments Reclassification	Adjustments Remeasurement	January 1, 2018 Amounts under KIFRS 1109
Financial liabilities				
Deposits				
Book value (KIFRS 1039, 1109)	₩ 230,410,494	₩ -	₩ -	₩ 230,410,494
Financial liabilities at FVTPL				
Book value (Under KIFRS 1039)	6,839,559	-	-	-
Reclassified as financial assets measured at FVTPL	-	(6,839,559)	-	-
Book value (KIFRS 1109)	-	-	-	-
Derivatives liabilities for hedging				
Book value (KIFRS 1039, 1109)	73,024	-	-	73,024
Borrowings				
Book value (KIFRS 1039, 1109)	13,774,502	-	-	13,774,502
Debentures				
Book value (KIFRS 1039, 1109)	22,311,737	-	-	22,311,737
Financial liabilities measured at FVTPL				
Book value (KIFRS 1039)	-	-	-	-
Reclassified from financial liabilities at FVTPL	-	6,839,559	-	-
Book value (KIFRS 1109)	-	-	-	6,839,559
Total	₩ 273,409,316	₩ -	₩ -	₩ 273,409,316

3.2.7.7 Changes in loss allowance as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions):

Subsequent measurement categories		Provision for loss			
December 31, 2017	January 1, 2018	December 31, 2017			January 1, 2018
Amounts under KIFRS 1039	Amounts under KIFRS 1109	Loss allowance under KIFRS 1039	Reclassification	Remeasurement	Loss allowance under KIFRS 1109
Loans and receivables	Financial assets measured at amortized cost	₩ 1,349,914	₩ -	₩ 98,194	₩ 1,448,108
Loans and receivables	Financial assets measured at FVTPL	12,908	(12,908)	-	-
Other financial assets	Financial assets at amortized cost	10,713	-	170	10,883
Available-for-sale financial assets	Financial assets measured at FVOCI	-	-	8,566	8,566
Held-to-maturity financial assets	Financial assets measured at amortized cost	-	-	1,523	1,523
		₩ 1,373,535	₩ (12,908)	₩ 108,453	₩ 1,469,080
Loss allowance for financial guarantee	Loss allowance for financial guarantee	765	-	(288)	477
Loss allowance for acceptances and guarantees	Loss allowance for acceptances and guarantees	84,459	-	(4,864)	79,595
Loss allowance for unused credit limit	Loss allowance for unused credit limit	58,995	-	5,591	64,586
		₩ 144,219	₩ -	₩ 439	₩ 144,658
Total		₩ 1,517,754	₩ (12,908)	₩ 108,892	₩ 1,613,738

3.2 Changes in accounting policies and disclosures (cont'd)

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's consolidated financial statements are disclosed below.

3.2.8 KIFRS 1116 *Leases*

KIFRS 1116 was issued in May 22, 2017 and is effective for annual periods on or after January 1, 2019. Early adoption is permitted. It replaces KIFRS 1017 *Leases*, KIFRS 2104 *Determining whether an Arrangement contains a Lease*, KIFRS 2015 *Operating Leases-Incentives* and KIFRS 2027 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*.

The Company assesses whether a contract is, or contains, a lease at inception of a contract and also assesses whether a contract is, or contains, a lease at the initial adoption of KIFRS 1116. However, the Company may not reassess all arrangements entered into before the date of initial application of the standard by applying the simplified approach.

The Company will adopt IFRS 1116 only for contracts entered into after the initial date of adoption (or changed) on the basis of the simplified method.

For a contract that is, or contains a lease, the Company will account for each lease component within the contract as a lease separately from non-lease components of the contract.

A lessee will recognize an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset) and a liability representing the right to make lease payments (i.e., the lease liability). However, in case of short-term leases(i.e., leases with a lease term of 12 months or less) and leases of 'low-value' assets(i.e., underlying assets under $5000) , the Company may elect to apply the exception under KIFRS 1116. As a practical expedient, a lessee may elect, by class of the underlying asset, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single component.

Lessor accounting under KIFRS 1116 is not significantly changed from today's accounting under KIFRS 1017.

3.2.8.1 Adoption of KIFRS 1116 *Leases*

The lessee can choose full retrospective approach to apply the effect for each past reporting period presented in accordance with KIFRS 1008 *Accounting Policies, Changes in Accounting Estimates and Errors* or (Cumulative Effect Batch Reconciliation Action) or cumulative effect approach (modified retrospective method) to recognize the cumulative effect of the initial application on the initial application date.

The Company plans to apply KIFRS 1116 for the first time using the cumulative effect approach as of January 1, 2019. Accordingly, the cumulative effect of applying KIFRS 1116 is adjusted in the retained earnings (or, where appropriate, other components of equity) at the date of initial application and the Company will not restate the comparative financial statements.

3.2.8.2 Financial effect of KIFRS 1116 *Leases*

In assessing the financial impact of the initial adoption of KIFRS 1116, the Company assessed the impact on the financial statements for the year 2019 based on the information and available information as of January 1, 2019.

The aggregate amount of the minimum lease payments prior to the present value discount of the assets that the Company is currently using as operating leases is ₩ 546,631 million and the discount amount is ₩ 526,558 million at the incremental borrowing rate of the lessee.

3.2.8.2 Financial effect of KIFRS 1116 *Leases* (cont'd)

However, the Company will account for each lease element and related non-lease element as a single lease element by applying the simplified method of accounting for contracts that include full (or in part) lease or lease.

As a result of a detailed analysis of the effect on the financial statements, the Company expects to increase the amount of using assets and liabilities by ₩ 557,808 million and ₩ 526,558 million as of January 1, 2019, respectively. However, the financial impact assessment may change depending on additional information available in the future.

3.2.9 IFRIC Interpretation 23 *Uncertainty over Income Tax Treatment*

The Interpretation provides guidance on determining the accounting tax position when there is uncertainty over income tax treatments. The Interpretation requires an entity to determine whether uncertain tax positions are assessed separately or as a group and assess whether it is probable that a tax authority will accept an uncertain tax treatment used, or proposed to be used, by an entity in its income tax filings. If probable, the entity should determine its accounting tax position consistently with the tax treatment used or planned to be used in its income tax filings. If not probable, the entity should reflect the effect of uncertainty which is measured using either the most likely amount or the expected value method, depending on which method better predicts the resolution of the uncertainty. The interpretation is effective for annual reporting periods beginning on or after January 1, 2019, with early application permitted. On initial application, the Company shall apply this interpretation retrospectively or retrospectively with the cumulative effect of initially applying the interpretation recognized at the date of initial application. The Company expects that the amendments will not have a significant impact on its consolidated financial statements.

3.2.10 Amendments to KIFRS 1109: *Prepayment Features with Negative Compensation*

Under KIFRS 1109, a debt instrument can be measured at amortized cost or at fair value through other comprehensive income, provided that the contractual cash flows are 'solely payments of principal and interest on the principal amount outstanding' (the SPPI criterion) and the instrument is held within the appropriate business model for that classification. The amendments to KIFRS 1109 clarify that a financial asset passes the SPPI criterion regardless of the event or circumstance that causes the early termination of the contract and irrespective of which party pays or receives reasonable compensation for the early termination of the contract.

The amendments are effective from January 1, 2019, with early application permitted. The Company expects that the amendments will not have a significant impact on its consolidated financial statements.

3.2.11 Amendments to KIFRS 1028: *Long-term interests in associates and joint ventures*

The amendments clarify that an entity applies KIFRS 1109 to long-term interests in an associate or joint venture to which the equity method is not applied but that, in substance, form part of the net investment in the associate or joint venture (long-term interests). The amendments also clarified that, in applying KIFRS 1109, an entity does not take account of any losses of the associate or joint venture, or any impairment losses on the net investment, recognized as adjustments to the net investment in the associate or joint venture that arise from applying KIFRS 1028 *Investments in Associates and Joint Ventures.*

The amendments should be applied retrospectively and are effective from January 1, 2019, with early application permitted. The Company expects that the amendments will not have an impact on its consolidated financial statements.

3.2.12 Amendments to KIFRS 1019: *Plan Amendment, Curtailment or Settlement*

The amendments apply to plan amendments, curtailments, or settlements occurring on or after the beginning of the first annual reporting period that begins on or after January 1, 2019, with early application permitted. The Company expects that the amendments will not have an impact on its consolidated financial statements.

3.3 Foreign currency transaction

3.3.1 Functional currency

When preparing for the consolidated financial statements, the Company measures and recognizes all items and transactions according to the functional currency. The term, functional currency, is defined as the monetary unit of account of the principal economic environment in which the entity operates, and trades between entities using its own functional currency and other currencies which are converted to the Company's functional currency to be measured and recognized.

3.3.2 Transactions and balances at the end of the reporting period

Transactions in foreign currencies are initially recorded at the spot rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the spot rate of exchange at the reporting date. Non–monetary items measured at fair value in a foreign currency are translated at the exchange rates at the end of reporting date. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss. Non–monetary items not measured at fair value in a foreign currency are translated using the exchange rates as of the dates of the initial transactions and thus there are no exchange differences.

The Company may have a monetary item that is receivable from or payable to a foreign operation. An item for which settlement is neither planned nor likely to occur in the foreseeable future is, in substance, a part of the entity's net investment in that foreign operation. Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment.

3.3.3 Translation of the presentation currency

As of the reporting date, the assets and liabilities of overseas branches are translated into the Company's presentation currency, Korean won (KRW), at the rate of exchange as of the reporting date, and their statements of comprehensive income and equity are translated using the exchange rates at transaction date or the average exchange rates for the period. Exchange differences arising on translation are taken directly to a separate component of equity. On disposal of a foreign entity, the deferred cumulative amount recognized in equity related to that particular foreign operation is recognized in 'Other operating expenses' or 'Other operating income' in the statements of comprehensive income.

3.4 Cash and cash equivalents

Cash and cash equivalents in the statements of financial position comprise of cash at Banks and on hand and short–term deposits with an original maturity of three months or less. The purpose of cash and cash equivalents is to make short–term investments and to meet short–term cash demands. Cash and cash equivalents are highly liquid, easily convertible and subject to changes in value.

3.5 Financial assets – classification and subsequent measurement

At initial recognition, financial assets and liabilities are classified as measured at FVTPL, FVOCI and amortized cost, in accordance with their characteristics and purposes.

All financial assets are initially recognized on the trade date, i.e., the date that the Company becomes a party to the contractual provisions of the instrument. This includes 'Regular way trades': purchases or sales of financial assets that require delivery of assets within the time frame generally established by regulation or convention in the market place.

Financial assets and liabilities are initially measured at fair value, and the transaction costs directly attributable to the acquisition of financial assets (liabilities) are added to (deducted from) the fair value at initial recognition if they are not measured at FVTPL. The fair value of the financial assets and liabilities is defined as the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The fair value of financial instruments is measured at the transaction price (the fair value of the consideration received or transferred) at initial recognition.

3.5.1 Financial assets measured at FVTPL

Financial assets measured at fair value through profit or loss include financial assets held-for-trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held-for-trading if they are acquired for the purpose of selling or repurchasing in the short term.

Also, financial assets can be designated at FVTPL if assets or liabilities are measured in accordance with different standards or in order to get rid of or reduce accounting mismatch.

Financial assets measured at FVTPL are measured at fair value and the gain or loss on valuation is recognized as profit or loss. Dividends and interest income from the financial assets are also recognized as profit or loss.

3.5.2 Financial assets measured at FVOCI

The Company measures financial assets measured at FVOCI if they meet the following conditions: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. Financial assets at FVOCI are measured at fair value after initial recognition. Gain or loss from changes in the fair value is recognized as other comprehensive income except for interest income in accordance with the effective interest rate method, dividends and foreign exchange differences on monetary assets directly recognized as profit or loss.

When financial assets measured at FVOCI are disposed of, the cumulative income recognized in other comprehensive income is transferred to the current profit or loss. However, the cumulative income recognized for equity securities designated as financial assets measured at FVOCI is not transferred to the current profit or loss.

The fair value of financial assets measured at FVOCI presented in foreign currencies is translated using the exchange rate as of the end of the reporting period. Changes in the fair value from exchange differences due to changes in amortized cost are recognized in the current profit or loss, while other changes are recognized directly in equity.

3.5.3 Financial assets measured at amortized cost

Financial assets that meet the following two conditions must be measured at amortized cost: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the objective of the entity's business model is to hold the financial asset to collect the contractual cash flows. After initial recognition, the financial assets are recognized at amortized cost using the effective interest rate, net of the allowance for doubtful accounts.

The Company defers LOF/LOCs associated with originating loans and LOCs that have future economic benefits. Loan balances are reported net of these LOF/LOCs. The deferred LOF/LOCs are amortized based on the effective interest rate method with the amortization recognized as adjustments to interest income.

3.6 Derivative financial instruments and hedge accounting

Derivative financial instruments are classified as trading derivatives or hedging derivatives depending on whether hedge accounting is applied or not, and are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Any gains or losses arising from changes in fair value on derivatives are taken directly to the statement of comprehensive income, except for the effective portion of cash flow hedges or hedges of net investment in a foreign operation, which is recognized in other comprehensive income.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment (except for foreign currency risk)
- Cash flow hedges when hedging exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or also the foreign currency risk in an unrecognized firm commitment

At the inception of a hedge relationship, the Company formally designates and documents the hedge relationship to which the Company wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the entity will assess the effectiveness of changes in the hedging instrument’s fair value in offsetting the exposure to changes in the hedged item’s fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

Hedges which meet the strict criteria for hedge accounting are accounted for as follows:

3.6.1 Fair value hedges

When fair value hedge accounting is applied, the unrealized gain or loss on hedged items that are attributable to a hedged risk and hedging instruments is symmetrically recognized in the consolidated financial statements as current income or other comprehensive income for the same reporting period to ensure that changes in the fair value of the hedged items are offset by changes in the fair value of the hedging instruments. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively. Any adjustment to the carrying amount of hedged items is amortized to profit or loss in the consolidated statement of comprehensive income over the remaining maturity using the effective interest rate method.

3.6.2 Cash flow hedges

When cash flow hedge accounting is applied, the effective portion of the unrealized gain or loss on the hedging instrument is directly recognized in other comprehensive income (loss) in the consolidated statement of financial position to ensure that changes in the cash flows of the hedged items are offset by changes in the cash flows of the hedging instruments while any ineffective portion is recognized immediately in the consolidated statement of comprehensive income. Amounts recognized as other comprehensive income are transferred to the consolidated statements of comprehensive income when the hedged transaction affects profit or loss. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively and the cumulative gain or loss on the hedging instrument previously recognized in other comprehensive income are transferred to profit or loss in the consolidated statement of comprehensive income.

3.6.3 Hedge accounting of net investment in a foreign operation

When applying hedge accounting of net investment in a foreign operation, the effective portion of changes in fair value of the hedging instrument is recognized in other comprehensive income, and the ineffective portion of the hedge is recognized as current profit or loss in order to offset changes in the fair value of the hedged item caused by the hedging with changes in the fair value of the hedging instrument. The effective portion of hedge recognized in other comprehensive income will be re- classified from other comprehensive income to current profit or loss in accordance with KIFRS 1021 *The Effects of Changes in Foreign Exchange Rates* at the time of disposal of a foreign operation or disposal of a portion of its foreign operations in the future.

3.6.4 Embedded derivatives

Derivatives embedded in other financial instruments or other host contracts are accounted for as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVPTL.

3.6.5 'Day 1' profit or loss

In case of derivatives in level 3 (see Note 5), whose fair value is determined using data which is not observable from markets, the difference between the transaction price and fair value at initial recognition (a 'Day 1' profit or loss) is deferred and amortized over the life of the associated instrument using the straight–line method and the amortization is recognized in the statement of comprehensive income.

3.6.6 Credit risk valuation adjustment

When assessing derivatives at fair value, expected loss from credit risk is measured and deducted from derivative assets to reflect credit risk of counterparties.

3.7 Expected credit loss for financial assets

Loss allowance is recognized for financial assets measured at FVOCI and amortized cost using the expected credit loss model.

The expected credit loss (ECL) is the weighted average amount of possible outcomes within a certain range, reflecting the time value of money, estimates on the past, current and future situations, and information accessible without excessive cost of effort.

The ECL can be measured in three followings ways:

- General approach: when financial assets do not fall into below two categories and are off-balance-sheet undrawn commitments
- Simplified approach: when financial assets are trade receivables, contract assets or lease receivables
- Credit-impaired approach: when financial assets are credit-impaired at initial recognition

The general approach is applied differently depending on the significance of the increase of the credit risk. If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, an entity shall measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If the credit risk on that financial instrument has increased significantly since initial recognition, an entity shall measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses at each reporting date.

The loss allowance is measured at an amount equal to lifetime expected credit losses for the simplified approach, and an entity shall only recognize the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for purchased or originated credit-impaired financial assets at each reporting date for the credit-impaired approach.

The following non-exhaustive list of information may be relevant in assessing changes in credit risk:

- Significant changes in internal price indicators of credit risk as a result of a change in credit risk since inception
- Other changes in the rates or terms of an existing financial instrument that would be significantly different
- An actual or expected significant change in the financial instrument’s external credit rating
- An actual or expected internal credit rating downgrade for the borrower or decrease in behavioral scoring used to assess credit risk internally
- An actual or expected significant change in the operating results of the borrower
- Past due information

3.7 Expected credit loss for financial assets (cont'd)

(1) Forward-looking information

The Company measures the significance of the increase of the credit risk and the expected credit loss using forward-looking information.

The Company assumes that the risk component is correlated with changes in market conditions, and calculates the expected credit loss using the forward-looking information by modelling macroeconomic variables and risk components.

The forward-looking information used to measure the expected credit loss is derived from 'stress-case' or 'worst-case' scenarios.

(2) Measurement of expected credit loss for financial assets measured at amortized cost

Expected credit loss for financial assets measured at amortized cost is measured as the difference between the present value of the cash flows expected to be received and the cash flow expected to paid. For this purpose, the Company calculates expected cash flows for individually significant financial assets (Individual valuation allowance).

Financial assets insignificant in value individually are measured on a collective basis with financial assets with similar credit risks (collective loss allowance).

1) Loss allowance on an individual assessment basis

Loss allowance on an individual assessment basis is based on the best estimates of management in regards to the present value of cash flows expected to be recovered from receivables. In estimating the cash flows, the Company uses all available information including the financial conditions such as the operating cash flows of counterparties and the net realizable value of collateral provided.

2) Loss allowance on a collective assessment basis

Loss allowance on a collective assessment basis uses the estimation model that accounts for the forward-looking information based on the past loss rate to measure the expected credit loss. The model considers the probability of default (PD) and the loss given default (LGD) reflecting the type of instruments and borrowers, credit rating, portfolio size and collection period. Also, certain assumptions are applied to model the expected credit loss measurement and to determine input variables based on past experiences and forward-looking information. Methodologies and assumptions for this model are regularly reviewed to minimize the difference between the loss allowance and the actual loss.

The expected credit loss for financial assets measured at amortized cost is recognized as the loss allowance, and when the financial asset is determined to be irrecoverable, the carrying amount and loss allowance are decreased. If financial assets previously written off are recovered, the loss allowance is increased and the difference is recognized in the current profit or loss.

(3) Expected credit loss measurement for financial assets measured at fair value through other comprehensive income

The measurement method is the same as the one for financial assets measured at amortized cost, but the change in the loss allowance is recognized as other comprehensive income. The loss allowance for financial assets measured at fair value through other comprehensive income is reclassified from other comprehensive income to current profit or loss when the assets are disposed of or repaid.

3.8 Derecognition of financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired.
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'Pass–through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Company has transferred its rights to receive cash flows from an asset or has entered into a pass–through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all the risks and rewards of the asset, nor transferred control of the asset, the asset is recognized to the extent of the Company's continuing involvement in the asset. In that case, the Company also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Company has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Company could be required to repay.

3.9 Recognition and measurement of financial liabilities

All financial liabilities are classified as financial liabilities at FVTPL, borrowings or others and measured initially at their fair value plus transaction costs, except in the case of financial liabilities recorded at FVTPL.

3.9.1 Financial liabilities at FVTPL

Financial liabilities at fair value through profit or loss include financial liabilities held-for-trading and financial liabilities designated upon initial recognition as of fair value through profit or loss. Financial liabilities are classified as held-for-trading if they are acquired for the purpose of selling in the near term. All financial liabilities including an embedded derivative separated from the host contract are reclassified as financial liabilities at fair value through profit or loss except for financial liabilities designated as effective hedging instruments or financial guarantee contracts. After initial recognition, the changes in the fair value of the financial liabilities at fair value through profit or loss and the related interest expenses are recognized as profit or loss.

The Company performs securities lending and borrowing classified to FVTPL. When the Company borrows securities from Korea Securities Depository, securities borrowed are managed as memorandum value and when selling them, they are recorded as securities sold. At closing, the difference in the price securities are sold and the market price prevailing on the closing date is taken into account as valuation gain or loss on securities sold, and at the time of selling the securities, the difference in book value and the price securities are purchased is recorded as trading gain or loss on securities sold.

3.9.2 Deposits, borrowings, and debentures

After initial recognition, interest bearing deposits, borrowings and debentures are subsequently measured at amortized cost using the EIR. Gains and losses are recognized in the statements of comprehensive income when the liabilities are derecognized as well as through the EIR amortization process.

3.10 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the statement of comprehensive income.

3.11 Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.

3.12 Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The provision is used only for expenditures for which the provision was originally recognized. If the effect of the time value of money is material, provisions are stated at present value.

Confirmed acceptances and guarantees, unconfirmed acceptances and guarantees and bills endorsed are not recognized on the statement of financial position, but are disclosed as off–statement financial position items in the notes to the financial statements. The Company provides a provision for such off–statement financial position items, applying a Cash Conversion Factor (Cash CF) and provision rates, and records the provision as a reserve for possible losses on acceptances and guarantees. The Company provides an allowance for possible losses on a certain portion of unused credit line. The Company records the provision for such unused balances as an allowance for possible losses on unused commitments which are calculated by applying a Credit Conversion Factor (CCF) and provision rates.

3.13 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument and is measured at fair value on date of initial recognition. After initial recognition, the Company, as an issuer of such a contract, measures it at the higher of (i) the amount determined in accordance with KIFRS 1037 and (ii) the amount initially recognized less, when appropriate, cumulative amortization recognized in accordance with KIFRS 1018.

3.14 Bonds purchased under resale agreements and bonds sold under repurchase agreements

Bonds purchased under resale agreements and bonds sold under repurchase agreements are included in loans and borrowings, respectively, in the accompanying statement of financial position. Interest income and expenses from purchase or sale are recognized as interest income on loan receivables and interest expenses on borrowings.

3.15 Property and equipment

Property and equipment are stated at historical cost, less accumulated depreciation. Such cost includes an expenditure which has directly occurred for the acquisition of the asset.

The initial and subsequent costs are recognized as an asset when it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. The other maintenances and repairs are expensed in the year in which they are incurred and the carrying amount of certain parts that are replaced is derecognized.

Land is not depreciated. For depreciation of other assets, amount of acquisition cost less residual value is calculated on a straight-line and declining balance basis over the following estimated useful life of the asset.

Classification	Depreciation method	Years
Buildings	Straight–line method	5 to 55
Leasehold improvements	Straight–line method	3 to 10
Equipment and vehicles	Declining balance method	3 to 20

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is immediately reduced to its recoverable amount. The residual value and economic useful life are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for if necessary. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognized in ‘other operating income' in the consolidated statement of comprehensive income in the year the asset is derecognized.

3.16 Investment properties

Investment properties are measured initially at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met; and excludes the costs of day–to–day servicing of an investment property. Subsequent to initial recognition, investment properties are stated using the cost model.

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of comprehensive income in the period of derecognition, and transfers are made to or from investment property only when there is a change in use. Depreciation method to measure buildings which are classified as investment properties is the straight–line method with useful lives ranging from 5 to 55 years.

3.17 Intangible assets

An intangible asset which comprises industrial property right, software, development costs and others is recognized as an asset only if it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. Intangible assets acquired individually are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as of the date of acquisition in accordance to KIFRS 1103 "*Business Combination*." Amortization of intangible assets with definite useful lives is calculated on the following amortization method over the estimated useful life of the assets.

Classification	Depreciation method	Years
Industrial property right, software, system development costs	Straight–line method	5
Other intangible assets	Straight–line method	1 to 27

Intangible assets with indefinite useful lives are not amortized but are annually tested for impairment or whenever there is an indication that the intangible asset may be impaired. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable.

3.18 Impairment of non–financial assets

The Company assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Company estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash–generating unit's (CGU) fair value less costs to sell and its value in use. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

3.19 Net defined benefit liabilities (assets)

The Company calculates defined benefit liabilities and pension benefit expenses based on defined benefit plan and defined contribution plan when an employee retires in accordance to pension related regulations. For defined benefit plans, the cost of retirement benefits is measured by an actuary services company, using the projected unit credit method. The present value of defined benefit obligation is computed by discounting expected future cash outflows with market rate of return measured against the yield of high-graded corporate bond whose date of payment and maturity is similar to that of a defined benefit obligation. Actuarial gains and losses, incurred from the change in actuarial assumptions and the difference between the assumptions and the actual results, are recognized in other comprehensive income for the period. Past service cost is recognized immediately to the extent that the benefits are already vested and otherwise is amortized on a straight-line basis over the period until the benefits become vested.

The Company has entered into retirement trust fund and retirement pension plan agreements to pay retirement benefits to its employees. The retirement benefit obligation represents the present value of the defined benefit obligation as adjusted for unrecognized past service cost and as reduced by the fair value of plan assets. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

3.20 Share–based payment transactions

Employees (including senior executives) of the Company receive remuneration in the form of share–based payment transactions, whereby employees render services as consideration for equity instruments, or they are granted share appreciation rights, which can only be settled in cash. If the goods or services provided cannot be reliably measured, the endowed equity is indirectly estimated at fair value and the Company accounts for compensation costs and equity.

3.20 Share–based payment transactions (cont'd)

The cost of cash–settled transactions is measured initially at fair value at the grant date, taking into account the terms and conditions upon which the instruments were granted. This fair value is expensed over the period until vesting with recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to and including the settlement date, which changes in fair value recognized in the statement of comprehensive income. Also, in the case of a selectable share–based payment transaction in which the employees have a choice between a cash–settled transaction and an equity–settled transaction, the Company records the amount depending on its materiality.

3.21 Employee benefits

3.21.1 Short-term employee benefits

When employees have rendered services to the Company during an accounting period, the Company recognizes the undiscounted amount of short-term employee benefits. This amount is expected to be settled in whole before twelve months after the end of the reporting period, in exchange for those services.

3.21.2 Termination benefits

The Company recognizes expenses for termination benefits when an employee accepts the offer or when a restriction on the Company's ability to withdraw the offer takes effect.

3.22 Income tax expenses and deferred tax assets and liabilities

Income taxes comprise of current and deferred taxes. All items related to taxes, other than those recognized directly in equity, are accounted for in the statement of comprehensive income. Accordingly, items recognized directly in equity and the related taxes are accounted for as other comprehensive income in the consolidated statements of comprehensive income. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Company operates and generates taxable income. If the applied tax laws require an interpretation, the Company calculates income tax payable expected to be paid to the taxation authorities based on the opinion made when the taxes were reported.

Deferred tax is provided on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit loss.
- In respect of taxable temporary differences associated with investments in subsidiaries and associates, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences to the extent that taxable profit will be available against which the deductible temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the years when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and taxation authority.

3.22 Income tax expenses and deferred tax assets and liabilities (cont'd)

The Company offsets deferred assets and liabilities if, and only if (a) the Company has a legally enforceable right to set off current tax assets against current tax liabilities and, (b) the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either on (i) the same taxable entity or (ii) different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3.23 Equity

3.23.1 Classification of equity

The Company classifies financial instruments at initial recognition as either financial liabilities or financial equity depending on the contractual materiality. In the case where it is possible to avoid the related contractual obligations, the financial item is classified as a financial equity. An equity is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities.

3.23.2 Stock issuance costs

New stock issuance costs or incremental costs related to the stock issuance for business combinations are recorded as a deduction from paid–in capital net of tax effects.

3.24 Earning per share

Basic and diluted earnings per share are computed by dividing net income by the weighted average number of shares of common stock outstanding during the year.

3.25 Accounting basis for trust accounts

The Company separately maintains the books of accounts and financial statements in connection with the trust operations (the "trust accounts") from those of the Bank's accounts in accordance with the *Financial Investment Services and Capital Markets Act* ("FSCMA"). When surplus funds are generated through the management of trust assets, such funds are deposited with the Bank and are recorded as due to trust accounts of the Bank's accounts. Also, the borrowings from the Bank's accounts are recorded as due from trust accounts of the Bank's accounts. The Company receives fees for operation and management of the trust business and accounts for them as fee and commission income from trust accounts.

With respect to certain trust account products, the Company guarantees the repayment of principal and interest of these trust accounts, in certain cases, with a fixed rate of return. If income from such trust accounts is insufficient to pay the guaranteed amount, such a deficiency is satisfied by using special reserves maintained in these trust accounts, offsetting trust fee payable to the Bank's accounts and receiving compensation contributions from the Bank's accounts. If the Company pays compensating contributions to the guaranteed return trusts to cover such deficiencies, these contributions are reflected as fee and commission expenses from trust accounts in the Company's consolidated statements of comprehensive income.

3.26 Accounting of leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Amounts due from lessees under finance leases are recognized as receivables at the amount of Company's net investment in the leases. Finance lease income is allocated to accounting period so as to reflect a constant periodic rate of return on the Company's net investment outstanding in respect of the leases.

3.27 Merchant banking account

As permitted by the *Restructuring of Financial Institutions Act*, the Bank may continue its merchant banking operations, including leasing business, until the existing contracts acquired from the Korea International Merchant Bank upon merger are terminated.

Significant accounting policies applied to the Bank’s merchant banking operations are summarized as follows:

3.27.1 Revenue recognition on discounted notes

Interest income on discounted notes is accrued over the term of the notes. Income from the sale of discounted notes is recognized at the date of transaction based on the difference between the purchase prices and sales prices of the notes, adjusted for interest earned during the holding period.

3.27.2 Cash Management Accounts (CMA)

The Company recognizes interest income from CMA investments and interest expenses from CMA deposits as operating income and operating expenses, respectively.

3.28 Interest income and interest expense

Interest income and interest expenses are recognized over time using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expenses over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Company estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. Cash flows at the time of the calculation include all the fees and points paid to or received from parties to the contract that are an integral part of the effective interest rate, including transaction costs, and all other premiums or discounts.

If income recognition on an accrual basis is deemed inappropriate due to low possibility of realizing interest income, the interest income is recognized when interest is actually received.

3.29 Fees and commission income

The Company's revenue recognition standard varies depending on the type of service provided to customers. Fee income, which is an integral part of the effective interest rate (EIR) of financial instruments, is adjusted using the EIR and recognized as interest income.

Fee income is recognized using the five-stage revenue recognition model (Identification of a contract with a customer → Identification of performance obligations in the contract → Determination of the transaction price → Allocation of the transaction price to the separate performance obligations in the contract → Recognition of revenue upon satisfying the performance obligations) in accordance with KIFRS 1115.

3.30 Dividend income

Dividend income is recognized when the Company’s right to receive the payment is established.

4. Significant judgments and accounting estimates

In the application of the Company's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily observable from objective sources. The estimation and assumption are based on other factors that are related to historical experience. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

In the process of applying the Company's accounting policies, management has made the following judgments that have a significant effect on the amounts recognized in the consolidated financial statements:

4.1 Fair value of financial instruments

The fair value of financial instruments is determined by referencing quoted market prices in active markets in the first place. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques including (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models.

4.2 Expected credit loss of financial assets

The Company recognizes impairment losses on debt instruments, lease receivables, contract assets, loan commitment, and financial guarantee contracts that were accounted for at amortized cost, or FVOCI, based on the expected credit loss (ECL) impairment model using a three-stage model for 12-month expected credit losses, or lifetime expected credit losses based on changes in credit risk since initial recognition of financial assets.

Classification		Loss allowance
Stage 1	Credit risk on a financial instrument has not increased significantly since initial recognition.	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date
Stage 2	Credit risk on a financial instrument has increased significantly since initial recognition.	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument
Stage 3	Credit-impaired	

The cumulative changes in lifetime expected credit losses since initial recognition are recognized as loss allowance for a financial asset that is considered credit-impaired at initial recognition.

4.3 Provision for severance and retirement benefits

The cost of providing benefits under the defined benefit plans is determined using the actuarial valuation. Actuarial assumptions were made for the discount rate, and an increase in the future pay rate. Severance and retirement benefits include significant uncertainties in the estimates due to the long-term duration.

4.4 Impairment of non–financial assets

The Company assesses, at each reporting date, whether there is an indication that an asset may be impaired. Intangible asset with indefinite useful life is tested for impairment annually or tested whenever there is an indication that the intangible asset may be impaired. Other non-financial assets are tested for impairment whenever there is indication that the book value cannot be recovered. For the calculation of value in use, management estimates expected future cash flow incurred from the asset or cash generating unit (CGU). For the calculation of present value of the expected future cash flow, appropriate discount rate is selected.

4.5 Income taxes

Different taxation laws that the Company’s foreign subsidiaries are exposed to require judgment in determining the amount of tax expenses that can be recognized. In addition, there has been various transactions and tax accounting methods which have made computing the final tax expenses for the period uncertain. The contingent liability from any future tax assessments is based on the estimates of the likelihood of additional taxes imposed and has been included in the Company’s consolidated financial statements for the current period. When the finalized tax expenses assessments are different from the appropriated amounts, the differences, if any, are recognized in current deferred tax assets, liabilities, and expenses for the period.

5. Fair value measurement of financial assets and liabilities

The standards the Company applies when measuring fair values of financial assets and liabilities are described below:

A. Quoted market prices as of the settlement date in an active market are the best evidence of fair value and should be used when available.
B. If a market for a financial instrument is not active, the Company establishes fair value by using a valuation technique that makes maximum use of market inputs and includes (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models. An acceptable valuation technique incorporates all factors that market participants would consider in setting a price and is consistent with accepted economic methodologies for pricing financial instruments.
C. When determining fair value using the valuation techniques, comparison with the current market transaction of another instrument that is substantially the same as the financial instrument needed to be objectively substantiated or inclusion of variables in the marketable data must be performed. Not all of the significant market variables are observable and in relevant cases, the reasonable estimates or assumptions are required to determine the fair value.
D. For an investment in equity instruments which quoted market price is not available in an active market or derivative linked to such instruments which fair values are not measured reliably, fair values are measured at cost.

5.1 Fair value hierarchy of financial instruments

Fair value hierarchy of financial instruments as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018 (*) Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets measured at FVTPL (KIFRS 1109)				
Equity securities	₩ 56,441	₩ -	₩ 6,271	₩ 62,712
Debt securities	1,445,998	2,868,924	310,503	4,625,425
Derivative assets held-for-trading	-	3,334,594	7,994	3,342,588
Convertible privately-placed bonds	-	-	389,381	389,381
	1,502,439	6,203,518	714,149	8,420,106
Financial assets measured at FVOCI				
Equity securities	418,206	-	649,111	1,067,317
Debt securities	19,212,155	14,560,973	4,615	33,777,743
	19,630,361	14,560,973	653,726	34,845,060
Derivative assets used for hedging	-	6,748	7	6,755
	₩ 21,132,800	₩ 20,771,239	₩ 1,367,882	₩ 43,271,921
Financial liabilities				
Financial liabilities measured at FVTPL (KIFRS 1109)				
Derivative liabilities held-for-trading	₩ -	₩ 3,082,443	₩ 7,441	₩ 3,089,884
Financial liabilities designated as measured at FVTPL (KIFRS 1109)	-	500,692	-	500,692
	-	3,583,135	7,441	3,590,576
Derivative liabilities used for hedging	-	82,575	16,222	98,797
	₩ -	₩ 3,665,710	₩ 23,663	₩ 3,689,373

(*) The Company recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

Classification	December 31, 2017 (*2) Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets at FVTPL (KIFRS 1039)				
Equity securities	₩ 50,932	₩ -	₩ -	₩ 50,932
Debt securities	1,728,000	1,107,194	-	2,835,194
Derivative assets held-for-trading	-	6,551,125	6,363	6,557,488
	1,778,932	7,658,319	6,363	9,443,614
Available-for-sale financial assets				
Equity securities (*1)	351,688	2,868,834	831,782	4,052,304
Debt securities	24,878,669	15,381,239	10,300	40,270,208
	25,230,357	18,250,073	842,082	44,322,512
Derivative assets used for hedging	-	11,760	-	11,760
	₩ 27,009,289	₩ 25,920,152	₩ 848,445	₩ 53,777,886
Financial liabilities				
Financial liabilities at FVTPL (KIFRS 1039)				
Derivative liabilities held-for-trading	₩ 15	₩ 6,408,881	₩ 5,036	₩ 6,413,932
Financial liabilities designated at FVTPL (KIFRS 1039)	-	425,627	-	425,627
	15	6,834,508	5,036	6,839,559
Derivative liabilities used for hedging	-	62,571	10,453	73,024
	₩ 15	₩ 6,897,079	₩ 15,489	₩ 6,912,583

5.1 Fair value hierarchy of financial instruments (cont'd)

(*1) As of December 31, 2017, equity securities, included in available-for-sale financial assets, not quoted in an active market and of which fair value cannot be measured reliably and thus are measured at cost, amount to ₩63,103 million, and are included in Level 3.

(*2) The Company recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation techniques:

- Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: Other techniques in which all significant inputs and significant value drivers are observable in active markets
- Level 3: Techniques, such as pricing models, discounted cash flow methodologies, or similar techniques based on significant unobservable inputs, as well as management judgments or estimates that are significant to valuation

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are measured at fair value as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		Fair value December 31, 2018	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets				
Financial assets measured at FVTPL (KIFRS 1109)				
Debt securities	₩	2,868,924	Net asset value model	Underlying asset prices such as bond, stock, etc.
Derivative assets held-for-trading		3,334,594	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, Index, volatility, swap yield curve, swaption volatility, yield curve of each currency
		6,203,518		
Financial assets measured at FVOCI				
Debt securities		14,560,973	DCF model	Discount rate
Derivative assets used for hedging		6,748	Hull-White 1 factor model	Exchange rate swap yield curve, swaption volatility, yield curve of each currency
	₩	20,771,239		

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2018	Description of the valuation technique	Inputs used in the fair value measurement
Financial liabilities			
Financial liabilities measured at FVTPL (KIFRS 1109)			
Derivative liabilities held-for-trading	3,082,443	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, Index, volatility, swap yield curve, swaption volatility, yield curve of each currency
Financial liabilities designated as measured at FVTPL (KIFRS 1109)	500,692	Hull-white 1 factor model	Swap yield curve, swaption volatility
	3,583,135		
Derivative liabilities used for hedging	82,575	Hull-white 1 factor model	Exchange rate, swap yield curve, swaption volatility, yield curve of each currency
	₩ 3,665,710		

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification		Fair value December 31, 2017	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets				
Financial assets at FVTPL (KIFRS 1039)				
Debt securities	₩	1,107,194	DCF model	Discount rate
Derivative assets held-for-trading		6,551,125	Black-Scholes model, Black model and DCF model	Exchange rate, interest rate for each currency, volatility, swap yield curve, swaption volatility, yield curve of each currency
		7,658,319		
Available-for-sale financial assets				
Equity securities		2,868,834	Net asset value model	Underlying asset prices such as bond, stock, etc.
Debt securities		15,381,239	DCF model	Discount rate
		18,250,073		
Derivative assets used for hedging		11,760	Hull-White 1 factor model, Black model	Volatility, swap yield curve, swaption volatility, yield curve of each currency, volatility of KRW cap/floor
	₩	25,920,152		
Financial liabilities				
Financial liabilities at FVTPL (KIFRS 1039)				
Derivative liabilities held-for-trading		6,408,881	Black-Scholes model, Black model and DCF model	Exchange rate, interest rate for each currency, volatility, swap yield curve, swaption volatility, yield curve of each currency
Financial liabilities designated at FVTPL (KIFRS 1039)		425,627	Hull-white short-rate model	KRW swap yield curve, KRW swaption volatility
		6,834,508		
Derivative liabilities used for hedging		62,571	Hull-White 1 factor model, Black model	Volatility, swap yield curve, swaption volatility, yield curve of each currency, volatility of KRW cap/floor
	₩	6,897,079		

5.1 Fair value hierarchy of financial instruments (cont'd)

Details of fair value, valuation technique, input to valuation, and significant unobservable inputs used to develop those measurements classified into level 3 assets and liabilities that are measured at fair value as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Fair value December 31, 2018	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Financial assets						
Financial assets measured at FVTPL (KIFRS 1109)						
Equity securities	₩ 6,271	DCF model, comparison with similar business	Growth rate, discount rate	Growth rate	0.00	Positive
				Discount rate	11.13 ~12.36	Negative
Debt securities	310,503	Binomial model	Underlying asset price, volatility of underlying assets	Volatility of underlying assets	23.96	Positive
Derivative assets held-for-trading	7,994	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, yield curve of each currency, correlation within evaluation model	correlation within evaluation model	-94.39 ~ -86.01	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Convertible privately-placed bonds	389,381	Binomial model	Underlying asset price, volatility of underlying assets, discount rate	Volatility of underlying assets	17.13 ~41.37	Positive
	714,149					
Financial assets measured at FVOCI						
Equity securities	649,111	DCF model, comparison with similar business, net asset value model	Growth rate, Liquidating value, discount rate	Growth rate Liquidating value Discount rate	0.00 0.00 7.15 ~17.40	Positive Positive Negative
			Underlying asset price, volatility of underlying assets, discount rate	Volatility of underlying assets	24.11 ~25.62	Positive
Debt securities	4,615	DCF model.	Discount rate	Discount rate	7.80	Negative
	653,726					
Derivative assets used for hedging	7	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, yield curve of each currency, correlation within evaluation model	correlation within evaluation model	-98.17	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 1,367,882					

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2018	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Financial liabilities						
Financial liabilities measured at FVTPL (KIFRS 1109)						
Derivative liabilities held-for-trading	7,441	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, yield curve of each currency, correlation within evaluation model	Correlation within evaluation model	-94.39 ~ -86.01	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Derivative liabilities used for hedging	16,222	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, yield curve of each currency, correlation within evaluation model	Correlation within evaluation model	-95.07 ~ -80.15	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 23,663					

Classification	Fair value December 31, 2017	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Financial assets						
Financial assets at FVTPL (KIFRS 1039)						
Derivative assets held-for-trading	6,363	Hull-White 2 factor model	KRW swap yield curve, Korean government bond yield curve, volatility of each yield, correlation of underlying assets	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
		Binomial model	Underlying asset price, Discount rate, volatility of underlying assets	Volatility of underlying assets	13.59 ~28.13	Positive
Available-for-sale financial assets						
Equity securities	831,782	DCF model, comparison with similar business, net asset value model, utilization of past transaction, risk-adjusted discount rate model, dividend discount model	Growth rate, discount rate	Growth rate	0.00 ~1.00	Positive
				Discount rate	5.43 ~17.26	Negative
Debt securities	10,300	DCF model.	Discount rate, etc.	Discount rate	11.88	Negative
	842,082					

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2017	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Derivative assets used for hedging	-	Hull-White 2 factor model	KRW swap yield curve, USD swap yield curve, volatility of each yield curve, correlation of each yield curve of underlying assets, correlation between USD interest rate and KRW/USD exchange rate	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 848,445					
Financial liabilities						
Financial liabilities at FVTPL (KIFRS 1039)						
Derivative liabilities held-for-trading	5,036	Hull-White 2 factor model	KRW swap yield curve, Korean government bond yield curve, volatility of each yield, correlation of underlying assets	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
		Binomial model	Underlying asset price, Discount rate, volatility of underlying assets	Volatility of underlying assets	13.59 ~28.13	Positive
Derivative liabilities used for hedging	10,453	Hull-White 2 factor model	KRW swap yield curve, USD swap yield curve, volatility of each yield curve, correlation of each yield curve of underlying assets, correlation between USD interest rate and KRW/USD exchange rate	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 15,489					

5.2 Changes in the fair value of financial instruments categorized as Level 3

Changes in the fair value of financial instruments categorized as Level 3 of the fair value hierarchy of financial instruments that are measured at fair value in the statements of financial position for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018						
	Financial assets measured at FVTPL (KIFRS 1109)			Financial assets measured at FVOCI		Net derivative instruments	
Classification	Equity securities	Debt securities	Convertible privately-placed bonds	Equity securities	Debt securities	Held-for-trading	Used for hedging
January 1, 2018	₩ 5,439	₩ 256,807	₩ 164,718	₩ 573,670	₩ 7,738	₩ 170	₩ (10,453)
Total profit or loss							
Profit or loss	1,149	25,337	(8,817)	-	1,239	(150)	4,412
Other comprehensive income	-	-	-	56,659	746	-	-
Buy / issue	300	57,544	363,003	18,791	-	533	(10,174)
Sell / settlement	(617)	(29,185)	(129,523)	(9)	(5,108)	-	-
December 31, 2018	₩ 6,271	₩ 310,503	₩ 389,381	₩ 649,111	₩ 4,615	₩ 553	₩ (16,215)

	2017			
	Available-for-sale financial assets		Net derivative instruments	
Classification	Equity securities	Debt securities	Held-for-trading	Used for hedging
January 1, 2017	₩ 913,568	₩ 7,850	₩ 2,551	₩ 1,164
Total profit or loss				
Profit or loss	(140,341)	1,581	(2,292)	(1,164)
Other comprehensive income	74,073	(1,480)	-	-
Buy / issue	24,990	2,349	1,068	(10,453)
Sell / settlement	(40,508)	-	-	-
December 31, 2017	₩ 831,782	₩ 10,300	₩ 1,327	₩ (10,453)

5.3 Current gains or losses recognized from changes in Level 3 financial instruments measured at fair value.

Current gains or losses recognized from changes in Level 3 financial instruments measured at fair value for the years ended December 31, 2018 and 2017 are recorded in the statements of comprehensive income as follows (Korean won in millions):

	2018			
Classification		Total gains or losses recognized in profit or loss		The line item in profit or loss in which those gains or losses are recognized
Gain (loss) on financial instruments measured at FVTPL (KIFRS 1109)	₩	17,519	₩	6,543
Gain (loss) related to derivative instruments used for hedging		4,412		3,788
Other gain (loss) related to financial instruments		1,239		-
	₩	23,170	₩	10,331

	2017			
Classification		Total gains or losses recognized in profit or loss		The line item in profit or loss in which those gains or losses are recognized
Gain (loss) on financial instruments at FVTPL (KIFRS 1039)	₩	(2,292)	₩	(1,585)
Gain (loss) related to derivative instruments used for hedging		(1,164)		-
Other gain (loss) related to financial instruments		(22,688)		(27,420)
Impairment loss related to financial assets		(117,653)		(117,653)
Reversal of impairment loss related to financial assets		1,581		1,581
	₩	(142,216)	₩	(145,077)

5.4 Transfers between fair value hierarchy

There is no transfer into or out of Level 3 of the fair value hierarchy for the years ended December 31, 2018 and 2017.

5.5 Sensitivity analysis

Sensitivity of the fair value measurement for the each Level 3 financial instrument upon the changes in significant unobservable input, whose results are favorable and unfavorable changes in profit or loss or other comprehensive income as of December 31, 2018 and 2017 are as follows (Korean won in millions): The sensitivity analysis of financial instruments classified as level 3 amounting to ₩663,744 million and ₩386,749 million as of December 31, 2018 and 2017, respectively, is impossible in practice and thus are excluded.

Classification	December 31, 2018 Favorable changes	December 31, 2018 Unfavorable changes
Financial assets		
Financial assets measured at FVTPL (KIFRS 1109)		
Equity securities (*2)	₩ 241	₩ (122)
Debt securities (*3)	145	(121)
Convertible privately-placed bonds (*4)	1,849	(1,286)
Derivative assets held-for-trading (*1)	409	(454)
	2,644	(1,983)
Financial assets measured at FVOCI		
Equity securities (*2)	106,157	(40,639)
Debt securities (*3)	96	(94)
	106,253	(40,733)
Derivative assets used for hedging (*1)	7	(51)
	₩ 108,904	₩ (42,767)
Financial liabilities		
Derivative liabilities held-for-trading (*1)	454	(409)
Derivative liabilities used for hedging (*1)	1,170	(1,068)
	₩ 1,624	₩ (1,477)

(*1) Unfavorable and favorable changes in fair value are calculated by increasing/decreasing by 10% of 1) correlation between rates of interest rate swap of KRW, 2) correlation between rates of interest rate swap of KRW and USD, 3) correlation between rates of interest rate swap of USD and exchange rates of KRW/USD, 4) correlation between stock index and individual stock, and 5) correlation within evaluation model.

(*2) Changes in fair value of equity securities are calculated by increasing/decreasing growth rate (0.0~1.0%) and discount rate, which are main unobservable inputs.

(*3) Changes in fair value of debt securities are calculated by increasing/decreasing discount rate (-1.0~1.0%), which is the main unobservable input. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by increasing/decreasing discount rate of lease cash flow (-1.0~1.0%) and rate of increase in selling price of real estate (-1.0~1.0%), under limited circumstances when they are consisted of real estate. However it is impossible in practice to calculate sensitivity of beneficiary securities based on changes in inputs.

(*4) For convertible privately-placed bonds, favorable and unfavorable changes in fair value are calculated by increasing or decreasing the price (-10.0~10.0%) and variability (-10.0~10.0%) of underlying assets, which are the main unobservable inputs.

5.5 Sensitivity analysis (cont'd)

Classification	December 31, 2017 Favorable changes		December 31, 2017 Unfavorable changes	
Financial assets				
Derivative assets held-for-trading (*1)	₩	376	₩	(166)
Available-for-sale financial assets				
Equity securities (*2)		107,552		(36,393)
Debt securities (*3)		226		(219)
		107,778		(36,612)
	₩	108,154	₩	(36,778)
Financial liabilities				
Derivative liabilities held-for-trading (*1)		32		(120)
Derivative liabilities used for hedging (*1)		287		(361)
	₩	319	₩	(481)

(*1) Unfavorable and favorable changes in fair value are calculated by increasing/decreasing by 10% of 1) correlation between rates of interest rate swap of KRW, 2) correlation between rates of interest rate swap of KRW and USD, 3) correlation between rates of interest rate swap of USD and exchange rates of KRW/USD, 4) correlation between stock index and individual stock, and 5) correlation within evaluation model.

(*2) Changes in fair value of equity securities are calculated by increasing/decreasing growth rate (0.0~1.0%) and discount rate, which are main unobservable inputs. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by increasing/decreasing discount rate of lease cash flow (-1.0~1.0%) and rate of increase in selling price of real estate (-1.0~1.0%), under limited circumstances when they are consisted of real estate. However it is impossible in practice to calculate sensitivity of beneficiary securities based on changes in inputs.

(*3) Changes in fair value of debt securities are calculated by changing discount rate (-1.0~1.0%), which is the main unobservable input.

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed

Fair value hierarchy of financial instruments measured at amortized cost as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018			
	Levels of the fair value hierarchy			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from banks	₩ 2,120,840	₩ 18,331,283	₩ -	₩ 20,452,123
Securities measured at amortized cost	1,545,278	12,163,077	-	13,708,355
Loans	-	-	244,644,502	244,644,502
Others	-	-	11,160,464	11,160,464
Merchant banking account assets	-	-	2,940,272	2,940,272
	₩ 3,666,118	₩ 30,494,360	₩ 258,745,238	₩ 292,905,716
Financial liabilities:				
Deposits	₩ -	₩ 29,628,826	₩ 218,051,939	₩ 247,680,765
Borrowings	-	629,350	14,652,749	15,282,099
Debentures	-	24,921,174	-	24,921,174
Others	-	-	21,636,135	21,636,135
Merchant banking account liabilities	-	-	2,339,383	2,339,383
	₩ -	₩ 55,179,350	₩ 256,680,206	₩ 311,859,556

	December 31, 2017			
	Levels of the fair value hierarchy			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from banks	₩ 2,224,215	₩ 17,759,701	₩ -	₩ 19,983,916
Held-to-maturity investments	1,023,875	5,194,347	-	6,218,222
Loans	-	-	222,442,280	222,442,280
Others	-	-	9,585,105	9,585,105
Merchant banking account assets	-	-	2,966,019	2,966,019
	₩ 3,248,090	₩ 22,954,048	₩ 234,993,404	₩ 261,195,542
Financial liabilities:				
Deposits	₩ -	₩ 31,566,008	₩ 197,908,839	₩ 229,474,847
Borrowings	-	2,180,567	11,593,071	13,773,638
Debentures	-	22,361,068	-	22,361,068
Others	-	-	20,759,022	20,759,022
Merchant banking account liabilities	-	-	2,018,346	2,018,346
	₩ -	₩ 56,107,643	₩ 232,279,278	₩ 288,386,921

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are not measured at fair value as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018			
Classification		Fair value	Valuation technique	Inputs
Financial assets				
Cash and due from banks	₩	18,331,283	DCF model	Discount rate
Securities measured at amortized cost		12,163,077	DCF model	Discount rate
		30,494,360		
Financial liabilities				
Deposits		29,628,826	DCF model	Discount rate
Borrowings		629,350	DCF model	Discount rate
Debentures		24,921,174	DCF model	Discount rate
	₩	55,179,350		

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	December 31, 2017			
Classification		Fair value	Valuation technique	Inputs
Financial assets				
Cash and due from banks	₩	17,759,701	DCF model	Discount rate
Held-to-maturity financial assets		5,194,347	DCF model	Discount rate
		22,954,048		
Financial liabilities				
Deposits		31,566,008	DCF model	Discount rate
Borrowings		2,180,567	DCF model	Discount rate
Debentures		22,361,068	DCF model	Discount rate
	₩	56,107,643		

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 3 assets and liabilities disclosed but not measured at fair value as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018			
Classification		Fair value	Valuation technique	Inputs
Financial assets				
Loans	₩	244,644,502	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets		11,160,464	DCF model	Discount rate
Merchant banking account assets		2,940,272	(*)	
	₩	258,745,238		
Financial liabilities				
Deposits	₩	218,051,939	DCF model	Other spread, rate of advanced redemption
Borrowings		14,652,749	DCF model	Other spread
Other financial liabilities		21,636,135	DCF model	Discount rate
Merchant banking account liabilities		2,339,383	(*)	
	₩	256,680,206		

(*) Other financial assets and liabilities are temporary accounts derived from various transactions. The book value of these assets and liabilities are regarded as their fair value without applying DCF method because their maturities are not fixed or short.

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Classification	December 31, 2017			
		Fair value	Valuation technique	Inputs
Financial assets				
Loans	₩	222,442,280	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets		9,585,105	(*)	
Merchant banking account assets		2,966,019	(*)	
	₩	234,993,404		
Financial liabilities				
Deposits	₩	197,908,839	DCF model	Other spread, rate of advanced redemption
Borrowings		11,593,071	DCF model	Other spread
Other financial liabilities		20,759,022	(*)	
Merchant banking account liabilities		2,018,346	(*)	
	₩	232,279,278		

(*) Other financial assets and liabilities are temporary accounts derived from various transactions. The book value of these assets and liabilities are regarded as their fair value without applying DCF method because their maturities are not fixed or short.

5.7 Gain and loss on deferred Day 1

Changes in gain (loss) on deferred Day 1 for the years ended December 31, 2018 and 2017 are summarized as follows (Korean won in millions):

Classification		2018		2017
January 1	₩	(188)	₩	-
New accruals of gain or loss		-		(200)
Amounts recognized as current profit or loss		13		12
December 31	₩	(175)	₩	(188)

5.8 Transferred financial assets and related liabilities not eliminated as a whole as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018			
	Book value		Fair value	
Transferred assets				
Financial assets measured at FVOCI (*)	₩	2,000,001	₩	2,000,001
Financial assets measured at amortized cost (*)		442,526		436,312
Related liabilities				
Bonds sold under repurchase agreements		449,928		449,692

(*) The financial assets measured at FVOCI-lent and the Securities measured at amortized cost-lent, of which related liabilities are not appropriated, amounting to ₩1,876,199 million and ₩47,574 million, respectively, as of December 31, 2018, are included.

Classification	December 31, 2017			
	Book value		Fair value	
Transferred assets				
Available-for-sale financial assets (*)	₩	903,591	₩	903,591
Held-to-maturity financial assets		31,682		33,942
Related liabilities				
Bonds sold under repurchase agreements		251,990		252,529

(*) Available-for-sale securities lent, of which related liabilities are not appropriated, amounting to ₩613,005 million as of December 31, 2017 are included.

6. Fair value of financial instruments

Fair values of financial instruments as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018 Book value	December 31, 2018 Fair value	December 31, 2017 Book value	December 31, 2017 Fair value
Financial assets				
Cash and due from banks	₩ 20,452,123	₩ 20,452,123	₩ 19,983,916	₩ 19,983,916
Financial assets at FVTPL (KIFRS 1039)	-	-	9,443,614	9,443,614
Financial assets measured at FVTPL (KIRS 1109)	8,420,106	8,420,106	-	-
Available-for-sale financial assets	-	-	44,322,512	44,322,512
Financial assets measured at FVOCI	34,845,060	34,845,060	-	-
Held-to-maturity financial assets	-	-	6,160,922	6,218,222
Securities measured at amortized cost	13,582,381	13,708,355	-	-
Loans	244,468,590	244,644,502	224,096,709	222,442,280
Derivative assets used for hedging	6,755	6,755	11,760	11,760
Other financial assets	11,160,654	11,160,464	9,585,105	9,585,105
Merchant banking account assets	2,940,272	2,940,272	2,966,019	2,966,019
	₩ 335,875,941	₩ 336,177,637	₩ 316,570,557	₩ 314,973,428
Financial liabilities				
Financial liabilities at FVTPL (KIFRS 1039)	₩ -	₩ -	₩ 6,839,559	₩ 6,839,559
Financial liabilities measured at FVTPL (KIFRS 1109)	3,590,576	3,590,576	-	-
Deposits	246,754,859	247,680,765	230,410,494	229,474,847
Borrowings	15,280,970	15,282,099	13,774,502	13,773,638
Debentures	24,668,613	24,921,174	22,311,737	22,361,068
Derivative liabilities used for hedging	98,797	98,797	73,024	73,024
Other financial liabilities	21,636,135	21,636,135	20,759,022	20,759,022
Merchant banking account liabilities	2,339,383	2,339,383	2,018,346	2,018,346
	₩ 314,369,333	₩ 315,548,929	₩ 296,186,684	₩ 295,299,504

The following standards are applied in measuring the fair value of financial instruments.

A. Loans and receivable: Expected cash flows, current market interest rates and discount rates including borrowers' credit risks are factors to calculate the fair value of loans and receivables. For lines of credit and loans that have a short term maturity (less than three months), it is assumed that the carrying amounts approximate to their fair value.
B. Financial investment assets: The fair value of financial assets held-to-maturity are as stated by the market, broker, or by credible sources. If none of the information from these entities is usable, published market price of financial instruments with similar credit rating, maturity, and ROI is used to estimate the fair value.
C. Depository liabilities: For deposits without an explicit maturity period including deposits with no interests, deposits that have a short term maturity (less than three months), and deposits with a floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing deposits is based on discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.
D. Borrowings: For borrowings that have a short term maturity (less than three months) and borrowings with floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing borrowings is based on and discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.
E. Debentures: For quoted debt issued, the fair values are determined based on quoted market prices. For those notes issued where quoted market prices are not available, a discounted cash flow model is used based on a current interest rate yield curve appropriate for the remaining term to maturity and credit spreads.

7. Categories of financial assets and financial liabilities

7.1 The Company categorizes its financial assets as of December 31, 2018 and 2017 as follows (Korean won in millions):

	December 31, 2018				
	Financial assets measured at FVTPL (KIFRS 1109)	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Derivatives for hedging	Total
Cash and due from banks	₩ -	₩ -	₩ 20,452,123	₩ -	₩ 20,452,123
Financial assets measured at FVTPL (KIFRS 1109)	8,420,106	-	-	-	8,420,106
Financial assets measured at FVOCI	-	34,845,060	-	-	34,845,060
Securities measured at amortized cost	-	-	13,582,381	-	13,582,381
Loans	-	-	244,468,590	-	244,468,590
Derivative assets used for hedging	-	-	-	6,755	6,755
Others	-	-	11,160,654	-	11,160,654
Merchant banking account assets	-	-	2,940,272	-	2,940,272
	₩ 8,420,106	₩ 34,845,060	₩ 292,604,020	₩ 6,755	₩ 335,875,941

	December 31, 2017					
	Financial instruments at FVTPL (KIFRS 1039)	Available–for–sale financial assets	Held–to–maturity investments	Loans	Derivatives for hedging	Total
Cash and due from banks	₩ -	₩ -	₩ -	₩ 19,983,916	₩ -	₩ 19,983,916
Financial assets at FVTPL (KIFRS 1039)	9,443,614	-	-	-	-	9,443,614
Available–for–sale financial assets	-	44,322,512	-	-	-	44,322,512
Held–to–maturity investments	-	-	6,160,922	-	-	6,160,922
Loans	-	-	-	224,096,709	-	224,096,709
Derivative assets used for hedging	-	-	-	-	11,760	11,760
Others	-	-	-	9,585,105	-	9,585,105
Merchant banking account assets	-	-	-	2,966,019	-	2,966,019
	₩ 9,443,614	₩ 44,322,512	₩ 6,160,922	₩ 256,631,749	₩ 11,760	₩ 316,570,557

7.2 The Company categorizes its financial liabilities as of December 31, 2018 and 2017 as follows (Korean won in millions):

Classification	December 31, 2018 Financial liabilities measured at FVTPL (KIFRS 1109)	Financial liabilities designated as measured at FVTPL (KIFRS 1109)	Financial liabilities measured at amortized cost	Derivatives for hedging	Total
Financial liabilities measured at FVPL (KIFRS 1109)	₩ 3,089,884	₩ 500,692	₩ -	₩ -	₩ 3,590,576
Deposits	-	-	246,754,859	-	246,754,859
Borrowings	-	-	15,280,970	-	15,280,970
Debentures	-	-	24,668,613	-	24,668,613
Derivative liabilities used for hedging	-	-	-	98,797	98,797
Others	-	-	21,636,135	-	21,636,135
Merchant banking account liabilities	-	-	2,339,383	-	2,339,383
	₩ 3,089,884	₩ 500,692	₩ 310,679,960	₩ 98,797	₩ 314,369,333

Classification	December 31, 2017 Financial liability at FVTPL Held-for-trading	Designated at FVTPL (KIFRS 1039)	Amortized cost of financial liabilities	Derivatives for hedging	Total
Financial liabilities at FVTPL (KIFRS 1039)	₩ 6,413,932	₩ 425,627	₩ -	₩ -	₩ 6,839,559
Deposits	-	-	230,410,494	-	230,410,494
Borrowings	-	-	13,774,502	-	13,774,502
Debentures	-	-	22,311,737	-	22,311,737
Derivative liabilities used for hedging	-	-	-	73,024	73,024
Others	-	-	20,759,022	-	20,759,022
Merchant banking account liabilities	-	-	2,018,346	-	2,018,346
	₩ 6,413,932	₩ 425,627	₩ 289,274,101	₩ 73,024	₩ 296,186,684

8. Offsetting of financial assets and liabilities

8.1 Financial assets offset, the executable master netting arrangements and financial assets subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions):

	December 31, 2018					
				Related amounts not offset		
Classification	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,349,343	₩ -	₩ 3,349,343	₩ (2,439,315)	₩ (420,992)	₩ 489,036
Securities lent	1,923,773	-	1,923,773	-	(1,923,773)	-
Bonds purchased under resale agreement	8,021,732	-	8,021,732	-	(8,021,732)	-
Unsettled spot exchanges	4,822,022	-	4,822,022	(4,818,379)	-	3,643
Domestic exchange settlement debit	24,390,516	21,168,932	3,221,584	-	-	3,221,584
Other accounts receivable	945	778	167	-	-	167
	₩ 42,508,331	₩ 21,169,710	₩ 21,338,621	₩ (7,257,694)	₩ (10,366,497)	₩ 3,714,430

	December 31, 2017					
				Related amounts not offset		
Classification	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 6,566,217	₩ -	₩ 6,566,217	₩ (4,703,240)	₩ (1,069,429)	₩ 793,548
Securities lent	613,005	-	613,005	-	(613,005)	-
Bonds purchased under resale agreement	4,524,823	-	4,524,823	-	(4,524,823)	-
Unsettled spot exchanges	6,171,297	-	6,171,297	(6,126,005)	-	45,292
Domestic exchange settlement debit	25,118,671	23,618,667	1,500,004	-	-	1,500,004
Other accounts receivable	1,997	1,924	73	-	-	73
	₩ 42,996,010	₩ 23,620,591	₩ 19,375,419	₩ (10,829,245)	₩ (6,207,257)	₩ 2,338,917

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

8.2 Financial liabilities offset, the executable master netting arrangements and financial liabilities subject to a similar agreement as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018					
				Related amounts not offset		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,188,681	₩ -	₩ 3,188,681	₩ (2,733,584)	₩ (111,818)	₩ 343,279
Bonds sold under repurchase agreements	449,928	-	449,928	(449,928)	-	-
Unsettled spot exchanges	4,821,771	-	4,821,771	(4,818,379)	-	3,392
Domestic exchange settlement credit	24,888,173	21,168,932	3,719,241	(3,719,241)	-	-
Other accounts payable	778	778	-	-	-	-
	₩ 33,349,331	₩ 21,169,710	₩ 12,179,621	₩ (11,721,132)	₩ (111,818)	₩ 346,671

	December 31, 2017					
				Related amounts not offset		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 6,470,157	₩ -	₩ 6,470,157	₩ (4,789,124)	₩ (126,654)	₩ 1,554,379
Bonds sold under repurchase agreements	251,990	-	251,990	(251,990)	-	-
Unsettled spot exchanges	6,170,414	-	6,170,414	(6,126,005)	-	44,409
Domestic exchange settlement credit	27,925,844	23,618,667	4,307,177	(4,307,177)	-	-
Other accounts payable	6,880	1,924	4,956	-	-	4,956
	₩ 40,825,285	₩ 23,620,591	₩ 17,204,694	₩ (15,474,296)	₩ (126,654)	₩ 1,603,744

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

9. Risk management

The Company is exposed to credit risk, liquidity risk, market risk and various operating risks. The objectives of risk management are to pursue economic benefits by managing the associated risk in the changing financial environment and to utilize capital efficiently.

The basic principles of risk management are as follows:

- Minimize the rapid fluctuation in profit by balancing the risks and the income.
- Maximize long–term shareholder value.
- Comply with procedures to ensure operating activities are confined to allowable risk limits.
- Examine the type and size of risk in accordance with the changes in potential economic value of portfolios for the efficient use and distribution of assets and to establish risk management strategy.

The basic policies in order to realize the basic principles of risk management are as follows:

- Set and comply with allowable limits for each risk type.
- Establish an appropriate balance between income and associated risk.
- When a conflict between income and associated risk exists, the Company pursues income while complying with the allowable risk limits.
- Prioritize the distribution of risk in order to avoid risk concentration in certain areas.
- Analyse the effect of various market fluctuations on parts or the entire portfolio on a regular basis.
- Separate risk management segments, operational segments, and other segments which deal with trade confirmations and payments in order to maintain independence.

9.1. Strategy and procedure of risk management

(1) Operation of and setting risk limits: The Company established and operates a limit management system to maintain the appropriate level of risk relative to the equity capital held. The Risk Management Committee approves total risk limits and limits by types of risks, taking into account of capital, business plans, risk management regulations, and institutional changes within the risk level that the Bank can manage. The Risk Management Operation Committee sets up and allocates other operational limits (eg, by organization, product, investment, and loss) to comply with allowable limits for each type of risk, approved by the Risk Management Committee and periodically checks the status of limit management.

(2) Risk measurement and management: The Company prepares the appropriate risk measurement methods considering the nature of risks, and measures them by the types of risks. Risk measurement and evaluation results are regularly reviewed, and reported to the Risk Management Committee, Risk Management Operation Committee, and management. Risk measurement and evaluation results are also used for daily business management activities such as establishment of business plan and management strategy.

(3) Operation of risk management information system: In order to provide advanced risk management in a rapidly changing financial environment, the Company has established a company-wide risk management system that meets the new BIS standards. The Company operates credit risk internal grading (changes are approved in November 2008 and September 2016), advanced operational risk measurement method (changes are approved in November 2008 and September 2016) and market risk internal model (changes are approved in April 2008 and August 2016 [retrospective application in September 2016]).

(4) Operation of crisis management system: The Company operates a crisis management system that can respond effectively to the crisis caused by drastic changes in the internal and external management environment. The Company operates an early warning system in order to respond to the drastic changes in the financial market in a consistent and systematic manner. In the event of an anomaly, the holding company declares the level of crisis at the group level, and the Bank analyzes the impact on the portfolio in accordance with the step-by-step plan and carries out the countermeasures.

9.2. Organization and structure of risk management

The risk management organization consists of the Risk Management Committee, Risk Management Operation Committee under the Risk Management Committee, the risk management officer, and the organization in charge of risk management, which are the top decision-making bodies for the risk management. The organization in charge of risk management, independent from operating segment, manages risk limits and risk management policies.

(1) Risk Management Committee: The Risk Management Committee regularly holds meeting once every quarter and resolves the establishment and management of allowable limits for risks, establishment and changes in risk management policies, and reviews the results of the management of allowable risk limits and suitability tests of risk management system.

(2) Risk Management Operation Committee: The Risk Management Operation Committee is responsible for setting and allocating specific operational limits for compliance with the allowable limits for each type of risk as resolved by the Risk Management Committee, adjusting the internal capital limit between business units within the same risk type, and carrying out risk management policies and strategies set by the Risk Management Committee, including preliminary deliberations on the agenda items.

(3) Organization in charge of risk management: The Risk Management Group is comprised of Comprehensive Risk Management Team, Credit Risk Management Team, and Credit Supervision Team. The Risk Management Group is independent of sales and investment sector and manages the execution of risk management policies. The Comprehensive Risk Management Team oversees the market, interest rate, liquidity, operational risk, and middle office, and supports the Risk Management Committee and Risk Management Operation Committee. The Credit Risk Management Team oversees credit risk and credit concentration risk. The Credit Supervision Team oversees the loans and early warning system.

9.3. Credit risk

Credit risk is a risk incurred when the Company faces a loss because its customers or counterparties fail to discharge their contractual obligations. Credit risk arises from on–balance and off–balance accounts including loans, derivatives, securities, financial guarantees, and acceptances and guarantees.

9.3.1 Management of Credit risk

9.3.1.1 Loans

9.3.1.1.1 Measurement of Credit risk

To determine the possibility of bankruptcy for its customers or counterparties, the Company uses various methods comprehensively. Risks pertaining to the retail sector compared to those pertaining to the corporate sector are relatively easy to predict but cyclical and seasonal factors may influence the outcomes. The frequency of impairment loss in the overall retail sector is relatively high but in terms of individual cases, the loss rate is lower than in the corporate sector. Based on these differences, the Company manages each segment differently in terms of credit rating, pricing and subsequent management.

As for the business customers, the branch managers and credit rating team carries out the credit risk assessment by using a detailed valuation model depending on the size and the nature of the industry. The corporate financial valuation model is further subdivided based on the characteristics of the loans and is a combination of statistical and expert valuation models. Also, the Loan Review team of the Credit Risk Management regularly performs the subsequent reviews in order to establish adequacy of the credit grading. As for the retail sector, a Credit Scoring System is used to compute the credit scores of the borrower. The system includes an Application Scoring Model which is used for the application of loans and a Behavioral Scoring Model which has been used after handling of the loans.

Expected loss is calculated using the expected default rate based upon the historical default rate and the estimated loss rate gives a rise to the default rate from a collection of historical information. A measured expected loss is reflected on the client's interest rate and allowances when applying or renewing a loan.

Unexpected loss takes into account the allowance for potential volatility in the actual loss. Unexpected loss is calculated using the inner Credit Metrics model with 99.9% of the confidence level and the measured figure is used as a credit risk reference value and is used as part of the unexpected loss when calculating interest rates.

9.3.1.1.2 Management of Credit risk

9.3.1.1.2.1 Management process

Both retail and corporate sectors are developing and operating a credit risk management system appropriately designed for each sector. The Credit Risk Management Committee and Credit Rating Team measure and manage credit risks for the corporate sector; Credit Risk Management Committee and Personal Loans Committee measure and manage credit risks for the retail sector. The Company manages as well as controls the credit risk by setting the limits on the amount of risk willing to accept for individual counterparties and for geographical and industry concentration, and by monitoring exposures relating to such limits. The Company reviews on a monthly basis in accordance with the economic conditions and industry characteristics and examines the adequacy of the limits on a semi-annual basis. The Company continuously manages credit rating models for retail and corporate sectors and examines the adequacy of LGD (loss given default) and EAD (exposure at default), and any related information.

9.3.1.1.2.2 Credit limits management and capital allocation

The Company annually performs a comprehensive analysis on economic conditions and changes in the economic environment in order to appropriately assess the credit quality of financial assets by setting credit limits on same entities, industries, countries, and financial instruments. In addition, for the unexpected loss management, the Company regularly sets, distributes and checks for the compliance maintenance of internal capital limits according to the corporate and household sectors and the size of clients through the risk management system.

9.3.1.1.2.3 Risk monitoring and early warning system

The Company measures and manages the risk indicators such as delinquency rate, roll–rate, and vintage rate of each operating segment. Also, in order to assess the credit quality of the assets, the Company operates an early warning system and regularly examines companies whose credit rating is likely to degrade.

9.3.1.1.2.4 Credit rating system

In order to separately evaluate the characteristics of clients in the corporate sector, the Company operates a detailed valuation model based on the external and non–external audit and is in the process of continuing the stability of the corporate credit rating system through the subsequent examinations and performance improvements. The Company operates a detailed valuation model based on the credit rating model and the activity rating model for the household sector in accordance with the client's characteristics. The Company improves the efficiency of the model through the subsequent examinations and performance improvements. Credit rating on new clients as well as an automatic renewal and adjustments to the credit limits are managed by the household and SOHO credit extension system.

9.3.1.1.2.5 Examination of credit

For a large amount of credit line, after the approval of credit extension, the Company regularly examines the borrower's credit status and the adequacy of the borrower's credit rating as in part of the subsequent management process. In addition, the Company significantly focuses on industries by increasing credit risks based on the analysis of the risk indicators and examines the sample for smaller credit extensions.

9.3.1.1.2.6 Risk mitigation policy

The Company obtains the collateral for the granted loans in order to reduce risks. The amount and type of the collateral required depends on an assessment of the credit risk of the counterparty. Guidelines are implemented regarding the acceptability of types of collateral and valuation parameters. The main types of the collateral obtained are as follows:

- For retail lending, mortgages over residential properties
- For commercial lending, charges over real estate properties, inventory and trade receivables
- For securities lending and reverse repurchase transactions, cash, or securities

9.3.1.2 Debt securities

The Company trades the debt securities above the Investment–Grade Status level in order to manage the credit risks and manage the exposure of credit ratings to maintain credit quality of the assets.

9.3.1.3 Derivative financial instruments

The credit risk arising from the derivative financial instruments is, at any time, limited to those with the positive fair values, as recorded on the statement of financial position. The Company manages the exposure as a part of the unused commitment of loans.

9.3.2 Significant increase in credit risk

The Company measures the expected credit loss for debt instruments measured at amortized cost or fair value through other comprehensive income in three stages as described below:

9.3.2.1 Stage 1: 12-month expected credit loss

For financial assets of which the credit risk has not increased significantly since initial recognition, expected credit losses that result from default events that are possible within 12 months after the reporting date are recognized.

9.3.2.2 Stage 2: Lifetime expected credit loss

For financial assets of which the credit risk has increased significantly since initial recognition, expected credit losses that result from all possible default events over the expected life of the financial instrument are recognized.

9.3.2.3 Stage 3: Lifetime expected credit loss

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Lifetime ECL is recognized for credit-impaired financial assets, and interest income is recognized using the EIR on amortized cost.

The Company assesses at each reporting date whether the significant of the increase of the credit risk compared to that of initial recognition, using internal and external credit rating information, early warning system and number of days past due.

9.3.2.4 Default

The Company considers that a default has occurred for financial assets on following situations:

A) When receivables are sold despite of an economic loss

B) When receivables have decreased due to adjustments resulting in an exemption of principal, interest or related fees or delayed payments

C) When the borrower has been declared bankruptcy or has declared bankruptcy or has taken other similar measures to delay or avoid repayments

9.3.2.5 Methodology for determining whether a financial asset is credit-impaired

A financial item is deemed impaired if, and only if, there is objective evidence of impairment as a result of one or more events which have occurred after the initial recognition of the item (an incurred ‘loss event’) and that loss event (or events) has an impact on the estimated future cash flows, such as changes in arrears or economic conditions which correlate with defaults, delinquency in interest for more than 90 days, credit deterioration resulting in misleading information, damages incurred due to poor exposure and significant financial difficulty of the issuer or obligor.

9.3.3 Measurement of ECL

Expected credit losses are a probability-weighted estimate of credit losses (i.e. the present value of all cash shortfalls) over the expected life of the financial instrument. A cash shortfall is the difference between the cash flows that are due to an entity in accordance with the contract and the cash flows that the entity expects to receive.

Historical information is an important anchor or base from which to measure expected credit losses. However, the Company adjusts historical data, such as credit loss experience, on the basis of current observable data to reflect the effects of the current conditions and its forecasts of future conditions that did not affect the period on which the historical data is based, and to remove the effects of the conditions in the historical period that are not relevant to the future contractual cash flows. Also, the Company measures ECL using the macroeconomic factors such as the growth rate, interest rate and stock indices. The methodology for future economic forecasts is regularly reviewed.

If the credit risk on financial instruments, for which lifetime expected credit losses have been recognized, subsequently improves so that the requirement for recognizing lifetime expected credit losses is no longer met, the loss allowance should be measured at an amount equal to 12-month expected credit losses.

9.3.4 Write-off

Financial assets are written off when an entity has no reasonable expectations of recovering the contractual cash flows on a financial asset in its entirety or a portion thereof. Generally, financial assets are written off when it is determined that the Company is not able to generate sufficient cash flows to make repayments. However, financial assets written off can be recovered by the Company.

9.3.5 The maximum exposure to credit risk

The maximum exposure to credit risk as of December 31, 2018 and 2017 are as follows. The following table shows the maximum exposure to credit risk for the components of the statement of financial position, including derivatives, by geography of counterparty and by industry before the effect of mitigation through the use of master netting and collateral agreements. Equity securities in financial assets at FVTPL, financial assets measured at FVTPL, financial assets available–for–sale and financial assets measured at FVOCI are excluded. (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
On–balance-sheet items		
Due from banks	₩ 18,331,283	₩ 17,759,701
Financial assets at FVTPL (KIFRS 1039)		
Debt securities	-	2,835,194
Derivative assets held for trading	-	6,557,488
	-	9,392,682
Financial assets measured at FVTPL (KIFRS 1109)		
Debt securities	2,484,378	-
Derivative assets held for trading	3,342,588	-
Convertible privately-placed bonds	389,381	-
	6,216,347	-
Available–for–sale financial assets	-	40,270,208
Financial assets measured at FVOCI	33,777,743	-
Held–to–maturity financial assets	-	6,160,922
Securities measured at amortized cost	13,582,381	-
Derivative assets used for hedging	6,755	11,760
Loans	244,468,590	224,096,709
Others	11,160,654	9,585,105
Merchant banking account assets	2,940,272	2,966,019
	₩ 330,484,025	₩ 310,243,106
Off–balance-sheet items		
Financial guarantees	₩ 501,694	₩ 684,944
Guarantee contracts	15,879,982	16,229,609
Commitment	80,951,728	63,918,791
Merchant banking account-commitment	1,199,000	1,021,000
	₩ 98,532,404	₩ 81,854,344

9.3.6 Details of collateral management and credit risk mitigation

Details of collateral management and credit risk mitigation as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018	
	Impaired loan	
Classification	Individual assessment	Collective assessment
Guarantees	₩ 44,752	₩ 86,630
Deposits	56,078	7,118
Real estates	397,273	193,469
Securities	6,885	7,601
Others	63	14,318
	₩ 505,051	₩ 309,136

	December 31, 2017				
	Impaired loan		Not impaired loan		
Classification	Individual assessment	Collective assessment	Past due	Non past due	Total
Guarantees	₩ 124,566	₩ 55,649	₩ 131,722	₩ 30,691,717	₩ 31,003,654
Deposits	74,038	9,466	11,918	2,449,164	2,544,586
Real estates	386,622	146,300	415,131	112,607,190	113,555,243
Securities	7,160	85	101	9,989,387	9,996,733
Others	62,938	34,780	508	6,830,186	6,928,412
	₩ 655,324	₩ 246,280	₩ 559,380	₩ 162,567,644	₩ 164,028,628

9.3.6.1 Financial assets with collaterals that do not recognize the allowance for losses amounted to ₩ 63,111 million as of December 31, 2018.

9.3.6.2 There is no change in the collateral policy of the Company.

9.3.7 Credit risk exposure

9.3.7.1 Loans

As of December 31, 2018, carrying amounts of loans by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

Classification	December 31, 2018				
	12-month expected credit loss	Life time expected credit loss		Subject to the application of credit-impaired approach	Total
		Non credit-impaired loan	Credit-impaired loans		
Household loans					
Grade 1	₩ 76,968,888	₩ 8,175,771	₩ -	₩ -	₩ 85,144,659
Grade 2	3,456,645	18,112,858	-	-	21,569,503
Grade 3	95,271	420,049	232,606	-	747,926
	₩ 80,520,804	₩ 26,708,678	₩ 232,606	₩ -	₩ 107,462,088
Corporate loans					
Grade 1	81,612,332	4,534,934	-	-	86,147,266
Grade 2	39,133,181	7,997,842	-	-	47,131,023
Grade 3	266,807	2,405,720	1,282,121	777,180	4,731,828
	₩ 121,012,320	₩ 14,938,496	₩ 1,282,121	₩ 777,180	₩ 138,010,117
	₩ 201,533,124	₩ 41,647,174	₩ 1,514,727	₩ 777,180	₩ 245,472,205

Deferred loan fees, net of expenses are not reflected in the carrying amounts above.

The Company classifies the grade of loan in accordance with the credit rating chart below, based on the credit worthiness of borrowers.

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.93% of PD	Less or equal to 0.58% of PD	Less or equal to 1.78% of PD
Grade 2	From 0.93% to 19.65% of PD	From 0.58% to 12.43% of PD	From 1.78% to 21.02% of PD
Grade 3	From 19.65% to 100% of PD	From 12.43% to 100% of PD	From 21.02% to 100% of PD

9.3.7.1 Loans (cont'd)

Details of delinquency rates on loans as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large–sized businesses	Small and medium–sized businesses	Public institution and others	Total
Neither past due nor impaired	₩ 99,604,043	₩ 32,636,604	₩ 76,791,215	₩ 13,275,872	₩ 222,307,734
Past due but not impaired	459,187	2,083	235,451	1,231	697,952
Impaired	199,835	1,276,310	713,065	3,149	2,192,359
	100,263,065	33,914,997	77,739,731	13,280,252	225,198,045
Plus (less)					
Deferred loan fees, net of expenses	203,878	(3,432)	60,302	737	261,485
Allowance for possible loan losses	(143,940)	(749,655)	(451,696)	(17,530)	(1,362,821)
	59,938	(753,087)	(391,394)	(16,793)	(1,101,336)
	₩ 100,323,003	₩ 33,161,910	₩ 77,348,337	₩ 13,263,459	₩ 224,096,709

Delinquency in interest occurs when the counterparty is unable to make a principal and interest payment as of the due date. A financial item is deemed impaired if, and only if, there is objective evidence of impairment as a result of one or more events which have occurred after the initial recognition of the item (an incurred 'loss event') and that loss event (or events) has an impact on the estimated future cash flows, such as changes in arrears or economic conditions which correlate with defaults, delinquency in interest for more than 90 days, credit deterioration resulting in misleading information, damages incurred due to poor exposure and significant financial difficulty of the issuer or obligor.

Loans that are neither impaired nor overdue

Details on loans that are neither impaired nor overdue as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large–sized businesses	Small and medium–sized businesses	Public institution and others	Total
Grade 1	₩ 95,948,208	₩ 25,582,127	₩ 38,855,870	₩ 11,575,156	₩ 171,961,361
Grade 2	3,270,154	6,620,580	34,866,679	1,134,761	45,892,174
Grade 3	129,371	433,897	970,099	955	1,534,322
Others	256,310	-	2,098,567	565,000	2,919,877
	₩ 99,604,043	₩ 32,636,604	₩ 76,791,215	₩ 13,275,872	₩ 222,307,734

9.3.7.1 Loans (cont'd)

The Company classifies the grade of loan in accordance with the credit rating chart below, based on the credit worthiness of borrowers.

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 1.55% of PD	A1 ~ A7	Less or equal to 1.28% of PD
Grade 2	From 1.55% to 16.52% of PD	B1 ~ B6	From 1.28% to 14.30% of PD
Grade 3	From 16.52% to 100% of PD	C1 ~ C3	From 14.30% to 78.44% of PD

Loans overdue but unimpaired

The Company regards loans overdue for less than 90 days as unimpaired in case there is no credit information indicating its loss event. Analysis of overdue time period of loans overdue but unimpaired by type as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large–sized businesses	Small-and medium–sized businesses	Public institution and others	Total
Less than 30 days	₩ 401,121	₩ 1,289	₩ 185,864	₩ 1,231	₩ 589,505
30 to 59 days	40,612	771	32,264	-	73,647
60 to 89 days	17,349	23	17,323	-	34,695
Others	105	-	-	-	105
	₩ 459,187	₩ 2,083	₩ 235,451	₩ 1,231	₩ 697,952

Impaired loans

Types of impaired loans as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large–sized businesses	Small-and medium–sized businesses	Public institution and others	Total
Individual impairment					
Credit balance	₩ 7,384	₩ 1,266,101	₩ 511,750	₩ 2,446	₩ 1,787,681
Deferred loan fees, net of expenses	(4,058)	-	(8,585)	(174)	(12,817)
Allowance for possible loan losses	1,190	(612,930)	(92,301)	(30)	(704,071)
	₩ 4,516	₩ 653,171	410,864	2,242	₩ 1,070,793
Collective impairment					
Credit balance	₩ 192,451	₩ 10,209	₩ 201,315	₩ 703	₩ 404,678
Deferred loan fees, net of expenses	118	-	51	1	170
Allowance for possible loan losses	(58,064)	(5,715)	(73,843)	(269)	(137,891)
	134,505	4,494	127,523	435	266,957
	₩ 139,021	₩ 657,665	₩ 538,387	₩ 2,677	₩ 1,337,750

9.3.7.2 Off-balance-sheet items

As of December 31, 2018, exposures of off-balance-sheet items by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

	December 31, 2018			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired loans	Credit-impaired loans	Total
Financial guarantees				
Grade 1	₩ 281,036	₩ 62,912	₩ -	₩ 343,948
Grade 2	63,998	93,631	-	157,629
Grade 3	-	117	-	117
	345,034	156,660	-	501,694
Guarantee contracts				
Grade 1	12,123,842	1,413,618	-	13,537,460
Grade 2	1,398,832	556,082	-	1,954,914
Grade 3	7,955	306,074	73,579	387,608
	13,530,629	2,275,774	73,579	15,879,982
Commitment				
Grade 1	62,577,795	3,998,914	-	66,576,709
Grade 2	6,913,754	6,862,802	-	13,776,556
Grade 3	10,675	483,613	104,175	598,463
	69,502,224	11,345,329	104,175	80,951,728
	₩ 83,377,887	₩ 13,777,763	₩ 177,754	₩ 97,333,404

The credit rating classification of off-balance-sheet items of the Company based on internal rating used by the Bank and credit rating by external rating agencies is as follows:

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.93% of PD	Less or equal to 0.58% of PD	Less or equal to 1.78% of PD
Grade 2	From 0.93% to 19.65% of PD	From 0.58% to 12.43% of PD	From 1.78% to 21.02% of PD
Grade 3	From 19.65% to 100% of PD	From 12.43% to 100% of PD	From 21.02% to 100% of PD

9.3.7.3 Debt securities

As of December 31, 2018, carrying amounts of debt securities by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

	December 31, 2018							
			Lifetime expected credit losses					
Classification	12 month expected credit loss		Non credit-impaired debt		Credit-impaired debt		Total	
Loans and receivables at amortized cost								
Grade 1	₩	13,585,330	₩	-	₩	-	₩	13,585,330
Grade 2		-		-		-		-
Grade 3		-		-		-		-
		13,585,330		-		-		13,585,330
Financial assets at FVOCI								
Grade 1		33,777,743		-		-		33,777,743
Grade 2		-		-		-		-
Grade 3		-		-		-		-
		33,777,743		-		-		33,777,743
	₩	47,363,073	₩	-	₩	-	₩	47,363,073

Overdue payments on debt securities as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017							
Classification	Financial assets at FVTPL (KIFRS 1039)		Available–for–sale financial assets		Held–to–maturity financial assets		Total	
Neither past due nor impaired	₩	2,835,194	₩	40,262,470	₩	6,160,922	₩	49,258,586
Impaired		-		7,738		-		7,738
	₩	2,835,194	₩	40,270,208	₩	6,160,922	₩	49,266,324

Internal credit ratings of debt securities as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017							
Classification	Financial assets at FVTPL (KIFRS 1039)		Available–for–sale financial assets		Held–to–maturity financial assets		Total	
Grade 1	₩	2,835,194	₩	39,803,365	₩	6,018,148	₩	48,656,707
Grade 2		-		464,480		140,739		605,219
Others		-		2,363		2,035		4,398
	₩	2,835,194	₩	40,270,208	₩	6,160,922	₩	49,266,324

The credit ratings of debt securities based on the internal rating used by the Company and credit ratings by external credit rating agencies are as follows:

Classification	Internal credit rating	Domestic rating agencies	Overseas rating agencies	
			Moody’s	Fitch
Grade 1	A1 ~ A3	AAA ~ A–	Aaa ~ Baa2	AAA ~ BBB
Grade 2	B1+ ~ B3	BBB+ ~ BB	Baa3 ~ B3	BBB– ~ B–
Grade 3	C1 ~ C3	BB– ~ B–	Caa1 ~ Caa3	CCC+ ~ CCC–

9.3.8 Credit risk concentration

9.3.8.1 Credit risk concentration in each major industry as of December 31, 2018 and 2017 are as follows (Korean won in millions):

		December 31, 2018	
Classification	Industry	Amounts	Ratio (%)
On balance sheet items			
Due from banks	Financial services	₩ 18,331,283	100.0
Financial assets measured at FVTPL (KIFRS 1109)	Financial services	998,430	34.7
	Manufacturing	549,696	19.1
	Public administration	1,291,567	44.9
	Wholesale & retail	20,007	0.7
	Others	14,059	0.6
		2,873,759	100.0
Financial assets measured at FVOCI	Financial services	16,575,951	49.1
	Manufacturing	160,420	0.5
	Public administration	15,450,982	45.7
	Construction	81,305	0.2
	Wholesale & retail	16,444	0.1
	Others	1,492,641	4.4
		33,777,743	100.0
Securities measured at amortized cost	Financial services	8,474,741	62.4
	Public administration	3,041,114	22.4
	Construction	593,661	4.4
	Others	1,475,814	10.8
		13,585,330	100.0
Loans	Household loans	107,462,088	43.7
	Corporate loans		
	Financial services	19,996,420	8.1
	Manufacturing	36,587,992	14.9
	Construction	3,314,603	1.3
	Wholesale & retail	15,726,317	6.4
	Real estate rental	31,641,752	12.9
	Others	30,743,033	12.6
	Deferred loan fees and expenses	304,547	0.1
		245,776,752	100.0
		₩ 314,344,867	

9.3.8.1 Credit risk concentration in each major industry as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

Classification	Industry		December 31, 2018 Amounts	December 31, 2018 Ratio (%)
Off balance sheet items				
Financial guarantees	Manufacturing	₩	145,539	29.0
	Construction		10,054	2.0
	Wholesale & retail		93,610	18.7
	Financial services		97,895	19.5
	Real estate rental		59,163	11.8
	Others		95,433	19.0
			501,694	100.0
Guarantee contracts	Household		58,332	0.4
	Manufacturing		8,253,245	52.0
	Construction		1,973,896	12.4
	Wholesale & retail		2,082,637	13.1
	Financial services		1,214,159	7.6
	Real estate rental		114,653	0.7
	Others		2,183,060	13.8
			15,879,982	100.0
Commitment	Household		23,460,288	29.0
	Corporate Commitment			
	Manufacturing		3,483,161	4.3
	Construction		676,171	0.8
	Wholesale & retail		3,246,997	4.0
	Financial services		2,248,922	2.8
	Real estate rental		1,489,394	1.8
	Others		46,346,795	57.3
			80,951,728	100.0
		₩	97,333,404	

9.3.8.1 Credit risk concentration in each major industry as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

		December 31, 2017			
				Total	
Classification	Industry	Korean won	Foreign currency	Amounts	Ratio (%)
On balance sheet items					
Due from banks	Financial services	₩ 11,168,327	₩ 6,591,374	₩ 17,759,701	100.0
Financial assets at FVTPL (KIFRS1039)	Financial services	1,085,453	-	1,085,453	38.3
	Manufacturing	230,740	-	230,740	8.1
	Public administration	1,488,649	-	1,488,649	52.5
	Wholesale & retail	19,807	-	19,807	0.7
	Others	-	10,545	10,545	0.4
		2,824,649	10,545	2,835,194	100.0
Available-for-sale financial assets	Financial services	18,246,690	4,877,184	23,123,874	57.4
	Manufacturing	78,651	564	79,215	0.2
	Public administration	14,696,828	985,501	15,682,329	38.9
	Construction	47,735	-	47,735	0.1
	Others	131,615	1,205,440	1,337,055	3.4
		33,201,519	7,068,689	40,270,208	100.0
Held–to–maturity financial assets	Financial services	2,707,621	989,662	3,697,283	60.0
	Public administration	1,264,509	352,507	1,617,016	26.2
	Construction	232,091	-	232,091	3.8
	Others	361,844	252,688	614,532	10.0
		4,566,065	1,594,857	6,160,922	100.0
Loans	Household loans	99,138,604	1,124,461	100,263,065	44.7
	Corporate loans				
	Financial services	7,588,634	7,160,091	14,748,725	6.6
	Manufacturing	23,186,388	12,226,642	35,413,030	15.8
	Construction	2,873,170	628,395	3,501,565	1.6
	Wholesale & retail	11,347,952	3,417,653	14,765,605	6.6
	Real estate rental	26,573,941	1,222,497	27,796,438	12.4
	Others	22,402,411	6,307,206	28,709,617	12.8
	Deferred loan fees and expenses	275,795	(14,310)	261,485	0.1
	Allowance for possible loan losses	(1,074,031)	(288,790)	(1,362,821)	(0.6)
		192,312,864	31,783,845	224,096,709	100.0
		₩ 244,073,424	₩ 47,049,310	₩ 291,122,734	

9.3.8.1 Credit risk concentration in each major industry as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

		December 31, 2017			
				Total	
Classification	Industry	Korean won	Foreign currency	Amounts	Ratio (%)
Off balance sheet items					
Financial guarantees	Manufacturing	₩ 241,611	₩ 25,871	₩ 267,482	39.1
	Construction	16,814	-	16,814	2.5
	Wholesale & retail	102,839	29,303	132,142	19.3
	Financial services	52,018	17,907	69,925	10.2
	Real estate rental	60,000	524	60,524	8.8
	Others	115,221	22,836	138,057	20.1
		588,503	96,441	684,944	100.0
Guarantee contracts	Household	117,368	10,444	127,812	0.8
	Manufacturing	510,099	7,257,392	7,767,491	47.9
	Construction	77,143	2,200,587	2,277,730	14.0
	Wholesale & retail	493,873	1,823,853	2,317,726	14.3
	Financial services	45,040	990,144	1,035,184	6.4
	Real estate rental	25,270	139,496	164,766	1.0
	Others	427,958	2,110,942	2,538,900	15.6
		1,696,751	14,532,858	16,229,609	100.0
Commitment	Household	11,029,295	2,189	11,031,484	17.3
	Manufacturing	12,513,969	12,486,889	25,000,858	39.1
	Construction	2,348,274	856,477	3,204,751	4.9
	Wholesale & retail	3,483,306	3,711,937	7,195,243	11.3
	Financial services	7,074,312	422,113	7,496,425	11.7
	Real estate rental	1,373,852	3,513	1,377,365	2.2
	Others	6,516,038	2,096,627	8,612,665	13.5
		44,339,046	₩ 19,579,745	₩ 63,918,791	100.0
		₩ 46,624,300	₩ 34,209,044	₩ 80,833,344	

9.3.8.2 Credit risk concentration in each major country as of December 31, 2018 and 2017 are as follows (Korean won in millions, ratio in %):

		December 31, 2018	
Classification	Country	Amounts	Ratio (%)
On balance sheet items			
Due from banks	Korea	₩ 14,224,458	77.6
	China	1,649,719	9.0
	U.S	332,156	1.8
	Japan	130,885	0.7
	Hong Kong	131,129	0.7
	Others	1,862,936	10.2
		18,331,283	100.0
Financial assets measured at FVTPL (KIFRS 1109)	Korea	2,869,700	99.9
	Others	4,059	0.1
		2,873,759	100.0
Financial assets measured at FVOCI	Korea	30,667,572	90.8
	China	941,634	2.8
	U.S	484,303	1.4
	Japan	97,228	0.3
	Others	1,587,006	4.7
		33,777,743	100.0
Securities measured at amortized cost	Korea	12,648,401	93.1
	China	434,733	3.2
	U.S	39,569	0.3
	Others	462,627	3.4
		13,585,330	100.0
Loans	Korea	225,865,678	91.9
	China	3,748,338	1.5
	U.S	2,155,550	0.9
	Japan	943,580	0.4
	Hong Kong	2,381,680	1.0
	Others	10,377,379	4.2
	Deferred loan fees and expenses	304,547	0.1
		245,776,752	100.0
		₩ 314,344,867	

9.3.8.2 Credit risk concentration in each major country as of December 31, 2018 and 2017 are as follows (Korean won in millions, ratio in %): (cont'd)

		December 31, 2018	
Classification	Country	Amounts	Ratio (%)
Off balance sheet items			
Financial guarantees	Korea	501,694	100.0
Guarantee contracts	Korea	12,517,756	78.8
	China	1,678,983	10.6
	U.S	60,712	0.4
	Japan	35,883	0.2
	Others	1,586,648	10.0
		15,879,982	100.0
Commitment	Korea	77,420,624	95.6
	China	1,114,217	1.4
	U.S	1,061,045	1.3
	Japan	42,891	0.1
	Others	1,312,951	1.6
		80,951,728	100.0
		₩ 97,333,404	

9.3.8.2 Credit risk concentration in each major country as of December 31, 2018 and 2017 are as follows (Korean won in millions, ratio in %): (cont'd)

		December 31, 2017			
				Total	
Classification	Country	Korean won	Foreign currency	Amounts	Ratio (%)
On balance sheet items					
Due from banks	Korea	₩ 11,168,327	₩ 634,113	₩ 11,802,440	66.5
	China	-	2,024,030	2,024,030	11.4
	U.S	-	1,551,104	1,551,104	8.7
	Japan	-	219,140	219,140	1.2
	Hong Kong	-	91,160	91,160	0.5
	Others	-	2,071,827	2,071,827	11.7
		11,168,327	6,591,374	17,759,701	100.0
Financial assets at FVTPL (KIFRS 1039)	Korea	2,824,649	-	2,824,649	99.6
	U.S	-	10,545	10,545	0.4
		2,824,649	10,545	2,835,194	100.0
Available-for-sale financial assets	Korea	33,201,519	4,190,032	37,391,551	92.9
	China	-	770,246	770,246	1.9
	U.S	-	691,674	691,674	1.7
	Japan	-	84,027	84,027	0.2
	Others	-	1,332,710	1,332,710	3.3
		33,201,519	7,068,689	40,270,208	100.0
Held–to–maturity financial assets	Korea	4,566,065	844,489	5,410,554	87.8
	China	-	333,392	333,392	5.4
	U.S	-	37,943	37,943	0.6
	Others	-	379,033	379,033	6.2
		4,566,065	1,594,857	6,160,922	100.0
Loans	Korea	191,676,053	12,710,954	204,387,007	91.2
	China	43,932	3,961,392	4,005,324	1.8
	U.S	161,162	1,146,824	1,307,986	0.6
	Japan	11,403	670,107	681,510	0.3
	Hong Kong	1,375	2,533,448	2,534,823	1.1
	Others	1,217,175	11,064,220	12,281,395	5.5
		193,111,100	32,086,945	225,198,045	100.5
	Deferred loan fees and expenses	275,795	(14,310)	261,485	0.1
	Allowance for possible loan losses	(1,074,031)	(288,790)	(1,362,821)	(0.6)
		192,312,864	31,783,845	224,096,709	100.0
		₩ 244,073,424	₩ 47,049,310	₩ 291,122,734	

9.3.8.2 Credit risk concentration in each major country as of December 31, 2018 and 2017 are as follows (Korean won in millions, ratio in %): (cont'd)

Classification	Country	December 31, 2017			
				Total	
		Korean won	Foreign currency	Amounts	Ratio (%)
Off balance sheet items					
Financial guarantees	Korea	₩ 588,503	₩ 96,441	₩ 684,944	100.0
Guarantee contracts	Korea	1,696,751	11,756,393	13,453,144	82.9
	China	-	1,579,792	1,579,792	9.7
	U.S	-	56,908	56,908	0.4
	Japan	-	35,723	35,723	0.2
	Others	-	1,104,042	1,104,042	6.8
		1,696,751	14,532,858	16,229,609	100.0
Commitment	Korea	44,339,046	17,037,572	61,376,618	96.0
	China	-	1,067,339	1,067,339	1.7
	U.S	-	283,171	283,171	0.4
	Japan	-	62,294	62,294	0.1
	Others	-	1,129,369	1,129,369	1.8
		44,339,046	19,579,745	63,918,791	100.0
		₩ 46,624,300	₩ 34,209,044	₩ 80,833,344	

9.4 Liquidity risk

Liquidity risk is defined as the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. Liquidity risk arises because of the possibility that the Company might be unable to meet its payment obligations when they fall due under both normal and stress circumstances.

9.4.1 Measurement of liquidity risk

The Company maintains a limit management indicator to measure the liquidity coverage ratio, loan to deposit ratio in Korean won, the liquidity coverage ratio in foreign currency, net stable funding ratio and long–term access to financing ratio in foreign currency in accordance with the guidelines and standards of the Financial Supervisory Service. In addition, the Company maintains a monitoring indicator to measure unbalance of funding, etc. to manage the liquidity risk, and manages early warning indicators in order to identify worsening trends in early stage to respond in a timely manner.

9.4.2 Management of liquidity risk

At an early stage, the Company identifies factors affecting liquidity in order to manage liquidity risks and has achieved an adequate level of liquidity via performing a systematic management.

The Company has the following basic principles for liquidity risk management:

－Comply with limits and early warning indicators set for its liquidity risk
－Regularly execute an analysis of stress tests and prepare an emergency procurement plan in case of illiquidity
－Focus on maintaining a diversified portfolio in order to avoid excessive concentrations of risks
－Evaluate and manage the effect of a large amount of money which is loaned out, invested, or procured on liquidity risks

In order to manage the liquidity risks, the Company is building the internal control systems for each department. In order to comply with Liquidity ratios and the maturity mismatch ratio set by the Financial Supervisory Service, the Comprehensive Risk Management monitors the ratios based on the calculated univariate liquidity ratio and maturity mismatch ratios. Liquidity risk status is reported to the Risk Management Operation Committee on a monthly basis and to the Risk Management Committee on a quarterly basis.

In order to maintain the liquidity risk management indicators to stay within the acceptable limits, the Treasury Department and the International Finance Department recommends the necessary measures in relation to the procurement and operation of the assets and liabilities traded in the capital market. In addition, the emergency planning in stages has been established in order to respond to liquidity emergencies. Financial planning department has established a portfolio management strategy based on the internal and external liquidity risk management requirements, procurement, and an outlook on the operating markets.

9.4.3 Contractual maturities analysis of financial liabilities

9.4.3.1 Analysis criteria

The details of the remaining contractual maturities of financial liabilities are analyzed by the earliest maturity date when the Bank would be required to pay, based on the undiscounted cash outflows of the Bank’s financial liabilities. In addition, financial liabilities at fair value through profit or loss and depository liabilities (payment on demand) are shown at fair value in the immediate payment column. All derivatives used for hedging purposes are interest rate swaps, and those are shown in net cash flows as all interest rate swaps are paid by the net amount.

9.4.3.2 The remaining contractual maturities of financial liabilities

The remaining contractual maturities of financial liabilities as of December 31, 2018 and 2017 are summarized as follows (Korean won in millions):

	December 31, 2018						
Classification	On demand	Less than 1 month	1–3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities measured at FVTPL (KIFRS 1109)	₩ 3,089,884	₩ -	₩ -	₩ -	₩ -	₩ 720,675	₩ 3,810,559
Deposits	101,632,255	22,307,060	29,137,822	84,914,686	9,580,029	1,943,045	249,514,897
Borrowings	2,758,515	2,992,641	1,877,148	5,140,794	2,155,092	468,608	15,392,798
Debentures	623	750,000	1,546,715	7,935,979	12,723,870	2,501,441	25,458,628
Derivative liabilities used for hedging purposes	-	(154)	(2,305)	6,660	28,891	(165,575)	(132,483)
Other liabilities	6,233,528	13,132,943	3,001	53,427	11,488	-	19,434,387
Merchant banking account liabilities	1,038,392	1,300,532	-	-	-	-	2,338,924
	114,753,197	40,483,022	32,562,381	98,051,546	24,499,370	5,468,194	315,817,710
Off-balance sheet items							
Finance guarantee	501,694	-	-	-	-	-	501,694
Loan commitment	80,951,728	-	-	-	-	-	80,951,728
Merchant banking account-commitment	1,199,000	-	-	-	-	-	1,199,000
	₩ 82,652,422	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 82,652,422

	December 31, 2017						
Classification	On demand	Less than 1 month	1–3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities at FVTPL (KIFRS 1039)	₩ 6,413,932	₩ -	₩ -	₩ -	₩ -	₩ 634,200	₩ 7,048,132
Deposits	104,793,932	18,454,436	26,312,299	71,459,046	10,003,237	1,510,202	232,533,152
Borrowings	2,710,703	3,470,389	2,615,800	2,747,401	1,876,800	409,067	13,830,160
Debentures	697	400,000	844,666	6,998,004	11,716,162	3,082,067	23,041,596
Derivative liabilities used for hedging purposes	-	506	706	932	19,320	(127,499)	(106,035)
Other liabilities	5,664,867	13,450,703	2,588	41,195	19,244	-	19,178,597
Merchant banking account liabilities	423,466	1,594,252	-	-	-	-	2,017,718
	120,007,597	37,370,286	29,776,059	81,246,578	23,634,763	5,508,037	297,543,320
Off-balance sheet items							
Finance guarantee	684,944	-	-	-	-	-	684,944
Loan commitment	63,918,791	-	-	-	-	-	63,918,791
Merchant banking account-commitment	1,021,000	-	-	-	-	-	1,021,000
	₩ 65,624,735	₩ -	₩ -	₩ -	₩ -	₩ -	₩ 65,624,735

9.4.3.2 The remaining contractual maturities of financial liabilities (cont'd)

Assets available for use in carrying out unused loan commitments after redeeming all financial liabilities are cash and bank deposits, debt securities, equity securities, and loans. In addition, the Company is able to cope with unexpected cash flows through the sale of securities and the additional sources of funding, similar to the asset backed securitization.

9.5 Market risk

Market risk is risk incurred in assets and liabilities subject to management based on the changes in market prices such as interest rate, stocks and foreign exchange, etc.

9.5.1 Market risk management

The purpose of market risk management is to manage the loss of assets and liabilities incurred due to changes in market variables such as interest rates, foreign exchanges and equity prices to remain within the allowable limits in order to ensure the profitability and stability.

9.5.2 Market risk management targets

Market risk management targets include marketable securities, foreign currency net positions, derivatives and other assets and liabilities with embedded market risks. The Company classifies exposures to market risk into either trading or non–trading positions and manages each of those portfolios separately.

9.5.3 Management of market risk related to trading position

9.5.3.1 Trading position classification

The trading position includes interest rate positions, equity price positions, commodity positions, and all foreign exchange positions:

- Financial instruments for the purpose of acquiring the differences incurred due to short–term trading or price fluctuations
- Financial instruments for the purpose of hedging risks
- Financial instruments for the purpose of acquiring arbitrages
- Financial instruments for the purpose of acquisition, mediation and market creation
- Derivatives which are not applied to fair value hedge accounting under KIFRS
- All foreign exchange and gold positions in accordance with Regulations on Supervision of Banking Business Appendix 3–2

9.5.3.2 Management of the trading position limits

The Risk Management Committee divides capital, annual loss, exposure and VaR limit in relation to market risks of the trading position by business unit (division) annually. Within the given limit, the Risk Management Operation Committee further subdivides the limits by business units (divisions) and desks. The Risk Management Group provides information necessary for deliberation and review by the Committee, reports trading limits, and measures risks. The Middle Office performs the mark–to–market measures, monitors trade violations and compliance with the limits. The Middle Office has established regulations and policies of trading and comply with them. It measures market risks in relation to trading position and daily inspects for compliance of limits by risks. Moreover, it daily monitors changes in exposure subject to management, verifies for compliance of limits, performs expost facto verification and analyses urgent situations and reports to the management.

The Company regularly measures the degree of market risks and complies with the allowable limits set for the various areas of the trading position. In addition, the Company reviews the adequacy of the risk–reward ratio by evaluating risks and related profits and losses on a regular basis and complies with the established trading policy regulations. The Company separately examines and analyses the change in exposures with checking its compliance of the limits and emergency situations, and reports to the management on a daily basis.

9.5.3.3 Value at Risk

Value at Risk (VaR) is a method that manages and measures the degree of market risks of the trading position subject to exposure. The Company calculates the VaR by applying Historical Simulation Method for 10 days in the 99% confidence level. Furthermore, the stress test is performed to measure the size of the loss in order to account for the method’s limited use in extreme cases.

9.5.3.4 Back test

Back–testing is performed daily on trading units to verify the predictive power of the value–at risk calculations. When back–testing is performed, the Company compares the daily profits and losses with VaR of the previous day and reports the result of subsequent examinations separately to the director of the Risk Management Group. The Company analyses the result of subsequent examination and reports to the Financial Supervisory Service and management.

9.5.3.5 Details of market risk VaR

Details of market risk 10 Day VaR (including 10 Day Stressed VaR) by risk type as of December 31, 2018 and 2017 are summarized as follows (Korean won in millions):

	December 31, 2018	Average	Min	Max	December 31, 2017
Interest rates risk	₩ 21,884	₩ 28,638	₩ 21,503	₩ 46,040	₩ 31,419
Foreign exchange rates risk	129,672	113,647	97,877	137,080	97,391
Stock price risk	21,098	28,342	18,092	51,655	13,523
Option risk	4,500	4,850	4,281	5,351	5,198
Total risk (*)	₩ 121,657	₩ 114,987	₩ 89,946	₩ 142,953	₩ 90,964

(*) The calculation of the total risk VaR takes into consideration the correlation and diversification effects between each risk factor and therefore, it is not the same as the total VaRs.

9.5.4 Management of market risk related to non-trading position

9.5.4.1 Interest rate risk

Interest rate risk of non-trading position is a risk of losses in financial assets and liabilities with interest rates due to adverse changes in interest rates and is incurred when maturity structure does not match interest rate setting cycle of the related assets and liabilities. The Company manages the interest rate risks of non-trading position in order to maintain the stability of net interest income and net asset value based on changes in interest rates. The following is subject to the Company's management of interest rate risk.

- Financial assets with interest rates such as bank deposits, debt securities, and loans
- Financial liabilities with interest rates such as depository liabilities, borrowings, and debentures
- Interest-related financial derivatives such as interest rate swaps

Interest rate risk is calculated using the interest rate gaps. The interest rate risks measure the interest rate gap ratio as a primary indicator, and the interest rate EaR, VaR and duration are used as secondary indicators. The Risk Committee establishes the interest risk limits on an annual basis; the Risk Committee as well as the Risk Management Committee measures the interest rate risk indicators on a monthly basis and reports the compliance with the limits to management.

The interest rate VaR is an estimated maximum loss of net asset due to the adverse changes of the interest rate. Details of the interest rate VaR as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018	Average	Min	Max	December 31, 2017
Interest rate VaR	₩ 337,150	₩ 562,153	₩ 337,150	₩ 758,196	₩ 872,797

The interest rate VaR is calculated by using the maturity bucket repricing gap, the interest maturity bucket on modified duration, and the expected gap due to the interest rate fluctuation in accordance with BIS standards. Assets below the substandard and amounts in checking accounts are excluded from the calculated amount.

9.5.4.2 Equity price risk

Equity price risk is a risk incurred when the fair value of equities results in changes in the level of related revenue and capital. Fluctuation in equity reflects the sensitivity of each equity. Effects on capital due to the fluctuation in equity price risk as of December 31, 2018 are as follows (Korean won in millions):

	December 31, 2018			
Classification	20% decline	10% decline	10% rise	20% rise
Equity price risk	₩ (105,320)	₩ (52,660)	₩ 52,660	₩ 105,320

9.5.5 Currency risk concentration

Currency risk is a risk incurred when the value of a financial instrument or future cash flows fluctuates due to the changes in foreign exchange rates. Currency risk arises from the financial instruments expressed in currencies other than the functional currency. Currency risk does not arise from the financial instruments expressed in the functional currency or in non–monetary items measured by using the historical foreign exchange rates. In order to establish the stop loss and limits, the Company manages the foreign exchange net exposure amount of the trading and non–trading positions by each currency.

9.5.5 Currency risk concentration (cont'd)

Significant foreign currency assets and liabilities denominated in Korean won as of December 31, 2018 and 2017 are as follows (Korean won in millions and US dollar in thousands):

Classification	December 31, 2018						
	USD	JPY	EUR	CNY	IDR	Others	Total
Assets							
Cash and due from bank	₩ 4,393,996	₩ 366,034	₩ 439,873	₩ 1,610,995	₩ 180,140	₩ 906,390	₩ 7,897,428
Financial assets measured at FVTPL (KIFRS 1109)	79,443	1,729	2,920	67,252	-	5,882	157,226
Financial assets measured at FVOCI	4,613,081	-	-	925,377	132,079	879,661	6,550,198
Securities measured at amortized cost	966,250	-	46,447	434,260	132,895	215,269	1,795,121
Loans	20,841,546	1,112,142	3,390,940	4,607,085	1,687,296	2,256,150	33,895,159
Derivative assets used for hedging	1,575	-	-	-	-	-	1,575
Others	2,813,675	187,989	101,402	528,893	40,261	597,651	4,269,871
	₩ 33,709,566	₩ 1,667,894	₩ 3,981,582	₩ 8,173,862	₩ 2,172,671	₩ 4,861,003	₩ 54,566,578
Liabilities							
Financial liabilities measured at FVTPL (KIFRS 1109)	66,203	42	1,082	3,363	335	-	71,025
Deposits	18,951,824	1,826,124	2,495,062	5,956,135	1,331,435	3,415,089	33,975,669
Borrowings	8,940,443	54,243	475,139	128,949	201,954	360,545	10,161,273
Debentures	4,626,845	-	56,681	212,376	77,795	528,230	5,501,927
Derivative liabilities used for hedging	82,068	-	-	-	-	-	82,068
Others	3,662,947	235,282	285,030	730,544	29,561	254,244	5,197,608
	₩ 36,330,330	₩ 2,115,691	₩ 3,312,994	₩ 7,031,367	₩ 1,641,080	₩ 4,558,108	₩ 54,989,570

9.5.5 Currency risk concentration (cont'd)

	December 31, 2017			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Assets				
Cash and due from bank	USD	2,549,683,244	$ 2,549,683	₩ 2,731,731
	JPY	43,740,515,835	387,480	415,146
	EUR	496,905,585	593,305	635,666
	CNY	12,164,510,396	1,858,057	1,990,722
	IDR	2,749,011,304,722	202,699	217,172
	Others		1,105,890	1,184,851
			6,697,114	7,175,288
Financial assets at FVTPL (KIFRS 1039)	USD	83,211,240	83,211	89,153
	JPY	49,660,630	440	471
	EUR	315,430	377	404
	CNY	1,419,365	217	232
	IDR	117,500,000	9	9
	Others		2,830	3,033
			87,084	93,302
Available-for-sale financial assets	USD	4,422,392,390	4,422,392	4,738,151
	JPY	503,620,000	4,461	4,780
	EUR	10,762,000	12,850	13,767
	CNY	4,457,287,531	680,824	729,435
	IDR	2,459,541,796,430	181,355	194,304
	Others		1,295,737	1,388,252
			6,597,619	7,068,689
Held–to–maturity financial assets	USD	836,904,497	836,904	896,659
	EUR	37,051,071	44,239	47,398
	CNY	2,037,223,770	311,174	333,392
	IDR	1,150,350,151,785	84,821	90,878
	Others		211,435	226,530
			1,488,573	1,594,857
Loans	USD	18,879,859,000	18,879,859	20,227,881
	JPY	104,605,425,082	926,658	992,821
	EUR	2,280,486,817	2,722,910	2,917,326
	CNY	26,333,773,089	4,022,328	4,309,522
	IDR	18,334,714,078,408	1,351,915	1,448,442
	Others		1,762,043	1,887,853
			29,665,713	31,783,845
Derivative assets used for hedging	USD	10,976,184	$ 10,976	₩ 11,760

9.5.5 Currency risk concentration (cont'd)

	December 31, 2017			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Others	USD	2,716,393,061	$ 2,716,393	₩ 2,910,344
	JPY	124,867,077,972	1,106,147	1,185,126
	EUR	127,975,829	152,803	163,713
	CNY	2,328,447,426	355,657	381,050
	IDR	208,552,760,530	15,378	16,476
	Others		232,826	249,450
			4,579,204	4,906,159
			$ 49,126,283	₩ 52,633,900
Liabilities				
Financial liabilities at FVTPL (KIFRS 1039)	USD	60,143,592	$ 60,144	₩ 64,438
	JPY	10,412,484	92	99
	CNY	18,986,370	2,900	3,107
	Others		972	1,042
			64,108	68,686
Deposits	USD	19,491,193,359	19,491,193	20,882,865
	JPY	207,791,610,616	1,840,742	1,972,171
	EUR	1,566,893,313	1,870,868	2,004,448
	CNY	35,321,132,069	5,395,094	5,780,303
	IDR	16,576,953,575,507	1,222,307	1,309,579
	Others		3,016,152	3,231,505
			32,836,356	35,180,871
Borrowings	USD	6,735,255,879	6,735,256	7,216,153
	JPY	13,761,716,433	121,909	130,614
	EUR	580,965,417	693,672	743,200
	CNY	2,280,450,812	348,325	373,196
	IDR	1,508,494,927,443	111,229	119,171
	Others		32,318	34,625
			8,042,709	8,616,959
Debentures	USD	3,524,483,923	3,524,484	3,776,132
	CNY	1,310,036,800	200,100	214,388
	IDR	242,603,324,492	17,888	19,166
	Others		118,813	127,295
			3,861,285	4,136,981
Derivative liabilities used for hedging	USD	41,391,510	41,392	44,347

9.5.5 Currency risk concentration (cont'd)

	December 31, 2017			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Others	USD	4,169,027,163	$ 4,169,027	₩ 4,466,696
	JPY	35,680,952,234	316,083	338,651
	EUR	533,207,321	636,649	682,105
	CNY	3,359,418,826	513,131	549,769
	IDR	198,633,282,200	14,646	15,692
	Others		236,224	253,090
			5,885,760	6,306,003
			$ 50,731,610	₩ 54,353,847

(*) All foreign currencies other than USD are expressed in USD amounts at the reporting date.

9.6 Operating risk

Operational risk is the risk of loss arising from system failure, human error, fraud or other external events. Risks related to legal or regulatory implications are identified as operational risks but risks related to the strategy of damaging reputation are excluded from operational risks. Operational risk includes losses from internal operational problems and externalities, such as natural disasters, etc., and legal lawsuit, but excludes losses from policy decision errors or unmeasurable reputation damage, etc. Operational risk does not have a direct correlation with income and the Company needs to mitigate such risk through internal controls and insurance.

The Company calculates the operational risk capital on a consolidation basis. The Company uses the Advanced Measurement Approach (AMA) and the subsidiary uses the basic indicator to manage total capital. Length of the period in which the AMA is in use is one year with a 99.9% confidence level. The Company uses the loss distribution approach to measure 9 different business units and 7 operational risk event types. In addition, the Company combines the loss distribution of the internal and external data on losses with results of the scenario analysis to calculate the amount of capital and takes into account business environment and changes in the controls in order to adjust the amount of capital. The Company uses the basic indicator by applying specific coefficient to the average profit of 3 years.

The Risk Management Committee determines the operational risk limits. In case the excess limit is expected, the management plan for the excess of internal capital limits should be reported to the Risk Management Operation Committee, and if additional limits are given, an approval from the Risk Management Committee is needed beforehand. If under exceptional case where the limit is exceeded, an expost facto approval from the Risk Management Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

9.7 Capital management

The Company implements the BIS capital requirement system in order to secure the capital adequacy and comply with the supervisory regulations. By BIS (Bank for International Settlements) regulation, the Company keeps its BIS capital adequacy ratio (hereinafter BIS ratio) above the minimum BIS for risk-weighted assets. In addition, the Company performs a capital adequacy assessment in order to cope with an unexpected loss.

Risk–weighted assets which are calculated per each risk type when calculating BIS ratio are as follows:

- Risk–weighted assets of credit risk are calculated using the Basic Internal Ratings–Based Approach (IRB). The Company uses the Standardized Approach (SA) for governments, banks, public institutes, overseas exposure, other assets, and etc.
- Risk–weighted assets of market risk are calculated by adding higher of (1) the VaR measured on the previous business day and the average VaR measured in the last 60 business days times (3+multiplier) and (2) the sVaR measured on the previous business day under emergency and the averages VaR measured in the last 60 business days times (3+multiplier) under emergency, to the separate risk calculated by using a standardized model. The FSS provides multiplier to each bank based on the results of verification and the level of meeting the requirements.
- Risk–weighted assets of the operational risk are calculated by multiplying 12.5 to the amount of operational risk capital calculated by Advanced Measurement Approach (AMA) for the Bank and Basic Indicator Approach (BIA) for its subsidiaries.

Regulatory capital in accordance with the Regulations on the Supervision of Banking Business for calculating BIS ratio is as follows:

- Common equity: Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments, retained earnings, accumulated other comprehensive income and other capital surplus, capital adjustments, non-controlling interest on common shares issued by banks, affiliated subsidiaries, etc.
- Other basic capital: The capital securities to meet accreditation requirements of other basic capital, capital surplus associated with the issuance of the other basic capital, non-qualifying capital securities and the accredited amount as other basic capital of a non-controlling interest on equity securities issued by a subsidiary, etc.
- Supplementary capital: The capital securities to meet supplementary capital accreditation requirements, capital surplus associated with the issuance of supplementary capital, the accredited amount of supplementary capital of non-qualifying capital securities, the accredited amount as supplementary capital of a non-controlling interest on equity securities issued by a subsidiary, eligible allowance for possible loan losses on "normal" or "precautionary" category assets, allowance for possible loan losses in excess of the total amount of expected losses, etc.

9.7 Capital management (cont'd)

Regulatory capital and BIS ratios as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018	December 31, 2017
Common equity		
Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments	₩ 5,359,453	₩ 5,359,453
Retained earnings	10,122,654	8,735,759
Accumulated other comprehensive income and other capital surplus, capital adjustments	8,757,776	8,874,660
Non-controlling interest on common shares issued by a bank, a consolidated subsidiary	27,022	23,719
Deduction	(1,623,576)	(1,604,266)
	22,643,329	21,389,325
Other basic capital		
Amount accredited as supplementary capital of non-qualifying capital securities	171,000	180,000
Amount accredited as other basic capital of a non-controlling interest on capital securities issued by a subsidiary	5,790	5,291
	176,790	185,291
Supplementary capital		
Equity securities satisfying the criteria of supplementary capital	1,970,860	1,642,840
Amount accredited as supplementary capital of non-qualifying capital securities	1,648,048	2,055,390
Amount accredited as supplementary capital of a non-controlling interest on equity securities issued by a subsidiary	19,727	18,183
Allowance for possible loan losses on assets categorized as "normal" or "critical"	225,275	125,047
	3,863,910	3,841,460
	₩ 26,684,029	₩ 25,416,076
Risk–weighted assets		
Credit risk–weighted assets (*)	₩ 148,524,473	₩ 144,738,746
Operational risk–weighted assets	10,298,132	8,751,643
Market risk–weighted assets	5,369,232	5,572,416
	₩ 164,191,837	₩ 159,062,805
BIS capital ratio		
Total capital ratio	16.25%	15.98%
Common equity ratio	13.79%	13.45%
Tier 1 capital ratio	13.90%	13.56%
Tier 2 capital ratio	2.35%	2.42%

(*) The equity below the lowest limit is presented in credit risk weighted assets.

9.7.1 Internal capital adequacy assessment and management

Internal capital is the amount which allows for continuous operation of business while accounting for all risks. Internal capital is defined as the size of capital needed to cope with unexpected loss under a certain rate. The purpose of managing the internal capital is to compare the size of internal capital and available capital (Tier 1) and to serve as a measure of financial strength. Managing the internal capital also provides the amount of risk–adjusted capital and basic measurement. The indicators are composed of the risk appetite ratio as well as exhaustion ratio of foreign holding limits. The risk appetite ratio is an internal capital ratio established after taking into consideration a capital buffer in Tier 1 capital. The exhaustion ratio of foreign holding limits is a ratio used to measure the amount of internal capital used against the internal capital limits.

Internal capital limits are established after accounting for the size of current and subsequent Tier 1 capital as well as the components, quality, risk appetite, target credit rating, operational strategy and business plans. The Risk Committee determines risk types and the internal capital limits for the Company more than once a year. In the case where new operations or the expansion of operations result in the amount exceeding the internal capital limits, an approval from the Risk Committee is needed beforehand. If such a situation occurs in cases outlined as exceptions, an approval from the Risk Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

10. Operating segment information

10.1 General information

In order to set strategies to achieve goal and efficiently conduct performance assessment, the business sectors of the Bank are divided by the operations as follows:

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A. Operating group segment: It consists of 4 groups (center, Chungcheong, Yeong-nam, and Ho-nam). It offers household loans and deposit, retirement pension benefit, company loans and deposit, etc.,
B. Capital market segment: This segmentation offers investment and operation of securities, purchasing and selling of public bonds, development and operation of derivatives.
C. Others segment: It consists of overseas business segment, headquarter supporting segment, trust segment, risk segment, audit segment and after-management segment.

In December 2017, the Company reorganized its central sales group and reorganized its existing sales support group to reinforce on-site sales.

10.2 Profit or loss by operating segment

10.2.1 Details of net income by operating segments for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018							
	Regional Sector				Finance sector and other sector	Subtotal	Adjustments	Total
	Center	Chungcheong	Yeongnam	Honam				
Operating income								
Net interest income	₩ 3,186,794	₩ 422,109	₩ 572,944	₩ 187,752	₩ 936,496	₩ 5,306,095	₩ (8,894)	₩ 5,297,201
Interest income	8,042,908	1,094,158	1,540,149	460,705	(1,728,061)	9,409,859	(31,157)	9,378,702
Interest expenses	(4,856,113)	(672,049)	(967,206)	(272,953)	2,664,557	(4,103,764)	22,264	(4,081,500)
Net fee and commission income (loss)	554,014	59,007	92,941	31,218	210,813	947,993	(307,600)	640,393
Net other operating income (loss)	(1,707,863)	(247,222)	(338,491)	(107,222)	(1,881,345)	(4,282,143)	1,215,249	(3,066,894)
Net segment profit (loss)	2,032,945	233,894	327,394	111,748	(734,036)	1,971,945	898,755	2,870,700
Income tax expenses (income)	559,060	64,321	90,033	30,731	(206,331)	537,814	240,454	778,268
Net segment income (loss)	₩ 1,473,885	₩ 169,573	₩ 237,361	₩ 81,017	₩ (527,705)	₩ 1,434,131	₩ 658,301	₩ 2,092,432

	2017							
	Regional Sector				Finance sector and other sector	Subtotal	Adjustments	Total
	Center	Chungcheong	Yeongnam	Honam				
Operating income								
Net interest income	₩ 2,935,239	₩ 364,637	₩ 521,860	₩ 159,763	₩ 847,702	₩ 4,829,201	₩ (15,029)	₩ 4,814,172
Interest income	6,986,800	916,064	1,319,938	363,532	(1,444,300)	8,142,034	(30,699)	8,111,335
Interest expenses	(4,051,561)	(551,427)	(798,078)	(203,769)	2,292,002	(3,312,833)	15,670	(3,297,163)
Net fee and commission income (loss)	565,774	52,147	84,751	24,641	185,862	913,175	(276,862)	636,313
Net other operating income (loss)	(1,829,937)	(239,339)	(330,776)	(95,224)	(1,027,197)	(3,522,473)	825,006	(2,697,467)
Net segment profit (loss)	1,671,076	177,445	275,835	89,180	6,367	2,219,903	533,115	2,753,018
Income tax expenses (income)	404,400	42,942	66,752	21,582	4,182	539,858	100,921	640,779
Net segment income (loss)	₩ 1,266,676	₩ 134,503	₩ 209,083	₩ 67,598	₩ 2,185	₩ 1,680,045	₩ 432,194	₩ 2,112,239

10. Operating segment information (cont'd)

10.2.2 External customers by operating sector and revenue from transactions in each sector for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018															
	Operating group segments								Finance sector							
Classification	Center		Chungcheong		Yeongnam		Honam		and other sector		Subtotal		Adjustments		Total	
Revenue from external customers	₩	3,498,854	₩	433,615	₩	610,213	₩	204,965	₩	1,355,836	₩	6,103,483	₩	(25,938)	₩	6,077,545

	2017															
	Operating group segments								Finance sector							
Classification	Center		Chungcheong		Yeongnam		Honam		and other sector		Subtotal		Adjustments		Total	
Revenue from external customers	₩	3,270,732	₩	372,029	₩	564,154	₩	177,944	₩	2,109,869	₩	6,494,728	₩	(58,226)	₩	6,436,502

10.2.3 Significant non–cash transactions included in income of operating segments for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018							
	Operating group segments							
Classification	Center	Chungcheong	Yeongnam	Honam	Finance sector and other sector	Subtotal	Adjustment	Total
Earnings from equity method investments	₩ -	₩ -	₩ -	₩ -	₩ 21,728	₩ 21,728	₩ (41)	₩ 21,687
Depreciation and amortization	(27,629)	(12,223)	(3,651)	(1,958)	(158,481)	(203,942)	288	(203,654)
	₩ (27,629)	₩ (12,223)	₩ (3,651)	₩ (1,958)	₩ (136,753)	₩ (182,214)	₩ 247	₩ (181,967)

	2017							
	Operating group segments							
Classification	Center	Chungcheong	Yeongnam	Honam	Finance sector and other sector	Subtotal	Adjustment	Total
Earnings from equity method investments	₩ -	₩ -	₩ -	₩ -	₩ 103,465	₩ 103,465	₩ -	₩ 103,465
Depreciation and amortization	(26,368)	(14,521)	(4,622)	(1,877)	(140,204)	(187,592)	(16,094)	(203,686)
	₩ (26,368)	₩ (14,521)	₩ (4,622)	₩ (1,877)	₩ (36,739)	₩ (84,127)	₩ (16,094)	₩ (100,221)

10.3 Information about regions

Revenue by region from the external customers for the years ended December 31, 2018 and 2017 and non–current assets by region as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Revenue from external customers (*1)				Non–current assets (*2)			
	2018		2017		December 31, 2018		December 31, 2017	
Domestic	₩	5,467,415	₩	5,910,490	₩	2,610,472	₩	2,600,583
Foreign								
Hong Kong		64,421		67,162		484		499
Singapore		32,456		24,687		762		865
U.S		38,337		40,101		5,849		5,168
Japan		18,346		16,978		2,788		2,765
China		177,967		138,087		26,427		26,405
Indonesia		129,399		143,557		11,100		9,359
U.K		18,281		18,621		1,838		2,889
Canada		32,355		28,623		6,219		6,774
Others		124,505		106,422		3,082		8,827
		636,067		584,238		58,549		63,551
Adjustments		(25,937)		(58,226)		6,131		49
	₩	6,077,545	₩	6,436,502	₩	2,675,152	₩	2,664,183

(*1) Income from external customers is divided into categories of domestic and overseas based on the locations of operating branches.
(*2) Non-current assets consist of property and equipment, investment property, and intangible asset and are divided into categories of domestic and overseas based on the location of assets.

11. Cash and due from banks

11.1 Cash and due from banks as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Counterparty	December 31, 2018	December 31, 2017
Cash		₩ 2,120,840	₩ 2,224,215
Due from banks in Korean won			
Reserve with central bank and others	Bank of Korea (“BOK”)	10,308,514	8,450,993
Monetary stabilization account	BOK	430,000	2,380,000
Time deposits and others	Bank of Communications	100,000	100,000
Other deposits	Other financial institutions	219,508	237,334
		11,058,022	11,168,327
Due from banks in foreign currencies			
Due from foreign banks	BOK and other banks	4,890,744	3,075,845
Time deposits	Bayern LB, etc.	1,043,465	1,495,382
Other due from banks	Other financial institutions	1,339,052	2,020,147
		7,273,261	6,591,374
		₩ 20,452,123	₩ 19,983,916

11.2 Restricted balances in due from banks as of December 31, 2018 and 2017 are summarized as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017	Restriction
Due from banks in Korean won			
Reserve deposits, etc.	₩ 10,308,514	₩ 8,450,993	Required under the *Banking Act* and other related regulations.
Monetary stabilization account	430,000	2,380,000	Required by the *Bank of Korea* for the purpose of liquidity management.
Investor’s deposits	157,478	153,473	Required under the *Financial Investment Services and Capital Markets Act.*
Other deposits	500	500	Pledge creation and etc.
	10,896,492	10,984,966	
Due from banks in foreign currencies			
Due from banks on demand	3,334,662	342,719	Reserve deposits required under the *Banking Act* and other related regulations.
Due from others on demand	1,035,058	463,056	Deposits received for guarantees as margin for derivatives.
	4,369,720	805,775	
	₩ 15,266,212	₩ 11,790,741	

12. Financial assets at fair value through profit or loss (KIFRS 1039)

12.1 Financial assets at fair value through profit or loss as of December 31, 2017 are as follows (Korean won in millions):

Classification		Book value December 31, 2017
Stocks	₩	50,932
Government and public bonds		1,403,732
Financial bonds		990,686
Corporate bonds and others		430,231
Beneficiary certificates		10,545
Derivative assets held for trading		6,557,488
	₩	9,443,614

12.2 There are no financial assets designated at FVTPL held by the Company as of December 31, 2017.

13. Financial assets measured at fair value through profit or loss (KIFRS 1109)

13.1 As of December 31, 2018, details of financial assets mandatorily measured at fair value through profit or loss are as follows (Korean won in millions):

Classification		Book value December 31, 2018
Stocks	₩	121,514
Government and public bonds		1,221,452
Financial bonds		451,431
Corporate bonds		807,436
Beneficiary certificates		1,342,349
Securities denominated in foreign currencies		572,238
Derivative assets held for trading		3,342,588
Other securities (Investment, etc.)		171,717
Convertible privately-placed bonds		389,381
	₩	8,420,106

13.2 As of December 31, 2018, the Company does not hold any financial assets designated as measured at fair value through profit or loss.

14. Available–for–sale financial assets

Available–for–sale financial assets as of December 31, 2017 are as follows (Korean won in millions):

Classification	Counterparty		Fair value (book value) December 31, 2017
Stocks	Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	₩	768,475
Investments in partnership	United PF 1ST Corporate Financial Stability Private Equity Fund, etc.		144,653
Government and public bonds	Treasury bonds		11,163,682
	Housing bonds		3,197,632
	Other local bonds		39,583
			14,400,897
Finance bonds	Monetary stabilization securities		13,063,071
	Deposit bank bonds		664,976
	Small and medium-sized business banking bonds		356,164
	Industrial financial bonds		913,823
			14,998,034
Corporate bonds and others	State owned entity bonds		3,409,897
	Corporate bonds		390,128
	Others		2,563
			3,802,588
Beneficial securities	Samsung DaVinci Special Investment Type Private Investment Trust No. 1 _Ci, etc.		2,330,354
Securities denominated in foreign currencies	Equity securities in foreign currencies		212,910
	Bonds in foreign currencies		7,068,689
	Investment in foreign currencies		5,571
	Beneficiary certificates securities in foreign currencies		590,341
			7,877,511
		₩	44,322,512

15. Financial assets measured at fair value through other comprehensive income

15.1 As of December 31, 2018, details of financial assets measured at fair value through other comprehensive income are as follows (Korean won in millions):

Classification	Counterparty		Fair value (book value) December 31, 2018
Stocks	Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	₩	813,951
Investments in partnership	Impact Finance Korea		173
Government and public bonds	Treasury bonds		11,399,359
	Housing bonds		3,246,004
	Other local bonds		19,873
			14,665,236
Finance bonds	Monetary stabilization securities		7,812,796
	Deposit bank bonds		338,850
	Small and medium-sized business banking bonds		388,808
	Industrial financial bonds		615,789
	Export-import credit bond		16,674
			9,172,917
Corporate bonds and others	State owned entity bonds		2,950,617
	Corporate bonds		438,775
			3,389,392
Other securities	STX Engine Co., Ltd.		18,601
Securities denominated in foreign currencies	Equity securities in foreign currencies		234,592
	Bonds in foreign currencies		6,550,198
			6,784,790
		₩	34,845,060

15.2 As of December 31, 2018, details of shares (including shares in foreign currencies) included in financial assets measured at FVOCI are as follows (Korean won in millions):

Counterparty		Book value		Fair value
Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	₩	307,881	₩	307,881
CM International Financing Leasing Co., Ltd.		228,540		228,540
Consumer Credit Assistant Fund Co., Ltd.		121,313		121,313
UAMCO., Ltd.		118,130		118,130
The Korea Securities Finance Corporation		60,614		60,614
Taihan Electric Wire Co., Ltd.		43,131		43,131
STX Engine Co., Ltd.		18,601		18,601
Korea Asset Management Corporation.		15,737		15,737
Dongbu Steel Co., Ltd.		15,028		15,028
Hyundai Merchant Marine Co., Ltd.		14,753		14,753
Kumho Tire Co., Inc.		12,890		12,890
ChinHung International, Inc.		12,678		12,678
BC Card Co., Ltd.		11,430		11,430
Koramco REITs Management and Trust Co., Ltd.		10,481		10,481
Korea Enterprise Data Co., Ltd.		10,461		10,461
HJC Inc, etc.		8,521		8,521
Korea Money Brokerage Corp.		7,237		7,237
Daiyang Metal Co., Ltd.		5,476		5,476
KHE Co., Ltd.		4,178		4,178
Mirae Credit Information Co., Ltd.		4,030		4,030
CLS Group Holdings AG		4,018		4,018
Korea Development Corporation		3,538		3,538
DB Asset Management Co., Ltd. etc.		28,651		28,651
	₩	1,067,317	₩	1,067,317

Equity instruments that are held for strategic alliances, converted from debt instruments and acquired for access rights of systems and facilities are designated as measured at FVOCI.

15.3 Details of equity instruments included in the financial assets measured at FVOCI derecognized for the year ended December 31, 2018, are as follows (Korean won in millions):

Counterparty	Book value	Cumulative valuation gain (loss)	Reason for disposal
STX Engine Co., Ltd.	₩ 15,349	₩ (22,925)	Resolution of the council of shareholders
Taihan Electric Wire Co., Ltd.	2,479	(3,690)	Resolution of the Board of Directors
Shinwon Co., Ltd	11	4	Receipt of dividends upon bankruptcy of business
Oriental Precision & Engineering Co., Ltd.	864	(8,571)	Resolution of the Board of Directors
JY Solutec Co., Ltd.	755	593	Sale of shares after the end of workout
Placidwave Korea Inc.	16	16	Capital reduction on stocks resulting from debt-equity swap based on the approval of changes in corporate rehabilitation plan
Microfinance & Badbank Harmony Co., Ltd.	871	871	Resolution of shareholders' meeting
Hanol Global Textile Co., Ltd.	9	9	Exercising right to sell stock of controlling shareholder
Hanil Hyundai Cement Co., Ltd.	12,062	8,995	Resolution of the Board of Directors
	₩ 32,416	₩ (24,698)	

15.4 There are no dividends recognized due to the equity instruments measured at FVOCI derecognized for the year ended December 31, 2018. Dividends recognized in relation to the equity instruments measured at FVOCI held as of December 31, 2018 amount to ₩5,848 million.

15.5 Changes in the loss allowance in relation to financial assets measured at FVOCI during the year ended December 31, 2018 are as follows (Korean won in millions):

	2018			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 7,524	₩ 723	₩ -	₩ 8,247
Transfer to 12 month expected credit loss	361	(361)	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision (reversal) for possible loan losses	352	-	-	352
New debt securities executed or purchased	-	-	-	-
Removed debt securities	(1,946)	(362)		(2,308)
Exchange rate fluctuation and others	291	-	-	291
Ending balance	₩ 6,582	₩ -	₩ -	₩ 6,582

15.6. Changes in the total book value in relation to financial assets measured at FVOCI during the year ended December 31, 2018 are as follows (Korean won in millions):

	2018			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 40,246,086	₩ 7,738	₩ -	₩ 40,253,824
Transfer to 12 month expected credit loss	3,869	(3,869)	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
New financial assets executed or purchased	5,978,524	-	-	5,978,524
Removed debt securities	(12,741,534)	(3,869)	-	(12,745,403)
Exchange rate fluctuation and others	290,798	-	-	290,798
Ending balance	₩ 33,777,743	₩ -	₩ -	₩ 33,777,743

16. Held–to–maturity financial assets

Held–to–maturity financial assets as of December 31, 2017 consist of the following (Korean won in millions):

Classification	Category		Book value December 31, 2017
Government and public bonds	Treasury bonds	₩	353,350
	Housing bonds		781,237
			1,134,587
Finance bonds	Deposit bank bonds		230,913
	Small and medium-sized business banking bonds		259,783
	Industrial financial debenture		249,957
			740,653
Corporate bonds and others	State owned entity bonds		2,610,761
	Corporate bonds		80,063
			2,690,824
Securities denominated in foreign currencies	Bonds in foreign currencies		1,594,858
		₩	6,160,922

17. Securities measured at amortized cost

17.1 Details of securities measured at amortized cost as of December 31, 2018 are as follows (Korean won in millions):

Classification	Category		Book value December 31, 2018
Government and public bonds	Treasury bonds	₩	400,847
	Housing bonds		1,328,502
			1,729,349
Finance bonds	Deposit bank bonds		230,711
	Small and medium-sized business banking bonds		649,858
	Industrial financial Debenture		1,861,640
	Export-import credit bond		210,623
			2,952,832
Corporate bonds and others	State owned entity bonds		7,037,213
	Corporate bonds		70,040
			7,107,253
Securities denominated in foreign currencies	Bonds in foreign currencies		1,795,896
Allowance for possible loan losses			(2,949)
		₩	13,582,381

17.2 There is no profit or loss from disposal of securities measured at amortized cost during the year ended December 31, 2018.

17.3 Changes in the loss allowance in relation to securities measured at amortized cost during the year ended December 31, 2018 are as follows (Korean won in millions):

Classification	12 month expected credit loss	Lifetime expected credit losses: Non credit-impaired debt securities	Lifetime expected credit losses: Credit-impaired debt securities	Total
Beginning balance	₩ 1,523	₩ -	₩ -	₩ 1,523
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
Provision for possible loan losses	2,537	-	-	2,537
Removed debt securities	(119)	-	-	(119)
Exchange rate fluctuation and others	(992)	-	-	(992)
Ending balance	₩ 2,949	₩ -	₩ -	₩ 2,949

17.4 Changes in the carrying amounts of securities measured at amortized cost during the year ended December 31, 2018 are as follows (Korean won in millions):

Classification	12 month expected credit loss	Lifetime expected credit losses: Non credit-impaired debt securities	Lifetime expected credit losses: Credit-impaired debt securities	Total
Beginning balance	₩ 6,174,861	₩ -	₩ -	₩ 6,174,861
Transfer to 12 month expected credit loss	-	-	-	-
Transfer to non credit-impaired debt securities	-	-	-	-
Transfer to credit-impaired debt securities	-	-	-	-
New debt securities executed or purchased	8,222,010	-	-	8,222,010
Removed debt securities	(777,724)	-	-	(777,724)
Effective interest rate amortization	4,823	-	-	4,823
Exchange rate fluctuation and others	(38,640)	-	-	(38,640)
Ending balance	₩ 13,585,330	₩ -	₩ -	₩ 13,585,330

18. Pledged assets

18.1 Assets pledged as collateral as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Category		Book value December 31, 2018
Financial assets measured at FVOCI	Intraday overdraft	₩	600,064
	Securities lent		1,859,927
	Borrowings		1,017,965
	Foreign currency borrowing		118,219
	BOK payment		1,688,711
	Future		186,219
	Others		468,066
			5,939,171
Securities measured at amortized cost	Future		180,346
	BOK payment		1,058,662
	Intraday overdraft		55,690
	Borrowings		408,460
	Foreign currency borrowing		385,243
	Others		74,919
			2,163,320
		₩	8,102,491

Classification	Category		Book value December 31, 2017
Available–for–sale financial assets	Intraday overdraft	₩	566,317
	Foreign currency borrowing		290,586
	Securities lent		599,777
	Borrowings		1,467,404
	BOK payment		2,554,249
	Future		66,955
	Others		979,720
			6,525,008
Held–to–maturity financial assets	Future		257,233
	BOK payment		1,121,782
	Intraday overdraft		45,740
	Borrowings		275,370
	Foreign currency borrowing		31,364
	Others		69,815
			1,801,304
Loans	Borrowings		10,212
		₩	8,336,524

18.2 The fair value of collateral that is available for sale and re-pledge, irrespective of default, is as follows(Korean won in millions)

Classification	December 31,2018			
	Fair value of collateral		Fair value of collateral sold or re-pledged	
Securities	₩	8,041,844	₩	-

Classification	December 31, 2017			
	Fair value of collateral		Fair value of collateral sold or re-pledged	
Securities	₩	3,953,962	₩	-

19. Loans and receivables

19.1 Loans and receivables as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Loans		
Loans in Korean won	₩ 202,127,586	₩ 187,647,345
Loans denominated in foreign currencies	20,427,575	19,878,908
Domestic import usance	3,616,403	3,450,088
Call loans	3,153,690	2,163,949
Bills purchased in Korean won	88,303	66,918
Bills purchased denominated in foreign currencies	5,662,188	5,663,420
Advance payments on acceptances and guarantees	23,869	17,816
Bonds purchased under resale agreement	8,021,732	4,524,823
Privately-placed corporate bonds	1,605,466	1,193,070
Others	745,393	591,708
	245,472,205	225,198,045
Plus (less)		
Deferred loan fees and expenses	304,547	261,485
Allowance for possible loan losses	(1,308,162)	(1,362,821)
	(1,003,615)	(1,101,336)
	₩ 244,468,590	₩ 224,096,709

19.2 Loans in Korean won by customer as of December 31, 2018 and 2017 are listed as follows (Korean won in millions):

Classification		December 31, 2018		December 31, 2017
Corporate loans				
Large–sized businesses	₩	33,844,730	₩	33,914,997
Small and medium–sized businesses		85,499,115		77,739,731
Public sector and others		18,666,272		13,280,252
Household loans		107,462,088		100,263,065
		245,472,205		225,198,045
Plus (less)				
Deferred loan fees, net of expenses		304,547		261,485
Allowance for possible loan losses		(1,308,162)		(1,362,821)
		(1,003,615)		(1,101,336)
	₩	244,468,590	₩	224,096,709

19.3 Changes in allowance for possible loan losses for the years ended December 31, 2018 and 2017 are summarized as follows (Korean won in millions):

	2018				
	12 month expected credit loss	Lifetime expected credit losses			
Classification		Non credit-impaired loan	Credit-impaired loan	Credit impairment model	Total
As of January 1, 2018	₩ 234,188	₩ 383,537	₩ 818,302	₩ 12,081	₩ 1,448,108
Transfer to 12 month expected credit loss	28,534	(26,748)	(1,786)	-	-
Transfer to non credit-impaired loan	(14,159)	80,794	(66,635)	-	-
Transfer to credit-impaired loan	(11,440)	(26,917)	38,357	-	-
Provisions (reversal) of allowance of possible loan losses	33,412	10,023	133,385	3,609	180,429
Write–offs	-	-	(364,822)	(5,789)	(370,611)
Disposal of non–performing loans	-	-	(31,080)	-	(31,080)
Recovering of loans written-off	-	-	129,745	-	129,745
Exchange rate fluctuation and others	17,658	(18,447)	(47,601)	(39)	(48,429)
As of December 31, 2018	₩ 288,193	₩ 402,242	₩ 607,865	₩ 9,862	₩ 1,308,162

	2017					
Classification	Loans in Korean won	Loans denominated in foreign currencies	Advance payments on acceptances and guarantees	Bills purchased denominated in foreign currencies	Privately placed corporate bonds	Total
As of January 1, 2017	₩ 1,090,644	₩ 285,366	₩ 3,745	₩ 56,369	₩ 26,820	₩ 1,462,944
Disposal of non-performing loans	(33,843)	-	-	-	-	(33,843)
Write-offs	(336,056)	(50,065)	(238)	-	-	(386,359)
Collection of loans written-off in prior period	171,171	35,343	683	-	-	207,197
Debt-to-equity swap	(109,053)	(255,690)	-	-	-	(364,743)
Exchange rate fluctuation and others	73	(28,664)	-	(5,172)	(3)	(33,766)
Provision for possible loan losses	273,369	246,714	(337)	7,196	1,116	528,058
Interest income from impaired loans	(13,010)	(2,493)	(52)	(782)	(330)	(16,667)
As of December 31, 2017	₩ 1,043,295	₩ 230,511	₩ 3,801	₩ 57,611	₩ 27,603	₩ 1,362,821

19.4 Changes in the carrying amounts of loans for the year ended December 31, 2018 are as follows (Korean won in millions):

Classification	2018				
		Lifetime expected credit losses			
	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Subject to the application of credit impairment model	Total
As of January 1, 2018	₩ 158,426,745	₩ 64,255,136	₩ 1,844,699	₩ 498,900	₩ 225,025,480
Transfer to 12 month expected credit loss	8,984,140	(8,978,859)	(5,281)	-	-
Transfer to non credit-impaired loan	(4,765,987)	4,946,501	(180,514)	-	-
Transfer to credit-impaired loan	(451,439)	(427,393)	878,832	-	-
New loans executed or purchased	86,172,681	1,893,749	222,618	570,777	88,859,825
Write–offs	-	-	(364,822)	(5,789)	(370,611)
Removed loans	(46,109,090)	(13,459,990)	(210,097)	(286,708)	(60,065,885)
Disposal of non–performing loans	-	-	(103,030)	-	(103,030)
Exchange rate fluctuation and others	(723,926)	(6,581,969)	(567,679)	-	(7,873,574)
As of December 31, 2018	₩ 201,533,124	₩ 41,647,175	₩ 1,514,726	₩ 777,180	₩ 245,472,205

19.5 Detail of both Amortized costs before change and net loss on change of loans whose Contractual cash flows have been changed and The allowance have been measured based on lifetime expected credit loss are as follows (Korean won in millions):

Classification	Amount
Amortized cost before change	₩ 66,898
Net loss due to change	9,446

19.6 Some of the allowance of loan receivables whose Contractual cash flows have been changed have been measured based on the lifetime expected credit losses. However, after being initially recognized, amount of loan receivables whose measurement method of allowance has been changed into twelve-month expected credit loss is to be ₩ 100 million as of December 31, 2018.

19.7 The contractual amount of loans written off, for which the Company continues to recover, is ₩ 349,626 million as of December 31, 2018.

19.8 Leases investments and net lease investments of the financial lease loans included in loans as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017		
	Short-term	Long-term	Total
Present value of minimum lease payments	₩ -	₩ 1,613	₩ 1,613
Net lease investments	-	1,613	1,613
Total lease investments	₩ -	₩ 1,613	₩ 1,613

19.9 Leases investments and net lease investments of the financial lease loans by lease period as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017	
	Total lease investment	Net lease investment
After 1 year but no later than 5 years	₩ 1,613	₩ 1,613
	₩ 1,613	₩ 1,613

20. Derivative instruments

20.1 Details of amounts of the unsettled derivative contract and fair value of derivatives held by the Company as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	Amounts of unsettled contract		Accumulated valuation gain (loss)			
			December 31, 2018		December 31, 2017	
Classification	December 31, 2018	December 31, 017	Assets	Liabilities	Assets	Liabilities
Currency						
Forward	₩ 219,058,713	₩ 200,080,489	₩ 1,950,839	₩ 1,881,382	₩ 4,388,876	₩ 4,508,586
Swap	67,117,113	61,630,029	952,394	772,364	1,809,223	1,477,573
Options purchased	234,609	79,069	4,710	-	1,298	-
Options sold	215,109	96,426	-	3,684	-	2,450
Futures	1,364,831	1,137,045	-	-	-	-
	287,990,375	263,023,058	2,907,943	2,657,430	6,199,397	5,988,609
Interest						
Swap	83,210,036	75,261,996	433,164	389,423	350,285	382,205
Options purchased	470,000	776,000	9,276	-	16,854	-
Options sold	2,249,479	3,262,567	-	42,721	-	43,050
Futures	389,405	118,339	-	-	-	-
	86,318,920	79,418,902	442,440	432,144	367,139	425,255
Stock						
Options purchased	25,949	819	1,043	-	170	-
Options sold	26,488	16,160	-	310	-	68
Futures	193	1,223	-	-	-	-
	52,630	18,202	1,043	310	170	68
Others						
Other derivatives	-	113,795	-	-	1,157	-
Credit spread adjustment, etc.	-	-	(8,838)	-	(10,375)	-
	-	113,795	(8,838)	-	(9,218)	-
	₩ 374,361,925	₩ 342,573,957	₩ 3,342,588	₩ 3,089,884	₩ 6,557,488	₩ 6,413,932

20.2 Details of valuation gain (loss) of the derivatives for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018 Net valuation gain	2018 Net valuation loss	2017 Net valuation gain	2017 Net valuation loss
Currency				
Forward	₩ 1,992,178	₩ 1,854,395	₩ 4,447,688	₩ 4,760,172
Swap	1,059,332	1,043,626	2,750,913	2,336,546
Options purchased	3,654	-	317	-
Options sold	-	2,100	-	364
	3,055,164	2,900,121	7,198,918	7,097,082
Interest				
Swap	230,471	145,275	249,149	271,986
Options purchased	2,415	-	12,558	-
Options sold	-	9,020	-	4,261
	232,886	154,295	261,707	276,247
Stock				
Options purchased	894	-	136	-
Options sold	-	301	-	15
	894	301	136	15
Others				
Other derivatives	-	-	898	1,585
Credit spread adjustment, etc.	2,053	-	9,918	-
	2,053	-	10,816	1,585
	₩ 3,290,997	₩ 3,054,717	₩ 7,471,577	₩ 7,374,929

20.3 Fair value hedge

20.3.1 Details of items subject to fair value hedge as of December 31, 2018 are as follows (Korean won in millions):

Classification	Hedged items	Book value: Assets	Book value: Liabilities	Accumulated fair value adjustments: Assets	Accumulated fair value adjustments: Liabilities	Fair value fluctuation
Application of hedge accounting						
Interest	Depository liabilities in Korean won	₩ -	₩ 511,658	₩ -	₩ (8,342)	₩ (5,486)
	Depository liabilities denominated in foreign currencies	-	532,658	-	(37,573)	25,314
	Finance debentures in Korean won	-	100,102	-	102	(102)
	Finance debentures denominated in foreign currencies	-	2,584,266	-	(43,269)	22,506
		-	3,728,684	-	(89,082)	42,232
Currency	Equity securities measured at FVOCI	223,620	-	4,620	-	9,340
Currency and interest	Finance debentures denominated in foreign currencies	-	675,673	-	14,696	(7,930)
		₩ 223,620	₩ 4,404,357	₩ 4,620	₩ (74,386)	₩ 43,642

20.3.1 Details of items subject to fair value hedge as of December 31, 2018 are as follows (Korean won in millions): (cont'd)

Gain or loss on valuation of items subject to fair value hedge for the year ended December 31, 2017 are as follows (Korean won in millions):

Classification	Valuation gain		Valuation loss	
Finance debentures	₩	12,581	₩	13,205
Depository liabilities		17,821		7,125
Available-for-sale financial assets		-		27,420
	₩	30,402	₩	47,750

As of December 31, 2018, interest rate swap or currency swap is designated as hedging instrument and the fair value hedge accounting is applied in order to hedge fair value fluctuation risk incurred due to interest rate fluctuations and foreign exchange rate fluctuations in finance debentures issued and depository liabilities.

20.3.2 Derivative instruments used for hedging purposes edging and related assets and liabilities as of December 31, 2018 and 2017 are as follows. And valuation of fair value and gain and loss on valuation for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018							
		Unsettled contract amounts		Net valuation gain(loss)		Assets		Liabilities
Currency								
Currency swaps	₩	660,977	₩	696	₩	3,766	₩	7,075
Interest								
Interest rate swaps		3,817,766		(43,014)		2,989		91,722
	₩	4,478,743	₩	(42,318)	₩	6,755	₩	98,797

Classification	December 31, 2017									
		Unsettled contract amounts		Valuation gain		Valuation loss		Assets		Liabilities
Currency										
Currency swaps	₩	279,922	₩	31,872	₩	-	₩	-	₩	14,225
Interest										
Interest rate swaps		3,530,626		11,884		30,298		11,760		58,799
	₩	3,810,548	₩	43,756	₩	30,298	₩	11,760	₩	73,024

Derivative transactions of which purchase and sale incur simultaneously like foreign exchange forward transaction, currency futures and currency swap, do not distinguish purchase contract amount from sale contract amount. For a derivative transaction involving both Korean won and foreign currencies, the contract amount based on foreign currencies is denominated using a fair exchange rate prevailing at the end of reporting period. For a derivative transaction involving only foreign currencies, the contract amount based on foreign currencies purchased are denominated using a fair exchange rate prevailing at the end of reporting period.

20.3.3 Fair values of non-derivative financial instruments designated as hedging instrument as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Fair value			
	December 31, 2018		December 31, 2017	
Debentures denominated in foreign currencies	₩	223,621	₩	214,280

20.3.4 Ineffective portion of gain or loss on derivatives designated as hedging instrument for the year ended December 31, 2018 are as follows (Korean won in millions):

Classification	Ineffective portion of the hedge recognized as current profit or loss	
Currency	₩	(7,234)
Interest		(782)
	₩	(8,016)

20.4 Hedges of net investment in foreign operations

20.4.1 Details of hedges of net investment in foreign operations as of December 31, 2018 are as follows (Korean won in millions):

Classification	Fair value fluctuation		Comprehensive income of hedges of net investment in foreign operations	
Currency (Exchange rate risk)	₩	12,343	₩	3,764

The effective portion of gains or losses arising from the hedges of net investment in foreign operations, which is recognized in other comprehensive income for the year ended December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017			
	Valuation gain		Valuation loss	
Hedged items				
Exchange differences on translation of foreign operations (branches and subsidiaries)	₩	-	₩	42,427

20.4.2 Details of fair values of financial instruments designated as hedging instrument of net investment of foreign operations as of December 31, 2018 are as follows (Korean won in millions):

Classification	Book value		Fair value fluctuation	The effective portion of changes in fair value recognized in other comprehensive income	Ineffective portion of the hedge recognized as current profit or loss
	Assets	Liabilities			
Debentures denominated in foreign currencies	₩ -	₩ 631,239	₩ (12,343)	₩ (12,343)	₩ -

The effective portion of gains or losses arising from the hedging instrument in relation to the hedge accounting for the net investment in foreign operations, which is recognized in other comprehensive income for the year ended December 31, 2017 are as follows (Korean won in millions):

Classification	2017	
	Gain	Loss
Hedging instruments		
Debentures denominated in foreign currencies	₩ 42,427	₩ -

20.5 Average hedging ratios of future nominal cash flows by the type of risk hedge as of December 31, 2018 are as follows (Korean won in millions):

Classification	1 year	2 years	3 years	4 years	5 years	More than 5 years	Total
Fair value hedge							
Nominal amounts of items subject to hedge	₩ 1,019,085	₩ 101,714	₩ 956,314	₩ 20,000	₩ 428,730	₩ 2,176,521	₩ 4,702,364
Nominal amounts of hedging instrument	1,019,085	101,714	956,314	20,000	428,730	2,176,521	4,702,364
Average hedging ratio	100.50%	99.92%	100.30%	100.00%	98.13%	100.50%	100.00%
Hedge of net investment in foreign operations							
Nominal amounts of items subject to hedge	-	-	-	-	-	631,239	631,239
Nominal amounts of hedging instrument	-	-	-	-	-	631,239	631,239
Average hedging ratio	-	-	-	-	-	100.00%	100.00%

21. Investments in associates

21.1 Details of investments in associates as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification (unaudited)	Country	Reporting date	Industry	Ownership (%) Dec 31, 2018	Ownership (%) Dec 31, 2017	Book value Dec 31, 2018	Book value Dec 31, 2017
Bank of Jilin (*1)	China	December 31	Bank	16.98	16.98	₩ 694,609	₩ 644,252
Hana First Private Equity Fund	Korea	December 31	Other financial services	29.97	29.97	5,281	16,586
Korea Credit Bureau (*1)	Korea	December 31	Credit investigation and Collection agency	9.00	9.00	6,485	5,601
Darby Hana Infrastructure Fund Management (*1)	Korea	December 31	Asset Management Company	9.90	9.90	1,482	1,242
CM International financing leases	China	December 31	Other financial services	25.00	25.00	202,173	201,064
Beijing Langzi Asset Management (*3)	China	September, 30	Credit finance business	17.70	25.00	46,258	45,113
Somesevit Corporation (*1) (*2)	Korea	December 31	Construction	1.92	1.92	-	-
Midan City Development Co., Ltd. (*1)(*2)(*3)	Korea	March 31	Construction	2.17	2.17	-	-
Masan Marine New Town Co., Ltd. (*1)	Korea	December 31	Construction	10.00	10.00	101	101
Company K startup winwin fund	Korea	December 31	Investment	23.80	23.81	6,931	9,643
Darby Latin American Private Debt Fund III (*5)	USA	December 31, 2017	Investment	17.09	24.99	-	6,770
Darby Latin American Private Debt Fund IIIA (*5)	USA	December 31, 2017	Investment	12.52	24.97	-	1,045
BSK-6 Patent Technology Investment Association	Korea	December 31	Investment	20.00	20.00	813	885
Fidelis Private Equity Fund No.2	Korea	December 31	Investment	29.70	-	3,005	-
Koramco Professional Investment Type Real Estate No.73	Korea	December 31	Investment	25.76	-	1,683	-
Koramco Professional Investment Type Real Estate No.87	Korea	December 31	Investment	21.13	-	1,500	-
KEB Hana-KVIC Unicorn Fund of Funds (*4)	Korea	December 31	Investment	90.90	-	857	-
Ourcrowd international invest Co., Ltd. (*3)	Virgin Islands	September 30	Investment	22.19	-	14,049	-
KEB Mirae Asset First Securitization Specialty Co., Ltd. (*6)	Korea	December 31, 2017	Asset securitization	-	40.00	-	-
KEB Mirae Asset Second Securitization Specialty Co., Ltd. (*6)	Korea	December 31, 2017	Asset securitization	-	45.00	-	-
PT Sinarmas Hana Finance	Indonesia	December 31	Financial services	30.00	30.00	3,118	3,253
						₩ 988,345	₩ 935,555

(*1) These entities are presented as investments in associates as the Company exercises a significant influence on the investee's Board of Directors.
(*2) The equity method is no longer appropriate because the current balances for the investments are below "0"
(*3) As the financial statements as of December 31, 2018 could not be obtained, the most recent financial statements available from the closing date were used. The effect of significant transactions or events incurred between the end of the reporting period of the associate and that of the Bank was reviewed and reflected.

21.1 Details of investments in associates as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

(*4) As of December 31, 2018, the Company classified the investee as investment in associates as it is a limited partner and thus, cannot exercise control over the investee.
(*5) As of December 31, 2018, the investees are reclassified as financial assets at FVTPL since the Bank disposed them and ownership ratio thereof decreased and thus, lost significant control over them.
(*6) The Company lost significant control over the investee due to its liquidation.

21.2 Condensed financial statements as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018						
Classification	Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income (loss)	Dividends income
Bank of Jilin	₩ 56,868,945	₩ 52,861,480	₩ 4,007,465	₩ 1,348,642	₩ 186,925	₩ 409,668	₩ -
Hana First Private Equity Fund	22,322	4,702	17,620	809	(15,545)	(15,545)	-
Korea Credit Bureau Co., Ltd.	88,797	22,788	66,009	78,018	9,901	9,901	113
Darby Hana Infrastructure Fund Management	17,063	2,099	14,964	5,990	2,531	2,531	79
CM International financing leases	4,493,521	3,684,828	808,693	316,370	8,541	8,541	-
Beijing Langzi Asset Management	509,420	248,063	261,357	39,553	15,847	15,847	1,690
Somesevit Corporation	81,464	127,963	(46,499)	10,765	(649)	(649)	-
Midan City Development Co., Ltd.	662,631	686,733	(24,102)	-	(321)	(321)	-
Masan Marine New Town Co., Ltd.	135,026	134,018	1,008	280	2	2	-
Company K startup winwin fund	29,696	586	29,110	2,467	(131)	854	-
BSK-6 Patent Technology Investment Association	4,067	2	4,065	20	(360)	(360)	-
Fidelis Private Equity Fund No.2	10,123	4	10,119	1,343	1,170	1,170	342
Koramco Professional Investment Type Real Estate No.73	6,437	4	6,433	(167)	(167)	(167)	-
Koramco Professional Investment Type Real Estate No.87	7,100	-	7,100	-	-	-	-
KEB Hana-KVIC Unicorn Fund of Funds	1,104	161	943	4	(158)	(158)	-
Ourcrowd international invest Co., Ltd.	52,091	1,391	50,700	42	(429)	1,236	-
PT Sinarmas Hana Finance	53,820	43,534	10,286	5,552	657	657	-

21.2 Condensed financial statements as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2017						
	Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income(loss)	Dividend income
Bank of Jilin	₩ 62,533,816	₩ 58,823,646	₩ 3,710,170	₩ 1,401,157	₩ 484,330	₩ 344,357	₩ 20,006
Hana Equity Partners I. L.P	71,568	16,224	55,344	1,102	7,553	(17,555)	-
Korea Credit Bureau Co., Ltd	75,504	19,323	56,181	68,750	3,580	3,580	149
Darby Hana Infrastructure Fund Management ("DHIF")	14,423	1,884	12,539	6,189	2,213	2,213	59
CM International financing leases	5,713,627	4,909,370	804,257	358,637	57,835	57,835	13,019
Beijing Langzi Asset Management	416,310	235,856	180,454	23,843	16,884	16,884	-
Somesevit Corporation	82,400	128,244	(45,844)	10,498	(2,224)	(2,224)	-
Midan City Development Co., Ltd.	664,251	683,621	(19,370)	71,448	615	615	-
Masan Marine New Town Co., Ltd.	134,980	133,974	1,006	402	-	-	-
Company K Startup winwin fund	41,025	525	40,500	3,828	3,012	3,641	-
Darby Latin American Private Debt Fund III	14,258	1,934	12,324	-	(1,871)	(1,871)	-
Darby Latin American Private Debt Fund IIIA	2,508	333	2,175	-	(333)	(333)	-
BSK-6 Patent Technology Investment Association	4,505	79	4,426	6	(74)	(74)	-
KEB Mirae Asset First Securitization Specialty LC.	7,388	12,587	(5,199)	737	(4,082)	(4,082)	-
KEB Mirae Asset Second Securitization Specialty LC.	3,234	9,136	(5,902)	2,261	(405)	(405)	-
PT Sinarmas Hana Finance	39,420	29,511	9,909	6,249	(1,196)	(1,769)	-

21.3 Changes in the investment in an associate for the year ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018										
						Equity method valuation					
Classification	Owner Ship (%)	Beginning balance	Acquisition, and others	Dividend	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩ 644,252	₩ -	₩ -	₩ 644,252	₩ 19,522	₩ -	₩ 30,835	₩ -	₩ -	₩ 694,609
Hana First Private Equity Fund	29.97	16,586	-	-	16,586	(4,658)	-	-	-	(6,647)	5,281
Korea Credit Bureau Co., Ltd.	9.00	5,601	-	(113)	5,488	997	-	-	-	-	6,485
Darby Hana Infrastructure Fund Management	9.90	1,242	-	(79)	1,163	319	-	-	-	-	1,482
CM International financing leases	25.00	201,064	-	-	201,064	2,135	-	(1,026)	-	-	202,173
Beijing Langzi Asset Management	17.70	45,113	-	(1,690)	43,423	4,070	-	(42)	-	(1,193)	46,258
Somesevit Corporation	1.92	-	-	-	-	-	-	-	-	-	-
Midan City Development Co., Ltd.	2.17	-	-	-	-	-	-	-	-	-	-
Masan Marine New Town Co., Ltd.	10.00	101	-	-	101	-	-	-	-	-	101
Company K startup winwin fund	23.80	9,643	-	-	9,643	(756)	-	234	-	(2,190)	6,931
Darby Latin American Private Debt Fund III	-	6,770	-	-	6,770	(103)	-	-	-	(6,667)	-
Darby Latin American Private Debt Fund IIIA	-	1,045	-	-	1,045	4	-	-	-	(1,049)	-
BSK-6 Patent Technology Investment Association	20.00	885	-	-	885	(72)	-	-	-	-	813
Fidelis Private Equity Fund No.2	29.70	-	3,000	(342)	2,658	347	-	-	-	-	3,005
Koramco Professional Investment Type Real Estate No.73	25.76	-	1,700	-	1,700	(17)	-	-	-	-	1,683
Koramco Professional Investment Type Real Estate No.87	21.13	-	1,500	-	1,500	-	-	-	-	-	1,500
KEB Mirae Asset First Securitization Specialty LC.	-	-	-	-	-	-	-	-	-	-	-
KEB Mirae Asset Second Securitization Specialty LC	-	-	-	-	-	-	-	-	-	-	-
KEB Hana-KVIC Unicorn Fund of Funds	90.90	-	1,000	-	1,000	(143)	-	-	-	-	857
Ourcrowd international invest Co., Ltd.	22.19	-	14,049	-	14,049	-	-	-	-	-	14,049
PT Sinarmas Hana Finance	30.00	3,253	-	-	3,253	41	-	-	(176)	-	3,118
		₩ 935,555	₩ 21,249	₩ (2,224)	₩ 954,580	₩ 21,686	₩ -	₩ 30,001	₩ (176)	₩ (17,746)	₩ 988,345

21.3 Changes in the investment in an associate for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

	2017										
						Equity method valuation					
Classification	Owner ship (%)	Beginning balance	Acquisition and others	Dividends	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩ 639,369	₩ -	₩ (20,006)	₩ 619,363	₩ 82,241	₩ -	₩ (57,352)	₩ -	₩ -	₩ 644,252
Hana First Private Equity Fund	29.97	23,812	-	-	23,812	2,263	-	(7,524)	-	(1,965)	16,586
Korea Credit Bureau Co., Ltd.	9.00	5,398	-	(149)	5,249	352	-	-	-	-	5,601
Darby Hana Infrastructure Fund Management	9.90	1,084	-	(59)	1,025	217	-	-	-	-	1,242
CM International financing leases	25.00	211,928	-	(13,019)	198,909	14,459	-	(12,304)	-	-	201,064
Beijing Langzi Asset Management	25.00	-	41,801	-	41,801	4,200	-	(888)	-	-	45,113
Somesevit Corporation	1.92	-	-	-	-	-	-	-	-	-	-
Midan City Development Co., Ltd.	2.17	226	-	-	226	-	(226)	-	-	-	-
Masan Marine New Town Co., Ltd.	10.00	101	-	-	101	-	-	-	-	-	101
Company KStartup winwin fund	23.81	9,585	-	-	9,585	719	-	39	-	(700)	9,643
Darby Latin American Private Debt Fund III	24.99	-	7,621	-	7,621	(606)	-	(245)	-	-	6,770
Darby Latin American Private Debt Fund IIIA	24.97	-	1,190	-	1,190	(107)	-	(38)	-	-	1.045
BSK-6 Patent Technology Investment Association	20.00	-	900	-	900	(15)	-	-	-	-	895
KEB Mirae Asset First Securitization Specialty LC.	40.00	-	-	-	-	-	-	-	-	-	-
KEB Mirae Asset Second Securitization Specialty LC..	45.00	-	-	-	-	-	-	-	-	-	-
PT Sinarmas Hana Finance	30.00	3,832	-	-	3,832	(258)	-	-	(321)	-	3,253
		₩ 895,335	₩ 51,512	₩ (33,233)	₩ 913,614	₩ 103,465	₩ (226)	₩ (78,312)	₩ (321)	₩ (2,665)	₩ 935,555

21.4 The Company discontinued recognizing its losses in shares since the balance of investments in associates was "0" and the losses which are accumulated for the current year and before the current year are as follows (Korean won in millions):

Company	December 31, 2018	
	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (13)	₩ (893)
Midan City Development Co., Ltd.	(103)	(523)
	₩ (116)	₩ (1,416)

Company	December 31, 2017	
	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (42)	₩ (880)
Midan City Development Co., Ltd.	(420)	(420)
KEB Mirae Asset First Securitization Specialty LC.	(1,630)	(2,080)
KEB Mirae Asset Second Securitization Specialty LC.	(453)	(2,656)
	₩ (2,545)	₩ (6,036)

21.5 Details of adjustments from net assets of associates to carrying values of shares thereof as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018				
	Net assets	Ownership (%)	Share of net assets	Goodwill, Etc. (*).	Carrying value
Bank of Jilin	₩ 4,007,465	16.98	₩ 680,483	₩ 14,126	₩ 694,609
Hana First Private Equity Fund	17,620	29.97	5,281	-	5,281
Korea Credit Bureau	66,009	9.00	5,941	544	6,485
Darby Hana Infrastructure Fund Management	14,964	9.90	1,482	-	1,482
CM International financing leases	808,693	25.00	202,173	-	202,173
Beijing Langzi Asset Management	261,357	17.70	46,258	-	46,258
Somesevit Corporation	(46,499)	1.92	(893)	893	-
Midan City Development Co., Ltd.	(24,102)	2.17	(523)	523	-
Masan Marine New Town Co., Ltd.	1,008	10.00	101	-	101
Company K startup winwin fund	29,110	23.80	6,931	-	6,931
BSK-6 Patent Technology Investment Association	4,065	20.00	813	-	813
Fidelis Private Equity Fund No.2	10,119	29.70	3,005	-	3,005
Koramco Professional Investment Type Real Estate No.73	6,433	25.76	1,657	26	1,683
Koramco Professional Investment Type Real Estate No.87	7,100	21.13	1,500	-	1,500
KEB Hana-KVIC Unicorn Fund of Funds	943	90.90	857	-	857
Ourcrowd international invest Co., Ltd.	50,700	22.19	11,250	2,799	14,049
PT Sinarmas Hana Finance	10,286	30.00	3,086	32	3,118

21.5 Details of adjustments from net assets of associates to carrying values of shares thereof as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd):

	December 31, 2017				
Classification	Net assets	Ownership (%)	Share of net assets	Goodwill, etc. (*).	Carrying value
Bank of Jilin	₩ 3,710,170	16.98	₩ 629,987	₩ 14,265	₩ 644,252
Hana First Private Equity Fund	55,344	29.97	16,586	-	16,586
Korea Credit Bureau	56,181	9.00	5,056	545	5,601
Darby Hana Infrastructure Fund Management	12,539	9.90	1,242	-	1,242
CM International financing leases	804,257	25.00	201,064	-	201,064
Beijing Langzi Asset Management	180,454	25.00	45,113	-	45,113
Somesevit Corporation	(45,844)	1.92	(880)	880	-
Midan City Development Co., Ltd.	(19,370)	2.17	(420)	420	-
Masan Marine New Town Co., Ltd.	1,006	10.00	101	-	101
Company K startup winwin fund	40,500	23.81	9,643	-	9,643
Darby Latin American Private Debt Fund III	12,324	24.99	3,080	3,690	6,770
Darby Latin American Private Debt Fund IIIA	2,175	24.97	543	502	1,045
BSK-6 Patent Technology Investment Association	4,426	20.00	885	-	885
KEB Mirae Asset First Securitization Specialty LC.	(7,617)	40.00	(3,047)	3,047	-
KEB Mirae Asset Second Securitization Specialty LC.	(6,715)	45.00	(3,022)	3,022	-
PT Sinarmas Hana Finance	10,662	30.00	3,199	54	3,253

(*) Others include fair value adjustments incurred at acquisition of equity shares and unrecognized accumulated loss due to discontinuance of equity method as the investment balance became zero.

22. Property and equipment

22.1 Property and equipment as of December 31, 2018 and 2017 consist of the following (Korean won in millions):

	December 31, 2018			
	Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩ 925,512	₩ -	₩ -	₩ 925,512
Buildings	885,197	(259,954)	-	625,243
Leasehold improvements	377,835	(295,994)	-	81,841
Equipment and vehicles	872,545	(742,486)	-	130,059
Construction in progress	29,393	-	-	29,393
Others	69,574	-	-	69,574
	₩ 3,160,056	₩ (1,298,434)	₩ -	₩ 1,861,622

	December 31, 2017			
	Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩ 854,024	₩ -	₩ -	₩ 854,024
Buildings	733,257	(256,415)	(34)	476,808
Leasehold improvements	386,973	(311,678)	(62)	75,233
Equipment and vehicles	901,859	(757,935)	-	143,924
Construction in progress	15,555	-	-	15,555
Others	69,808	-	-	69,808
	₩ 2,961,476	₩ (1,326,028)	₩ (96)	₩ 1,635,352

22.2 Changes in property and equipment for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018						
Classification	January 1	Additions	Disposal	Depreciation	Transfer out	Others	December 31
Land	₩ 854,024	₩ 1,477	₩ (26,264)	₩ -	₩ 96,233	₩ 42	₩ 925,512
Buildings	476,807	20,310	(6,431)	(21,272)	153,669	2,160	625,243
Leasehold improvements	75,233	36,613	(3,781)	(26,702)	20	458	81,841
Equipment and vehicles	143,924	62,788	(4,467)	(70,299)	16	(1,903)	130,059
Construction in progress	15,555	16,165	-	-	(2,266)	(61)	29,393
Others	69,809	-	(235)	-	-	-	69,574
	₩ 1,635,352	₩ 137,353	₩ (41,178)	₩ (118,273)	₩ 247,672	₩ 696	₩ 1,861,622

	2017						
Classification	January 1	Additions	Disposal	Depreciation	Transfer out	Others	December 31
Land	₩ 1,353,181	₩ -	₩ (71,814)	₩ -	₩ (427,280)	₩ (63)	₩ 854,024
Buildings	562,315	25,337	(25,553)	(19,249)	(62,281)	(3,761)	476,808
Leasehold improvements	74,649	22,928	(3,588)	(25,614)	1,922	4,936	75,233
Equipment and vehicles	147,667	71,531	(9,686)	(77,657)	1,128	10,941	143,924
Construction in progress	91,664	145,249	-	-	(221,357)	(1)	15,555
Others	71,796	-	(1,988)	-	-	-	69,808
	₩ 2,301,272	₩ 265,045	₩ (112,629)	₩ (122,520)	₩ (707,868)	₩ 12,052	₩ 1,635,352

23. Investment properties

23.1 Details of investment property as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018			
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩ 359,470	₩ -	₩ (2)	₩ 359,468
Buildings	264,289	(95,444)	(645)	168,200
	₩ 623,759	₩ (95,444)	₩ (647)	₩ 527,668

Classification	December 31, 2017			
	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩ 455,703	₩ -	₩ (2)	₩ 455,701
Buildings	404,516	(73,418)	(645)	330,453
	₩ 860,219	₩ (73,418)	₩ (647)	₩ 786,154

23.2 Changes in investment property for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018			
Classification	January 1	Depreciation	Transfer (*)	December 31
Land	₩ 455,701	₩ -	₩ (96,233)	₩ 359,468
Buildings	330,453	(10,814)	(151,439)	168,200
	₩ 786,154	₩ (10,814)	₩ (247,672)	₩ 527,668

	2017				
Classification	January 1	Depreciation	Transfer (*)	Others	December 31
Land	₩ 415,342	₩ -	₩ 40,359	₩ -	₩ 455,701
Buildings	139,891	(9,302)	201,470	(1,606)	330,453
	₩ 555,233	₩ (9,302)	₩ 241,829	₩ (1,606)	₩ 786,154

(*) The amount represents the change in the carrying amount of investment properties held by the Company due to the change in the ratio of lease occupancy.

23.3 Details of investment property, fair value and valuation technique as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Fair value (*)		Valuation technique	Inputs
	December 31, 2018	December 31, 2017		
Land	₩ 365,038	₩ 381,840	Appraised value of land	Appraised value of land
Buildings	471,785	562,529	Estimates based on cost method	Refinancing cost
	₩ 836,823	₩ 944,369		

(*) The fair value of investment property is classified as Level 3 of fair value hierarchy.

23.4 Rental income and operating expenses arising from the Company's investment properties for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018		2017	
Rental income	₩	16,978	₩	11,582
Operating cost directly related to Investment property that generate rental income		604		639

24. Intangible assets

24.1 Intangible assets as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018			
Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ -	₩ -	₩ 892
Industrial proprietary rights	1,604	(825)	-	779
Core deposits	4,980	(1,545)	-	3,435
Software	190,460	(133,848)	-	56,612
Systems development costs	775,420	(653,243)	-	122,177
Memberships	21,555	-	(3,198)	18,357
Others	183,117	(99,478)	(29)	83,610
	₩ 1,178,028	₩ (888,939)	₩ (3,227)	₩ 285,862

	December 31, 2017			
Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ -	₩ -	₩ 892
Industrial proprietary rights	1,260	(593)	-	667
Core deposits	4,980	(1,545)	-	3,435
Software	168,382	(116,596)	-	51,786
Systems development costs	733,581	(612,399)	-	121,182
Memberships	20,642	-	(1,725)	18,917
Others	135,669	(89,842)	(29)	45,798
	₩ 1,065,406	₩ (820,975)	₩ (1,754)	₩ 242,677

24.2 Changes in the carrying amount of intangible assets for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018					
Classification	January 1	Acquisition	Disposal	Amortization	Others	December 31
Goodwill	₩ 892	₩ -	₩ -	₩ -	₩ -	₩ 892
Industrial proprietary rights	667	344	-	(232)	-	779
Core deposits	3,435	-	-	-	-	3,435
Software	51,786	22,130	(186)	(17,134)	16	56,612
Systems development costs	121,182	42,073	(178)	(40,973)	73	122,177
Memberships	18,917	-	(533)	-	(27)	18,357
Others	45,798	55,212	-	(16,228)	(1,172)	83,610
	₩ 242,677	₩ 119,759	₩ (897)	₩ (74,567)	₩ (1,110)	₩ 285,862

	2017					
Classification	January 1	Acquisition	Disposal	Amortization	Others	December 31
Goodwill	₩ 892	₩ -	₩ -	₩ -	₩ -	₩ 892
Industrial proprietary rights	616	242	-	(191)	-	667
Core deposits	3,753	-	-	-	(318)	3,435
Software	45,646	21,595	(11)	(15,491)	47	51,786
Systems development costs	122,131	40,482	(566)	(40,704)	(161)	121,182
Memberships	22,691	478	(2,569)	(27)	(1,656)	18,917
Others	38,921	26,121	(4,240)	(15,451)	447	45,798
	₩ 234,650	88,918	(7,386)	(71,864)	(1,641)	242,677

25. Non-current assets held for sale

25-1 Details of non-current assets held-for-sale as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		December 31, 2018		December 31, 2017
Acquisition cost (*)	₩	466,117	₩	457,699
Accumulated impairment loss		-		-
Book value	₩	466,117	₩	457,699
Net fair value	₩	709,802	₩	712,219

(*) Acquisition cost is presented as net of accumulated depreciation before classification as non-current assets held-for-sale.

Non-current assets held-for-sale are composed of 23 collaterals acquired for the purpose of repayment of loans and one office building located in Myeong dong, which the Bank uses as its head office. These are classified as a non-current assets held-for-sale based on the management's decision to sell them, and the sale is in progress.

25.2 Details of valuation techniques and inputs for measuring fair values of non-current assets held for sale and inputs used in measurement as of December 31, 2018 are as follows (Korean won in millions):

	Fair value					
Classification		December 31, 2018		December 31, 2017	Valuation technique	Input
Land and buildings	₩	709,802	₩	712,219	Estimates based on cost method	Appraised value of land, refinancing cost

The fair value of non-current assets held for sale located in Myeong-dong, which the Company used as the head office, is ₩628,357 million as of December 31, 2018.

Real estate property in non–current assets held for sale are measured by an independent evaluator with expertise and experience in assessing similar properties recently in the area in which the property being assessed is located. All held-to-maturity assets are classified as level 3 of fair value hierarchy.

26. Other assets and merchant banking account assets

26.1 Details of other assets as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Guarantee deposits paid	₩ 838,445	₩ 942,744
Accounts receivable	6,101,995	6,264,124
Accrued income	975,227	875,835
Prepaid expenses	119,206	100,268
Suspense payments	43,072	22,945
Expenditures	1,594	846
Deposit money to court	9,415	8,196
Domestic exchange settlement debit	3,221,584	1,500,004
Other miscellaneous assets	39,740	29,697
Allowance for possible loan losses for other assets	(9,654)	(10,713)
	₩ 11,340,624	₩ 9,733,946

26.2 Changes in the allowance for possible losses for the year ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018	2017
Beginning balance	₩ 10,883	₩ 14,193
Write-offs	(1,514)	(3,989)
Provision of allowance of possible losses	276	408
Collection of loans written-off in prior period	1,586	697
Disposal of non-performing loans	(140)	-
Interest income on impaired assets	(16)	(14)
Exchange rate fluctuation and others	(1,421)	(582)
Ending balance	₩ 9,654	₩ 10,713

26.3 Details of merchant banking account assets as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		December 31, 2018
On-balance-sheet items:		
Merchant banking account-loans measured at FVTPL (KIFRS 1109)	₩	3,995
Merchant banking account-debt securities measured at FVTPL (KIFRS 1109)		1,938,409
CMA assets:		
Loans measured at FVTPL (KIFRS 1109)		-
Debt securities measured at FVTPL (KIFRS 1109)		997,868
		997,868
Allowance for possible loan losses		-
	₩	2,940,272
Off-balance-sheet items:		
Commitment	₩	1,199,000

Classification		December 31, 2017
On-balance-sheet items:		
Merchant banking account loans	₩	4,000
Merchant banking account trading bonds		2,602,903
CMA assets:		
Loans		-
Trading bonds		359,121
		359,121
Allowance for possible loan losses		(5)
	₩	2,966,019
Off-balance-sheet items:		
Commitment	₩	1,021,000

27. Deposits

27-1 Deposit liabilities as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018		December 31, 2017	
Demand deposits				
Demand deposits in Korean won	₩	9,975,626	₩	9,163,654
Demand deposits in foreign currency		19,653,200		22,402,354
		29,628,826		31,566,008
Time and savings deposits				
Time and savings deposits in Korean won		196,769,035		182,682,083
Time and savings deposits in foreign currency		14,322,469		12,778,517
		211,091,504		195,460,600
Certificate of deposits		6,034,529		3,383,886
	₩	246,754,859	₩	230,410,494

27-2 Classification of deposits by customers as Of December 31, 2018 and 2017 are listed as follows (Korean won in millions):

Classification	December 31, 2018		December 31, 2017	
Individuals	₩	85,715,378	₩	84,503,385
Corporations		78,362,146		72,708,564
Other banks		15,248,359		14,094,524
Public institutions		7,356,481		6,476,320
Other financial institutions		36,823,922		29,946,173
Government		6,897,317		5,834,251
Non–profit corporations		9,961,789		9,701,953
Foreign corporations		1,807,199		2,094,367
Others		4,582,268		5,050,957
	₩	246,754,859	₩	230,410,494

28. Financial liabilities at FVTPL (KIFRS 1039)

28.1 Details of financial liabilities held-for-trading as of December 31, 2017 are as follows (Korean won in millions):

Classification		December 31, 2017
Derivative liabilities held-for-trading	₩	6,413,932

28.2 In order to eliminate or significantly reduce the inconsistencies between the recognized and measured amounts, the financial liabilities designated at FVTPL has been categorized accordingly. Details of financial liabilities at FVTPL as of December 31, 2017 are as follows (Korean won in millions):

Classification		December 31, 2017
Deposits	₩	425,627

Differences between the book value and maturity amount of the financial liabilities designated at FVTPL as of December 31, 2017 are as follows (Korean won in millions):

Classification		December 31, 2017
Book value		425,627
Maturity amount		450,000
Difference	₩	(24,373)

29. Financial liabilities at fair value through profit or loss (KIFRS 1109)

29.1 As of December 31, 2018, details of financial liabilities measured at FVTPL are as follows (Korean won in millions):

Classification		December 31, 2018
Derivative liabilities held-for-trading	₩	3,089,884

29.2 As of December 31, 2018, details of financial liabilities designated as measured at FVTPL are as follows (Korean won in millions):

Classification		December 31, 2018
Deposits	₩	500,692

Financial liabilities are measured at FVTPL in order to eliminate or significantly reduce a measurement or recognition inconsistency.

29.3 Difference between the book value and maturity amount of the financial liabilities designated as measured at fair value through profit or loss as of December 31, 2018 are as follows (Korean won in millions):

Classification		December 31, 2018
Book value		500,692
Maturity amount		510,000
Difference	₩	(9,308)

30. Borrowings

Borrowings as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Lender	Annual interest rate (%)		December 31, 2018		December 31, 2017
Borrowings in Korean won						
BOK borrowings	BOK	0.50~0.75	₩	1,315,139	₩	1,606,722
Government borrowings	Korea Finance Corporation (KoFC), etc.	0.50~2.49		1,376,437		1,456,174
Other borrowings	Korea Energy Management Corporation, etc.	0.00~3.90		2,379,337		1,865,685
				5,070,913		4,928,581
Borrowings denominated in foreign currencies						
Bank overdrafts	Foreign banks, etc.	0.01~16.28		308,313		586,941
Other borrowings	JP Morgan bank, etc.	-0.27~12.00		8,773,902		5,771,681
				9,082,215		6,358,622
Call money						
Call money in Korean won	-	-		-		174,000
Call money in foreign currencies	The Export-Import Bank of Korea, etc.	-0.30~7.60		629,350		2,006,567
				629,350		2,180,567
Bonds sold under repurchase agreements						
Bonds sold under repurchase agreements in Korean won	SUGAYAYOSHIKO, etc.	-		220		220
Bonds sold under repurchase agreements in foreign currencies	ING Bank	2.72~3.26		449,708		251,770
				449,928		251,990
Others						
Bills sold	General customers	0.00~1.63		48,564		54,742
			₩	15,280,970	₩	13,774,502

31. Debentures

Debentures as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	Lenders	Annual interest rate (%)	December 31, 2018	December 31, 2017
Debentures in Korean won				
Debentures	Institutions	1.33~3.15	₩ 14,410,000	₩ 13,730,000
Subordinated debentures	Institutions and general customers	2.45~8.00	4,780,500	4,480,697
Net gain (loss) on fair value hedges (current period)			102	-
Less present value discount			(23,916)	(35,941)
			19,166,686	18,174,756
Debentures in foreign currencies				
Debentures	Institutions	1.75~4.75	4,551,084	3,281,291
Subordinated debentures	Institutions	4.25~9.95	991,019	884,215
Net gain (loss) on fair value hedges (current period)			(14,576)	624
Net gain (loss) on fair value hedges (previous periods)			(13,996)	(15,331)
Less present value discount			(11,604)	(13,818)
			5,501,927	4,136,981
			₩ 24,668,613	₩ 22,311,737

32. Net defined benefit liability (Assets)

32.1 Details of net defined benefit liability (Assets)

Details of net defined benefit liability as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Present value of defined benefit obligation deposited to plan assets	₩ 1,650,155	₩ 1,358,685
Fair value of plan assets	(1,511,664)	(1,398,060)
Net defined benefit liability	138,491	5,170
Net defined benefit asset	-	(44,545)

32.2 Defined benefit obligations

32.2.1 Changes in present value of defined benefit obligation

Changes in present value of defined benefit obligation for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018		2017	
Beginning balance	₩	1,358,685	₩	1,305,234
Current service cost		127,421		131,574
Past service cost		80,216		3,649
Interest cost		35,815		31,302
Remeasurements of the net defined benefit liability		118,192		(50,151)
Benefits paid		(66,681)		(64,697)
Changes due to transference between affiliates		(2,197)		3,193
Others		(1,296)		(1,419)
Ending Balance	₩	1,650,155	₩	1,358,685

32.2.2 Total costs recognized in accordance to defined benefit plans

Total costs incurred in relation to defined benefit pension plans for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018		2017	
Current service cost	₩	127,421	₩	131,574
Past service cost		80,216		3,649
Interest cost		35,815		31,302
Interest income on plan assets		(34,895)		(28,495)
Actuarial losses		(718)		(927)
	₩	207,839	₩	137,103

32.2.3 Weighted average duration of defined benefit obligation as of December 31, 2018 and 2017 is 10.17 years and 8.14 years, respectively.

32.3 Actuarial assumptions

32.3.1 Principal assumptions for actuarial valuation method as of December 31, 2018 and 2017 are as follows:

	2018	
	Rate (%)	Content
Demographic assumptions		
Death rate	0.005~0.073	Korea Insurance Development Institute
Retirement rate	4.10	
Financial assumptions		
Wage growth rate	5.40	Average of past 5 years
Discounting rate	2.30	Return rate of AAA corporate bond

	2017	
	Rate (%)	Content
Demographic assumptions		
Death rate	0.004~0.080	Korea Insurance Development Institute
Retirement rate	7.30	
Financial assumptions		
Wage growth rate	5.50	Average of past 5 years
Discounting rate	2.80	Return rate of AAA corporate bond

32.3.2 Present values of defined benefit liability based on the changes in the principal actuarial assumptions as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018		
	Present value of defined benefit liability	Increase by 1%	Decrease by 1%
Discounting rate	₩ 1,650,155	₩ 1,473,930	₩ 1,798,091
Wage growth rate	1,650,155	1,791,547	1,476,172

	2017		
	Present value of defined benefit liability	Increase by 1%	Decrease by 1%
Discounting rate	₩ 1,358,685	₩ 1,246,341	₩ 1,459,553
Wage growth rate	1,358,685	1,455,814	1,247,446

32.4 Plan assets

32.4.1 Details of changes in the value of plan assets

Changes in the fair value of plan assets for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		December 31, 2018		December 31, 2017
Beginning balance	₩	1,398,060	₩	1,261,246
Employer contributions		154,218		175,325
Interest income on plan assets		34,895		28,495
Remeasurements of the net defined benefit liability		(12,201)		(9,030)
Benefit provided		(62,982)		(60,784)
Changes due to transference between affiliates		(328)		2,808
Others		2		-
Ending Balance	₩	1,511,664	₩	1,398,060

32.4.2 Details of plan assets

Details of plan assets as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018					
	Active market existing		Active market not existing		Total	
Time deposits	₩	-	₩	1,423,964	₩	1,423,964
Others		-		87,700		87,700
	₩	-	₩	1,511,664	₩	1,511,664

	December 31, 2017					
	Active market existing		Active market not existing		Total	
Time deposits	₩	-	₩	1,296,885	₩	1,296,885
Others		-		101,175		101,175
	₩	-	₩	1,398,060	₩	1,398,060

32.4.3 The Company expects to contribute ₩138,590 million in 2019, in relation to the defined benefit plan.

32.5 Remeasurements of the net defined benefit liability

Remeasurements of the net defined benefit liability as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018	2017
Actuarial gains and losses		
Effects on changing financial assumptions	₩ (72,370)	₩ 33,232
Effects on changing demographic Assumptions	(27,714)	5,922
Others	(18,108)	10,997
	(118,192)	50,151
The return on plan assets		
The actual return on plan assets	25,110	21,475
The amount included in net interest of net defined benefit liability	(37,311)	(30,505)
	(12,201)	(9,030)
	₩ (130,393)	₩ 41,121

33. Contingent liabilities, agreements, and provisions

33.1 Details of provisions as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Allowance for possible losses on acceptances and guarantees:		
Financial acceptances and guarantees (*)	₩ 260	₩ 765
Non–financial acceptances and guarantees	66,720	84,294
Bills endorsed	75	165
	67,055	85,224
Allowances for unused commitments	59,690	58,995
Other allowance:		
Allowances for asset retirement obligation	64,211	55,071
Allowance for lawsuits	6,868	69,110
Others	37,363	18,559
	108,442	142,740
	₩ 235,187	₩ 286,959

(*) The Company recognizes the amount exceeding the unamortized amount of the initial fair value at subsequent measurement of the financial guarantee contract as provisions for guarantees. The Company recognizes the unamortized amount as financial guarantee contract liabilities in the amount of ₩13,603 million and ₩13,867 million as of December 31, 2018 and 2017, respectively.

33.2 Changes in unused commitments for the year ended December 31, 2018 are as follows (Korean won in millions):

Classification	2018			
	Unused commitments			
	12 month expected credit loss	Lifetime expected credit losses		
		Non credit-impaired loan	Credit-impaired loan	Total
January 1, 2018	₩ 28,883	₩ 20,000	₩ 15,703	₩ 64,586
Transfer to 12-month expected credit loss	1,602	(1,589)	(13)	-
Transfer to non credit-impaired loan	(942)	5,316	(4,374)	-
Transfer to credit-impaired loan	(15)	(10)	25	-
Provision (reversal)	(1,922)	(4,881)	1,903	(4,900)
Exchange rate fluctuation	16	(12)	-	4
December 31, 2018	₩ 27,622	₩ 18,824	₩ 13,244	₩ 59,690

33.3 Changes in financial acceptances and guarantees for year ended December 31, 2018 are as follows (Korean won in millions):

Classification	2018			
	Financial acceptances and guarantees			
		Lifetime expected credit losses		
	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Total
January 1, 2018	₩ 408	₩ 69	₩ -	₩ 477
Transfer to 12-month expected credit loss	2	(2)	-	-
Transfer to non credit-impaired loan	(9)	9	-	-
Transfer to credit-impaired loan	-	-	-	-
Reversal	(188)	(56)	-	(244)
Exchange rate fluctuation	24	3	-	27
December 31, 2018	₩ 237	₩ 23	₩ -	₩ 260

33.4 Changes in other provisions for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018				
Classification	January 1	Provision (reversal)	Use	Other	December 31
Non–financial acceptances and guarantees	₩ 79,595	₩ (14,941)	₩ -	₩ 2,141	₩ 66,795
Other allowance:					
Allowances for asset retirement obligation	55,071	6,103	(3,220)	6,257	64,211
Allowance for lawsuits	69,110	(62,263)	-	21	6,868
Others	18,559	26,285	(8,604)	1,123	37,363
	142,740	(29,875)	(11,824)	7,401	108,442
	₩ 222,335	₩ (44,816)	₩ (11,824)	₩ 9,542	₩ 175,237

	2017				
Classification	January 1	Provision (reversal)	Use	Other	December 31
Allowance for possible losses on acceptances and guarantees	₩ 82,922	₩ 9,405	₩ -	₩ (7,103)	₩ 85,224
Allowances for unused commitments	70,429	(11,088)	-	(346)	58,995
Other allowance:					
Allowances for asset retirement obligation	52,619	5,905	(9,164)	5,711	55,071
Allowance for lawsuits	95,446	(23,675)	(2,712)	51	69,110
Others	8,233	14,450	(3,667)	(457)	18,559
	156,298	(3,320)	(15,543)	5,305	142,740
	₩ 309,649	₩ (5,003)	₩ (15,543)	₩ (2,144)	₩ 286,959

33.5 Details of guarantees as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Financial guarantees in Korean won:		
Collateral for loans	₩ 97,079	₩ 99,940
Purchasing loans	328,152	488,563
	425,231	588,503
Financial guarantees in foreign currencies:		
Local financial acceptances and guarantees	76,462	96,441
Confirmed acceptance and guarantees in Korean won	1,578,011	1,634,495
Confirmed acceptance and guarantees in foreign currencies:		
Acceptance on letter of credit	924,390	835,516
Acceptance on letter of guarantees	106,636	119,910
Others	9,108,738	9,928,841
	10,139,764	10,884,267
Contingent acceptance and guarantees:		
Letters of credit	3,495,006	3,281,199
Others	642,324	382,479
	4,137,330	3,663,678
Bills endorsed	24,878	47,169
	₩ 16,381,676	₩ 16,914,553

33.6 Commitments

Details of unused commitments as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018		December 31, 2017	
Commitments on loans in Korean won	₩	56,868,640	₩	41,949,132
Commitments on loans in foreign currencies		21,342,457		19,242,684
Commitments on credit lines on asset–backed securities		881,283		1,395,428
Commitments on purchase of securities		1,859,348		1,331,547
	₩	80,951,728	₩	63,918,791

33.7 Lawsuits

As of December 31, 2018, the Company is involved in 352 lawsuits as a plaintiff and 143 lawsuits as a defendant. The aggregate amounts of claims as plaintiff and defendant are ₩425,969 million and ₩174,344 million, respectively. The Company's major lawsuits in progress as a defendant are summarized as follows (Korean won in millions):

			Status of lawsuit		
Plaintiff	Amount		First trial	On appeal	Content
F********Bankruptcy administrator	₩	37,560	In-progress	-	Return of an illicit gain
**** Securities Co., Ltd.,		37,136	In-progress	-	Compensation for damages
**** Investments Co., Ltd.		16,798	In-progress	-	Compensation for damages

34. Other liabilities and merchant banking account liabilities

34.1 Details of other liabilities as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Borrowing from trust accounts	₩ 5,984,610	₩ 4,690,383
Foreign exchanges settlement credits	494,080	303,576
Domestic exchange settlement credits	3,719,241	4,307,177
Accounts payables	6,500,410	6,791,099
Accrued expenses payables	1,995,654	1,417,404
Income in advance	67,544	57,095
Deferred income	337	627
Deposits for letter of guarantees and others	332,626	1,037,823
Suspense receipt	268,626	320,643
Withholding taxes	73,684	103,250
Security deposits received	207,312	123,108
Accounts for agency businesses	269,884	158,583
Liability incurred by agency relationship	2,248,377	1,918,483
Financial acceptance and guarantees	13,603	13,867
Other liabilities	17,247	19,957
	₩ 22,193,235	₩ 21,263,075

34.2 Details of merchant banking account liabilities as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Merchant banking account deposits	₩ 2,338,924	₩ 2,017,718
Others		
Provision for unused commitments	-	99
Other liabilities (*)	459	529
	459	628
	₩ 2,339,383	₩ 2,018,346

(*) Including accrued expenses, unearned income and others.

35. Capital stock and other paid-in capital

35.1 Issued capital as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018		December 31, 2017	
Number of shares authorized		2,000,000,000		2,000,000,000
Par value per share (Korean won)	₩	5,000	₩	5,000
Number of shares issued		1,071,915,717		1,071,915,717
Common stock	₩	5,359,578	₩	5,359,578

35.2 Other paid-in capital as of December 31, 2018 and 2017 are as follows (Korea won in millions):

Classification	December 31, 2018		December 31, 2017	
Capital surplus (*1)	₩	9,670,357	₩	9,668,863
Hybrid securities (*2)		179,737		179,737
Capital adjustments				
Stock option		(9,638)		(10,367)
Others		(32,257)		(32,257)
		(41,895)		(42,624)
	₩	9,808,199	₩	9,805,976

(*1) The amount recognized as other capital surplus as of December 31, 2018 consists of the amount recognized for business combinations under common control and stock options that are not exercised and recognized as capital adjustments.

(*2) There is expiry date of hybrid securities but the Company has the right to continuously extend the maturity and accordingly, the requirements for capital are fulfilled.

36. Accumulated other comprehensive income

Changes in accumulated other comprehensive income for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018					
Classification	January 1	Increase and decrease	Transfer of retained earnings	Reclassification (*)	Tax effects	December 31
Gain (loss) on valuation of Financial assets measured at FVOCI	₩ (474,274)	₩ 465,499	₩ 24,697	₩ (1,184)	₩ (136,078)	₩ (121,340)
Changes in equities of investments in associates	(81,977)	30,284	-	-	(8,328)	(60,021)
Gain (loss) on valuation of net investment hedges of foreign operations	12,712	(12,343)	-	-	3,394	3,763
Exchange differences on translation of foreign operations	(341,805)	(7,733)	-	-	(5,513)	(355,051)
Gain on valuation of fair value hedges	-	(9,340)	-	-	2,569	(6,771)
Remeasurement of the net defined benefit plan	(237,291)	(130,537)	537	-	35,898	(331,393)
	₩ (1,122,635)	₩ 335,830	₩ 25,234	₩ (1,184)	₩ (108,058)	₩ (870,813)

(*) Gain (loss) on valuation of financial assets measured at FVOCI recognized as accumulated other comprehensive income is reclassified due to disposal of financial assets measured at FVOCI.

36. Accumulated other comprehensive income (cont'd)

	2017									
Classification		January 1		Increase and decrease		Reclassification (*)		Tax effects		December 31
Gain (loss) on valuation of available-for-sale financial assets	₩	81,004	₩	57,506	₩	(318,331)	₩	80,652	₩	(99,169)
Exchange differences on translation of foreign operations		(147,442)		(209,528)		-		15,165		(341,805)
Changes in equities of investments in associates		(30,709)		(78,317)		-		22,874		(86,152)
Gain (loss) on valuation of net investment hedges of foreign operations		(29,715)		55,972		-		(13,545)		12,712
Remeasurement of the net defined benefit plan		(268,461)		41,121		-		(9,950)		(237,290)
	₩	(395,323)	₩	(133,246)	₩	(318,331)	₩	95,196	₩	(751,704)

(*) Gain (loss) on valuation of available-for-sale financial assets recognized as accumulated other comprehensive income is reclassified due to disposal or recognition of impairment of available-for-sale financial assets.

37. Retained earnings

37.1 Details of retained earnings as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		December 31, 2018		December 31, 2017
Legal reserve				
Earned surplus reserve (*1)	₩	1,223,000	₩	1,027,500
Voluntary reserve				
Revaluation reserves on tangible assets (*2)		411,081		414,616
Other reserves (*3)		177,103		152,502
Regulatory reserve for bad debts (*4)		1,843,898		1,915,033
Other voluntary reserves		3,588,194		2,819,822
		6,020,276		5,301,973
Unappropriated retained earnings		2,879,378		2,406,286
	₩	10,122,654	₩	8,735,759

(*1) The *Banking Law* of the Republic of Korea requires the Company to appropriate at least 10% of net income after income tax to legal reserve, until such reserve equals 100% of its paid-in capital. This reserve is restricted to the payment of cash dividends; however, it can be used to reduce deficit or be transferred to capital.
(*2) The Company records gains from revaluation of property and equipment previously recognized as other comprehensive income to the voluntary reserve, as it applies the revaluation amount as deemed cost at the first-time adoption of KIFRS. The reserve is recognized in distributable retained earnings when the relevant property and equipment are disposed.
(*3) Relevant Japanese regulations require the Company's overseas branches located in Japan to appropriate a minimum of 10% of net income for the period as a legal reserve, until such reserve equals ¥2,000 million. This reserve is restricted to be used upon liquidation of the Japanese branches. Singapore, Hong Kong and Hanoi branches' statutory reserves are included in other reserves in accordance with the relevant regulations.
(*4) The Company has provided allowances for possible loan losses in accordance with KIFRS. The difference in this amount and the provision of allowance accumulated in accordance with the minimum accumulation ratio required by FSS has been accounted for as regulatory reserve for bad debts.

37.2 Changes in appropriated retained earnings for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Beginning balance	₩	8,735,759	₩	7,242,262
Effect of changes in accounting standards		301,831		-
Net income		2,085,920		2,103,510
Dividends		(972,600)		(600,200)
Dividends on hybrid securities		(9,814)		(9,813)
Reclassification of valuation gain or loss on equity securities measured at FVOCI upon derecognition		(17,905)		-
Others		(537)		-
Ending balance	₩	10,122,654	₩	8,735,759

37.3 Dividends

Details of calculation on common stock dividends for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions and shares in units):

		2018 (*1)		2017
Number of shares		1,071,915,717		1,071,915,717
Par value per share (Korean won)	₩	5,000	₩	5,000
Dividend ratio		16.55%		18.15%
Dividend per share (Korean won)	₩	827.30	₩	907.35
Dividends	₩	886,800	₩	972,600
Net income (*2)	₩	2,085,920	₩	2,103,510
Dividend pay-out ratio based on net income		42.51%		46.24%
Adjusted income after deducting provisions for bad debt reserve (*2)	₩	1,889,615	₩	2,084,221
Dividends pay-out ratio based on adjusted income after deducting provisions for bad debt		46.93%		46.66%

(*1) The dividend for 2018 will be presented at the annual general meeting of shareholders, which is scheduled on March 21, 2019.

(*2) Net income before deducting provisions for bad debt and adjusted income after deducting provisions for bad debt is calculated on the basis of the controlling company's shares.

38. Regulatory reserve for bad debts

Regulatory reserve for bad debt is calculated and disclosed in accordance with Article 29, Section 1 and 2 of supervision of Banking Business of the Republic of Korea.

38.1 Details of regulatory reserve for bad debts as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		December 31, 2018		December 31, 2017
Beginning balance	₩	1,934,322	₩	1,915,033
Planned provision for bad debts		205,227		19,289
Ending balance	₩	2,139,549	₩	1,934,322

38.2 Provisions for bad debt reserve and income adjusted for deductions of provisions for bad debt for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Net income attributable to equity holders of the parent before deducting provisions for bad debt	₩	2,085,920	₩	2,103,510
Reversal of bad debt reserve		(196,305)		(19,289)
Adjusted income after deducting provisions for bad debt		1,889,615		2,084,221
Basic earnings per share adjusted after reflecting reserve for bad debt (*1) (Korean won)	₩	1,754	₩	1,935
Diluted earnings per share adjusted after reflecting reserve for bad debt (*2) (Korean won)	₩	1,754	₩	1,935

(*1) The dividend on hybrid equity securities in the amount of ₩9,814 million and ₩9,813 million for the years ended December 31, 2018 and 2017 were deducted from the adjusted income after reflecting the bad debt reserve for the calculation of earnings per share after reflecting reserve for bad debt for each period.
(*2) Because it does not have dilutive potential ordinary stock, basic earnings per share is the same as diluted earnings per share.

39. Operating income and operating expenses

39.1 Operating income for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Interest income	₩	9,378,701	₩	8,111,335
Fees and commission income		835,895		835,420
Gains on financial instruments at FVTPL (KIFRS 1039)		-		18,949,975
Gains on financial instruments measured at FVTPL (KIFRS 1109)		11,559,767		-
Gains on fair value hedging derivative instruments		71,827		80,806
Gains on financial instruments available-for-sale		-		555,384
Gains on financial instruments measured at FVOCI		10,883		-
Changes in credit risk loss for financial instruments		1,956		-
Other operating income		4,144,724		4,512,008
	₩	26,003,753	₩	33,044,928

39.2 Operating expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Interest expenses	₩	4,081,500	₩	3,297,163
Fees and commission expenses		195,502		199,107
Losses on financial instruments at FVTPL (KIFRS 1039)		-		19,085,174
Losses on financial instruments measured at FVTPL (KIFRS 1109)		11,294,896		-
Losses on fair value hedging derivative instruments		83,830		57,256
Losses on financial instruments available-for-sale		-		21,589
Losses on financial instruments measured at FVOCI		3,594		-
Impairment loss of financial Instruments		-		669,129
Changes in credit risk loss for financial instruments		183,123		-
General and administrative expenses		3,025,472		3,091,795
Other operating expenses		4,264,930		3,948,138
	₩	23,132,847	₩	30,369,351

40. Net interest income

40.1 Interest income for years ended December 31, 2018 and 2017 is as follows (Korean won in millions):

Classification		2018		2017
Interest income on due from banks	₩	139,318	₩	142,403
Interest income on financial assets at FVTPL (KIFRS 1039)		-		46,129
Interest income on available–for–sale financial assets		-		653,203
Interest income on held–to–maturity financial assets		-		156,779
Interest income on financial assets measured at FVTPL (KIFRS 1109)		63,135		-
Interest income on financial assets measured at FVOCI		698,766		-
Interest income on securities measured at amortized cost		259,911		-
Interest income on loans		8,217,571		7,112,821
	₩	9,378,701	₩	8,111,335

40.2 Interest expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Interest expenses on deposit liabilities	₩	3,066,319	₩	2,460,875
Interest expenses on borrowings		268,179		207,720
Interest expense on financial liabilities at FVTPL (KIFRS 1039)		-		11,682
Interest expenses on financial liabilities measured at FVTPL (KIFRS 1109)		11,675		-
Interest expenses of debentures		623,084		518,902
Others		112,243		97,984
	₩	4,081,500	₩	3,297,163

41. Net fees and commission income

41.1 Fees and commission income for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Commissions received from loans and others	₩	538,014	₩	542,058
Commissions received on guarantee		71,428		68,559
Commissions related foreign exchange		226,453		224,803
	₩	835,895	₩	835,420

41.2 Fees and commission expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Commissions paid borrowings and others	₩	152,117	₩	158,771
Commissions related foreign exchange		43,385		40,336
	₩	195,502	₩	199,107

42. Net gain (loss) from financial instruments at FVTPL (KIFRS 1039)

42.1 Details of gain (loss) on financial assets and liabilities at FVTPL for the year ended December 31, 2017 are as follows (Korean won in millions):

Classification		2017
Gain from financial instruments at FVTPL		
Financial instruments held-for-trading		
Gain on valuation	₩	3,489
Gain on disposal		31,333
		34,822
Derivatives instruments held-for-trading		
Gain on valuation of derivatives		
Currency related derivatives		7,198,918
Interest related derivatives		261,707
Stock related derivatives		136
Others		10,816
		7,471,577
Gain on transaction of derivatives		
Currency related derivatives		10,444,059
Interest related derivatives		978,923
Stock related derivatives		5,588
Others		992
		11,429,562
Gain on securities sold		791
	₩	18,936,752
Loss from financial instruments at FVTPL		
Financial instruments held-for-trading		
Loss on valuation	₩	8,527
Loss on disposal		22,738
		31,265
Derivatives instruments held-for-trading		
Loss on valuation of derivatives		
Currency related derivatives		7,097,082
Interest related derivatives		276,247
Stock related derivatives		15
Others		1,585
		7,374,929
Loss on transaction of derivatives		
Currency related derivatives		10,706,993
Interest related derivatives		963,374
Stock related derivatives		5,338
Others		1,277
		11,676,982
Loss on securities sold		1,755
		19,084,931
	₩	(148,179)

42.2 Details of gain (loss) on financial assets and liabilities designated at FVTPL for the year ended December 31, 2017 are as follows (Korean won in millions):

Classification		2017
Gain on financial assets and liabilities designated at FVTPL		
Deposits		
Gain on valuation	₩	13,223
		13,223
Loss on financial assets and liabilities designated at FVTPL		
Deposits		
Loss on valuation		160
Loss on disposal		83
		243
	₩	12,980

43. Net gain (loss) from financial instruments at FVTPL (KIFRS 1109)

43.1 Details of gain (loss) on financial assets and liabilities measured at FVTPL for the year periods ended December 31, 2018 are as follows (Korean won in millions):

Classification		2018
Gains from financial instruments at FVTPL		
Financial assets and liabilities measured at FVTPL		
Gain on valuation	₩	81,811
Gain on disposal		66,200
		148,011
Derivatives instruments held-for-trading Borrowings		
Gain on valuation of derivatives		
Currency related derivatives		3,055,164
Interest related derivatives		232,886
Stock related derivatives		894
Others		2,053
		3,290,997
Gain on transaction of derivatives		
Currency related derivatives		6,918,577
Interest related derivatives		1,197,264
Stock related derivatives		4,562
		8,120,403
Gain on securities sold		30
		11,559,441
Loss from financial instruments measured at FVTPL		
Financial instruments measured at FVTPL		
Loss on valuation		54,776
Loss on disposal		97,119
Others		665
		152,560
Derivatives instruments held-for-trading		
Loss on valuation of derivatives		
Currency related derivatives		2,900,121
Interest related derivatives		154,295
Stock related derivatives		301
		3,054,717
Loss on transaction of derivatives		
Currency related derivatives		6,825,163
Interest related derivatives		1,241,872
Stock related derivatives		5,039
		8,072,074
Loss on securities sold		168
		11,279,519
	₩	279,922

43.2 Details of gain (loss) on financial assets and liabilities designated as measured at FVTPL for the year ended December 31, 2018 are as follows (Korean won in millions):

Classification		2018
Gain on financial assets and liabilities designated as measured at FVTPL		
Deposits		
Gain on valuation	₩	326
	₩	326
Loss on financial assets and liabilities designated at FVTPL		
Deposits	₩	15,377
Loss on valuation		15,377
	₩	(15,051)

44. Gain (loss) from derivative financial instruments used for hedging

Gain (loss) from derivative instruments used for hedging for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018	2017
Gain from derivative instruments used for hedging		
Hedged item		
Gain on valuation		
Gain on valuation of debentures	₩ 23,423	₩ 12,581
Gain on valuation of deposits	27,988	17,821
	51,411	30,402
Gain on transaction		
Gain on transaction of debentures	464	1,466
Gain on transaction of deposits	-	2,658
	464	4,124
Derivative instruments used for hedging		
Gain on valuation of derivatives		
Gain on valuation of currency related derivatives	3,910	31,872
Gain on valuation of interest related derivatives	9,152	11,884
	13,062	43,756
Gain on transaction of derivatives		
Gain on transaction of currency related derivatives	5,569	-
Gain on transaction of interest related derivatives	1,321	2,524
	6,890	2,524
	71,827	80,806
Loss from derivative instruments used for hedging		
Hedged item		
Loss on valuation		
Loss on valuation of debentures	8,949	13,205
Loss on valuation of deposits	8,160	7,125
	17,109	20,330
Loss on transaction		
Loss on transaction of debentures	1,174	1,833
Loss on transaction of deposits	624	698
	1,798	2,531
Derivative instruments used for hedging		
Loss on valuation of derivatives		
Loss on valuation of currency related derivatives	3,214	-
Loss on valuation of interest related derivatives	52,166	30,298
	55,380	30,298
Loss on transaction of derivatives		
Loss on transaction of currency related derivatives	9,543	-
Loss on transaction of interest related derivatives	-	4,097
	9,543	4,097
	83,830	57,256
	₩ (12,003)	₩ 23,550

45. Gain (loss) on available-for-sale financial assets and liabilities

Net income on other financial instruments for the year ended December 31, 2017 are as follows (Korean won in millions):

Classification	2017
Gain on disposal of available-for-sale financial assets	₩ 555,384
Loss on disposal of available-for-sale financial assets	21,589
	₩ 533,795

46. Gain (loss) from financial instruments measured at FVOCI

Details of gain (loss) on financial assets and liabilities designated as measured at FVOCI for the year ended December 31, 2018 are as follows (Korean won in millions):

Classification		2018
Gain on disposal of financial instruments measured at FVOCI	₩	10,883
Loss on disposal of financial instruments measured at FVOCI		3,594
	₩	7,289

47. Impairment loss on financial assets

Impairment loss on financial assets for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Impairment loss of available-for-sale financial assets	₩	-	₩	140,663
Reversal of credit loss of debt securities measured at FVOCI		(1,956)		-
Provision for possible loan loss for debt securities measured at amortized cost		2,418		-
Provision for possible loan losses		180,429		528,058
Provision for possible other asset losses		276		408
	₩	181,167	₩	669,129

48. General and administrative expenses

General and administrative expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018		2017	
Salaries	₩	1,502,996	₩	1,614,849
Retirement benefits – Defined benefits plans		207,839		136,726
Retirement benefits – Defined contribution plans		205		377
Termination benefits		107,531		130,670
Employee welfare benefits		86,717		87,330
Depreciation		129,087		131,822
Amortization		74,567		71,864
Rental expenses		237,083		280,631
Entertainment expenses		19,136		20,600
Taxes and dues		107,978		105,001
Advertising expenses		108,622		104,333
Others		443,711		407,592
	₩	3,025,472	₩	3,091,795

49. Other operating income

Other operating income for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Gain on disposal of loans	₩	34,957	₩	58,524
Reversal of acceptance and guarantees		15,185		-
Reversal of allowances for unused commitments		4,900		11,088
Reversal of other provisions		29,875		3,320
Trust commissions		197,981		167,232
Gain on foreign exchange transaction		3,758,071		4,153,506
Gain on merchant banking accounts (*)		60,636		51,889
Dividends		12,724		58,223
Others		30,395		8,226
	₩	4,144,724	₩	4,512,008

(*) Details of gain on merchant banking accounts for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Interest income	₩	43,085	₩	35,111
Fee and commission income		429		362
Gain on disposal of trading bonds		-		1,013
Gain on disposal of debt securities measured at FVTPL (KIFRS 1109)		1,023		-
Gain on valuation of debt securities measured at FVTPL (KIFRS 1109)		111		-
Gain on valuation of CMA securities		2		16
Gain on disposal of bills		15,986		15,139
Reversal of allowance for doubtful accounts on loans		-		74
Reversal of provisions for unused commitments		-		174
	₩	60,636	₩	51,889

50. Other operating expenses

Other operating expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018		2017	
Loss on disposal of loans	₩	655	₩	634
Provision of acceptance and guarantees transferred		-		9,405
Contribution to Korea Credit Guarantee Fund		262,641		265,425
Insurance fee on deposit		329,637		308,205
Loss on foreign exchange transaction		3,628,592		3,331,342
Loss on merchant banking accounts (*)		40,272		31,687
Others		3,133		1,440
	₩	4,264,930	₩	3,948,138

(*) Details of loss on merchant banking accounts for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018		2017	
Interest expenses	₩	40,128	₩	31,538
Others		144		149
	₩	40,272	₩	31,687

51. Other non-operating income

Other non–operating income for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018		2017	
Rental fee income	₩	16,978	₩	11,582
Gain on disposal of property and equipment		17,949		24,416
Gain on disposal of intangible asset		178		411
Gain on disposal of Investments in associates		812		-
Gain on equity method		26,418		103,465
Others		30,440		69,241
	₩	92,775	₩	209,115

52. Other non-operating expenses

Other non–operating expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Loss on disposal of property and equipment	₩	3,831	₩	5,911
Loss on disposal of intangible asset		4		35
Loss on equity method		4,731		-
Collection expenses for written-off claims		1,685		2,429
Collection commissions for written-off claims		3,971		3,944
Loss on disposal of investments in associates		1,199		-
Impairment loss on Investments in associates		-		226
Donations		58,204		19,228
Others		19,356		99,901
	₩	92,981	₩	131,674

53. Income tax expenses

53.1 The components of income tax expenses for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Current income taxes				
Income taxes	₩	703,586	₩	838,702
Prior year's income tax adjustments recognized in the current year		(65,891)		(23,429)
Changes in deferred income tax assets (liabilities)		138,306		(236,290)
Current and deferred income taxes recognized directly to equity		44,222		98,343
Tax effect of consolidated tax returns		(41,955)		(36,547)
Income tax expenses	₩	778,268	₩	640,779

53.2 Reconciliations of income tax expenses applicable to the net income before income tax expenses at the Korea statutory tax rate to income tax expenses at the effective income tax rate of the Company for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Net income before income tax expenses	₩	2,870,700	₩	2,753,018
Tax at domestic statutory income tax rate (*)		770,742		663,248
Non-taxable income		(3,361)		(3,170)
Expenses not deductible for tax purposes		4,487		5,088
Tax credit		(7,692)		(14,027)
Income tax expenses of foreign branches and subsidiaries		31,102		34,049
Tax effect of consolidated tax return		(41,956)		(36,547)
Prior year's income tax adjustments Recognized in the current year		(65,891)		(23,429)
Others (Effect of tax rates change, etc.)		90,837		15,567
Income tax expenses	₩	778,268	₩	640,779
Effective income tax rate (%)		27.11		23.28

(*) 11% is applied to income under ₩200 million, 22% is applied to income exceeding ₩200 million and under ₩20 billion, 24.2% is applied to income exceeding ₩20 billion and under ₩300 billion and 27.5% is applied to income above ₩300 billion.

53.3 Temporary differences and deferred income tax assets (liabilities) as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018			
Classification	Deductible (taxable) temporary differences		Deferred income tax assets (liabilities)	
Gain or loss on valuation of securities	₩	384,953	₩	105,862
Valuation of investment in associates		(461,574)		(126,933)
Gain on valuation of derivatives		(283,487)		(77,959)
Deemed dividends		156,718		43,097
Deferred loan fees, net of expenses		(319,524)		(87,869)
Accrued interest income		(306,074)		(84,170)
Accrued expenses		139,583		38,384
Provisions on acceptance and guarantees		58,047		15,963
Severance and retirement insurance		(1,511,444)		(415,588)
Severance and retirement benefit liabilities		1,519,582		417,817
Other provisions		108,600		29,865
Loans written-off		690,642		189,178
Depreciation		(12,764)		(3,510)
Fair value valuation resulting from merger		32		9
Dormant deposits		17,556		4,828
Allowance for advanced depreciation		(180,315)		(49,587)
Deemed cost for property and equipment		(914,566)		(251,506)
Gain on valuation of financial instruments measured at FVOCI		170,659		46,963
Net loss carried over		71,188		15,661
Investment in kind		18,479		5,082
Financial guarantee contract		1,775		488
Deferred reward points income		337		93
Others		314,914		85,436
	₩	(336,683)	₩	(98,396)
Domestic deferred income tax liabilities				(98,396)
Foreign deferred tax assets (*)				55,845
Foreign deferred tax liabilities (*)				(85,968)
			₩	(128,519)

53.3 Temporary differences and deferred income tax assets (liabilities) as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2017 Deductible (taxable) temporary differences	December 31, 2017 Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 823,772	₩ 226,551
Impairment loss on securities	2,581	568
Valuation of investment in associates	(464,687)	(127,789)
Gain on valuation of derivatives	(191,033)	(52,534)
Deemed dividends	158,343	43,544
Deferred loan fees, net of expenses	(273,888)	(75,319)
Accrued interest income	(261,706)	(71,969)
Accrued expenses	147,704	40,556
Provisions on acceptance and guarantees	83,187	22,877
Severance and retirement insurance	(1,232,842)	(339,026)
Severance and retirement benefit liabilities	1,232,895	339,037
Other provisions	150,859	41,486
Loans written-off	601,930	164,682
Depreciation	(25,569)	(7,032)
Fair value valuation resulting from merger	32	9
Dormant deposits	15,441	4,246
Allowance for advanced depreciation	(180,315)	(49,587)
Deemed cost for property and equipment	(931,110)	(256,055)
Available-for-sale securities	149,859	41,211
Net loss carried over	87,016	19,144
Investment in kind at KEB China	18,479	5,082
Financial guarantee contract	1,975	543
Deferred reward points income	627	172
Others	233,486	63,484
	₩ 147,036	₩ 33,881
Domestic deferred income tax assets		33,881
Foreign deferred income tax assets (*)		28,758
Foreign deferred income tax liabilities (*)		(52,852)
		₩ 9,787

(*) Deferred tax assets of foreign branches are not offset against the deferred tax liabilities due to the differences in tax jurisdictions.

The effective income tax rate of 27.5% as of December 31, 2018, is applied when calculating deferred tax assets or liabilities. Also, deferred income tax assets are recognized when it is foreseeable that future taxable income will be incurred and that future tax credits will be realized.

53.4 The unrealized temporary differences on investment assets of related companies as of December 31, 2018, are as follows (Korean won in millions):

Classification	2018	2017
Deductible temporary difference	₩ 321,087	₩ 316,927
Taxable temporary difference	(355,579)	(355,579)
	₩ (34,492)	₩ (38,652)

53.5 Details of deferred income taxes charged (credited) directly to equity as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018			
		Before tax amounts		Deferred income tax assets (liabilities)
Gain (loss) on valuation of financial assets measured at FVOCI	₩	(173,869)	₩	47,814
Changes in equity in equity method		(82,788)		22,767
Exchange differences on translation of foreign operations		(45,665)		12,558
	₩	(302,322)	₩	83,139

Classification	December 31, 2017			
		Before tax amounts		Deferred income tax assets (liabilities)
Gain (loss) on valuation of available-for-sale financial assets	₩	(149,859)	₩	41,211
Changes in equity in equity method		(118,830)		32,678
Exchange differences on translation of foreign operations		(65,714)		18,071
	₩	(334,403)	₩	91,960

54. Earnings per share

54.1 Weighted-average number of ordinary shares for the years ended December 31, 2018 and 2017 are as follows (shares in units):

Classification	Periods	Number of shares	Weights	Weighted-average number of ordinary shares
December 31, 2018	2018.01.01~2018.12.31	1,071,915,717	365/365	1,071,915,717
December 31, 2017	2017.01.01~2017.12.31	1,071,915,717	365/365	1,071,915,717

Since the Company does not have potentially dilutive ordinary stock, the weighted average number of shares of ordinary stock outstanding per basic share is the same as the weighted average number of shares of ordinary stock outstanding per diluted share.

54.2 The Company's basic earnings per share for the years ended December 31, 2018 and 2017 are calculated as follows (Korean won in millions except per share amounts):

Classification	2018	2017
Net income attributable to equity holders of the parent for the year	₩ 2,085,920	₩ 2,103,510
Dividends on hybrid equity securities	(9,814)	(9,813)
Net income attributable to common stock	2,076,106	2,093,697
Weighted-average number of shares of ordinary stocks outstanding	1,071,915,717	1,071,915,717
Basic earnings per share (Korean won) (*)	₩ 1,937	₩ 1,953

(*) Basic earnings per share (EPS) are the same as diluted EPSs for the years ended December 31, 2018 and 2017.

55. Share-based payment

When the stock options are exercised, the Company has the option to settle either through issuance of new shares or treasury stock or through payment of cash equivalents to the difference between the market price and the exercise price. The number of exercisable stock option is determined in accordance with management performance and the calculation criteria for the number of exercisable shares. Also, the Company granted the equity-linked special incentive (Rose Bonus and/or Rose Share) to employees for the purpose of motivation to improve long-term performance. The equity-linked special incentive is settled in cash. It can be exercised from 1 to 3 years after the grant date for the following 3 to 4 years.

Details of liabilities related to share-based payment and total intrinsic value of rights accounted for as accounts payable in case that option holders achieve rights to receive cash or other assets as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		December 31, 2018		December 31, 2017
Book value of liabilities related to share-based payment				
Stock options	₩	23	₩	329
Equity-linked special incentives (granted by the Bank)		11,301		200
Equity-linked special incentives (granted by HFG)		33,915		48,547
	₩	45,239	₩	49,076

The compensation costs for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification		2018		2017
Costs recognized due to share-based payment				
Stock options	₩	(305)	₩	261
Equity-linked special incentive (granted by the Bank)		5,674		126
Equity-linked special incentive (granted by HFG)		2,219		8,278
	₩	7,588	₩	8,665

55.1 Stock options

Details of the share-based payment as of December 31, 2018 are as follows. Stock options are measured at fair value based on Black-Scholes model (in Korean won and share in units):

Grant date (unaudited)	Exercise period	Risk-free rate	Expected service period	Volatility of the underlying stock price	Expected dividends	Stock price at grant date	Fair value
2011-08-10	2015-08-11 ~ 2019-08-10	1.07%	8.01	25.91%	₩ 1,550	₩ 8,060	₩ 52
2011-08-26	2015-08-27 ~ 2019-08-26	1.14%	8.01	25.37%	1,550	7,720	107
2011-09-02	2015-09-03 ~ 2019-09-02	1.18%	8.01	25.20%	1,550	7,930	122

The company used the volatility of the past stock price in the expected exercise period as the expected volatility, and used the stock price as of December 31, 2018 as the stock price of the underlying asset, and calculated the fair value by using the average dividend rate for the past three years as the expected dividend rate.

Changes in shares of stock options for the year ended December 31, 2018 are as follows (Korean won and share):

Grant date	Shares at the beginning	Exercise	Divesture	Extinction at maturity	Shares at the end	Stock option outstanding	Exercise price
2011-08-10	333,000	-	-	-	333,000	333,000	₩ 9,100
2011-08-26	42,290	-	-	-	42,290	42,290	8,500
2011-09-02	11,250	-	-	-	11,250	11,250	8,400
	386,540	-	-	-	386,540	386,540	

There is no exercise of the stock options for the year ended December 31, 2018.

Weighted average residual expiration of exercisable stock options is 0.61 years as of December 31, 2018.

55.2 Equity-linked special incentives

Equity-linked special incentives are measured at fair value based on the binomial model and become exercisable from 1 to 3 years after the grant date for the following 3 to 4 years. There is no equity-linked special incentive provided by the Bank to the employees as of December 31, 2018.

Changes in shares of equity linked special incentives for the years ended December 31, 2018 and 2017 are as follows (shares in units):

Classification	Number of shares	
	2018	2017
Beginning	-	25,430
Number of shares exercised	-	(25,430)
Ending	-	-

55.3 Performance-linked share-based compensation

Hana Financial Group (HFG) and the Bank operate performance share plan, granting the executives and department head of the Bank with performance-linked stocks. Details of performance-linked stocks granted to the executives and department head of the Bank as of December 31, 2018 are as follows:

Classification	5th	6th	7th	8th
Granted by	Hana Financial Group	Hana Financial Group	Hana Bank	Hana Bank
Grant date	2015-01-01	2016-01-01	2017-01-01	2018-01-01
Payment date	2017-12-31	2018-12-31	2019-12-31	2020-12-31
Grant period	2015-01-01~ 2017-12-31	2016-01-01~ 2018-12-31	2017-01-01~ 2019-12-31	2018-01-01~ 2020-12-31
Grace period	2018-01-01~ 2018-12-31	2019-01-01~ 2019-12-31	2020-01-01~ 2020-12-31	2021-01-01~ 2021-12-31
Payment period	Within 2019-04-30	Within 2020-04-30	Within 2021-04-30	Within 2022-04-30
Grant method	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price	Payment of cash equivalents to the difference between the market price and the exercise price
Shares at settlement date (*)	346,714	458,079	233,160	69,490

(*) Hana Financial Group (HFG) and the Bank provide the executives and department head of the Bank with the right to receive stocks. The amount of stocks paid is adjusted based on the performance. The amounts of 5th and 6th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income) is 60%. The amounts of 7th and 8th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income, soundness) is 60%.

56. Cash flow information

56.1 Details of cash and cash equivalents as of December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	December 31, 2018	December 31, 2017
Cash	₩ 2,120,840	₩ 2,224,215
Due from banks in Korean won	11,058,022	11,168,327
Due from banks In foreign currencies	7,273,261	6,591,374
	20,452,123	19,983,916
Less: Restricted balances	15,266,212	11,790,742
Deposits which have a maturity period of three months or above	812,820	754,133
	₩ 4,373,091	₩ 7,439,041

56.2 Significant non–cash transactions for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018	2017
Unrealized gain on valuation of available−for−sale financial assets	₩ -	₩ (259,664)
Gain on valuation of financial assets measured at FVOCI	240,243	-
Transfer from property and equipment to investment properties	211,817	241,830
Transfer from property and equipment to non-current assets held-for-sale	-	466,037
Transfer from loans to financial assets measured at FVOCI resulting from debt-to-equity swap	20,475	-
Transfer from loans to available-for-sale financial assets resulting from debt-to-equity swap	-	11,014
Transfer from investment in associates to financial assets at FVTPL	18,023	-

56.3 Changes in liabilities arising from financing activities are as follows (Korean won in millions):

	December 31, 2018					
Classification	January 1, 2018	Financing activities	Exchange rate fluctuation	Fair value hedging	Other	December 31, 2018
Borrowings	₩ 13,774,502	₩ 1,373,999	₩ 132,469	₩ -	₩ -	₩ 15,280,970
Debentures	22,311,737	2,214,647	79,958	7,209	55,062	24,668,613
	₩ 36,086,239	₩ 3,588,646	₩ 212,427	₩ 7,209	₩ 55,062	₩ 39,949,583

	December 31, 2017					
Classification	January 1, 2018	Financing activities	Exchange rate fluctuation	Fair value hedging	Other	December 31, 2018
Borrowings	₩ 15,310,635	₩ (243,485)	₩ (1,292,648)	₩ -	₩ -	₩ 13,774,502
Debentures	19,310,873	3,248,768	(240,239)	(55,349)	47,684	22,311,737
	₩ 34,621,508	₩ 3,005,283	₩ (1,532,887)	₩ (55,349)	₩ 47,684	₩ 36,086,239

57. Related parties

57.1 Transactions with related parties for the years ended December 31, 2018 and 2017 are summarized as follows (Korean won in millions):

	2018						
	Income			Expenses			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company:							
Hana Financial Group (HFG)	₩ -	₩ 2,748	₩ 3,020,	₩ -	₩ 42	₩ -	₩ -
Associates:							
Bank of Jilin	44	-	33	-	-	-	47
CM International financing leases	6,964	-	-	424	-	-	-
Beijing Langzi Asset Management Co., Ltd.	900	292	6	116	-	-	-
PT Sinarmas Hana Finance	1,625	2	-	(29)	57	-	2
Hana First Private Equity Fund	-	8	-	-	9	-	-
Korea Credit Bureau	-	-	-	-	121	-	-
Darby Hana Infrastructure Fund Management	-	-	1	-	210	-	-
Masan Marine New Town Co., Ltd.	126	-	-	2	2	-	-
Company K startup winwin fund	-	-	-	-	36	-	-
Fidelis Private Equity Fund No.2	-	-	342	-	-	-	-
KEB Hana-KVIC Unicorn Fund of Funds	-	-	-	-	5	-	-
	₩ 9,659	₩ 302	₩ 382	₩ 513	₩ 440	₩ -	₩ 49
Entities under common control:							
Hana Financial Investment Co., Ltd.	269	1,751	9,599	(12)	1,620	-	6,521
Hana Card Co., Ltd.	-	78,737	4,704	(20)	2,178	4,919	1,045
Hana Capital Co., Ltd.	-	377	232	(5)	204	-	481
Hana Asset Trust Co., Ltd.	-	39	-	-	1,824	-	-
Hana Alternative Asset Management Co., Ltd.	-	26	692	-	273	-	-
Hana TI Co., Ltd.	-	7	-	-	135	7,800	60,999
Hana Life Insurance Co., Ltd	-	14,779	1,192	-	62	-	1,132
Hana Savings Bank	-	81	32	-	1	-	-
Hana Investors Services Company	-	2	1,024	-	270	-	-
Hana Ventures Inc.	-	-	-	-	49	-	-
	₩ 269	₩ 95,799	₩ 17,475	₩ (37)	₩ 6,616	₩ 12,719	₩ 70,178

57.1 Transactions with related parties for the years ended December 31, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	2018						
	Income			Expenses			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties:							
Odin2 LLC	1,794	1	-	-	-	-	-
Gunsan BIO Energy Co., Ltd.	-	-	-	-	15	-	-
Finnq Co., Ltd.	-	262	-	-	5	-	-
Mirae Credit Information Services Corp.	117	10	-	(2)	55	946	-
UBS Hana Asset Management Co., Ltd.	-	1	7	-	-	-	-
F&U Credit Information Co., Ltd.	-	4	-	-	6	-	-
BNP Asset Development Co., Ltd.	216	-	-	23	-	-	-
Thehue Company Ltd.	-	-	-	(22)	-	-	-
Smartscore Co., Ltd.	2	-	-	-	2	-	-
Lotte Accelerator Corporation	-	-	-	-	57	-	-
GMHB Co., Ltd.	-	1	-	-	-	-	-
Myoungshin Co., Ltd.	4	1	-	-	-	-	-
	₩ 2,133	₩ 280	₩ 7	₩ (1)	₩ 140	₩ 946	₩ -
Key management	79	-	-	(1)	39	-	-
	₩ 12,140	₩ 99,129	₩ 20,884	₩ 474	₩ 7,277	₩ 13,665	₩ 70,227

57.1 Transactions with related parties for the years ended December 31, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	2017						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company:							
HFG	₩ -	₩ 1,533	₩ 1,985	₩ -	₩ 10	₩ -	₩ 13
Investment in associates:						-	-
Korea Credit Bureau	-	-	-	-	56	-	-
Darby Hana Infrastructure Fund Management	-	-	505	-	159	-	-
Hana Equity Partners I, L.P	-	9	-	-	6	-	-
Masan Marine New Town Co., Ltd.	108	-	-	-	2	-	-
Midan City Development Co., Ltd.	-	-	-	-	33	-	-
Company KStartup winwin fund	-	-	-	-	31	-	-
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	-	2	-	-	2	-	-
Bank of Jilin (*)	2,075	-	-	12	-	-	-
CM International financing leases (*)	6,531	19	-	(267)	25	-	-
Beijing Langzi Asset Management Co., Ltd. (*)	463	168	-	94	256	-	-
PT Sinarmas Hana Finance (*)	1,236	-	-	38	152	-	-
	₩ 10,413	₩ 198	₩ 505	₩ (123)	₩ 722	₩ -	₩ -

57.1 Transactions with related parties for the years ended December 31, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	2017						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Entities under common control:							
Hana Financial Investment Co., Ltd.	35	1,404	4,785	-	1,910	-	40,675
Hana Card Co., Ltd.	(1)	79,216	617	-	1,365	2,200	589
Hana Capital Co., Ltd.	-	367	138	-	99	9	43
Hana Asset Trust Co., Ltd.	-	25	-	-	768	-	-
Hana Alternative Asset Management Co., Ltd.	-	9	38	-	137	-	-
Hana TI Co., Ltd.	-	3	9	-	4	62,842	-
Hana Institute of Finance	-	-	-	-	11	3,272	-
Hana Savings Bank	-	7	37	-	-	-	1
Hana Life Insurance Co., Ltd.	-	12,799	1,085	-	-	-	31
Hana Investors Services Company	-	6	162	-	111	-	32
	₩ 34	₩ 93,836	₩ 6,871	₩ -	₩ 4,405	₩ 68,323	₩ 41,371

57.1 Transactions with related parties for the years ended December 31, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	2017						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties:							
Odin2 LLC	-	-	-	2,126	-	-	-
Gunsan BIO Energy Co., Ltd. (*)	-	-	-	-	16	-	-
Advanced&Different Credit Information Co., Ltd.	-	-	-	-	3	-	-
Finnq Co., Ltd.	-	67	-	-	1	-	-
Mirae Credit Information Services Corp.	89	-	-	5	54	222	-
UBS Hana Asset Management Co., Ltd.	-	2	-	-	-	1	-
F&U Credit Information Co., Ltd.	-	3	-	-	-	-	-
Hana AIM Investment Management Inc.	-	-	-	-	10	-	-
BNP Asset Development Co., Ltd.	100	-	-	26	-	-	-
Thehue Company Ltd.	232	2	4	(14)	-	-	-
	₩ 421	₩ 74	₩ 4	₩ 2,143	₩ 84	₩ 223	₩ -
Key management	180	15	6	(1)	78	-	-
	₩ 11,048	₩ 95,656	₩ 9,371	₩ 2,019	₩ 5,299	₩ 68,546	₩ 41,384

(*) Significant transactions with related parties for the year ended December 31, 2017, were restated by reflecting the partial errors in the transactions of the Company and overseas affiliated companies. Due to such restatement to the notes to the financial statements, revenue, transfer (reversal) of allowance for doubtful accounts, and expenses increased by ₩10,699 million, decreased by ₩127 million, and increased by ₩514 million, respectively.

57.2 Significant transactions with related parties for the years ended December 31, 2018 and 2017 are as follows:

57.2.1 Details of significant borrowings and investment in cash to related parties for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

Classification	2018					
	Borrowings (*1)					Investment in cash
	Beginning	Increase	Decrease	Others (*2)	Ending	
Associates:						
Bank of Jilin	₩ 194,333	₩ 355,651	₩ (547,655)	₩ (1,129)	₩ 1,200	₩ -
CM International financing leases	137,205	82,901	(93,725)	1,601	127,982	-
Beijing Langzi Asset Management Co., Ltd.	16,399	-	(1,626)	(143)	14,630	-
PT Sinarmas Hana Finance	16,195	4,187	(2,304)	(451)	17,627	-
Masan Marine New Town Co., Ltd.	1,513	-	-	-	1,513	-
Fidelis Private Equity Fund No.2	-	-	-	-	-	3,000
Koramco Professional Investment Type Real Estate No.73	-	-	-	-	-	1,700
KEB Hana-KVIC Unicorn Fund of Funds	-	-	-	-	-	1,000
Koramco Professional Investment Type Real Estate No.87	-	-	-	-	-	1,500
Ourcrowd international invest Co., Ltd.	-	-	-	-	-	14,049
	365,645	442,739	(645,310)	(122)	162,952	21,249
Entities under common control:						
Hana Financial Investment Co., Ltd.	-	-	-	500	500	-
	-	-	-	500	500	-
Other related parties:						
Odin2 LLC	2,237	-	-	-	2,237	-
Mirae Credit Information Services Corp.	7,000	2,000	(7,000)	-	2,000	-
BNP Asset Development Co., Ltd.	4,900	100	(100)	-	4,900	-
Thehue Company Ltd.	5,250	-	(160)	(5,090)	-	-
Myoungshin Co., Ltd.	-	885	(1,084)	383	184	-
	19,387	2,985	(8,344)	(4,707)	9,321	-
Key management	5,715	-	(3,967)	-	1,748	-
	₩ 390,747	₩ 445,724	₩ (657,621)	₩ (4,329)	₩ 174,521	₩ 21,249

(*1) Intraday overdrafts are excluded.
(*2) Others include the effect of exchange rate fluctuation.

57.2.1 Details of significant borrowings and investment in cash to related parties for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

	2017					
	Borrowings (*1)					Investment in cash
Classification	Beginning	Increase	Decrease	Others (*2)	Ending	
Associates:						
Bank of Jilin	₩ -	₩ 688,911	₩ (494,578)	₩ -	₩ 194,333	₩ -
CM International financing leases	149,038	-	(11,833)	-	137,205	-
Beijing Langzi Asset Management Co., Ltd.	-	58,923	(42,524)	-	16,399	41,801
PT Sinarmas Hana Finance	11,270	6,607	(1,682)	-	16,195	-
Masan Marine New Town Co., Ltd.	1,513	-	-	-	1,513	-
Darby Latin American Private Debt Fund III	-	-	-	-	-	7,621
Darby Latin American Private Debt Fund IIIA	-	-	-	-	-	1,190
BSK-6 Patent Technology Investment Association	-	-	-	-	-	900
	161,821	754,441	(550,617)	-	365,645	51,512
Other related parties:						
Odin2 LLC	2,237	-	-	-	2,237	-
Mirae Credit Information Services Corp.	-	7,000	-	-	7,000	-
BNP Asset Development Co., Ltd.	1,700	3,200	-	-	4,900	-
Thehue Company Ltd.	6,244	-	(994)	-	5,250	-
	10,181	10,200	(994)	-	19,387	-
Key management	4,803	912	-	-	5,715	-
	₩ 176,805	₩ 765,553	₩ (551,611)	₩ -	₩ 390,747	₩ 51,512

(*1) Intraday overdrafts are excluded.
(*2) Others include the effect of exchange rate fluctuation.

57.2.2 Details of significant deposits with related parties for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions):

	2018				
	Deposits (*1)				
Classification	Beginning	Increase	Decrease	Others (*2)	Ending
Associates:					
PT Sinarmas Hana Finance	₩ 790	₩ 38	₩ -	₩ (22)	₩ 806
Korea Credit Bureau Co., Ltd.	6,000	11,080	(6,080)	-	11,000
Darby Hana Infrastructure Fund Management	11,100	14,164	(11,264)	-	14,000
Company KStartup winwin fund	4,020	26,543	(30,563)	-	-
	21,910	51,825	(47,907)	(22)	` 25,806
Entities under common control:					
Hana Financial Investment Co., Ltd.	15,000	5,000	(15,000)	-	5,000
Hana Card Co., Ltd.	3,005	3,550	(3,050)	-	3,505
Hana Asset Trust	52,000	55,423	(52,423)	-	55,000
Hana Alternative Asset Management Co., Ltd.	9,630	30,354	(33,352)	-	6,632
Hana TI Co., Ltd.	-	922	-	-	922
Hana Investors Services Company	12,500	19,616	(21,116)	-	11,000
	92,135	114,865	(124,941)	-	82,059
Other related parties:					
F&U Credit information Co., Ltd.	-	500	-	-	500
BNP Asset Development Co., Ltd.	-	10	-	-	10
Hana AIM Investment Management Inc.	2,006	-	-	(2,006)	-
Lotte Accelerator Corporation	-	3,000	-	-	3,000
	2,006	3,510	-	(2,006)	3,510
Key management	9,735	-	(5,815)	-	3,920
	₩ 125,786	₩ 170,200	₩ (178,663)	₩ (2,028)	₩ 115,295

(*1) Deposits/withdrawals arising from operations between related parties are excluded.
(*2) Others include the effect of exchange rate fluctuation.

57.2.2 Details of significant deposits with related parties for the years ended December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

Classification	2018 Deposits (*1) Beginning	Increase	Decrease	Others (*2)	Ending
Associates:					
PT Sinarmas Hana Finance	₩ -	₩ 4,648	₩ (3,858)	₩ -	₩ 790
Korea Credit Bureau Co., Ltd.	1,000	6,000	(1,000)	-	6,000
Darby Hana Infrastructure Fund Management	8,500	12,700	(10,100)	-	11,100
Midan City Development Co., Ltd.	6	-	(6)	-	-
Company KStartup winwin fund	900	27,560	(24,440)	-	4,020
	10,406	50,908	(39,404)	-	21,910
Entities under common control:					
Hana Financial Investment Co., Ltd.	-	15,000	-	-	15,000
Hana Card Co., Ltd.	3,005	3,051	(3,051)	-	3,005
Hana Asset Trust	-	52,000	-	-	52,000
Hana Alternative Asset Management Co., Ltd.	8,000	22,245	(20,615)	-	9,630
Hana Investors Services Company	6,500	27,085	(21,085)	-	12,500
	17,505	119,381	(44,751)	-	92,135
Other related parties:					
Advanced&Different Credit Information Co., Ltd.	1,000	-	(1,000)	-	-
Mirae Credit Information Services Corp.	8,100	1,000	(9,100)	-	-
Hana AIM Investment Management Inc.	-	4,006	(2,000)	-	2,006
	9,100	5,006	(12,100)	-	2,006
Key management	11,896	-	(2,161)	-	9,735
	₩ 48,907	₩ 175,295	₩ (98,416)	₩ -	₩ 125,786

(*1) Deposits/withdrawals arising from operations between related parties are excluded.
(*2) Others include the effect of exchange rate fluctuation.

57.3 Outstanding balances with related parties arising from the above transactions as of December 31, 2018 and 2017 are summarized as follows (Korean won in millions):

	December 31, 2018				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company:					
Hana Financial Group (HFG)	₩ -	₩ -	₩ -	₩ 4,385	₩ 270,460
Associates:		-			-
Bank of Jilin	1,200	-	-	7	-
CM International financing leases	127,982	-	559	15	-
Beijing Langzi Asset Management LC	14,630	-	211	1	-
PT Sinarmas Hana Finance	17,627	30	25	815	-
Hana First Private Equity Fund	-	2	-	592	-
Korea Credit Bureau Co., Ltd.	-	-	-	11,147	-
Darby Hana Infrastructure Fund Management	-	-	-	14,309	-
Midan City Development Co., Ltd.	-	-	-	5	-
Masan Marine New Town Co., Ltd.	1,513	-	2	811	-
Fidelis Private Equity Fund No.2	-	-	-	35	-
KEB Hana-KVIC Unicorn Fund of Funds	-	-	-	1,104	-
	₩ 162,952	₩ 32	₩ 797	₩ 28,841	₩ -
Entities under common control:					
Hana Financial Investment Co., Ltd.	500	10,532	74	264,361	9,672
Hana Card Co., Ltd.	-	18	117	170,581	68,749
Hana Capital Co., Ltd.	-	-	86	20,240	4,737
Hana Asset Trust	-	-	-	114,748	376
Hana Alternative Asset Management Co., Ltd.	-	-	-	18,507	648
Hana TI Co., Ltd.	-	-	-	2,796	1,371
Hana Life Insurance Co., Ltd.	-	1,020	-	-	2,495
Hana Saving Bank Co., Ltd.	-	8	-	-	53
Hana Investors Services Company	-	-	-	12,855	811
Hana Ventures Inc.	-	-	-	29,213	44
	₩ 500	₩ 11,578	₩ 277	₩ 633,301	₩ 88,956

57.3 Outstanding balances with related parties arising from the above transactions as of December 31, 2018 and 2017 are summarized as follows (Korean won in millions): (cont`d)

	December 31, 2018				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Other related parties:					
Odin2. LLC	₩ 2,237	₩ -	₩ 2,237	₩ -	₩ -
Gunsan bio-energy Corp.	-	-	-	3,844	-
Finnq Co., Ltd.	-	-	-	9,748	-
Mirae Credit Information Services Corp.	2,000	-	-	1,809	-
UBS Hana Asset Management Co., Ltd	-	-	-	312	-
F&U Credit Information Co., Ltd.	-	-	-	529	-
BNP Asset Development Co., Ltd.	4,900	-	41	335	-
Hana Lantern Energy Factory Private Equity Fund	-	-	-	3	-
Smartscore Co., Ltd.	-	-	-	351	-
Lotte Accelerator Corporation	-	-	-	3,043	-
Myoungshin Co., Ltd.	184	-	1	3	-
	9,321	-	2,279	19,977	-
Key management	1,748	-	4	3,920	-
	₩ 174,521	₩ 11,610	₩ 3,357	₩ 690,424	₩ 359,416

57.3 Outstanding balances with related parties arising from the above transactions as of December 31, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	December 31, 2017				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company:					
Hana Financial Group (HFG)	₩ -	₩ 5,405	₩ -	₩ 10,744	₩ 640,494
Associates:					
Korea Credit Bureau Co., Ltd.	-	-	-	6,009	-
Darby Hana Infrastructure Fund Management	-	11,734	-	12,121	-
Hana First Private Equity Fund	-	-	-	33	-
Masan Marine New Town Co., Ltd.	1,513	-	-	787	-
Midan City Development Co., Ltd.	-	-	-	327	-
Company KStartup winwin fund	-	-	-	4,020	-
KEB Mirae Asset First Securitization Specialty Co., Ltd.	-	-	-	620	-
KEB Mirae Asset Secondt Securitization Specialty Co., Ltd.	-	-	-	744	-
Bank of Jilin (*)	194,333	273	12	-	-
CM International financing leases (*)	137,205	413	135	21	5
Beijing Langzi Asset Management Co., Ltd. (*)	16,399	-	94	1	-
PT Sinarmas Hana Finance (*)	16,195	-	81	1,001	-
	₩ 365,645	₩ 12,420	₩ 322	₩ 25,684	₩ 5
Entities under common control:					
Hana Financial Investment Co., Ltd.	₩ -	₩ 8,246	₩ -	₩ 203,605	₩ 10,688
Hana Card Co., Ltd.	-	88	-	269,207	65,776
Hana Capital Co., Ltd.	-	-	-	43,691	5,041
Hana Asset Trust	-	-	-	80,564	63
Hana Alternative Asset Management Co., Ltd.	-	-	-	15,302	605
Hana TI Co., Ltd.	-	-	-	6,861	20
Hana Saving Bank	-	1	-	-	52
Hana Life Insurance Co., Ltd.	-	1,082	-	11	2,372
Hana Investors Services Company	-	-	-	13,191	811
	₩ -	₩ 9,417	₩ -	₩ 632,432	₩ 85,428
Other related parties:					
GMHB Co., Ltd.(*)	₩ -	₩ -	₩ -	₩ 858	₩ -
Odin2.LLC	2,237	-	2,237	-	-
Gunsan bio-energy Corp.	-	-	-	5,194	-
Finnq Co., Ltd.	-	-	-	4,597	-
Mirae Credit Information Services Corp. (*)	7,000	-	5	10,734	20
UBS Hana Asset Management Co., Ltd.	-	-	-	408	-
F&U Credit Information Co., Ltd.	-	-	-	1	-
Hana AIM Investment Management Inc.	-	-	-	2,117	-
BNP Asset Development Co., Ltd.	4,900	-	33	107	-
Hana Lantern Energy Factory Private Equity Fund	-	-	-	74	-
Thehue Company Ltd.(*)	5,250	-	1,397	74	-
	₩ 19,387	₩ -	₩ 3,672	₩ 24,164	₩ 20
Key management	5,715	-	-	9,735	-
	₩ 390,747	₩ 27,242	₩ 3,994	₩ 702,759	₩ 725,947

57.3 Outstanding balances with related parties arising from the above transactions as of December 31, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

(*) Receivables and payables from significant transactions with related parties for the year ended December 31, 2017, were restated by reflecting the partial errors in the transactions of the Company and overseas affiliated companies. Due to such restatement to the notes to the financial statements, receivables, allowance for doubtful accounts, and payables increased by ₩364,818 million, ₩1,633 million and ₩1,906 million, respectively.

57.4 Guarantees and acceptances and collateral provided between controlling company and subsidiaries as of December 31, 2018 and 2017 are as follows (Korean won in millions):

	December 31, 2018			
Company	Classification		Limit	Counterparty
The Bank	Unused limit related to loan commitments in Korean won	₩	500,000	Hana Card Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies		2,236	
	Unused limit related to loan commitments in Korean won		260,000	Hana Capital Co., Ltd.
	Unused limit related to loan commitments in Korean won		130,500	Hana Financial Investment Co., Ltd.
	Commitment to purchase securities		13,263	
	Unused limit related to loan commitments in Korean won		327	Masan Marine New Town Co., Ltd.
	Commitment to purchase securities		2,100	BSK-6 Patent Technology Investment Association
	Guarantees and acceptances denominated in foreign currencies		21,132	Beijing Langzi Asset Management LC
	Commitment to purchase securities		99,000	KEB Hana - KVIC Unicorn Fund of Funds
	Unused limit related to loan commitments in Korean won		151	Myoungshin Co., Ltd.
PT Bank KEB Hana	Unused limit related to loan commitments in foreign currencies		3,908	PT Sinarmas Hana Finance
Hana Card Co., Ltd.	Collateral provided		3,800	
	Unused limit		141,865	
Hana Capital Co., Ltd	Collateral provided		392,911	The Bank
Hana Financial Investment Co., Ltd. (*)	Unsettled arrangements (Currency forward)		7,246	
	Unsettled arrangements (Interest rate swaps)		95,905	

(*) The Company is provided with additional investment or supplementary funding for the forward exchange or currency swap of the investment trust from swap bank Hana Financial Investment Co., Ltd. of the investment trust, which is a participant in the purchase of private equity.

57.4 Guarantees and acceptances and collateral provided between controlling company and subsidiaries as of December 31, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

	December 31, 2017			
Company	Classification		Limit	Counterparty
The Bank	Unused limit related to loan commitments in Korean won	₩	500,000	Hana Card Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies		2,143	
	Unused limit related to loan commitments in Korean won		260,000	Hana Capital Co., Ltd.
	Unused limit related to loan commitments in Korean won (*)		130,000	Hana Financial Investment Co., Ltd.
	Unused limit related to loan commitments in Korean won		100	HN Housing Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies (*)		21,319	Beijing Langzi Asset Management Co., Ltd.
	Unused limit related to loan commitments in Korean won (*)		5,000	Masan Marine New Town Co., Ltd.
	Unused limit related to loan commitments in Korean won (*)		2,100	BSK-6 Patent Technology Investment Association
PT Bank KEB Hana	Unused limit related to loan commitments in foreign currencies (*)		5,925	PT Sinarmas Hana Finance
Hana Card Co., Ltd.	Collateral provided		3,000	
	Unused limit (*)		140,675	
Hana Capital Co., Ltd	Collateral provided		389,719	The Bank
Hana Financial Investment Co., Ltd.	Unsettled arrangements (Currency forward) (*)		28,973	
	Unsettled arrangements (Interest rate swaps) (*)		130,391	

Significant payment guarantees and collateral with related parties for the year ended December 31, 2017, were restated by reflecting the partial errors in the unused limit (including credit card) and payment guarantee, etc. Due to such restatement to the notes to the financial statements, unused limit, payment guarantee and unsettled arrangements increased by ₩283,700 million, ₩21,319 million and ₩159,364 million, respectively.

57.5 Details of compensation for standing directors and executive officers for the years December 31, 2018 and 2017 are summarized as follows (Korean won in millions of people in units):

Classification		2018		2017
Short–term employee payment	₩	10,602	₩	8,613
Severance payment		823		752
Stock options		3,578		2,467

OFFERING CIRCULAR

KEB Hana Bank

(incorporated with limited liability under the laws of the Republic of Korea)

U.S.$10,000,000,000
Global Medium Term Note Programme

On 17 May 1995, KEB Hana Bank (formerly Korea Exchange Bank; the "**Issuer**" or the "**Bank**") established a programme for the issuance of debt instruments up to U.S.$4,000,000,000 (as amended, supplemented or restated, the "**Programme**") and issued an offering circular on that date describing the Programme. On 8 January 2016, the Issuer increased the aggregate nominal amount of the Programme from U.S.$4,000,000,000 to U.S.$10,000,000,000. This offering circular (this "**Offering Circular**") updates the Programme and supersedes all previous offering circulars and any supplements or amendments thereto, including the immediately preceding offering circular dated 21 March 2017. Any Notes (as defined below) issued under the Programme on or after the date of this Offering Circular are issued subject to the provisions described herein. This update does not affect any Notes issued before the date of this Offering Circular.

Under the Programme, the Issuer may from time to time issue notes in bearer and/or registered form (respectively, "**Bearer Notes**" and "**Registered Notes**", and together, the "**Notes**", which expression includes Senior Notes and Subordinated Notes (as defined herein)) denominated in any currency agreed between the Issuer and the relevant Dealer (as defined below).

The maximum aggregate nominal amount of all Notes from time to time outstanding under the Programme will not exceed U.S.$10,000,000,000 (or its equivalent in other currencies calculated as described herein).

In relation to any Tranche (as defined under "*Terms and Conditions of the Notes*") of Notes, the Issuer may act through its principal office in Korea or through any of its branches, in each case as indicated in the applicable Pricing Supplement (as defined below).

The Notes may be issued on a continuing basis to one or more of the Dealers specified under "*Summary of the Programme*" and any additional Dealer appointed under the Programme from time to time, which appointment may be for a specific issue or on an ongoing basis (each a "**Dealer**", and together, the "**Dealers**"). References in this Offering Circular to the "**relevant Dealer**" shall, in the case of an issue of Notes being (or intended to be) subscribed by more than one Dealer, be to all Dealers agreeing to subscribe for such Notes.

Approval in-principle has been received from the Singapore Exchange Securities Trading Limited (the "**Singapore Stock Exchange**") in connection with the Programme and application will be made for the listing and quotation of Notes that may be issued pursuant to the Programme and which are agreed, at or prior to the time of issue thereof, to be so listed on the Singapore Stock Exchange. Such permission will be granted when such Notes have been admitted for listing and quotation on the Singapore Stock Exchange. The Singapore Stock Exchange assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of any Notes on, the Singapore Stock Exchange are not to be taken as an indication of the merits of the Issuer, the Programme or the Notes. Notice of the aggregate nominal amount of Notes, interest (if any) payable in respect of Notes, the issue price of Notes and any other terms and conditions not contained herein which are applicable to each Tranche of Notes will be set out in a pricing supplement (the "**Pricing Supplement**") a copy of which, with respect to Notes to be listed on the Singapore Stock Exchange, will be submitted to the Singapore Stock Exchange before the date of listing of the Notes of such Tranche.

The Programme provides that Notes may be listed on such other or further stock exchange(s) as may be agreed between the Issuer and the relevant Dealer. The Issuer may also issue unlisted Notes.

See "*Investment Considerations*" for a discussion of certain factors to be considered in connection with an investment in the Notes.

The Notes have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "**Securities Act**") and may not be offered or sold in the United States or to, or for the benefit of, U.S. persons (as defined in Regulation S under the Securities Act) unless the Notes are registered under the Securities Act or an exemption from the registration requirements of the Securities Act is available. See "*Form of the Notes*" for a description of the manner in which Notes will be issued. Registered Notes are subject to certain restrictions on transfer, see "*Subscription and Sale and Transfer and Selling Restrictions*".

In addition, if the Pricing Supplement (as defined in the Offering Circular) in respect of any Notes includes a legend entitled "Prohibition of Sales to EEA Retail Investors", the Notes are not intended, from the date of application of Regulation (EU) No 1286/2014 (the "**PRIIPs Regulation**"), to be offered, sold or otherwise made available to and, with effect from such date, should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("**EEA**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU ("**MiFID II**"); (ii) a customer within the meaning of Directive 2002/92/EC ("**IMD**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Directive 2003/71/EC (as amended, the "**Prospectus Directive**"). Consequently, no key information document required by the PRIIPs Regulation for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPS Regulation.

Notification under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA") — Unless otherwise stated in the Pricing Supplement in respect of any Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA) that the Notes to be issued under the Programme shall be prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

The Issuer may agree with any Dealer that Notes may be issued in a form not contemplated by the Terms and Conditions of the Notes herein, in which event a supplementary Offering Circular, if appropriate, will be published which will describe the effect of the agreement reached in relation to such Notes.

Arranger

HSBC

Dealers

BNP PARIBAS
Commerzbank
HSBC
KEB Hana Global Finance
Société Générale Corporate & Investment Banking
BofA Merrill Lynch
Crédit Agricole CIB
ING
Mizuho Securities
Standard Chartered Bank
Citigroup
Hana Financial Investment
J.P. Morgan
MUFG
UBS

The date of this Offering Circular is 11 January 2019.

The Issuer, having made all reasonable enquiries, accepts responsibility for this Offering Circular, and confirms that this Offering Circular contains all information which is material in the context of the Programme, that the information contained in this Offering Circular is true and accurate in all material respects and is not misleading, that the opinions and intentions expressed in this Offering Circular are honestly held and that there are no other facts the omission of which would make any of such information or the expression of any such opinions or intentions misleading.

This Offering Circular is to be read in conjunction with all documents which are deemed to be incorporated herein by reference (see "*Documents Incorporated by Reference*" below). This Offering Circular shall be read and construed on the basis that such documents are incorporated and form part of this Offering Circular.

No representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by the Dealers as to the authenticity, origin, validity, accuracy or completeness of the information contained or incorporated by reference in this Offering Circular or any supplement hereto or any other information provided by or purported to be provided by the Arranger, the Dealers or the Issuer in connection with the Programme, the Issuer or issue and offering of the Notes. No Dealer accepts any liability in relation to the information contained or incorporated by reference in this Offering Circular or any other information provided by the Arranger, the Dealers or the Issuer in connection with the Programme, the Issuer or issue and offering of the Notes. Each Dealer and its affiliates accordingly disclaim all and any liability whether arising in tort or contract or otherwise which it might otherwise have in respect of this Offering Circular or any such information.

No person is or has been authorised by the Issuer to give any information or to make any representation not contained in or not consistent with this Offering Circular or any other information supplied in connection with the Programme or the Notes and, if given or made, such information or representation must not be relied upon as having been authorised by the Issuer or any of the Dealers.

Neither this Offering Circular nor any other information supplied in connection with the Programme or any Notes (i) is intended to provide the basis of any credit or other evaluation or (ii) should be considered as a recommendation or constituting an invitation or offer by the Issuer or any of the Dealers that any recipient of this Offering Circular or any other information supplied in connection with the Programme or any Notes should purchase any Notes. Each investor contemplating purchasing any Notes should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the Issuer. Neither this Offering Circular nor any other information supplied in connection with the Programme or any Notes constitutes an offer or invitation by or on behalf of the Issuer or any of the Dealers to any person to subscribe for or to purchase any Notes.

Neither the delivery of this Offering Circular nor the offering, sale or delivery of any Notes shall in any circumstances imply that the information contained herein concerning the Issuer is correct at any time subsequent to the date hereof or that any other information supplied in connection with the Programme is correct as of any time subsequent to the date indicated in the document containing the same. The Dealers expressly do not undertake to review the financial condition or affairs of the Issuer during the life of the Programme or to advise any investor in the Notes of any information coming to their attention. Investors should review, *inter alia*, the most recently published financial statements of the Issuer when deciding whether or not to purchase any Notes.

The Notes in bearer form are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to U.S. persons, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the U.S. Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder.

This Offering Circular does not constitute an offer to sell or the solicitation of an offer to buy any Notes in any jurisdiction to any person to whom it is unlawful to make the offer or solicitation in such jurisdiction. The distribution of this Offering Circular and the offer or sale of Notes may be restricted by law in certain jurisdictions. The Issuer and the Dealers do not represent that this document may be lawfully distributed, or that any Notes may be lawfully offered, in compliance with any applicable registration or other requirements in any such jurisdiction, or pursuant to an exemption available thereunder, or assume any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by the Issuer or the Dealers which would permit a public offering of any Notes or distribution of this document in any jurisdiction where action for that purpose is required. Accordingly, no Notes may be offered or sold, directly or indirectly, and neither this Offering Circular nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations and the Dealers have represented that all offers and sales by them will be made on the same terms. Persons into whose possession this Offering Circular or any Notes come must inform themselves about, and observe, any such restrictions on the distribution of this Offering Circular and the offering and sale of Notes. In particular, there are restrictions on the distribution of this Offering Circular and the offer or sale of Notes in the United States, the European Economic Area (including the United Kingdom), Japan, Hong Kong, Singapore, Canada, United Arab Emirates (including the Dubai International Finance Centre), Switzerland and Korea. For a description of these and certain further restrictions on offers and sales of the Notes and distribution of this Offering Circular, see "*Subscription and Sale and Transfer and Selling Restrictions*" below.

In making an investment decision, investors must rely on their own examination of the Issuer and the terms of the Notes being offered, including the merits and risks involved. The Notes have not been approved or disapproved by the U.S. Securities and Exchange Commission or any other securities commission or other regulatory authority in the United States, nor have the foregoing authorities approved this Offering Circular or confirmed the accuracy or determined the adequacy of the information contained in this Offering Circular. Any representation to the contrary is unlawful.

None of the Dealers or the Issuer makes any representation to any investor in the Notes regarding the legality of its investment under any applicable laws. Any investor in the Notes should be able to bear the economic risk of an investment in the Notes for an indefinite period of time.

U.S. INFORMATION

The Notes have not been and will not be registered under the Securities Act and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in certain transactions exempt from the registration requirements of the Securities Act. See *"Subscription and Sale and Transfer and Selling Restrictions"* below.

This Offering Circular may be submitted on a confidential basis in the United States to a limited number of QIBs or Institutional Accredited Investors (each as defined under "*Form of the Notes*") for informational use solely in connection with the consideration of the purchase of the Notes being offered hereby. Its use for any other purpose in the United States is not authorised. It may not be copied or reproduced in whole or in part nor may it be distributed or any of its contents disclosed to anyone other than the prospective investors to whom it is originally submitted.

Registered Notes may be offered or sold within the United States only to QIBs or to Institutional Accredited Investors, in either case in transactions exempt from registration under the Securities Act. Each U.S. purchaser of Registered Notes is hereby notified that the offer and sale of any Registered Notes to it may be being made in reliance upon the exemption from the registration requirements of the Securities Act provided by Rule 144A under the Securities Act ("**Rule 144A**").

Purchasers of Definitive IAI Registered Notes will be required to execute and deliver an IAI Investment Letter (as defined under "*Terms and Conditions of the Notes*"). Each purchaser or holder of Definitive IAI Registered Notes, Notes represented by a Restricted Global Note (as defined under "*Form of the Notes*") or any Notes issued in registered form in exchange or substitution therefor (together, "**Legended Notes**") will be deemed, by its acceptance or purchase of any such Legended Notes, to have made certain representations and agreements intended to restrict the resale or other transfer of such Notes as set out in "*Subscription and Sale and Transfer and Selling Restrictions*". Unless otherwise stated, terms used in this paragraph have the meanings given to them in "*Form of the Notes*".

SINGAPORE INFORMATION

Notification under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA") — Unless otherwise stated in the Pricing Supplement in respect of any Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA) that the Notes to be issued under the Programme shall be prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

NOTICE TO PERSONS IN THE UNITED KINGDOM

This communication is only being distributed to and is only directed at (i) persons who are outside the United Kingdom, (ii) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (the "**FSMA**") (Financial Promotion) Order 2005, as amended, (the "**Order**"), or (iii) high net worth entities, and other persons to whom it may lawfully be communicated, falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "**relevant persons**"). Any Notes will only be available to, and any invitation, offer or agreement to subscribe, purchase or otherwise acquire such Notes will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

AVAILABLE INFORMATION

To permit compliance with Rule 144A in connection with any resales or other transfers of Notes that are "restricted securities" within the meaning of the Securities Act, the Issuer has undertaken in a deed poll dated 8 January 2016 (the "**Deed Poll**") to furnish, upon the request of a holder of such Notes or any beneficial interest therein, to such holder or to a prospective purchaser designated by him, the information required to be delivered under Rule 144A(d)(4) under the Securities Act if, at the time of the request, the Issuer is neither a reporting company under Section 13 or 15(d) of the U.S. Securities Exchange Act of 1934, as amended, (the "**Exchange Act**") nor exempt from reporting pursuant to Rule 12g3-2(b) thereunder.

KOREAN SELLING RESTRICTIONS

The Notes have not been and will not be registered under the Financial Investment Services and Capital Markets Act of Korea (the "**FSCMA**"). The Notes have not been and will not be offered, sold or delivered, directly or indirectly, in Korea or to, or for the account or benefit of, any resident of Korea (as defined in the Foreign Exchange Transactions Law of Korea and its Enforcement Decree), or to any other person for reoffering, resale or re-delivery, directly or indirectly, in Korea or to, or for the account or benefit of, any resident of Korea, except as otherwise permitted by applicable Korean laws and regulations. In addition, until the expiration of one year after the issuance of the Notes, a holder of Notes will be prohibited from offering, delivering or selling any Notes, directly or indirectly, in Korea or to any Korean resident except (i) in the case where the Notes are not issued as convertible bonds, bonds with warrants and exchangeable bonds, the Notes may be offered, sold or delivered to or for the account or benefit of a Korean resident which falls within certain categories of qualified institutional investors as specified in the FSCMA, its Enforcement Decree and the Regulation on Securities Issuance and Disclosure, **provided that** (x) the Notes are registered with Korea Financial Investment Association (the "**KOFIA**") by the Issuer and (y) the qualified institutional investors are registered with the KOFIA in advance, and further **provided that** all of the following requirements are satisfied: (1) the Notes shall be issued in a currency other than Won and the principal and interest shall be paid in a currency other than Won, (2) at least 80 per cent. of the Notes shall be allocated to non-residents of Korea (which applies only to the Notes acquired from the Issuer or any underwriter at the time of issuance), (3) the Notes shall be those listed on a major overseas securities market specified by the governor of the Financial Supervisory Services, those registered with or reported to a foreign financial investment supervisory agency of the country in which a major overseas market is established, or those for which any other procedure that may be deemed a public offering is completed in the country in which a major overseas market is established, (4) measures shall be taken to state the condition that the Notes shall not be transferred to any Korean resident other than qualified institutional investors at the time of issuance or within one year from the issuance date on the face of such Notes (limited to cases where any physical instrument is issued), the underwriting agreement, subscription agreement and offering document and (5) the Issuer and the relevant Dealers shall take measures under foregoing items (1) through (4) and the Issuer and the relevant Dealers shall severally or jointly preserve evidential documents in relation thereto; or (ii) as otherwise permitted under applicable Korean laws and regulations.

IMPORTANT — EEA RETAIL INVESTORS

If the Pricing Supplement in respect of any Notes includes a legend entitled "Prohibition of Sales to EEA Retail Investors," the Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("**EEA**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point

(11) of Article 4(1) of Directive 2014/65/EU ("**MiFID II**"); (ii) a customer within the meaning of Directive 2002/92/EC, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Directive 2003/71/EC. Consequently, no key information document required by Regulation (EU) No 1286/2014 (the "**PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

SERVICE OF PROCESS AND ENFORCEMENT OF CIVIL LIABILITIES

The Issuer is a corporation organised under the laws of Korea. All of the officers and directors named herein reside outside the United States and all or a substantial portion of the assets of the Issuer and of such officers and directors are located outside the United States. As a result, it may not be possible for investors to effect service of process within the U.S. upon the Issuer or such persons, or to enforce judgements against them obtained in courts in the U.S. predicated upon civil liabilities of the Issuer or such directors and officers under laws other than Korean law, including any judgement predicated upon U.S. federal securities laws. There is doubt as to the enforceability in Korea in original actions or in actions for enforcement of judgements of U.S. courts of civil liabilities predicated solely upon the federal securities laws of the United States.

FORWARD LOOKING STATEMENTS

Certain statements in this Offering Circular constitute "forward-looking statements", including statements regarding the Issuer's expectations and projections for future operating performance and business prospects. The words "believe", "expect", "anticipate", "estimate", "project", "will", "aim", "will likely result", "will continue", "intend", "plan", "contemplate", "seek to", "future", "objective", "goal", "should", "will pursue" and similar expressions or variations of these expressions identify forward-looking statements. In addition, all statements other than statements of historical facts included in this Offering Circular, including, without limitation, those regarding the Issuer's financial position and results, business strategy, plans and objectives of management for future operations, including development plans and objectives relating to the Issuer's products and services, are forward-looking statements. Such forward-looking statements and any other projections contained in this Offering Circular (whether made by the Issuer or any third party) involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from the future results, performance or achievements expressed or implied by forward-looking statements. Such forward-looking statements are based on current beliefs, assumptions, expectations, estimates and projections regarding the Issuer's present and future business strategies and the environment in which the Issuer will operate in the future. Important factors that could cause some or all of those assumptions not to occur or cause the Issuer's actual results, performance or achievements to differ materially from those in the forward-looking statements include, among other things:

- the condition of and changes in the Korean, Asian or global economies, including changes in consumer confidence and spending;
- changes in interest rates;
- future levels of non-performing loans;
- changes in government regulations affecting the Issuer's businesses in Korea and in other jurisdictions where the Issuer operates;
- the success of post-merger integration following Korea Exchange Bank's merger with Hana Bank, which became effective on 1 September 2015 (the "**Merger**");
- the Issuer's ability to successfully implement its business strategy; and
- competition in the financial services industry.

Additional factors that could cause the Issuer's actual results, performance or achievements to differ materially include, but are not limited to, those discussed under "*Investment Considerations*". Any forward-looking statements contained in this Offering Circular speak only as of the date of this Offering Circular. Each of the Issuer and the Dealers expressly disclaims any obligation or undertaking to release, publicly or otherwise, any updates or revisions to any forward-looking statement contained herein to reflect any change in the Issuer's expectations with regard thereto or any change in events, conditions, assumptions or circumstances on which any such statement was based.

CERTAIN DEFINED TERMS AND CONVENTIONS

Unless otherwise specified or the context otherwise requires, in this Offering Circular:

- References to "**we**", "**us**", "**our**", the "**Issuer**" and the "**Bank**" are to KEB Hana Bank (formerly Korea Exchange Bank), the surviving entity resulting from the Merger;
- References to "**Korea Exchange Bank**" are to Korea Exchange Bank prior to the Merger;
- References to "**Hana Bank**" are to Hana Bank, which merged with and into Korea Exchange Bank pursuant to the Merger; and
- References to "**Hana Financial Group**" are to Hana Financial Group, Inc., the Bank's holding company.

References to "**Korea**" are to the Republic of Korea. References to "**U.S.**" or the "**United States**" are to the United States of America. References to "**PRC**" or "**China**" are to the People's Republic of China. References to the "**Government**" are to the government of Korea. The "**Financial Services Commission**" or the "**FSC**" shall mean the Financial Services Commission of Korea, and the "**Financial Supervisory Service**" or the "**FSS**" shall mean the Financial Supervisory Service of Korea, the executive body of the FSC.

All references in this Offering Circular to "**Won**" and "**₩**" refer to the currency of Korea, those to "**U.S. dollars**", "**US$**" and "**U.S.$**" are to United States dollars, those to "**Japanese Yen**" are to the currency of Japan, those to "**S$**" are to the currency of Singapore, those to "**Sterling**" and "**£**" are to the currency of the United Kingdom, those to "**Chinese Renminbi**", "**Renminbi**" and "**RMB**" are to the currency of China and those to "**Euro**" and "**€**" are to the currency introduced at the start of the third stage of the European economic and monetary union pursuant to the Treaty establishing the European Community, as amended.

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

The Issuer maintains its financial books and records and prepares its financial statements in Won in accordance with the Korean equivalent of International Financial Reporting Standards ("**K-IFRS**"), which differ in certain significant respects from generally accepted accounting principles in other countries, including generally accepted accounting principles in the United States ("**U.S. GAAP**"). The Issuer has made no attempt to identify or quantify the impact of differences between K-IFRS and U.S. GAAP.

Unless otherwise stated, all financial information contained in this Offering Circular is presented on a consolidated basis in accordance with K-IFRS together with, where applicable, accounting and reporting guidelines under Korean accounting standards applicable to the banking industry. Financial and other information contained in this Offering Circular regarding individual borrowers, groups or categories of borrowers or classifications by industry, geography, size or other factors, including information as to loans, credits, total exposures, allowances, collateral values, nonperforming loans and other items, has been derived solely from the Issuer's internal management information systems.

Unless otherwise stated, the financial data of the Issuer as of and for the years ended 31 December 2015, 2016 and 2017 contained in this Offering Circular have been derived from the audited annual consolidated financial statements of the Issuer included herein, which have been prepared in accordance with K-IFRS. The financial data of the Issuer as of 30 September 2018 and for the nine months ended 30 September 2017 and 2018 contained in this Offering Circular have been derived from the Issuer's unaudited interim consolidated financial statements included herein, which have been prepared in accordance with K-IFRS 1034 *Interim Financial Reporting*.

The financial reporting periods shown in certain sections of this Offering Circular include periods prior to the Merger. The Merger has affected the financial statements of the Issuer significantly, which also affects the comparability of the results of operations and cash flows of the Issuer as presented in this Offering Circular for certain periods. Any statement of financial position data of the Issuer as of 31 December 2015, 2016 and 2017 and 30 September 2018 represents the financial position of the Issuer as of such dates giving effect to the Merger, which was consummated effective 1 September 2015. Any statement of comprehensive income data of the Issuer for the years ended 31 December 2016 and 2017 and for the nine months ended 30 September 2018 represents the results of the Issuer (giving effect to the Merger) for such period, and any statement of comprehensive income data of the Issuer for the year ended 31 December 2015 represents the results of the Issuer (giving effect to the Merger) from 1 September 2015 to 31 December 2015 and those of Korea Exchange Bank (prior to the Merger) from 1 January 2015 to 31 August 2015.

All references in this document to "**balance sheet**" are to the statement of financial position.

Under the Korean Banking Act (the "**Bank Act**"), assets accepted in trust by a bank in Korea must be segregated from its other assets in the accounts of that bank. Accordingly, banks, including the Issuer, engaged in the banking and trust businesses must maintain two separate accounts, the bank account and the trust account, and two separate sets of records, which provide details of their respective banking and trust businesses. All financial information contained in this Offering Circular relating to the Issuer is presented with respect to the Issuer's bank account only, unless stated otherwise.

Unless otherwise specified, all conversions of Won into U.S. dollars were made at the base rate under the market average exchange system, provided by Seoul Money Brokerage Services, Ltd. in Seoul for U.S. dollars against Won (the "**Market Average Exchange Rate**"). For convenience only, except as set out below and where otherwise indicated, certain Won amounts have been translated into dollars at the Market Average Exchange Rate of U.S.$1.00 = ₩1,112.7, which was in effect on 30 September 2018. No representation is made that the Won or the U.S. dollar amounts referred to in this Offering Circular could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate or at all.

Any discrepancies in any table between totals and the sums of the amounts listed are due to rounding. References to billions are to thousands of millions.

In connection with the issue of any Tranche of Notes, the Dealer or Dealers (if any) named as the Stabilisation Manager(s) (or persons acting on behalf of any Stabilisation Manager(s)) in the applicable Pricing Supplement may over-allot Notes or effect transactions with a view to supporting the market price of the Notes at a level higher than that which might otherwise prevail. However, stabilisation may not necessarily occur. Such stabilising, if commenced, may be discontinued at any time and, if begun, must be brought to an end after a limited period. Any stabilisation action or over-allotment must be conducted by the relevant Stabilisation Manager(s) (or persons acting on behalf of any Stabilisation Manager(s)) in accordance with all applicable laws and rules.

CONTENTS

DOCUMENTS INCORPORATED BY REFERENCE

The following documents shall be deemed to be incorporated in, and to form part of, this Offering Circular:

(a) the publicly available audited consolidated and audited separate annual financial statements and the publicly available unaudited consolidated and unaudited separate interim financial statements of the Issuer for the most recent financial period; and

(b) all supplements or amendments to this Offering Circular circulated by the Issuer from time to time,

save that any statement contained herein or in a document which is deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purpose of this Offering Circular to the extent that a statement contained in any such subsequent document which is deemed to be incorporated by reference herein modifies or supersedes such earlier statement (whether expressly, by implication or otherwise).

The Issuer will provide, without charge, to each person to whom a copy of this Offering Circular has been delivered, upon the written request of such person, a copy of any or all of the documents deemed to be incorporated herein by reference unless such documents have been modified or superseded as specified above. Written requests for such documents should be directed to the Issuer at its registered office set out at the end of this Offering Circular. In addition, such documents will be available for inspection, free of charge at the specified office of The Bank of New York Mellon, London Branch (the "**Principal Paying Agent**").

The Issuer will, in connection with the listing of the Notes on the Singapore Stock Exchange, so long as the rules of the Singapore Stock Exchange so require, in the event of any material change in the information contained in this Offering Circular, prepare a supplement to this Offering Circular or publish a new Offering Circular for use in connection with any subsequent issue of the Notes to be listed on the Singapore Stock Exchange.

If the terms of the Programme are modified or amended in a manner which would make this Offering Circular, as supplemented, materially inaccurate or misleading, a new Offering Circular will be prepared.

GENERAL DESCRIPTION OF THE PROGRAMME

Under the Programme, the Issuer may from time to time issue Notes denominated in any currency and with any maturity, subject as set out herein. A summary of the terms and conditions of the Programme and the Notes appears below. The applicable terms of any Notes will be agreed between the Issuer and the relevant Dealer prior to the issue of the Notes and will be set out in the Terms and Conditions of the Notes endorsed on, or incorporated by reference into, the Notes, as modified and supplemented by the applicable Pricing Supplement attached to, or endorsed on, such Notes, as more fully described under "*Form of the Notes*" below.

This Offering Circular and any supplement will only be valid for the offering of Notes in an aggregate nominal amount of Notes which, when added to the aggregate nominal amount then outstanding of all Notes previously or simultaneously issued under the Programme, does not exceed U.S.$10,000,000,000 or its equivalent in other currencies. For the purpose of calculating the U.S. dollar equivalent of the aggregate nominal amount of Notes issued under the Programme from time to time:

(a) the U.S. dollar equivalent of Notes denominated in another Specified Currency (as specified in the applicable Pricing Supplement in relation to the Notes, described under "*Form of the Notes*" below) shall be determined, at the discretion of the Issuer, either as of the date on which agreement is reached for the issue of Notes or on the preceding day on which commercial banks and foreign exchange markets are open for business in London, in each case on the basis of the spot rate for the sale of the U.S. dollar against the purchase of such Specified Currency in the London foreign exchange market quoted by any leading international bank selected by the Issuer on the relevant day of calculation;

(b) the U.S. dollar equivalent of Dual Currency Notes, Index Linked Notes and Partly Paid Notes (each as specified in the applicable Pricing Supplement in relation to the Notes, described under "*Form of the Notes*" below) shall be calculated in the manner specified above by reference to the original nominal amount on issue of such Notes (in the case of Partly Paid Notes regardless of the subscription price paid); and

(c) the U.S. dollar equivalent of Zero Coupon Notes (as specified in the applicable Pricing Supplement in relation to the Notes, described under "*Form of the Notes*" below) and other Notes issued at a discount or premium shall be calculated in the manner specified above by reference to the net proceeds received by the Issuer for the relevant issue.

SUMMARY OF THE PROGRAMME

The following summary does not purport to be complete and is taken from, and is qualified in its entirety by, the remainder of this Offering Circular and, in relation to the terms and conditions of any particular Tranche of Notes, the applicable Pricing Supplement. Words and expressions defined in "*Form of the Notes*" and "*Terms and Conditions of the Notes*" below shall have the same meanings in this summary.

Issuer:	KEB Hana Bank (in relation to each Tranche of Notes, the applicable Pricing Supplement will indicate whether the Issuer is acting through its principal office in Korea or through any of its branches)
Legal Entity Identifier:	6RPK2YDJN6L35AS0M510
Description:	Global Medium Term Note Programme
Arranger:	The Hongkong and Shanghai Banking Corporation Limited
Dealers:	BNP Paribas, Citigroup Global Markets Inc., Commerzbank Aktiengesellschaft, Crédit Agricole Corporate and Investment Bank, Hana Financial Investment Co., Ltd., The Hongkong and Shanghai Banking Corporation Limited, ING Bank N.V., Singapore Branch, J.P. Morgan Securities plc, KEB Hana Global Finance Limited, Merrill Lynch International, Mizuho Securities Asia Limited, MUFG Securities EMEA plc, Société Générale, Standard Chartered Bank, UBS AG Hong Kong Branch and any other Dealers appointed in accordance with the Programme Agreement (as defined under "*Subscription and Sale and Transfer and Selling Restrictions*").
Certain Restrictions:	Each issue of Notes denominated in a currency in respect of which particular laws, guidelines, regulations, restrictions or reporting requirements apply will only be issued in circumstances which comply with such laws, guidelines, regulations, restrictions or reporting requirements from time to time (see "*Subscription and Sale and Transfer and Selling Restrictions*").
Principal Paying Agent and Calculation Agent:	The Bank of New York Mellon, London Branch
DTC Paying Agent, DTC Transfer Agent, DTC Registrar and Exchange Agent:	The Bank of New York Mellon
ICSD Paying Agent (in respect of Notes held through Euroclear and Clearstream):	The Bank of New York Mellon, London Branch
ICSD Transfer Agent and Registrar (in respect of Notes held through Euroclear and Clearstream):	The Bank of New York Mellon SA/NV, Luxembourg Branch
CMU Lodging Agent, CMU Transfer Agent and CMU Registrar:	The Bank of New York Mellon, Hong Kong Branch
Size:	Up to U.S.$10,000,000,000 (or its equivalent in other currencies calculated as described under "*General Description of the Programme*") outstanding at any time. The Issuer may increase the amount of the Programme in accordance with the terms of the Programme Agreement.
Distribution:	Notes may be distributed by way of private or public placement and in each case on a syndicated or non-syndicated basis.

Currencies:	Subject to any applicable legal or regulatory restrictions, any currency agreed between the Issuer and the relevant Dealer.
Maturities:	Such maturities as may be agreed between the Issuer and the relevant Dealer and as indicated in the applicable Pricing Supplement, subject to such minimum or maximum maturities as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the Issuer or the relevant Specified Currency; **provided that** Tier II Subordinated Notes shall have a minimum maturity of five years and Tier I Subordinated Notes shall be undated perpetual securities with no fixed maturity.
Issue Price:	Notes may be issued on a fully-paid or a partly-paid basis and at an issue price which is at par or at a discount to, or premium over, par.
Form of Notes:	The Notes will be issued in bearer or registered form as described in "*Form of the Notes*". Registered Notes will not be exchangeable for Bearer Notes and *vice versa*.
Fixed Rate Notes:	Fixed interest will be payable on such date or dates as may be agreed between the Issuer and the relevant Dealer (as indicated in the applicable Pricing Supplement) and on redemption and will be calculated on the basis of such Day Count Fraction as may be agreed between the Issuer and the relevant Dealer.
Floating Rate Notes:	Floating Rate Notes will bear interest at a rate determined either: (i) on the same basis as the floating rate under a notional interest-rate swap transaction in the relevant Specified Currency governed by an agreement incorporating the 2006 ISDA Definitions (as published by the International Swaps and Derivatives Association, Inc., and as amended and updated as at the Issue Date of the first Tranche of the Notes of the relevant Series); or (ii) on the basis of a reference rate appearing on the agreed screen page of a commercial quotation service; or (iii) on such other basis as may be agreed between the Issuer and the relevant Dealer, as indicated in the applicable Pricing Supplement. The Margin (if any) relating to such floating rate will be agreed between the Issuer and the relevant Dealer for each series of Floating Rate Notes.
Index Linked Notes:	Payments of principal in respect of Index Linked Redemption Notes or of interest in respect of Index Linked Interest Notes will be calculated by reference to such index and/or formula, to the extent permitted by applicable law, as the Issuer and the relevant Dealer may agree (as indicated in the applicable Pricing Supplement).
Other provisions in relation to Floating Rate Notes and Index Linked Interest Notes:	Floating Rate Notes and Index Linked Interest Notes may also have a maximum interest rate, a minimum interest rate or both. Interest on Floating Rate Notes and Index Linked Interest Notes in respect of each Interest Period, as selected prior to issue by the Issuer and the relevant Dealer, will be payable on such Interest Payment Dates specified in, or determined pursuant to, the applicable Pricing Supplement and will be calculated on the basis of the relevant Day Count Fraction, as may be agreed between the Issuer and the relevant Dealer.

Dual Currency Notes:	Payments (whether in respect of principal or interest and whether at maturity or otherwise) in respect of Dual Currency Notes will be made in such currencies and based on such rates of exchange, as the Issuer and the relevant Dealer may agree (as indicated in the applicable Pricing Supplement).
Zero Coupon Notes:	Zero Coupon Notes will be offered and sold at a discount to their nominal amount and will not bear interest other than in the case of late payment.
Redemption:	The applicable Pricing Supplement will indicate either that the relevant Notes cannot be redeemed prior to their stated maturity (other than in specified instalments (see below), if applicable, or for taxation reasons (in the case of Subordinated Notes, only with the prior approval of the FSS or of such other relevant regulatory authorities in Korea, if necessary) or, in the case of Senior Notes, following an Event of Default or, in the case of Subordinated Notes, following a Bankruptcy Event or the liquidation of the Bank) or that such Notes will be redeemable at the option of the Issuer (only with, in the case of Subordinated Notes, the prior approval of the FSS or of such other relevant regulatory authorities in Korea, if necessary) upon giving not less than 15 nor more than 30 days' irrevocable notice (or such other notice period (if any) as is indicated in the applicable Pricing Supplement) to the Noteholders, and/or (except in the case of Subordinated Notes) at the option of the Noteholders, upon giving not less than 15 nor more than 30 days' irrevocable notice (or such other notice period (if any) as is indicated in the applicable Pricing Supplement) to the Issuer, on a date or dates specified prior to such stated maturity and at a price or prices and on such terms as are indicated in the applicable Pricing Supplement. The applicable Pricing Supplement may provide that Notes may be repayable in two or more instalments of such amounts and on such dates as are indicated in the applicable Pricing Supplement.
Denomination of Notes:	Notes will be issued in such denominations as may be agreed between the Issuer and the relevant Dealer and as indicated in the applicable Pricing Supplement save that the minimum denomination of each Note will be such as may be allowed or required from time to time by the relevant central bank (or equivalent body) or any laws or regulations applicable to the relevant Specified Currency. Definitive IAI Registered Notes sold in the United States to Institutional Accredited Investors pursuant to Section 4(a)(2) of the Securities Act or in a transaction otherwise exempt from registration under the Securities Act shall be issued in minimum denominations of U.S.$500,000 (or its equivalent in any other currency) and higher integral multiples of U.S.$1,000 (or its equivalent as aforesaid).
Taxation:	All payments in respect of the Notes will be made without deduction for or on account of withholding taxes imposed within Korea or any Specified Country, subject as provided in Condition 9. In the event that any such deduction is made, the Issuer will, save in certain limited circumstances provided in Condition 9, be required to pay additional amounts to cover the amounts so deducted.
Negative Pledge:	The terms of the Senior Notes will contain a negative pledge provision as further described in Condition 4.
Cross-Acceleration:	The terms of the Senior Notes will contain a cross-acceleration provision as further described in Condition 11.

Status of the Senior Notes:	The Senior Notes and any relative Receipts and Coupons will constitute direct, unconditional, unsubordinated and (subject to Condition 4) unsecured obligations of the Issuer which will rank *pari passu* among themselves and will rank at least *pari passu* with all other present and future unsecured (subject to Condition 4) and unsubordinated obligations of the Issuer, save for such as may be preferred by mandatory provisions of applicable law.
Status of the Subordinated Notes:	The Subordinated Notes and any relative Receipts and Coupons will constitute direct, general, subordinated and unsecured obligations of the Issuer. The rights of holders of Subordinated Notes will be subordinated in right of payment in the manner provided in Conditions 3(b) and 3(c).
Write-off of the Subordinated Notes upon a Trigger Event	The Subordinated Notes will be subject to Write-off upon the occurrence of a Trigger Event, as provided in Condition 8. See "*Investment Considerations — Risks relating to the Notes — The Notes that are Subordinated Notes may be fully written off upon the occurrence of certain trigger events, in which case holders of the Subordinated Notes will lose all of their investment*".
Listing:	Approval in-principle has been received from the Singapore Stock Exchange in connection with the Programme and application will be made for the listing and quotation of Notes that may be issued pursuant to the Programme and which are agreed at or prior to the time of issue thereof, to be so listed on the Singapore Stock Exchange. Such permission will be granted when such Notes have been admitted for listing and quotation on the Singapore Stock Exchange. The Singapore Stock Exchange assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of any Notes on, the Singapore Stock Exchange are not to be taken as an indication of the merits of the Issuer, the Programme or the Notes. For so long as any Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, such Notes, if traded on the Singapore Stock Exchange, will be traded in a minimum board lot size of S$200,000 or its equivalent in foreign currencies. Notes may also be listed on such other or further stock exchange(s) as may be agreed between the Issuer and the relevant Dealer in relation to each Series. The Pricing Supplement relating to each Tranche of Notes will state whether or not and, if so, on which stock exchange(s) the Notes are to be listed. Notes not listed on a stock exchange may also be issued.
Governing Law:	The Notes and all non-contractual obligations arising out of or in connection with the Notes will be governed by, and construed in accordance with, English law, except for Conditions 3(b) (*Status of the Subordinated Notes*) and 3(c) (*Subordination*), which will be governed by, and construed in accordance with, Korean law.
Notes Issued as Green Bonds, Social Bonds or Sustainability Bonds:	The Issuer may agree at the relevant issue date of any Notes designated as Green Bonds, Social Bonds or Sustainability Bonds (as described in "*Use of Proceeds*") to allocate the net proceeds towards the financing and/or refinancing of Green Eligible Categories, Social Eligible Categories (each as defined in "*Use of Proceeds*") or a combination of the two categories (in the case of Sustainability Bonds) in accordance with certain prescribed eligibility criteria as described under the KEB Hana Bank Sustainable Financing Framework. See "*Sustainable Financing Framework*". However, it

would not be an event of default under the Green Bonds, Social Bonds or Sustainability Bonds if (i) the Issuer were to fail to comply with such undertaking or were to fail to allocate the proceeds in the manner specified in the applicable Pricing Supplement and/or (ii) any Second Party Opinion issued in connection with such Green Bonds, Social Bonds or Sustainability Bonds were to be withdrawn. Any failure to allocate the net proceeds of any Series of Green Bonds, Social Bonds or Sustainability Bonds in connection with green projects, social projects or sustainability projects and/or any failure to meet, or to continue to meet, the investment requirements of certain environmentally or socially focused investors with respect to such Green Bonds, Social Bonds or Sustainability Bonds may affect the value and/or trading price of the Green Bonds, Social Bonds or Sustainability Bonds, and/or may have consequences for certain investors with portfolio mandates to invest in green assets, social assets or sustainability assets.

Selling Restrictions: There are selling restrictions in relation to the United States, the European Economic Area (including the United Kingdom), Japan, Hong Kong, Singapore, Canada, United Arab Emirates (including the Dubai International Finance Centre), Switzerland, Korea and such other restrictions as may be required in connection with the offering and sale of a particular Tranche of Notes. See *"Subscription and Sale and Transfer and Selling Restrictions"*.

FORM OF THE NOTES

The Notes of each Series will be in either bearer form, with or without interest coupons attached, or registered form, without interest coupons attached. Bearer Notes will be issued outside the United States in reliance on Regulation S under the Securities Act ("**Regulation S**") and Registered Notes will be issued both outside the United States in reliance on the exemption from registration provided by Regulation S and within the United States in reliance on Rule 144A or Regulation D under the Securities Act.

Bearer Notes

Each Tranche of Bearer Notes will be initially issued in the form of either a temporary global note (a "**Temporary Global Note**") or a permanent global note (a "**Permanent Global Note**") as indicated in the applicable Pricing Supplement, which, in either case, will be delivered on or prior to the original issue date of the Tranche to either (i) a common depositary (the "**Common Depositary**") for Euroclear Bank S.A./N.V. ("**Euroclear**") and Clearstream Banking S.A. ("**Clearstream, Luxembourg**") or (ii) a sub-custodian for the Hong Kong Monetary Authority ("**HKMA**") as operator of the Central Moneymarkets Unit Service (the "**CMU Service**"). Whilst any Bearer Note is represented by a Temporary Global Note, payments of principal, interest (if any) and any other amount payable in respect of the Notes due prior to the Exchange Date (as defined below) will be made against presentation of the Temporary Global Note only to the extent that certification (in a form to be provided) to the effect that the beneficial owners of interests in such Bearer Note are not U.S. persons or persons who have purchased for resale to any U.S. person, as required by U.S. Treasury regulations, has been received by Euroclear and/or Clearstream, Luxembourg and/or The Bank of New York Mellon, Hong Kong Branch (the "**CMU Lodging Agent**") and (in the case of a Temporary Global Note delivered to the Common Depositary for Euroclear and Clearstream, Luxembourg) Euroclear and/or Clearstream, Luxembourg, as applicable, has given a like certification (based on the certifications it has received) to the Principal Paying Agent.

On and after the date (the "**Exchange Date**") which is 40 days after a Temporary Global Note is issued, interests in such Temporary Global Note will be exchangeable (free of charge) upon a request as described therein either for (i) interests in a Permanent Global Note of the same Series or (ii) for definitive Bearer Notes of the same Series with, where applicable, receipts, interest coupons and talons attached (as indicated in the applicable Pricing Supplement and subject, in the case of definitive Bearer Notes, to such notice period as is specified in the applicable Pricing Supplement), in each case against certification of beneficial ownership as described above unless such certification has already been given, **provided that** purchasers in the United States and certain U.S. persons will not be able to receive definitive Bearer Notes. The CMU Service may require that any such exchange for a Permanent Global Note is made in whole and not in part and in such event, no such exchange will be effected until all relevant account holders (as set out in a CMU Instrument Position Report (as defined in the rules of the CMU Service) or any other relevant notification supplied to the CMU Lodging Agent by the CMU Service) have so certified. The holder of a Temporary Global Note will not be entitled to collect any payment of interest, principal or other amount due on or after the Exchange Date unless, upon due certification, exchange of the Temporary Global Note for an interest in a Permanent Global Note or for definitive Bearer Notes is improperly withheld or refused.

Payments of principal, interest (if any) or any other amounts on a Permanent Global Note (if not held through the CMU Service) will be made through Euroclear and/or Clearstream, Luxembourg against presentation or surrender (as the case may be) of the Permanent Global Note without any requirement for certification.

In respect of a Bearer Global Note held through the CMU Service, any payments of principal, interest (if any) or any other amounts shall be made to the person(s) for whose account(s) interests in the relevant Bearer Global Note are credited (as set out in a CMU Instrument Position Report or any other relevant notification supplied to the CMU Lodging Agent by the CMU Service) and save in the case of final payment, no presentation of the relevant Bearer Global Note shall be required for such purpose.

The applicable Pricing Supplement will specify that a Permanent Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Notes with, where applicable, receipts, interest coupons and talons attached upon the occurrence of an Exchange Event. For these purposes, "**Exchange Event**" means that (i) an Event of Default (as defined in Condition 11) has occurred and is continuing, (ii) the Issuer has been notified that Euroclear and/or Clearstream, Luxembourg have been or, in the case of Notes held through the CMU Service, the CMU Service has been, closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and no alternative clearing system is available or (iii) the Issuer has or will become obliged to pay additional amounts as provided for or referred to in Condition 9 which would not be required were the Notes represented by the Permanent Global Note in definitive form (**provided that**, in certain circumstances where the Notes are held through Euroclear and/or Clearstream, Luxembourg, and/or the CMU Service, such adverse tax consequences are as a result of a change in, or amendment to, the laws or regulation (taxation or otherwise) in, or of, Korea). The Issuer will promptly give notice to Noteholders and the relevant agents in accordance with Condition 15 if an Exchange Event occurs. In the event of the occurrence of an Exchange Event, in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream, Luxembourg, Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Permanent Global Note) and/or, in the case of Notes held through the CMU Service, the relevant account holders therein, may give notice to the Principal Paying Agent or, as the case may be, the CMU Lodging Agent, requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iii) above, the Issuer may also give notice to the Principal Paying Agent or, as the case may be, the CMU Lodging Agent, requesting exchange. Any such exchange shall occur not later than 45 days after the date of receipt of the first relevant notice by the Principal Paying Agent or, as the case may be, the CMU Lodging Agent.

The following legend will appear on all Bearer Notes which have an original maturity of more than 365 days and on all receipts and interest coupons relating to such Notes:

"ANY U.S. PERSON WHO HOLDS THIS OBLIGATION WILL BE SUBJECT TO LIMITATIONS UNDER THE UNITED STATES INCOME TAX LAWS, INCLUDING THE LIMITATIONS PROVIDED IN SECTIONS 165(j) AND 1287(a) OF THE INTERNAL REVENUE CODE."

The sections referred to provide that U.S. holders, with certain exceptions, will not be entitled to deduct any loss on Bearer Notes, receipts or interest coupons and will not be entitled to capital gains treatment of any gain on any sale, disposition, redemption or payment of principal in respect of such Notes, receipts or interest coupons.

Notes which are represented by a Bearer Global Note will only be transferable in accordance with the rules and procedures for the time being of Euroclear or Clearstream, Luxembourg, or the CMU Service, as the case may be.

Registered Notes

The Registered Notes of each Tranche offered and sold in reliance on Regulation S, which will be sold to non-U.S. persons outside the United States, will initially be represented by a global note in registered form (a "**Regulation S Global Note**"). To the extent Category 2 is applicable at the time of the offering pursuant to Rule 903 under Regulation S, prior to expiry of the distribution compliance period (as defined in Regulation S) applicable to each Tranche of Notes, beneficial interests in a Regulation S Global Note may not be offered or sold to, or for the account or benefit of, a U.S. person save as otherwise provided in Condition 2 and may not be held otherwise than through Euroclear or Clearstream, Luxembourg or the CMU Service and such Regulation S Global Note will bear a legend regarding such restrictions on transfer.

The Registered Notes of each Tranche may only be offered and sold in the United States or to U.S. persons in private transactions (i) to "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act ("**QIB**") or (ii) to "accredited investors" (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) that are institutions ("**Institutional Accredited Investors**") who agree to purchase the Notes for their own account and not with a view to the distribution thereof. The Registered Notes of each Tranche sold to QIBs will be represented by a restricted permanent global note in registered form (a "**Restricted Global Note**" and, together with a Regulation S Global Note, the "**Registered Global Notes**").

Registered Global Notes will be deposited with either (i) a custodian for, and registered in the name of a nominee of, the Depositary Trust Company ("**DTC**") for the accounts of Euroclear and Clearstream, Luxembourg, (ii) a common depositary for, and registered in the name of a common nominee of, Euroclear and Clearstream, Luxembourg or (iii) a sub-custodian for the HKMA as operator of the CMU Service, in each case, as specified in the applicable Pricing Supplement. Persons holding beneficial interests in Registered Global Notes will be entitled or required, as the case may be, under the circumstances described below, to receive physical delivery of definitive Notes in fully registered form.

The Registered Notes of each Tranche sold to Institutional Accredited Investors will be in definitive form, registered in the name of the holder thereof ("**Definitive IAI Registered Notes**"). Unless otherwise set forth in the applicable Pricing Supplement, Definitive IAI Registered Notes will be issued only in minimum denominations of U.S.$500,000 and integral multiples of U.S.$1,000 in excess thereof (or the approximate equivalents in the applicable Specified Currency). Definitive IAI Registered Notes will be subject to the restrictions on transfer set forth therein and will bear the restrictive legend described under "*Subscription and Sale and Transfer and Selling Restrictions*". Institutional Accredited Investors that hold Definitive IAI Registered Notes may not hold such Notes through DTC, Euroclear, Clearstream, Luxembourg or the CMU Service, but transferees acquiring the Notes in transactions exempt from Securities Act registration pursuant to Regulation S or Rule 144 under the Securities Act (if available) may elect to do so upon satisfaction of the requirements applicable to such transfer as described under "*Subscription and Sale and Transfer and Selling Restrictions*". The Restricted Global Note and the Definitive IAI Registered Notes will be subject to certain restrictions on transfer set forth therein and will bear a legend regarding such restrictions.

Payments of principal, interest and any other amount in respect of the Registered Global Notes will, in the absence of provision to the contrary, be made to the person shown on the Register (as defined in Condition 1) as the registered holder of the Registered Global Notes. None of the Issuer, any Paying Agent or the Registrar will have any responsibility or liability for any aspect of the records relating to or payments or deliveries made on account of beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

Payments of principal, interest or any other amount in respect of the Registered Notes in definitive form will, in the absence of provision to the contrary, be made to the persons shown on the Register on the relevant Record Date (as defined in Condition 6(b)) immediately preceding the due date for payment in the manner provided in that Condition.

Interests in a Registered Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Registered Notes without receipts, interest coupons or talons attached only upon the occurrence of an Exchange Event. For these purposes, "**Exchange Event**" means that (i) an Event of Default has occurred and is continuing, (ii) in the case of Notes registered in the name of a nominee for DTC, either DTC has notified the Issuer that it is unwilling or unable to continue to act as depository for the Notes and no alternative clearing system is available or DTC has ceased to constitute a clearing agency registered under the Exchange Act, (iii) in the case of Notes registered in the name of a nominee for a common depositary for Euroclear and Clearstream, Luxembourg, the Issuer has been notified that both Euroclear and Clearstream, Luxembourg have and, in the case of Notes held through the CMU Service, the Issuer has been notified that the CMU Service has, been closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and, in any such case, no successor clearing system is available or (iv) the Issuer has or will become subject to adverse tax consequences which would not be suffered were the Notes represented by the Registered Global Note in definitive form. The Issuer will promptly give notice to Noteholders and the relevant agents in accordance with Condition 15 if an Exchange Event occurs. In the event of the occurrence of an Exchange Event, (i) in the case of Notes registered in the name of a nominee for DTC or a nominee for a Common Depositary for Euroclear and/or Clearstream, Luxembourg, DTC, Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Registered Global Note) and/or (ii) in the case of Notes held through the CMU Service, the relevant account holders therein, may give notice to the Registrar, or as the case may be, the CMU Lodging Agent requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iv) above, the Issuer may also give notice to the Registrar or, as the case may be, the CMU Lodging Agent requesting exchange. Any such exchange shall occur not later than 10 days after the date of receipt of the first relevant notice by the Registrar or, as the case may be, the CMU Lodging Agent.

Transfer of Interests

Interests in a Registered Global Note may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such interest in another Registered Global Note or in the form of a Definitive IAI Registered Note and Definitive IAI Registered Notes may, subject to compliance with all applicable restrictions, be transferred to a person who wishes to hold such Notes in the form of an interest in a Registered Global Note. No beneficial owner of an interest in a Registered Global Note will be able to transfer such interest, except in accordance with the applicable procedures of DTC, Euroclear and Clearstream, Luxembourg and the CMU Service, in each case to the extent applicable. Registered Notes are also subject to the restrictions on transfer set forth therein and will bear a legend regarding such restrictions, see *"Subscription and Sale and Transfer and Selling Restrictions"*.

CMU Notes

Unless otherwise specified in the applicable Pricing Supplement, CMU Notes will initially be issued in registered form and represented by a global certificate registered in the name of HKMA, in its capacity as operator of the CMU Service. Certain special provisions apply to such CMU Notes. See "*Book-Entry Clearance Systems — CMU Notes*".

General

Pursuant to the Agency Agreement (as defined under "*Terms and Conditions of the Notes*"), the Principal Paying Agent or the CMU Lodging Agent, as the case may be, shall arrange that, where a further Tranche of Notes is issued which is intended to form a single Series with an existing Tranche of Notes, the Notes of such further Tranche shall be assigned a common code and ISIN and, where applicable, a CUSIP and CINS number and/or CMU instrument number which are different from the common code, ISIN, CUSIP, CINS and CMU instrument number assigned to Notes of any other Tranche of the same Series until at least the expiry of the distribution compliance period applicable to the Notes of such Tranche.

For so long as any of the Notes is represented by a Global Note held on behalf of Euroclear, Clearstream, Luxembourg and/or the CMU Service, each person (other than Euroclear, Clearstream, Luxembourg or the CMU Service) who is for the time being shown in the records of Euroclear, Clearstream, Luxembourg or the CMU Service as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear, Clearstream, Luxembourg and/or the CMU Service as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on such nominal amount of such Notes, for which purpose the bearer of the relevant Bearer Global Note or the registered holder of the relevant Registered Global Note shall be treated by the Issuer and its agents as the holder of such nominal amount of such Notes in accordance with and subject to the terms of the relevant Global Note and the expressions "**Noteholder**" and "**holder of Notes**" and related expressions shall be construed accordingly. Notwithstanding the above, if a Note is held through the CMU Service, any payment that is made in respect of such Note shall be made at the direction of the bearer or the registered holder to the person(s) for whose account(s) interests in such Note are credited as being held through the CMU Service in accordance with the CMU Rules at the relevant time as notified to the CMU Lodging Agent by the CMU Service in a relevant CMU Instrument Position Report or any other relevant notification by the CMU Service (which notification, in either case, shall be conclusive evidence of the records of the CMU Service as to the identity of any accountholder and the principal amount of any Note credited to its account, save in the case of manifest error) and such payments shall discharge the obligation of the Issuer in respect of that payment under such Note.

So long as DTC or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and such Notes except to the extent that in accordance with DTC's published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

Any reference herein to Euroclear and/or Clearstream, Luxembourg and/or DTC and/or the CMU Service shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system specified in the applicable Pricing Supplement.

A Note may be accelerated by the holder thereof in certain circumstances described in Condition 11. In such circumstances, where any Note is still represented by a Global Note and the Global Note (or any part thereof) has become due and repayable in accordance with the Terms and Conditions of such Notes and payment in full of the amount due has not been made in accordance with the provisions of the Global Note then holders of interests in such Global Note credited to their accounts with Euroclear and/or Clearstream, Luxembourg and/or DTC and/or the CMU Service, as the case may be, will become entitled to proceed directly against the Issuer on the basis of statements of account provided by Euroclear, Clearstream, Luxembourg, DTC and the CMU Service on and subject to the terms of a deed of covenant (the "**Deed of Covenant**") dated 8 January 2016 and executed by the Issuer. In addition, holders of interests in such Global Note credited to their accounts with DTC may require DTC to deliver Definitive Notes in registered form in exchange for their interest in such Global Note in accordance with DTC's standard operating procedures.

So long as any Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, in the event that the Global Note representing such Notes is exchanged for definitive Notes, the Issuer shall appoint and maintain a Paying Agent in Singapore, where such definitive Notes may be presented or surrendered for payment or redemption. In addition, in the event the Global Note representing such Notes is exchanged for definitive Notes, an announcement of such exchange will be made by or on behalf of the Issuer through the Singapore Stock Exchange. Such announcement will include all material information with respect to the delivery of the definitive Notes, including details of the Paying Agent in Singapore.

Form of Pricing Supplement

Set out below is the form of Pricing Supplement which will be completed for each Tranche of Notes issued under the Programme.

[MIFID II PRODUCT GOVERNANCE — Solely for the purposes of the manufacturer's product approval process, the target market assessment in respect of the securities has led to the conclusion that: (i) the target market for the securities is eligible counterparties and professional clients only, each as defined in Directive 2014/65/EU (as amended, "MiFID II"); and (ii) all channels for distribution of the securities to eligible counterparties and professional clients are appropriate. Any person subsequently offering, selling or recommending the securities (a "distributor") should take into consideration the manufacturer's target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the securities (by either adopting or refining the manufacturer's target market assessment) and determining the appropriate distribution channels.]

[PROHIBITION OF SALES TO EEA RETAIL INVESTORS — The securities are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area ("EEA"). For these purposes: (a) the expression "retail investor" means a person who is one (or more) of the following: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "MiFID II"); (ii) a customer within the meaning of Directive 2002/92/EC, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Directive 2003/71/EC, as amended; and (b) the expression "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities. Consequently, no key information document required by Regulation (EU) No 1286/2014 (the "PRIIPs Regulation") for offering or selling the securities or otherwise making them available to retail investors in the EEA has been prepared and therefore, offering or selling the securities or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.]

[Notification under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA") — The Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are [prescribed capital markets products [OR] capital markets products other than prescribed capital markets products]* (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and [Excluded Investment Products [OR] Specified Investment Products]* (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).]

To delete accordingly.

[Date]

KEB HANA BANK

[(acting through its [●] branch)]
Issue of [Aggregate Nominal Amount of Tranche] [Title of Notes]
Issued Pursuant to the U.S.$10,000,000,000 Global Medium Term Note Programme

This document constitutes the Pricing Supplement relating to the issue of Notes described herein. Terms used herein shall be deemed to be defined as such for the purposes of the Terms and Conditions of the Notes set forth in the Offering Circular dated [date] as amended or supplemented from time to time (the "Offering Circular"). This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with the Offering Circular. Full information on the Issuer and the offer of the Notes is only available on the basis of this Pricing Supplement and the Offering Circular.

The Notes have not been registered with the Financial Services Commission of Korea under the Financial Investment Services and Capital Markets Act of Korea. Accordingly, the Notes may not be offered, delivered, or sold directly or indirectly in Korea or to any resident of Korea (as defined in the Foreign Exchange Transaction Law of Korea and the regulations thereunder) or to others for re-offering or resale directly or indirectly in Korea or to any resident of Korea except as otherwise permitted under applicable Korean laws and regulations. In addition, during the first year after the issuance of the Notes, the Notes may not be transferred to any resident of Korea other than a "qualified institutional investor" as defined in the Regulation on Securities Issuance and Disclosure of Korea (a "**Korean QII**") who is registered with the Korea Financial Investment Association (the "**KOFIA**") for Korean QII bond trading. Furthermore, any such Korean QII must file relevant documents requested by the KOFIA for registration and administration of Korean QIIs and Korean QII bonds and the Notes acquired by all Korean QIIs at the time of issuance must be less than 20 per cent. of the aggregate principal amount of the Notes.

[*The following alternative language applies if the first tranche of an issue which is being increased was issued under an Offering Circular with an earlier date.*

Terms used herein shall be deemed to be defined as such for the purposes of the Terms and Conditions of the Notes (the "**Conditions**") set forth in the Offering Circular dated [*original date*]. This Pricing Supplement contains the final terms of the Notes and must be read in conjunction with the Offering Circular dated [*date*], save in respect of the Conditions which are extracted from the Offering Circular dated [*original date*] and are attached hereto. Full information on the Issuer and the offer of the Notes is only available on the basis of this Pricing Supplement and such Offering Circulars.]

[Include whichever of the following apply or specify items as "not applicable" (N/A). Note that the numbering should remain as set out below, even if "Not Applicable" is indicated for individual paragraphs or sub-paragraphs. Italics denote directions for completing the Pricing Supplement.]

[If the Notes have a maturity of less than one year from the date of their issue, the minimum denomination may need to be £100,000 or its equivalent in any other currency.]

1.	Issuer (acting [through its principal office in Korea]/[through its branch]):		KEB Hana Bank, [acting through its [principal office in Korea]/ [name of relevant issuing branch]] (Legal Entity Identifier: 6RPK2YDJN6L35AS0M510)
2.	(i)	Series Number:	[●]
	(ii)	Tranche Number:	[●] (*If re-opening fungible with an existing Series, details of that Series, including the date on which the Notes become fungible*)
	(iii)	Re-opening:	[Yes/No] (*Specify terms of initial or eventual fungibility*)

3.	Specified Currency or Currencies:	[●]*
4.	Aggregate Nominal Amount:	
	(i) Tranche:	[●]
	(ii) Series:	[●]
5.	[(i)] Issue Price of Tranche:	[●] per cent. of the Aggregate Nominal Amount [plus accrued interest from [insert date] (in the case of fungible re-opening issues only, if applicable).
	[(ii) Net Proceeds:	[●]
	(*Required only for listed issues*)]	
6.	(i) Specified Denominations:	[●] (*N.B. In the case of Registered Notes, this means the minimum integral amount in which transfers can be made. For Registered Global Notes, consider including language substantially to the following effect (however, appropriate amendments should be made for different currencies*): ("[US$200,000] / [C 100,000] and integral multiples of [US$1,000] / [C 1,000] in excess thereof") (*Notes (including Notes denominated in Sterling) in respect of which the issue proceeds are to be accepted by the issuer in the United Kingdom or whose issue otherwise constitutes a contravention of Section 19 FSMA and which have a maturity of less than one year must have a minimum redemption value of £100,000 (or its equivalent in other currencies).*) (*N.B. For Bearer Notes with a Specified Denomination and higher integral multiples above the minimum denomination, consider including language substantially to the following effect (however, appropriate amendments should be made for different currencies):* ("[US$200,000] / [C 100,000] and integral multiples of [US$1,000] / [C 1,000] in excess thereof, up to and including [US$399,000] / [C 199,000] and, for so long as the Notes are represented by a Global Note (as defined below) and Euroclear and Clearstream so permit, the Notes shall be tradable only in the minimum authorised denomination of [US$200,000] / [C 100,000] and higher integral multiples of [US$1,000] [C 1,000], notwithstanding that no definitive notes will be issued with a denomination above [US$399,000] / [C 199,000].")
	(ii) Calculation Amount:	[●] (*If there is only one Specified Denomination, insert the Specified Denomination. If there is more than one Specified Denomination, insert the highest common factor. Note: There must be a common factor in the case of two or more Specified Denominations.*)

* In respect of Notes denominated in Renminbi, purchasers of the Notes should note that Renminbi is not freely convertible at present. All payments in respect of such Notes shall be made solely by transfer to a Renminbi account maintained by or on behalf of the Noteholder with a bank in Hong Kong in accordance with applicable laws and regulations. The Issuer cannot be required to make payment by any other means (including in any other currency or in bank notes, by cheque or by transfer to a bank account in the PRC).

7.	(i) Issue Date:	[●]
	(ii) Interest Commencement Date:	[*specify/Issue Date/Not Applicable*] (*N.B. An Interest Commencement Date will not be relevant for certain Notes, for example Zero Coupon Notes.*)
8.	Maturity Date:	[*Fixed rate — specify date/Floating rate — Interest Payment Date falling in or nearest to [specify month and year]*] *(N.B. Tier II Subordinated Notes shall have a minimum maturity of five years and Tier I Subordinated Notes shall be undated perpetual securities with no fixed maturity.)*
9.	Interest Basis:	[[●] per cent. Fixed Rate] [[LIBOR/EURIBOR/HIBOR] +/- [●] per cent. Floating Rate] [Zero Coupon] [Index-Linked Interest] [Dual Currency Interest] [*specify other*] (further particulars specified below)
10.	Redemption/Payment Basis:	[Redemption at par] [Index-Linked Redemption] [Dual Currency Redemption] [Partly Paid] [Instalment] [*specify other*]
11.	Change of Interest Basis or Redemption/ Payment Basis:	[*Specify details of any provision for change of Notes into another Interest Basis or Redemption/Payment Basis*]
12.	Put/Call Options:	[Investor Put] [Issuer Call] [(further particulars specified below)] [***N.B. Investor Put not possible for Subordinated Notes; Issuer Call for Subordinated Notes will be subject to satisfaction of regulatory conditions.***]
13.	(i) Status of the Notes:	[Senior/Tier I Subordinated/Tier II Subordinated]
	(ii) Date of [Board] approval for issuance of Notes obtained:	[●]/[None required] (*N.B. Only relevant where Board (or similar) authorisation is required for the particular tranche of Notes*)

	(iii)	Date of regulatory approval/ consent for issuance of Notes obtained:	[●]/[None required] (*N.B. Only relevant where Board (or similar) authorisation is required for the particular tranche of Notes*)
14.	Listing:		[Singapore/specify other/None] (*N.B. Consider disclosure requirements under the EU Prospectus Directive applicable to securities admitted to an EU regulated market*)
15.	Method of distribution:		[Syndicated/Non-syndicated]

PROVISIONS RELATING TO INTEREST (IF ANY) PAYABLE

16.	Fixed Rate Note Provisions:		[Applicable/Not Applicable] (*If not applicable, delete the remaining sub-paragraphs of this paragraph*)
	(i)	Rate[(s)] of Interest:	[●] per cent. per annum [payable [annually/ semi-annually/ quarterly/monthly] in arrear] (*If payable other than annually, consider amending Condition 5*)
	(ii)	Interest Payment Date(s):	[[●] in each year up to and including the Maturity Date]/ [specify other] (*N.B. This will need to be amended in the case of long or short coupons*)
	(iii)	Fixed Coupon Amount(s): (*Applicable to Notes in definitive form*)	[[●] per Calculation Amount]/[As per Condition 5(a)(II)]
	(iv)	Broken Amount(s): (*Applicable to Notes in definitive form*)	[[●] per Calculation Amount, payable on the Interest Payment Date falling [in/on] [●]]/[As per Condition 5(a)(II)]
	(v)	Day Count Fraction:	[*30/360 or Actual/Actual (ICMA) or specify* other]/[Not applicable] (*Applicable if Condition 5(a)(I) is specified as being applicable in paragraph 16(viii)*)
	(vi)	Determination Date(s):	[●] in each year [*Insert regular interest payment dates, ignoring issue date or maturity date in the case of a long or short first or last coupon. N.B.: This will need to be amended in the case of regular interest payment dates which are not of equal duration. N.B. Only relevant where Day Count Fraction is Actual/Actual (ICMA)*]
	(vii)	Business Day Convention:	[*Following Business Day Convention*] [*Other*]
	(viii)	Other terms relating to the method of calculating interest for Fixed Rate Notes:	[Condition 5(a)(I) applies/Condition 5(a)(II) applies. The Principal Paying Agent will act as the Calculation Agent/ None/*give details*]

17.	Floating Rate Note Provisions:		[Applicable/Not Applicable]
			(*If not applicable, delete the remaining sub-paragraphs of this paragraph*)
	(i)	Specified Period(s)/Interest Payment Dates:	[●]
	(ii)	Business Day Convention:	[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/ Preceding Business Day Convention/[*specify other*]]
	(iii)	Additional Business Centre(s):	[●] (Insert New York City for U.S. dollar denominated Notes to be held through DTC and for non-U.S. dollar denominated Notes where exchange into U.S. dollars is contemplated for DTC participants holding through Euroclear and Clearstream, Luxembourg)
	(iv)	Manner in which the Rate of Interest and Interest Amount is to be determined:	[Screen Rate Determination/ISDA Determination/*specify other]*
	(v)	Party responsible for calculating the Rate of Interest and Interest Amount (if not the Principal Paying Agent):	[●]
	(vi)	Screen Rate Determination:	
		Reference Rate:	[●]
			(*Either LIBOR, EURIBOR, HIBOR or other, although additional information is required if other — including fallback provisions in the Agency Agreement*)
		Interest Determination Date(s):	[●]
			(*Second business day prior to the start of each Interest Period*)
		Relevant Screen Page:	[●]
			(*In the case of EURIBOR, if not Reuters page EURIBOR01 ensure it is a page which shows a composite rate or amend the fallback provisions appropriately*)
	(vii)	ISDA Determination:	
		Floating Rate Option:	[●]
		Designated Maturity:	[●]
		Reset Date:	[●]
	(viii)	Margin(s):	[+/-] [●] per cent. per annum
	(ix)	Minimum Rate of Interest:	[●] per cent. per annum
	(x)	Maximum Rate of Interest	[●] per cent. per annum
	(xi)	Day Count Fraction:	[Actual/Actual (ISDA)

			Actual/365 (Fixed) Actual/365 (Sterling) Actual/360 30/360 30E/360 30E/360 (ISDA)] (*See Condition 5 for alternatives*)
	(xii)	Fall back provisions, rounding provisions and any other terms relating to the method of calculating interest on Floating Rate Notes, if different from those set out in the Conditions:	[●]
18.	Zero Coupon Note Provisions:		[Applicable/Not Applicable] (*If not applicable, delete the remaining sub-paragraphs of this paragraph*)
	(i)	Accrual Yield:	[●] per cent. per annum
	(ii)	Reference Price:	[●]
	(iii)	Any other formula/basis of determining amount payable:	[●]
	(iv)	Day Count Fraction in relation to Early Redemption Amounts and late payment:	Conditions 7(e)(iii) and 7(j) apply/specify other] (*Consider applicable day count fraction if not U.S. dollar denominated*)
19.	Index Linked Interest Note Provisions:		[Applicable/Not Applicable] (*If not applicable, delete the remaining sub-paragraphs of this paragraph*)
	(i)	Index/Formula:	[give or annex details]
	(ii)	Calculation Agent:	[●]
	(iii)	Party responsible for calculating the Rate of Interest (if not the Calculation Agent) and Interest Amount (if not the Principal Paying Agent):	[●]
	(iv)	Provisions for determining Coupon where calculation by reference to Index and/or Formula is impossible or impracticable:	[*need to include a description of market disruption or settlement disruption events and adjustment provisions*]
	(v)	Specified Period(s)/Specified Interest Payment Dates:	[●]

	(vi) Business Day Convention:	[Floating Rate Convention/Following Business Day Convention/Modified Following Business Day Convention/ Preceding Business Day Convention/[*specify other*]]
	(vii) Additional Business Centre(s):	[●]
	(viii) Minimum Rate of Interest:	[●] per cent. per annum
	(ix) Maximum Rate of Interest:	[●] per cent. per annum
	(x) Day Count Fraction:	[●]
20.	Dual Currency Note Provisions:	[Applicable/Not Applicable] (*If not applicable, delete the remaining sub-paragraphs of this paragraph*)
	(i) Rate of Exchange/method of calculating Rate of Exchange:	[*give details*]
	(ii) Party, if any, responsible for calculating the principal and/or interest payable (if not the Principal Paying Agent):	[●]
	(iii) Provisions applicable where calculation by reference to Rate of Exchange impossible or impracticable:	[*need to include a description of market disruption or settlement disruption events and adjustment provisions*]
	(iv) Person at whose option Specified Currency(ies) is/are payable:	[●]
21.	Interest Rate Reset:	[Applicable/Not Applicable]
	Interest Reset Date:	[●] (*include if applicable*)

PROVISIONS RELATING TO REDEMPTION

22.	Issuer Call:	[Applicable/Not Applicable] (*If not applicable, delete the remaining sub-paragraphs of this paragraph*)
	(i) Optional Redemption Date(s):	[●] (*N.B. Subordinated Notes may not be redeemed within five years of their issuance date*)
	(ii) Optional Redemption Amount of each Note and method, if any, of calculation of such amount(s):	[[●] per Calculation Amount/specify *other/see* Appendix]
	(iii) If redeemable in part:	
	(a) Minimum Redemption Amount:	[●]
	(b) Maximum Redemption Amount:	[●]

(iv)	Notice period (if other than as set out in the Conditions):	[●] (*N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Principal Paying Agent*)
23.	Investor Put:	[Applicable/Not Applicable] (*If not applicable, delete the remaining sub-paragraphs of this paragraph*)
(i)	Optional Redemption Date(s):	[●]
(ii)	Optional Redemption Amount of each Note and method, if any, of calculation of such amount(s):	[[●] per Calculation Amount/*specify other/see* Appendix]
(iii)	Notice period (if other than as set out in the Conditions):	[●] (*N.B. If setting notice periods which are different to those provided in the Conditions, the Issuer is advised to consider the practicalities of distribution of information through intermediaries, for example, clearing systems and custodians, as well as any other notice requirements which may apply, for example, as between the Issuer and the Principal Paying Agent*)
24.	Final Redemption Amount of each Note:	[[●] per Calculation Amount/*specify other/see* Appendix]
25.	Early Redemption Amount of each Note payable on redemption for taxation reasons or on event of default and/or the method of calculating the same (if required or if different from that set out in Condition 7(e)):	[[●] per Calculation Amount/*specify other/see* Appendix]

GENERAL PROVISIONS APPLICABLE TO THE NOTES

26.	Form of Notes:	[Bearer Notes: [Temporary Global Note exchangeable for a Permanent Global Note which is exchangeable for Definitive Bearer Notes only upon an Exchange Event]* [Temporary Global Note exchangeable for Definitive Bearer Notes on and after the Exchange Date]* [Permanent Global Note exchangeable for Definitive Bearer Notes only upon an Exchange Event]*

* *Ensure that this is consistent with the wording in the "Form of the Notes" section in the Offering Circular and the Notes themselves. N.B. The exchange upon notice/at any time options should not be expressed to be applicable if the Specified Denomination of the Notes in paragraph 6(i) includes language substantially to the following effect: "U.S.$200,000 and integral multiples of U.S.$1,000 in excess thereof up to and including U.S.$399,000." Furthermore, such Specified Denomination construction is not permitted in relation to any issue of Notes which is to be represented on issue by a Temporary Global Note exchangeable for Definitive Bearer Notes.*

		[Registered Notes: Regulation S Global Note (U.S.$[●] nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream, Luxembourg/held through the CMU Service]/ Restricted Global Note (U.S.$[●] nominal amount) registered in the name of a nominee for [DTC/a common depositary for Euroclear and Clearstream, Luxembourg/held through the CMU Service]/Definitive IAI Registered Notes (*specify nominal amounts*)] (*Ensure that this is consistent with the language in the "Form of the Notes" section in the Offering Circular and the Notes themselves*)
27.	Additional Financial Centre(s) or other special provisions relating to Payment Dates:	[Not Applicable/*give details*] (*Note that this item relates to the place of payment and not Interest Period end dates to which items 17(iii) and 19(vi) relate; insert New York City for U.S. dollar denominated Notes to be held through DTC*)
28.	Talons for future Coupons or Receipts to be attached to Definitive Bearer Notes (and dates on which such Talons mature):	[Yes/No. *If yes, give details]*
29.	Details relating to Partly Paid Notes: amount of each payment comprising the Issue Price and date on which each payment is to be made and consequences of failure to pay, including any right of the Issuer to forfeit the Notes and interest due on late payment:	[Not Applicable/*give details*] *(N.B. New forms of Global Note(s) may be required for Partly Paid issues.*)
30.	Details relating to Instalment Notes:	
	(i) Instalment Amount(s):	[Not Applicable/*give details*]
	(ii) Instalment Date(s):	[Not Applicable/*give details*]
31.	Redenomination applicable:	Redenomination [not] applicable (*If Redenomination is applicable, specify the applicable Day Count Fraction and any provisions necessary to deal with floating rate interest calculation (including alternative reference rates)*)
32.	Other terms or special conditions:	[Not Applicable/*give details*]
33.	Additional U.S. federal income tax considerations:	[Not Applicable/*give details*] [The Notes are [not] subject to U.S. federal withholding tax under Section 871(m).]* [Additional information regarding the application of Section 871(m) to the Notes will be available at [●]]

* *The Notes should not be subject to U.S. federal withholding tax under Section 871(m), if they (i) do not reference any U.S. equity or any index that contains any U.S. equity (ii) reference indices considered to be "qualified indices" for purposes of Section 871(m) or (iii) are Non-Delta-One Notes and are issued prior to 1 January 2021. Delta-One Notes issued on or after 1 January 2017 or Non-Delta-One Notes issued on or after 1 January 2021 that reference a U.S. equity or index that contains any U.S. equity are subject to additional testing on a trade-by-trade basis to determine whether they are Section 871(m) Notes.*

34.	Private Bank Rebate/Commission:	[Not Applicable/*give details if applicable* (e.g., In addition, we have agreed with the Joint Lead Managers that we will pay a commission to certain private banks in connection with the distribution of the Notes to their clients. This commission will be based on the principal amount of the Notes so distributed, and may be deducted from the purchase price for the Notes payable by such private banks upon settlement.)]

DISTRIBUTION

35.	(i) If syndicated, names of Managers:	[Not Applicable/*give names*]
	(ii) Stabilisation Manager (if any):	[Not Applicable/*give name*]
36.	If non-syndicated, name of relevant Dealer:	[●]
37.	Whether TEFRA D or TEFRA C rules applicable or TEFRA rules not applicable:	[TEFRA D/TEFRA C/TEFRA not applicable]
38.	U.S. Selling Restrictions:	[Rule 144A]/ Regulations S, Category 2
39.	Prohibition of Sales to EEA Retail Investors:	[Applicable/Not Applicable] (*Where the Notes clearly do not constitute "packaged" products, "Not Applicable" should be specified*)
40.	Additional selling restrictions:	[Not Applicable/*give details*]

PROVISIONS RELATING TO GREEN BONDS, SOCIAL BONDS OR SUSTAINABILITY BONDS

41.	(i) Green Bonds	[Yes/No]
	(ii) Social Bonds	[Yes/No]
	(iii) Sustainability Bonds	[Yes/No]
	(iv) [Reviewer(s):]	*[Name of sustainability rating agency(ies) [and name of third party assurance agent] and [give details of compliance opinion(s) and availability]]*

OPERATIONAL INFORMATION

42.	Any clearing system(s) other than Euroclear and Clearstream, Luxembourg and the relevant identification number(s):	[CMU Service/Not Applicable/give *name(s) and number(s)*]
43.	Delivery:	Delivery [against/free of] payment
44.	[In the case of Registered Notes, specify the location of the office of the Registrar if other than New York:]	[Not Applicable/[Luxembourg]/Hong Kong]
45.	Additional Paying Agent(s) (if any):	[●]

ISIN:	[●]
Common Code:	[●]

(*insert here any other relevant codes such as CUSIP, CINS codes and a CMU instrument number*)

[LISTING APPLICATION

This Pricing Supplement comprises the final terms required to list the issue of Notes described herein pursuant to the U.S.$10,000,000,000 Global Medium Term Note Programme of KEB Hana Bank.]

RESPONSIBILITY

The Issuer accepts responsibility for the information contained in this Pricing Supplement.

Signed on behalf of the Issuer:

By: ______________________________

Duly authorised

If the relevant Pricing Supplement relating to a Tranche of Notes specifies any modification to the Terms and Conditions of the Notes as described herein, it is envisaged that, to the extent that such modification relates only to Conditions 1, 2, 5, 6, 7 (except Condition 7(b)), 12, 13, 14, 15 (insofar as such Notes are not listed or admitted to trade on any stock exchange) or 17, they will not necessitate the preparation of a supplementary Offering Circular. If the Terms and Conditions of the Notes of any Series are to be modified in any other respect, a supplementary Offering Circular or a further Offering Circular describing the modification will be prepared, if appropriate.

TERMS AND CONDITIONS OF THE NOTES

The following are the Terms and Conditions of the Notes to be issued by the Issuer which will be incorporated by reference into each global Note and each definitive Note, in the latter case only if permitted by the relevant stock exchange (if any) and agreed by the Issuer and the relevant Dealer at the time of issue but if not so permitted and agreed, such definitive Note will have endorsed thereon or attached thereto such Terms and Conditions. The applicable Pricing Supplement in relation to any Tranche of Notes may specify other terms and conditions which shall to the extent so specified or to the extent inconsistent with the following Terms and Conditions, replace or modify the following Terms and Conditions for the purpose of such Notes. The applicable Pricing Supplement (or the relevant provisions thereof) will be endorsed upon, or attached to, each Temporary Global Note, Permanent Global Note, Regulation S Global Note, Restricted Global Note and definitive Note. Reference should be made to "Form of the Notes" above for a description of the content of Pricing Supplements which will specify which of such terms are to apply in relation to the relevant Notes.

This Note is one of a Series (as defined below) of Notes issued by KEB Hana Bank (the "**Issuer**"). The applicable Pricing Supplement (as defined below) will indicate whether the Issuer is acting in relation to the Notes through its principal office in the Republic of Korea ("**Korea**") or any of its branches.

References herein to the "**Notes**" shall be references to the Notes of this Series and shall mean;

(i) in relation to any Notes represented by a global Note (a "**Global Note**"), units of the lowest Specified Denomination in the Specified Currency;

(ii) definitive Notes in bearer form ("**Bearer Notes**") issued in exchange (or part exchange) for a Global Note;

(iii) any Global Note;

(iv) in relation to any Notes represented by definitive Notes in registered form ("**Definitive Registered Notes**"), units of the lowest Specified Denomination in the Specified Currency; and

(v) any Definitive Registered Notes.

The Notes, the Receipts (as defined below) and the Coupons (as defined below) have the benefit of the Agency Agreement dated 8 January 2016 as amended and supplemented by the First Supplement to the Agency Agreement dated 5 October 2016 and the Second Supplement to the Agency Agreement dated 11 January 2019 (as further amended, restated or supplemented from time to time, the "**Agency Agreement**") and made between, the Issuer, The Bank of New York Mellon, London Branch, as principal paying agent (the "**Principal Paying Agent**", which expression shall include any successor principal paying agent) and calculation agent (the "**Calculation Agent**", which expression shall include any successor), The Bank of New York Mellon SA/NV, Luxembourg Branch, as registrar with respect to Notes held through Euroclear and Clearstream, Luxembourg, The Bank of New York Mellon, as registrar with respect to Notes held through DTC, The Bank of New York Mellon, Hong Kong Branch, as registrar with respect to Notes held through CMU (the relevant "**Registrar**", which expression shall include any successor registrar) and The Bank of New York Mellon SA/NV, Luxembourg Branch, as the transfer agent with respect to Notes held through Euroclear and Clearstream, Luxembourg, The Bank of New York Mellon, as transfer agent with respect to Notes held through DTC, The Bank of New York Mellon, Hong Kong Branch, as transfer agent with respect to Notes held through CMU (the relevant "**Transfer Agents**", which expression shall include any successor or any additional transfer agents appointed in accordance with the Agency Agreement), The Bank of New York Mellon, as exchange agent (the "**Exchange Agent**", which expression shall include any successor exchange agent) and as DTC paying agent (the "**DTC Paying Agent**", which expression shall include any successor or any additional DTC paying agent appointed from time to time), The Bank of New York Mellon, Hong Kong Branch, as CMU lodging and paying agent (the "**CMU Lodging Agent**", which expression shall include any successor or any additional CMU lodging and paying agents appointed from time to time) (together with the Principal Paying Agent and the DTC Paying Agent, the "**Paying Agents**", which expression shall, unless the context otherwise requires, include any successor or any additional paying agents appointed in accordance with the Agency Agreement). For purposes of these Terms and Conditions, all references to the Principal Paying Agent and the Registrar shall, with respect to a Series of Notes to be held in the CMU Service (as defined below), be deemed to be a reference to the CMU Lodging Agent and all such references shall be construed accordingly.

Interest bearing definitive Bearer Notes (unless otherwise indicated in the applicable Pricing Supplement) have interest coupons ("**Coupons**") and, if indicated in the applicable Pricing Supplement, talons for further Coupons ("**Talons**") attached on issue. Any reference herein to Coupons or coupons shall, unless the context otherwise requires, be deemed to include a reference to Talons or talons. Definitive Bearer Notes repayable in instalments have receipts ("**Receipts**") for the payment of the instalments of principal (other than the final instalment) attached on issue. Definitive Registered Notes do not have Receipts or Coupons attached on issue.

The Pricing Supplement for this Note (or the relevant provisions thereof) is attached to or endorsed on this Note and supplements these Terms and Conditions and may specify other terms and conditions which shall, to the extent so specified or to the extent inconsistent with these Terms and Conditions, replace or modify these Terms and Conditions for the purposes of this Note. References to the "**applicable Pricing Supplement**" are to the Pricing Supplement (or the relevant provisions thereof) attached to or endorsed on this Note.

Any reference to "**Noteholders**" shall mean (in the case of Bearer Notes) the holders of the Notes and (in the case of Registered Notes) the persons in whose name the Notes are registered, and shall, in relation to any Notes represented by a Global Note, be construed as provided below. Any reference herein to "**Receiptholders**" shall mean the holders of the Receipts and any reference herein to "**Couponholders**" shall mean the holders of any Coupons, and shall, unless the context otherwise requires, include the holders of any Talons.

As used herein, "**Tranche**" means Notes which are identical in all respects (including as to listing) and "**Series**" means a Tranche of Notes together with any further Tranche or Tranches of Notes which are (i) expressed to be consolidated and form a single series and (ii) identical in all respects (including as to listing) except for their respective Issue Dates, Interest Commencement Dates and/or Issue Prices.

The Noteholders, the Receiptholders and the Couponholders are entitled to the benefit of the deed of covenant dated 8 January 2016 (the "**Deed of Covenant**") made by the Issuer. The original of the Deed of Covenant is held by a common depositary on behalf of Euroclear (as defined below) and Clearstream, Luxembourg (as defined below).

Copies of the Agency Agreement, the Pricing Supplement applicable to this Note, a deed poll (the "**Deed Poll**") dated 8 January 2016 and the Deed of Covenant are available for inspection during normal business hours at the specified office of the Paying Agents save that, if this Note is an unlisted Note of any Series, the applicable Pricing Supplement will only be available to a Noteholder holding one or more unlisted Notes of that Series and such Noteholder must produce evidence satisfactory to the relevant Paying Agent as to its holding of Notes and as to identity. The Noteholders, the Receiptholders and the Couponholders are deemed to have notice of, and are entitled to the benefit of, all the provisions of the Agency Agreement, the Deed Poll, the Deed of Covenant and the applicable Pricing Supplement which are applicable to them.

Words and expressions defined in the Agency Agreement or used in the applicable Pricing Supplement shall have the same meanings where used in these Terms and Conditions unless the context otherwise requires or unless otherwise stated and **provided that**, in the event of inconsistency between the Agency Agreement and the applicable Pricing Supplement or these Terms and Conditions and the applicable Pricing Supplement, the applicable Pricing Supplement will prevail.

1. **Form, Denomination and Title**

The Notes may be in bearer form or in registered form and, in the case of definitive Notes, will be serially numbered, in the Specified Currency and the Specified Denomination(s). Save as provided in Condition 2, Notes of one Specified Denomination may not be exchanged for Notes of another Specified Denomination and Bearer Notes may not be exchanged for Registered Notes and *vice versa*.

This Note is a Fixed Rate Note, a Floating Rate Note, a Zero Coupon Note, an Index Linked Interest Note, an Index Linked Redemption Note, an Instalment Note, a Dual Currency Note or a Partly Paid Note or a combination of any of the foregoing, depending upon the Interest/ Payment Basis shown in the applicable Pricing Supplement.

Each Tranche of Bearer Notes will be initially represented by a temporary global Note without Receipts, Coupons or Talons attached (each, a "**Temporary Global Note**") which will be delivered to a common depositary for Euroclear Bank S.A./N.V. ("**Euroclear**") and Clearstream Banking S.A. ("**Clearstream, Luxembourg**") and/or a sub-custodian for the Central Moneymarkets Unit Service (the "**CMU Service**") operated by the Hong Kong Monetary Authority (the "**HKMA**"). On or after the date which is 40 days after the Issue Date beneficial interests in a Temporary Global Note will be exchangeable upon a request as described therein either for interests in a permanent global Note without Receipts, Coupons or Talons (each, a "**Permanent Global Note**") or for definitive Bearer Notes (as indicated in the applicable Pricing

Supplement and subject, in the case of definitive Bearer Notes, to such notice period as is specified in the applicable Pricing Supplement), in each case against certification to the effect that the beneficial owner of interests in such Temporary Global Note is not a U.S. person or a person who has purchased for resale to any U.S. person, as required by U.S. Treasury regulations. The applicable Pricing Supplement will specify that a Permanent Global Note will be exchangeable (free of charge), in whole but not in part, for definitive Notes with, where applicable, receipts, interest coupons and talons attached upon the occurrence of an Exchange Event. For these purposes, "**Exchange Event**" means that (i) an Event of Default (as defined in Condition 11) has occurred and is continuing, (ii) the Issuer has been notified that Euroclear and/or Clearstream, Luxembourg have been or, in the case of Notes held through the CMU Service, the CMU Service has been, closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or have announced an intention permanently to cease business or have in fact done so and no alternative clearing system is available or (iii) the Issuer has or will become obliged to pay additional amounts as provided for or referred to in Condition 9 which would not be required were the Notes represented by the Permanent Global Note in definitive form (**provided that**, in certain circumstances where the Notes are held through Euroclear and/or Clearstream, Luxembourg, and/or the CMU Service, such adverse tax consequences are as a result of a change in, or amendment to, the laws or regulation (taxation or otherwise) in, or of, Korea). The Issuer will promptly give notice to Noteholders in accordance with Condition 15 if an Exchange Event occurs. In the event of the occurrence of an Exchange Event, (x) in the case of Notes held by a Common Depositary for Euroclear and/or Clearstream, Luxembourg, Euroclear and/or Clearstream, Luxembourg (acting on the instructions of any holder of an interest in such Permanent Global Note) and/or (y) in the case of Notes held through the CMU Service, the relevant accountholders therein, may give notice to the Principal Paying Agent or, as the case may be, the CMU Lodging Agent, requesting exchange and, in the event of the occurrence of an Exchange Event as described in (iii) above, the Issuer will also give notice to the Principal Paying Agent or the CMU Lodging Agent, as the case may be, requesting exchange. Any such exchange following an Exchange Event shall occur not later than 45 days after the date of receipt of the first relevant notice by the Principal Paying Agent or the CMU Lodging Agent, as the case may be.

Bearer Notes in definitive form are issued with Coupons and (if applicable) Receipts and Talons attached, unless they are Zero Coupon Notes in which case references to Coupons and Couponholders in these Terms and Conditions are not applicable.

Unless otherwise provided with respect to a particular series of Registered Notes, Registered Notes of each Tranche sold outside the United States in reliance on Regulation S ("**Regulation S**") under the United States Securities Act of 1933, as amended, (the "**Securities Act**") will, unless otherwise specified in the applicable Pricing Supplement, be represented by a permanent global Registered Note, without Receipts, Coupons or Talons attached, (each, a "**Regulation S Global Note**"), deposited with (i) a custodian for, and registered in the name of a nominee of, The Depository Trust Company ("**DTC**") for the accounts of Euroclear and Clearstream, Luxembourg, (ii) a common depositary for, and registered in the name of a common nominee of, Euroclear and Clearstream, Luxembourg, or (iii) a sub-custodian for the HKMA as operator of the CMU Service, as specified in the applicable Pricing Supplement. Definitive Registered Notes issued in exchange for Regulation S Global Notes or otherwise sold or transferred in reliance on Regulation S under the Securities Act, together with the Regulation S Global Notes, are referred to herein as "**Regulation S Notes**". With respect to all offers or sales of an unsold allotment or subscription and in any case prior to expiry of the period that ends 40 days after the later of the relevant Issue Date and completion of the distribution of each Tranche of Notes, as certified by the relevant Dealer, in the case of a non-syndicated issue, or by the Lead Manager, in the case of a syndicated issue (the "**Distribution Compliance Period**"), beneficial interests in a Regulation S Global Note may not be offered or sold to, or for the account or benefit of, a U.S. person (save as otherwise provided in Condition 2). After expiry of such Distribution Compliance Period, beneficial interests in a Regulation S Note may be held through DTC directly by a participant in DTC or indirectly through a participant in DTC.

Registered Notes of each Tranche sold in private transactions in reliance upon Rule 144A under the Securities Act to qualified institutional buyers within the meaning of Rule 144A under the Securities Act ("**QIBs**") will, unless otherwise specified in the applicable Pricing Supplement, be represented by a permanent global Registered Note, without Receipts, Coupons or Talons (each, a "**Restricted Global Note**" and, together with any Regulation S Global Note, the "**Registered Global Notes**") deposited with a custodian for, and registered in the name of a nominee of, DTC. Notes in definitive form issued in exchange for Restricted Global Notes or otherwise sold or transferred in accordance with the requirements of Rule 144A under the Securities Act, together with the Restricted Global Notes, are referred to herein as "**Restricted Notes**".

Registered Notes of each Tranche sold to accredited investors (as defined in Rule 501(a)(1), (2), (3) or (7) under the Securities Act) ("**Institutional Accredited Investors**") pursuant to Section 4(a)(2) of the Securities Act or in a transaction otherwise exempt from registration under the Securities Act who agree to purchase the Notes for their own account and not with a view to the distribution thereof will be issued as Definitive Registered Notes only, registered in the name of the holder thereof and will not be represented by a global Note.

Definitive Registered Notes issued to Institutional Accredited Investors or in exchange for an interest in a Restricted Global Note and Restricted Global Notes shall bear a legend specifying certain restrictions on transfer (each, a "**Legend**"), such Notes being referred to herein as "**Legended Notes**". Upon the transfer, exchange or replacement of Legended Notes, or upon specific request for removal of a Legend, the Registrar shall (save as provided in Condition 2(d)) deliver only Legended Notes or refuse to remove such Legend, as the case may be, unless there is delivered to the Issuer such satisfactory evidence as may reasonably be required by the Issuer, which may include an opinion of counsel, that neither the Legend nor the restrictions on transfer set forth therein are required to ensure compliance with the provisions of the Securities Act and the Issuer shall notify the Registrar accordingly.

Subject as otherwise provided in Condition 2, Definitive Registered Notes may be exchanged or transferred in whole or in part in the Specified Denominations for one or more Definitive Registered Notes of like aggregate nominal amount.

Each Definitive Registered Note will be numbered serially with an identifying number which will be recorded in the register (the "**Register**") which the Issuer shall procure to be kept by the Registrar.

Notes are issued in the Specified Denomination(s) set out in the applicable Pricing Supplement which, in the case of Registered Notes sold other than pursuant to Regulation S, shall be the Authorised Denomination (as defined below) and, in the case of Notes having a maturity of 183 days or less, the Specified Denomination shall be at least U.S.$500,000 (or the equivalent in any other currency or currencies). Each Tranche of Notes is issued in a nominal amount that is a multiple of the applicable Specified Denominations.

"**Authorised Denomination**" means:

(i) in the case of a Restricted Note, U.S.$200,000 (or its equivalent in any other currency rounded upwards as specified in the relevant Pricing Supplement), unless otherwise specified in the applicable Pricing Supplement, and higher integral multiples of U.S.$1,000, or the higher denomination or denominations specified in the applicable Pricing Supplement; and

(ii) in the case of a Definitive Registered Note which is initially offered and sold to Institutional Accredited Investors pursuant to Section 4(a)(2) of the Securities Act, U.S.$500,000 (or its equivalent in any other currency rounded upwards as specified in the applicable Pricing Supplement) and higher integral multiples of U.S.$1,000 or the higher denomination or denominations specified in the applicable Pricing Supplement.

Any minimum Authorised Denomination required by any law or directive or regulatory authority in respect of the currency of issue of any Note shall be such as applied on or prior to the date of issue of such Note.

Subject as set out below, title to Bearer Notes, Receipts and Coupons will pass by delivery. Title to Registered Notes will pass upon registration of transfers in accordance with the provisions of the Agency Agreement. The Issuer, the Principal Paying Agent, any other Paying Agent, the Registrar, (if applicable) the CMU Lodging Agent (except as otherwise required by law) and any Transfer Agent may deem and treat the bearer of any Bearer Note, Receipt or Coupon and any person in whose name a Registered Note is registered as the absolute owner thereof (whether or not overdue and notwithstanding any notice of ownership or writing thereon or notice of any previous loss or theft thereof) for all purposes but, in the case of any Global Note, without prejudice to the provisions set out in the next paragraph.

For so long as any of the Bearer Notes is represented by a bearer Global Note held by a common depositary on behalf of Euroclear and/or Clearstream, Luxembourg and/or a sub-custodian for the CMU Service or for so long as DTC or its nominee is the registered holder of a Registered Global Note, each person (other than Euroclear, Clearstream, Luxembourg, the CMU Service or DTC as applicable) who is for the time being shown in the records of Euroclear, Clearstream, Luxembourg, the CMU Service or, as the case may be, DTC, as the holder of a particular nominal amount of such Notes (in which regard any certificate or other document issued by Euroclear, Clearstream, Luxembourg, the CMU Service or, as the case may be, DTC, as to the nominal amount of such Notes standing to the account of any person shall be conclusive and binding for all purposes save in the case of manifest error) shall be treated by the Issuer, any Paying Agent, the Registrar, the Exchange Agent and any Transfer Agent as the holder of such nominal amount of such Notes for all purposes other than with respect to the payment of principal or interest on the Notes, for which purpose the bearer of the relevant Global Note shall be treated by the Issuer, any Paying Agent, the Registrar, the Exchange Agent and any Transfer Agent as the holder of such Notes in accordance with and subject to the terms of the relevant Global Note (and the expressions "**Noteholder**" and "**holder of Notes**" and related expressions shall be construed accordingly). Notes which are represented by a Global Note will be transferable only in accordance with the rules and procedures for the time being of Euroclear, Clearstream, Luxembourg, the CMU Service and DTC, as the case may be. Notwithstanding the above, if a Note (whether in global or definitive form) is held through the CMU Service, any payment that is made in respect of such Note shall be made at the direction of the bearer or the registered holder to the person(s) for whose account(s) interests in such Note are credited as being held through the CMU Service in accordance with the CMU Rules at the relevant time as notified to the CMU Lodging Agent by the CMU Service in a relevant CMU Instrument Position Report or any other relevant notification by the CMU Service. Such notification shall be conclusive evidence of the records of the CMU Service as to the identity of any accountholder (the "**CMU Accountholders**") and the principal amount of any Note credited to its account, save in the case of manifest error, and such payments shall discharge the obligation of the Issuer in respect of that payment under such Note.

For so long as DTC or its nominee is the registered owner or holder of a Registered Global Note, DTC or such nominee, as the case may be, will be considered the sole owner or holder of the Notes represented by such Registered Global Note for all purposes under the Agency Agreement and the Notes except to the extent that in accordance with DTC's published rules and procedures any ownership rights may be exercised by its participants or beneficial owners through participants.

References to Euroclear, Clearstream, Luxembourg, the CMU Service and/or DTC shall, whenever the context so permits, be deemed to include a reference to any additional or alternative clearing system approved by the Issuer and the Principal Paying Agent and specified in the applicable Pricing Supplement.

2. **Exchange and Transfers of Registered Notes**

(a) ***Exchange of interests in Registered Global Notes for Definitive Registered Notes***

Interests in any Registered Global Note will be exchangeable for Definitive Registered Notes if (i) Euroclear and/or Clearstream, Luxembourg, the CMU Service or DTC, as the case may be, notifies the Issuer that it is unwilling or unable to continue as depositary for such Registered Global Note, (ii) if applicable, DTC ceases to be a "**Clearing Agency**" registered under the U.S. Securities Exchange Act of 1934, as amended (the "**Exchange Act**") or Euroclear, Clearstream, Luxembourg or the CMU Service, as the case may be, is closed for business for a continuous period of 14 days (other than by reason of holiday, statutory or otherwise) or announces its intention permanently to cease business, and a successor depositary or alternative clearing system satisfactory to the Issuer and the Registrar and, in the case of CMU Notes, the CMU Lodging Agent is not available or (iii) an Event of Default (as defined in Condition 11) has occurred and is continuing with respect to such Notes. Upon the occurrence of any of the events described in the preceding sentence, the Issuer will cause the appropriate Definitive Registered Notes to be delivered, **provided that**, notwithstanding the above, no Definitive Registered Notes will be issued until expiry of the applicable Distribution Compliance Period.

(b) ***Transfers of Registered Global Notes***

Transfers of a Registered Global Note registered in the name of a nominee or a sub-custodian for DTC, Euroclear, Clearstream, Luxembourg or the CMU Service, as the case may be, shall be limited to transfers of such Registered Global Note, in whole but not in part, to another nominee or sub-custodian of DTC, Euroclear, Clearstream, Luxembourg or the CMU Service, as the case may be, or to the nominee or sub-custodian of any successor thereto.

(c) ***Transfers of interests in Regulation S Notes***

Prior to expiry of the applicable Distribution Compliance Period, transfers by the holder of, or of a beneficial interest in, a Regulation S Note to a transferee in the United States will (unless otherwise specified in the applicable Pricing Supplement) only be made:

(i) upon receipt by the Registrar of a written certification substantially in the form set out in the Agency Agreement, amended as appropriate (a "**Transfer Certificate**"), copies of which are available from the specified office of the Registrar or any Transfer Agent, from the transferor of the Note or beneficial interest therein to the effect that such transfer is being made:

(A) to a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A; or

(B) to a person who is an Institutional Accredited Investor (as defined below), in which case the Transfer Certificate must be accompanied by a duly executed investment letter from the relevant transferee substantially in the form set out in the Agency Agreement (an "**IAI Investment Letter**"); or

(ii) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States,

and, in each case, in accordance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States or any other jurisdiction.

In the case of (i) above, such transferee may take delivery through a Legended Note in global or definitive form and, in the case of (ii) above, such transferee may take delivery only through a Legended Note in definitive form. After expiry of the applicable Distribution Compliance Period (a) beneficial interests in Regulation S Notes may be held through DTC directly by a participant in DTC or indirectly through a participant in DTC and (b) such certification requirements will no longer apply to such transfers.

(d) ***Transfers of interests in Legended Notes***

Transfers of Legended Notes or beneficial interests therein may be made:

(i) to a transferee who takes delivery of such interest through a Regulation S Note, upon receipt by the Registrar of a duly completed Transfer Certificate from the transferor to the effect that such transfer is being made in accordance with Regulation S and that, if such transfer is being made prior to expiry of the applicable Distribution Compliance Period, the interests in the Notes being transferred will be held immediately thereafter indirectly through Euroclear and/or Clearstream, Luxembourg; or

(ii) to a transferee who takes delivery of such interest through a Restricted Global Note if the transferee is a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A; or

(iii) to a transferee who takes delivery of such interest through a Legended Note:

(A) where the transferee is a person whom the transferor reasonably believes is a QIB in a transaction meeting the requirements of Rule 144A, without certification; or

(B) where the transferee is an Institutional Accredited Investor, subject to delivery to the Registrar of a Transfer Certificate from the transferor to the effect that such transfer is being made to an Institutional Accredited Investor, together with a duly executed investment letter from the relevant transferee substantially in the form set out in the Agency Agreement (an "**IAI Investment Letter**"); or

(iv) otherwise pursuant to the Securities Act or an exemption therefrom, subject to receipt by the Issuer of such satisfactory evidence as the Issuer may reasonably require, which may include an opinion of U.S. counsel, that such transfer is in compliance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States, and in each case, in accordance with any applicable federal securities laws of the United States or any applicable securities laws of any state of the United States or any other jurisdiction.

Notes transferred by Institutional Accredited Investors to QIBs pursuant to Rule 144A or outside the United States pursuant to Regulation S will be eligible to be held by such QIBs or non-U.S. investors through DTC, Euroclear, Clearstream, Luxembourg or the CMU Service, as appropriate, and the Registrar will arrange for any Notes which are the subject of such a transfer to be represented by the appropriate Registered Global Note, where applicable.

(e) ***Exchanges and transfers of Registered Notes generally***

Registered Notes may not be exchanged for Bearer Notes and *vice versa*.

Holders of Definitive Registered Notes, other than Institutional Accredited Investors, may exchange such Definitive Registered Notes for interests in a Registered Global Note of the same type at any time.

Transfers of beneficial interests in Registered Global Notes will be effected by DTC, Euroclear, Clearstream, Luxembourg or the CMU Service, as the case may be, and, in turn, by participants and, if appropriate, indirect participants in such clearing systems acting on behalf of beneficial transferors and transferees of such interests. A beneficial interest in a Registered Global Note will be transferable and exchangeable for Notes in definitive form or for a beneficial interest in another Registered Global Note only in accordance with the terms and conditions thereof and the rules and operating procedures for the time being of DTC, Euroclear, Clearstream, Luxembourg, or the CMU Service, as the case may be (the "**Applicable Procedures**") and as specified in the Pricing Supplement.

Upon the terms and subject to the conditions set forth in the Agency Agreement, a Definitive Registered Note may be transferred in whole or in part (in the Authorised Denominations set out in the applicable Pricing Supplement) by the holder or holders surrendering the Definitive Registered Note for registration of the transfer of the Definitive Registered Note (or the relevant part of the Definitive Registered Note) at the specified office of the Registrar or any Transfer Agent, with the form of transfer thereon duly executed by the holder or holders thereof or his or their attorney or attorneys duly authorised in writing and upon the Registrar or, as the case may be, the relevant Transfer Agent, after due and careful enquiry, being satisfied with the documents of title and the identity of the person making the request and subject to such reasonable regulations as the Issuer and the Registrar or, as the case may be, the relevant Transfer Agent may prescribe, including any restrictions imposed by the Issuer on transfers of Definitive Registered Notes originally sold to a U.S. person. Subject as provided above, the Registrar or, as the case may be, the relevant Transfer Agent will, within three business days (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar or, as the case may be, the relevant Transfer Agent is located) of the request (or such longer period as may be required to comply with any applicable fiscal or other laws or regulations) authenticate and deliver, or procure the authentication and delivery of, at its specified office to the transferee or (at the risk of the transferee) send by mail to such address as the transferee may request, a new Definitive Registered Note of a like aggregate nominal amount to the Definitive Registered Note (or the relevant part of the Definitive Registered Note) transferred. In the case of the transfer of part only of a Definitive Registered Note, a new Definitive Registered Note in respect of the balance of the Definitive Registered Note not transferred will be so authenticated and delivered or (at the risk of the transferor) sent to the transferor.

Exchanges or transfers by a holder of a Definitive Registered Note for an interest in, or to a person who takes delivery of such Note through, a Registered Global Note will be made no later than 30 days after the receipt by the Registrar or, as the case may be, the relevant Transfer Agent of the Definitive Registered Note to be so exchanged or transferred and, if applicable, upon receipt by the Registrar of a written certification from the transferor.

(f) ***Registration of transfer upon partial redemption***

In the event of a partial redemption of Notes under Condition 7(c), the Issuer shall not be required:

(a) to register the transfer of Registered Notes (or parts of Registered Notes) during the period beginning on the 15th day before the date of the partial redemption and ending on the date on which notice is given specifying the serial numbers of Notes called (in whole or in part) for redemption (both inclusive); or

(b) to register the transfer of any Registered Note, or part of a Registered Note, called for partial redemption.

(g) ***Closed Periods***

No Noteholder may require the transfer of a Registered Note to be registered during the period of 15 days ending on the due date for any payment of principal or interest or payment on that Note.

(h) ***Costs of exchange or registration***

Registration of transfers will be effected without charge by or on behalf of the Issuer, the Registrar or the relevant Transfer Agent, but upon payment (or the giving of such indemnity as the Registrar or the relevant Transfer Agent may reasonably require) in respect of any tax or other governmental charges which may be imposed in relation to it **provided that** the Issuer shall not be responsible for any documentary stamp tax payable on the transfer of Notes effected in Korea unless the Issuer is the counterparty directly liable for that documentary stamp tax.

3. **Status of the Notes**

(a) ***Status of the Senior Notes***

Notes whose status is specified in the applicable Pricing Supplement as Senior (the "**Senior Notes**") and any relative Receipts and Coupons constitute direct, unconditional, unsubordinated and (subject to Condition 4) unsecured obligations of the Issuer which rank *pari passu* among themselves and will rank at least *pari passu* with all other present and future unsecured (subject to Condition 4) and unsubordinated obligations of the Issuer, save for such as may be preferred by mandatory provisions of applicable law.

(b) ***Status of the Subordinated Notes***

(i) **Tier II Subordinated Notes**

*This Condition 3(b)(i) applies only to Notes whose status is specified in the applicable Pricing Supplement as "Tier II Subordinated Notes" (the "**Tier II Subordinated Notes**").*

Tier II Subordinated Notes and any relative Receipts and Coupons constitute direct, general, subordinated (as described in Condition 3(c)) and unsecured obligations of the Issuer which rank (x) junior to the Senior Indebtedness of the Issuer (as defined in Condition 3(c)), (y) *pari passu* among themselves and all other subordinated obligations of the Issuer which do not rank or are not expressed by their terms to rank junior to the Tier II Subordinated Notes (collectively, the "**Tier II Obligations**") and (z) in priority to claims of holders of the Tier I Obligations (as defined in Condition 3(b)(ii)) and all classes of equity (including holders of preference shares (if any)) of the Issuer.

(ii) **Tier I Subordinated Notes**

*This Condition 3(b)(ii) applies only to Notes whose status is specified in the applicable Pricing Supplement as "Tier I Subordinated Notes" (the "**Tier I Subordinated Notes**").*

Tier I Subordinated Notes and any relative Receipts and Coupons constitute direct, general, subordinated (as described in Condition 3(c)) and unsecured obligations of the Issuer which (subject to the provisions of Conditions 5(f) and 8) rank (x) junior to the Senior Indebtedness of the Issuer (as defined in Condition 3(c)), (y) *pari passu* among themselves and all other subordinated obligations of the Issuer which either constitute additional Tier I capital of the Issuer under applicable Korean Law or otherwise rank or are expressed by their terms to rank *pari passu* with the Tier I Subordinated Notes (collectively, the "**Tier I Obligations**") and (z) in priority to claims of holders of all classes of equity (including holders of preference shares (if any)) of the Issuer (other than equity that constitutes Tier II capital of the Issuer under applicable Korean Law). In addition, in the case of a Bankruptcy Event (as defined in Condition 3(c)), the Tier I Subordinated Notes shall be deemed not to constitute liabilities for purposes of determining whether the Issuer's liabilities exceed its assets.

(c) ***Subordination***

*This Condition 3(c) applies only to Tier I Subordinated Notes and Tier II Subordinated Notes (together, the "**Subordinated Notes**").*

(i) If, on or prior to the Maturity Date or at any time while any amount is due and outstanding under any Subordinated Notes, a Bankruptcy Event (as defined below) occurs and so long as it continues, any amounts which become due then or thereafter under the Subordinated Notes (including overdue amounts) shall not be payable unless and until the total amount of any and all Senior Indebtedness of the Issuer which is listed on the distribution list (as amended, if such be the case) for final distribution submitted to the court in the bankruptcy proceedings is paid in full or provided to be paid in full in such bankruptcy proceedings.

(ii) If, on or prior to the Maturity Date or at any time while any amount is due and outstanding under any Subordinated Notes, a Rehabilitation Event (as defined below) occurs and so long as it continues, any amounts which become due then or thereafter under the Subordinated Notes (including overdue amounts) shall not be payable unless and until the total amount of any and all

Senior Indebtedness of the Issuer which is listed on the rehabilitation plan of the Issuer at the time when the court's approval of such plan becomes final and conclusive shall have been paid in full in the rehabilitation proceedings to the extent of the original amount thereof (without regard to any adjustment of such amount in the approved rehabilitation plan).

(iii) If, on or prior to the Maturity Date or at any time while any amount is due and outstanding under any Subordinated Notes, a Foreign Event (as defined below) occurs and so long as it continues, any amounts which become due then or thereafter under the Subordinated Notes (including overdue amounts) shall only become payable upon conditions equivalent to those enumerated in the above two paragraphs having been fulfilled; **provided that** notwithstanding any provision herein to the contrary if the imposition of any such conditions is not allowed under such proceedings, any amounts which become due under the Subordinated Notes shall become payable in accordance with the terms herein provided and not subject to such conditions.

(iv) A holder of a Subordinated Note by its acceptance thereof or its interest therein, shall thereby agree that (i) if any payment in respect of such Note is made to such holder after the occurrence of a Subordination Event and the amount of such payment shall exceed the amount, if any, that should have been paid to such holder upon the proper application of these subordination provisions, the payment of such excess amount shall be deemed null and void and such holder (without the Registrar or any Paying Agent having any obligation or liability with respect thereto, save to the extent that the Registrar or such Paying Agent shall return to the Issuer any such excess amount which remains held by it at the time of the notice next referred to) shall be obliged to return the amount of the excess payment within 10 days of receiving notice from the Issuer of the excess payment and (ii) upon the occurrence of a Subordination Event and so long as such Subordination Event continues, such holder shall not exercise any right to set off any liabilities of the Issuer under such Note which become so payable on or after the date on which the Subordination Event occurs against any liabilities of such holder owed to the Issuer unless, until and only in such amount as the liabilities of the Issuer under such Note become payable pursuant to the proper application of these subordination provisions.

In addition, a holder of a Subordinated Note by its acceptance thereof or its interest therein shall be deemed to have waived, and agreed not to exercise, any right as a creditor to require the Issuer to redeem such Subordinated Note or provide collateral with respect thereto that may arise pursuant to Article 527-5, Paragraph 3 and Article 232 of the Korean Commercial Code in connection with a merger of the Issuer with another entity.

In these Conditions:

a "**Bankruptcy Event**" shall mean a court of competent jurisdiction in Korea having adjudicated the Issuer to be bankrupt pursuant to the provisions of the Debtor Rehabilitation and Bankruptcy Act or any successor legislation thereto;

a "**Foreign Event**" shall mean in any jurisdiction other than Korea, the Issuer having become subject to bankruptcy, rehabilitation or other equivalent proceedings pursuant to any applicable law of any jurisdiction other than Korea;

a "**Rehabilitation Event**" shall mean a court of competent jurisdiction in Korea having adjudicated the Issuer to be subject to the rehabilitation proceedings pursuant to the provisions of the Debtor Rehabilitation and Bankruptcy Act or any successor legislation thereto;

"**Senior Indebtedness of the Issuer**" shall mean (i) in the case of Tier II Subordinated Notes, all deposits and other liabilities of the Issuer (other than the Tier II Obligations and the Tier I Obligations) and (ii) in the case of Tier I Subordinated Notes, all deposits and other liabilities of the Issuer (other than the Tier I Obligations) and all equity that constitutes Tier II capital of the Issuer under applicable Korean Law; and

a "**Subordination Event**" shall mean any Bankruptcy Event, Rehabilitation Event, or Foreign Event.

4. Negative Pledge

(a) ***Negative Pledge***

So long as any Senior Note remains outstanding (as defined in the Agency Agreement), the Issuer will not create or permit to be outstanding any mortgage, charge, pledge or other security interest upon or over the whole or any part of its property, assets or revenues (whether present or future) to secure for the benefit of the holders of any International Investment Securities (as defined below):

(i) payment of any sum due in respect of any such International Investment Securities;

(ii) payment under any guarantee in respect of any such International Investment Securities; or

(iii) payment under any indemnity or other like obligations in respect of any such International Investment Securities,

without, in any such case and at the same time, according to the Senior Notes either the same security as is available for the benefit of the holders of such International Investment Securities or such other security as shall be approved for the purpose by an Extraordinary Resolution (as defined in the Agency Agreement) of the holders of Senior Notes.

For the avoidance of doubt, notwithstanding the foregoing, under the Act on Issuance of Covered Bonds, which was enacted on 14 January 2014 and became effective on 15 April 2014, in Korea, the issuance of Covered Bonds (as defined below) by the Issuer and any arrangement relating to the segregation or "ring-fencing" of any part of the Issuer's property, assets or revenues (whether present or future) for the purpose thereof shall be permitted, **provided that** such Covered Bonds are issued and such arrangement is entered into, respectively, in compliance with the Act on Issuance of Covered Bonds (or any amendment or supplemental legislation in connection thereof) and that such property, assets and revenues are intended to form part of the pool of the assets in respect of which a priority of claim in favour of the holders of the Covered Bonds may be given.

(b) ***Interpretation***

In these Conditions:

(i) "**International Investment Securities**" means notes, bonds, debentures, certificates of deposit or investment securities of any Person which (1) by their terms either are payable, or confer a right to receive payment, in any currency other than Won or are denominated in Won and more than 50 per cent. of the aggregate principal amount of which is initially distributed outside Korea by or with the authorisation of the Issuer; (2) are for the time being, or are intended to be, quoted, listed, ordinarily dealt in or traded on any stock exchange or over-the-counter or other securities market outside Korea; and (3) are not (A) securities issued in accordance with a securitisation plan pursuant to the Asset-Backed Securitisation Act of Korea (or other similar laws of Korea); or (B) securities or instruments serviced primarily by the cash flows of a discrete pool of receivables or other financial assets, either fixed or revolving, that by their terms convert into cash within a finite period and which are commonly regarded as asset-backed securities;

(ii) "**Covered Bonds**" means debt securities (including, without limitation, any notes, bonds, debentures, certificates of deposit or investment securities) backed by cash flows generated from an underlying investment pool consisting of mortgage loans, public sector assets, cash, cash equivalents and/or other financial assets or otherwise issued in compliance with the Act on Issuance of Covered Bonds; and

(iii) "**Person**" means any individual, company, corporation, firm, partnership, joint venture, association, organisation, state, agency of a state or other entity, whether or not having a separate legal personality.

5. **Interest**

(a) ***Interest on Fixed Rate Notes***

(I) *In the case of Fixed Rate Notes where Conditions 5(a)(I) is specified as being applicable in the applicable Pricing Supplement, the following provisions will apply instead of Condition 5(a)(II):*

Each Fixed Rate Note bears interest on its nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Issue Date (or, if otherwise specified in the applicable Pricing Supplement, the Interest Commencement Date) at the rate(s) per annum equal to the Fixed Rate(s) of Interest payable in arrear on the Interest Payment Date(s) in each year and on the Maturity Date if that does not fall on an Interest Payment Date.

Except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on such date will amount to the

Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

Where a Fixed Coupon Amount or Broken Amount is specified in the applicable Pricing Supplement, interest shall be calculated in respect of any period by applying the Rate of Interest to:

(A) in the case of Fixed Rate Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Fixed Rate Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or

(B) in the case of Fixed Rate Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention.

In these Conditions:

"**Day Count Fraction**" means, in respect of the calculation of an amount of interest in accordance with this Condition 5(a):

(i) if "**Actual/Actual (ICMA)**" is specified in the applicable Pricing Supplement:

(a) in the case of Notes where the number of days in the relevant period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (the "**Accrual Period**") is equal to or shorter than the Determination Period (as defined below) during which the Accrual Period ends, the number of days in such Accrual Period divided by the product of (1) the number of days in such Determination Period and (2) the number of Determination Dates (as specified in the applicable Pricing Supplement) that would occur in one calendar year; or

(b) in the case of Notes where the Accrual Period is longer than the Determination Period during which the Accrual Period ends, the sum of:

(1) the number of days in such Accrual Period falling in the Determination Period in which the Accrual Period begins divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates (as specified in the applicable Pricing Supplement) that would occur in one calendar year; and

(2) the number of days in such Accrual Period falling in the next Determination Period divided by the product of (x) the number of days in such Determination Period and (y) the number of Determination Dates that would occur in one calendar year.

(ii) if "**30/360**" is specified in the applicable Pricing Supplement, the number of days in the period from (and including) the most recent Interest Payment Date (or, if none, the Interest Commencement Date) to (but excluding) the relevant payment date (such number of days being calculated on the basis of a year of 360 days with twelve 30-day months) divided by 360.

In this Condition 5(a)(I):

"**Determination Period**" means each period from (and including) a Determination Date to but excluding the next Determination Date (including, where either the Interest Commencement Date or the final Interest Payment Date is not a Determination Date, the period commencing on the first Determination Date prior to, and ending on the first Determination Date falling after, such date);

"**Fixed Interest Period**" means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date; and

"**sub-unit**" means, with respect to any currency other than Euro, the lowest amount of such currency that is available as legal tender in the country of such currency and, with respect to Euro, means one cent.

(II) *In the case of Fixed Rate Notes where Conditions 5(a)(II) is specified as being applicable in the applicable Pricing Supplement, the following provisions will apply instead of Condition 5(a)(I):*

Each Fixed Rate Note bears interest on its outstanding nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date at the rate(s) per annum (expressed as a percentage) equal to the Rate(s) of Interest. If any Interest Payment Date would otherwise fall on a day which is not a business day (as defined below), it shall be postponed to the next day which is a business day unless it would thereby fall into the next calendar month in which event it shall be brought forward to the immediately preceding day. Interest will be payable in arrear on the Interest Payment Date(s) in each year up to (and including) the Maturity Date.

Except as provided in the applicable Pricing Supplement, the amount of interest payable on each Interest Payment Date in respect of the Fixed Interest Period ending on such date will amount to the Fixed Coupon Amount. Payments of interest on any Interest Payment Date will, if so specified in the applicable Pricing Supplement, amount to the Broken Amount so specified.

Where an applicable Fixed Coupon Amount or Broken Amount is specified in the applicable Pricing Supplement, interest shall be calculated in respect of any period by applying the Rate of Interest to:

(A) in the case of Fixed Rate Notes which are represented by a Global Note, the aggregate outstanding nominal amount of the Fixed Rate Notes represented by such Global Note (or, if they are Partly Paid Notes, the aggregate amount paid up); or

(B) in the case of Fixed Rate Notes in definitive form, the Calculation Amount;

and, in each case, multiplying such sum by the actual number of days in the Fixed Interest Period concerned divided by 365, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency, half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention. Where the Specified Denomination of a Fixed Rate Note in definitive form is a multiple of the Calculation Amount, the amount of interest payable in respect of such Fixed Rate Note shall be the product of the amount (determined in the manner provided above) for the Calculation Amount and the amount by which the Calculation Amount is multiplied to reach the Specified Denomination, without any further rounding.

In this Condition 5(a)(II):

"**business day**" means a day (other than a Saturday, Sunday or public holiday) upon which commercial banks and foreign exchange markets are generally open for business and settlement of Renminbi payments in Hong Kong and are not authorised or obligated by law or executive order to be closed; and

"**Fixed Interest Period**" means the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date; and

"**sub-unit**" means, with respect to Renminbi, the lowest amount of such currency that is available as legal tender in the People's Republic of China.

(b) ***Interest on Floating Rate Notes and Index Linked Interest Notes***

(i) *Interest Payment Dates*

Each Floating Rate Note and Index Linked Interest Note bears interest on its nominal amount (or, if it is a Partly Paid Note, the amount paid up) from (and including) the Interest Commencement Date and such interest will be payable in arrear on either:

(A) the Interest Payment Date(s) (each an "**Interest Payment Date**") in each year specified in the applicable Pricing Supplement; or

(B) if no express Interest Payment Date(s) is/are specified in the applicable Pricing Supplement, each date (each an "**Interest Payment Date**") which falls the number of months or other period specified as the Specified Period in the applicable Pricing Supplement after the preceding Interest Payment Date or, in the case of the first Interest Payment Date, after the Interest Commencement Date.

Such interest will be payable in respect of each Interest Period (which expression shall in these Terms and Conditions, mean the period from (and including) an Interest Payment Date (or the Interest Commencement Date) to (but excluding) the next (or first) Interest Payment Date, each an "**Interest Period**").

If a business day convention is specified in the applicable Pricing Supplement and (x) if there is no numerically corresponding day in the calendar month in which an Interest Payment Date should occur or (y) if any Interest Payment Date would otherwise fall on a day which is not a Business Day, then, if the business day convention specified is:

(1) in any case where Specified Periods are specified in accordance with Condition 5(b)(i)(B) above, the Floating Rate Convention, such Interest Payment Date (i) in the case of (x) above, shall be the last day that is a Business Day in the relevant month and the provisions of (B) below of this subparagraph (1) shall apply *mutatis mutandis* or (ii) in the case of (y) above, shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event (A) such Interest Payment Date shall be brought forward to the immediately preceding Business Day and (B) each subsequent Interest Payment Date shall be the last Business Day in the month which falls the Specified Period after the preceding applicable Interest Payment Date occurred; or

(2) the Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day; or

(3) the Modified Following Business Day Convention, such Interest Payment Date shall be postponed to the next day which is a Business Day unless it would thereby fall into the next calendar month, in which event such Interest Payment Date shall be brought forward to the immediately preceding Business Day; or

(4) the Preceding Business Day Convention, such Interest Payment Date shall be brought forward to the immediately preceding Business Day.

In these Conditions, "**Business Day**" means a day which is both:

(A) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in London and, in the case of an issue of Notes cleared through the CMU Service, Hong Kong, and any Additional Business Centre specified in the applicable Pricing Supplement; and

(B) either (1) in relation to any sum payable in a Specified Currency other than Euro and Renminbi, a day on which commercial banks and foreign exchange markets settle payments in the principal financial centre of the country of the relevant Specified Currency (if other than London and Hong Kong, as applicable, and any Additional Business Centre) and which, if the Specified Currency is Australian dollars or New Zealand dollars shall be Sydney or Auckland, respectively) or (2) in relation to any sum payable in Euro, a day on which the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET2) System (the "**TARGET2 System**") is open or (3) in relation to any sum payable in Renminbi, a day (other than a Saturday, Sunday or public holiday) on which commercial banks and foreign exchange markets are open for business and settle Renminbi payments in Hong Kong.

(ii) *Rate of Interest*

The Rate of Interest payable from time to time in respect of Floating Rate Notes and Index Linked Interest Notes will be determined in the manner specified in the applicable Pricing Supplement.

(A) *ISDA Determination for Floating Rate Notes*

Where ISDA Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will be the relevant ISDA Rate plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any). For the purposes of this sub-paragraph (A), "**ISDA Rate**" for an Interest Period means a rate equal to the Floating Rate that would be determined by the Principal Paying Agent under an interest rate swap transaction if the Principal Paying Agent were acting as Calculation Agent for that swap transaction under the terms of an agreement incorporating the 2006 ISDA Definitions as amended and updated as at the Issue Date of the first tranche of the Notes, published by the International Swaps and Derivatives Association, Inc. (the "**ISDA Definitions**") and under which:

(1) the Floating Rate Option is as specified in the applicable Pricing Supplement;

(2) the Designated Maturity is a period specified in the applicable Pricing Supplement; and

(3) the relevant Reset Date is either (i) if the applicable Floating Rate Option is based on the London inter-bank offered rate ("**LIBOR**"), the Euro-zone inter- bank offered rate ("**EURIBOR**") or on the Hong Kong inter-bank offered rate ("**HIBOR**") for a currency, the first day of that Interest Period or (ii) in any other case, as specified in the applicable Pricing Supplement.

For the purposes of this sub-paragraph (A), (i) "**Floating Rate**", "**Calculation Agent**", "**Floating Rate Option**", "**Designated Maturity**" and "**Reset Date**" have the meanings given to those terms in the ISDA Definitions, (ii) the definition of "**Banking Day**" in the ISDA Definitions shall be amended to insert after the words "are open for" in the second line the word "general" and (iii) "**Euro-zone**" means the region comprised of Member States of the European Union that adopt or have adopted the single currency in accordance with the Treaty establishing the European Community, as amended by the Treaty on European Union.

When this sub-paragraph (A) applies, in respect of each relevant Interest Period the Agent will be deemed to have discharged its obligations under Condition 5(b)(iv) in respect of the determination of the Rate of Interest if it has determined the Rate of Interest in respect of such Interest Period in the manner provided in this sub-paragraph (A).

(B) *Screen Rate Determination for Floating Rate Notes*

(1) Where Screen Rate Determination is specified in the applicable Pricing Supplement as the manner in which the Rate of Interest is to be determined, the Rate of Interest for each Interest Period will, subject as provided below, be either:

(A) the offered quotation; or

(B) the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the offered quotations, (expressed as a percentage rate per annum) for the Reference Rate which appears or appear, as the case may be, on the Relevant Screen Page as at 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR or Hong Kong time, in the case of HIBOR) on the second business day before the beginning of each Interest Period (each an "**Interest Determination Date**") in question plus or minus (as indicated in the applicable Pricing Supplement) the Margin (if any), all as determined by the Calculation Agent. If five or more of such offered quotations are available on the Relevant Screen Page, the highest (or, if there is more than one such highest quotation, one only of such quotations) and the lowest (or, if there is more than one such lowest quotation, one only of such quotations) shall be disregarded by the Calculation Agent for the purpose of determining the arithmetic mean (rounded as provided above) of such offered quotations.

(2) If the Relevant Screen Page is not available (other than as a result of a Benchmark Discontinuance Event) or, if in the case of Condition 5(b)(ii)(B)(1)(A) above, no such offered quotation appears or, in the case of Condition 5(b)(ii)(B)(1)(B) above, fewer than three such offered quotations appear, in each case as at the time specified in the preceding paragraph the Determination Agent (as defined below) shall request each of the Reference Banks (as defined below) to provide the Determination Agent with its offered quotation (expressed as a percentage rate per annum) for the Reference Rate at approximately 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR, or Hong Kong time, in the case of HIBOR) on the Interest Determination Date in question. If two or more of the Reference Banks provide the Determination Agent with such offered quotations, the Rate of Interest for such Interest Period shall be the arithmetic mean (rounded if necessary to the fifth decimal place with 0.000005 being rounded upwards) of such offered quotations plus or minus (as appropriate) the Margin (if any), all as determined by the Calculation Agent.

(3) If on any Interest Determination Date one only or none of the Reference Banks provides the Determination Agent with such offered quotations as provided in the preceding paragraph, the Rate of Interest for the relevant Interest Period shall be the rate per annum which the Calculation Agent determines as being the arithmetic mean (rounded if necessary to the fifth decimal place, with 0.000005 being rounded upwards) of the rates, as communicated to (and at the request of) the Determination Agent by the Reference Banks or any two or more of them, at which such banks were offered, at

approximately 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR, or Hong Kong time, in the case of HIBOR) on the relevant Interest Determination Date, deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate by leading banks in the London inter-bank market (if the Reference Rate is LIBOR) or the Euro-zone inter-bank market (if the Reference Rate is EURIBOR) or the Hong Kong inter-bank market (if the Reference Rate is HIBOR) plus or minus (as appropriate) the Margin (if any) or, if fewer than two of the Reference Banks provide the Determination Agent with such offered rates, the offered rate for deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate, or the arithmetic mean (rounded as provided above) of the offered rates for deposits in the Specified Currency for a period equal to that which would have been used for the Reference Rate, at which, at approximately 11:00 a.m. (London time, in the case of LIBOR, or Brussels time, in the case of EURIBOR, or Hong Kong time, in the case of HIBOR) on the relevant Interest Determination Date, any one or more banks (which bank or banks is or are in the opinion of the Issuer suitable for such purpose) informs the Determination Agent it is quoting to leading banks in the London inter-bank market (if the Reference Rate is LIBOR) or the Euro-zone inter-bank market (if the Reference Rate is EURIBOR) or the Hong Kong inter-bank market (if the Reference Rate is HIBOR) plus or minus (as appropriate) the Margin (if any), **provided that**, if the Rate of Interest cannot be determined in accordance with the foregoing provisions of this paragraph, the Rate of Interest shall be determined as at the last preceding Interest Determination Date (though substituting, where a different Margin is to be applied to the relevant Interest Period from that which applied to the last preceding Interest Period, the Margin relating to the relevant Interest Period, in place of the Margin relating to that last preceding Interest Period).

(4) "**Reference Banks**" means, in the case of Condition 5(b)(ii)(B)(1)(A) above, those banks whose offered rates were used to determine such quotation when such quotation last appeared on the Relevant Screen Page and, in the case of Condition 5(b)(ii)(B)(1)(B) above, those banks whose offered quotations last appeared on the Relevant Screen Page when no fewer than three such offered quotations appeared.

(5) If the Reference Rate from time to time in respect of Floating Rate Notes is specified in the applicable Pricing Supplement as being other than LIBOR, EURIBOR or HIBOR, the Rate of Interest in respect of such Notes will be determined as provided in the applicable Pricing Supplement.

(6) "**Determination Agent**" means an independent bank of international repute selected by and acting as an agent of the Issuer for the purposes of Condition 5(b)(ii) and notified to the Principal Paying Agent and Calculation Agent in writing.

(iii) *Minimum and/or Maximum Interest Rate*

If the applicable Pricing Supplement specifies a Minimum Interest Rate for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is less than such Minimum Interest Rate, the Rate of Interest for such Interest Period shall be such Minimum Interest Rate. If the applicable Pricing Supplement specifies a Maximum Interest Rate for any Interest Period, then, in the event that the Rate of Interest in respect of such Interest Period determined in accordance with the provisions of paragraph (ii) above is greater than such Maximum Interest Rate, the Rate of Interest for such Interest Period shall be such Maximum Interest Rate.

(iv) *Determination of Rate of Interest and Calculation of Interest Amounts*

The Principal Paying Agent or the Determination Agent, as the case may be, in the case of Floating Rate Notes, and the Calculation Agent, in the case of Index Linked Interest Notes, will at or as soon as practicable after each time at which the Rate of Interest is to be determined, determine the Rate of Interest for the relevant Interest Period. In the case of Floating Rate Notes, the Determination Agent (if applicable) or, in the case of Index Linked Interest Notes, the Calculation Agent will notify the Principal Paying Agent of the Rate of Interest for the relevant Interest Period as soon as practicable after calculating the same.

The Principal Paying Agent will calculate the amount of interest (the "**Interest Amount**") payable on the Floating Rate Notes or the Calculation Agent will calculate the amount of interest payable on the Index Linked Interest Notes in respect of each Specified Denomination for the relevant Interest Period. Each Interest Amount shall be calculated by applying the Rate of Interest to each Specified Denomination, multiplying such sum by the applicable Day Count Fraction, and rounding the resultant figure to the nearest sub-unit of the relevant Specified Currency half of any such sub-unit being rounded upwards or otherwise in accordance with applicable market convention.

"**Day Count Fraction**" means, in respect of the calculation of an amount of interest for any Interest Period:

(1) if "**Actual/Actual (ISDA)**" or "**Actual/Actual**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 (or, if any portion of that Interest Period falls in a leap year, the sum of (A) the actual number of days in that portion of the Interest Period falling in a leap year divided by 366 and (B) the actual number of days in that portion of the Interest Period falling in a non-leap year divided by 365);

(2) if "**Actual/365 (Fixed)**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365;

(3) if "**Actual/365 (Sterling)**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 365 or, in the case of an Interest Payment Date falling in a leap year, 366;

(4) if "**Actual/360**" is specified in the applicable Pricing Supplement, the actual number of days in the Interest Period divided by 360;

(5) if "**30/360**", "**360/360**" or "**Bond Basis**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"**Y_1**" is the year, expressed as a number, in which the first day of the Interest Period falls;

"**Y_2**" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**M_1**" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"**M_2**" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**D_1**" is the first calendar day, expressed as a number, of the Interest Period, unless such number is 31, in which case D_1 will be 30; and

"**D_2**" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31 and D_1 is greater than 29, in which case D_2 will be 30;

(6) if "**30E/360**" or "**Eurobond Basis**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"**Y_1**" is the year, expressed as a number, in which the first day of the Interest Period falls;

"**Y_2**" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"**M_1**" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{M_2}$" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{D_1}$" is the first calendar day, expressed as a number, of the Interest Period, unless such number would be 31, in which case D_1 will be 30; and

"$\mathbf{D_2}$" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless such number would be 31, in which case D_2 will be 30;

(7) if "**30E/360 (ISDA)**" is specified in the applicable Pricing Supplement, the number of days in the Interest Period divided by 360, calculated on a formula basis as follows:

$$\text{Day Count Fraction} = \frac{[360 \times (Y_2 - Y_1)] + [30 \times (M_2 - M_1)] + (D_2 - D_1)}{360}$$

where:

"$\mathbf{Y_1}$" is the year, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{Y_2}$" is the year, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{M_1}$" is the calendar month, expressed as a number, in which the first day of the Interest Period falls;

"$\mathbf{M_2}$" is the calendar month, expressed as a number, in which the day immediately following the last day of the Interest Period falls;

"$\mathbf{D_1}$" is the first calendar day, expressed as a number, of the Interest Period, unless (i) that day is the last day of February or (ii) such number would be 31, in which case D_1 will be 30; and

"$\mathbf{D_2}$" is the calendar day, expressed as a number, immediately following the last day included in the Interest Period, unless (i) that day is the last day of February but not the Maturity Date or (ii) such number would be 31, in which case D_2 will be 30.

(v) *Notification of Rate of Interest and Interest Amounts*

Provided that the Determination Agent or the Calculation Agent (if applicable) has notified the Principal Paying Agent, the Principal Paying Agent will cause the Rate of Interest and each Interest Amount for each Interest Period and the relevant Interest Payment Date to be notified to the Issuer and notice thereof to be published in accordance with Condition 15 as soon as possible after their determination but in no event later than the fourth Relevant Business Day thereafter. Each Interest Amount and Interest Payment Date so notified may subsequently be amended (or appropriate alternative arrangements made by way of adjustment) without notice in the event of an extension or shortening of the Interest Period. Any such amendment will be promptly notified to each stock exchange on which the relevant Floating Rate Notes or Index Linked Interest Notes are for the time being listed and to the Noteholders in accordance with Condition 15. For purposes of this paragraph, the expression "**Relevant Business Day**" means a day (other than a Saturday or Sunday) on which banks and foreign exchange markets are open for business in London or, if the specified currency is Renminbi, Hong Kong.

(vi) *Certificates to be Final*

All certificates, communications, opinions, determinations, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 5(b), whether by the Principal Paying Agent or, if applicable, the Determination Agent or the Calculation Agent, shall (in the absence of wilful default, fraud or manifest error) be binding on the Issuer, the Principal Paying Agent, the Registrar, the Calculation Agent (if applicable), the Determination Agent (if applicable), the other Paying Agents and all Noteholders, Receiptholders and Couponholders and (in the absence as aforesaid) no liability of the Issuer, the Noteholders, the Receiptholders or the Couponholders shall attach to the Principal Paying Agent, the Determination Agent (if applicable) or the Calculation Agent (if applicable) in connection with the exercise or non-exercise by it of its powers, duties and discretions pursuant to such provisions.

(vii) *Effect of Benchmark Discontinuance Event*

If a Benchmark Replacement Date (as defined below) shall have occurred prior to any Interest Determination Date, the Replacement Benchmark (as defined below) shall be selected and such determination and all subsequent determinations will be made using the Replacement Benchmark with respect to all future Interest Determination Dates.

In this Condition 5(b)(vii):

"**Benchmark**" means LIBOR; **provided that** if a Benchmark Replacement Date shall have occurred with respect to LIBOR, then the term "Benchmark" shall mean the applicable Replacement Benchmark.

"**Benchmark Discontinuance Event**" means the occurrence of one or more of the following events with respect to a Benchmark:

(1) a public statement or publication of information by or on behalf of the administrator of such Benchmark announcing that such administrator has ceased or will cease to provide such Benchmark, permanently or indefinitely, **provided that**, at the time of the statement or publication, there is no successor administrator that will continue to provide such Benchmark;

(2) a public statement or publication of information by the regulatory supervisor for the administrator of such Benchmark, the central bank for the currency of such Benchmark, an insolvency official with jurisdiction over the administrator for such Benchmark, a resolution authority with jurisdiction over the administrator for such Benchmark or a court or an entity with similar insolvency or resolution authority over the administrator for such Benchmark, which states that the administrator of such Benchmark has ceased or will cease to provide such Benchmark permanently or indefinitely, **provided that**, at the time of the statement or publication, there is no successor administrator that will continue to provide such Benchmark;

(3) a Benchmark rate is not published by the administrator of such Benchmark for five consecutive business days and such failure is not the result of a temporary moratorium, embargo or disruption declared by the administrator of such Benchmark or by the regulatory supervisor for the administrator of such Benchmark and the Benchmark cannot be determined by reference to an Interpolated Period;

(4) a public statement or publication of information by the administrator of such Benchmark that it has invoked or will invoke, permanently or indefinitely, its insufficient submissions policy; or

(5) a public statement by the regulatory supervisor for the administrator of such Benchmark announcing that such Benchmark is no longer representative or may no longer be used.

"**Benchmark Replacement Date**" means:

(1) for purposes of clauses (1) and (2) of the definition of "Benchmark Discontinuance Event," the later of (a) the date of such public statement or publication of information and (b) the date on which the administrator of the relevant Benchmark permanently or indefinitely ceases to provide such Benchmark,

(2) for purposes of clause (3) of the definition of "Benchmark Discontinuance Event," the first business day following such five consecutive business days,

(3) for purposes of clause (4) of the definition of "Benchmark Discontinuance Event," the later of (a) the date of such public statement or publication of information and (b) the date such insufficient submissions policy is invoked, and

(4) for purposes of clause (5) of the definition of "Benchmark Discontinuance Event," the later of (a) the date of such public statement and (b) the date as of which the Benchmark may no longer be used (or, if applicable, is no longer representative).

If a Benchmark Replacement Date occurs on the same day as, but earlier than, the Interest Determination Date for any determination, the Benchmark Replacement Date will be deemed to have occurred prior to the Interest Determination Date for such determination and such determination will be made using the applicable Replacement Benchmark.

"**Compounded SOFR**" means a compounded average of daily SOFR calculated over a Corresponding Period or Interpolated Period, as applicable, that ends on the second New York business day preceding the first day of the applicable interest period, compounded according to the provisions describing the methodology for compounding set forth under "USD-SOFR-COMPOUND" of the ISDA Definitions.

"**Corresponding Period**" with respect to a Replacement Benchmark means a period or maturity (including overnight) having approximately the same length (disregarding business day adjustments) as the term period for LIBOR.

"**Federal Reserve Bank of New York's Website**" means the website of the Board of Governors of the Federal Reserve System at http://www.newyorkfed.org, or any successor source.

"**Interpolated Period**" with respect to a Benchmark means the period determined by interpolating on a linear basis between: (1) such Benchmark for the longest period (for which such Benchmark is available) that is shorter than the Corresponding Period and (2) such Benchmark for the shortest period (for which such Benchmark is available) that is longer than the Corresponding Period.

"**ISDA Fallback Rate**" means the rate to be effective upon the occurrence of an Index Cessation Event with respect to the Benchmark according to (and as defined in) the ISDA Definitions, where such rate may have been adjusted for a tenor equal to the Corresponding Period or Interpolated Period, but without giving effect to any additional spread adjustment to be applied according to such ISDA Definitions.

"**Relevant Governmental Body**" means the Federal Reserve Board and/or the Federal Reserve Bank of New York, or a committee officially endorsed or convened by the Federal Reserve Board and/or the Federal Reserve Bank of New York or any successor thereto.

"**Replacement Benchmark**" means:

(1) the forward-looking term SOFR rate for a Corresponding Period (or, if there is no Corresponding Period, such rate for the Interpolated Period) that shall have been selected, endorsed or recommended as the forward-looking term SOFR by the Relevant Governmental Body, plus the applicable Replacement Benchmark Spread; **provided that**:

(2) if the Unadjusted Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clause (1) above, then the Replacement Benchmark shall be Compounded SOFR, plus the applicable Replacement Benchmark Spread; **provided, further that**:

(3) if the Unadjusted Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clauses (1) or (2) above, then the Replacement Benchmark shall be SOFR determined as of the Reference Time and remaining in effect for the duration of the Corresponding Period, plus the applicable Replacement Benchmark Spread; **provided, further, that**:

(4) if the Unadjusted Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clauses (1), (2) or (3) above, then the Replacement Benchmark shall be such other alternate, substitute or successor rate as shall have been selected, endorsed or recommended by the Relevant Governmental Body as the replacement for such Replacement Benchmark, plus the applicable Replacement Benchmark Spread; **provided, further, that**:

(5) if the Unadjusted Replacement Benchmark cannot be determined as of the Benchmark Replacement Date in accordance with clauses (1), (2), (3) or (4) above, then the Replacement Benchmark shall be the fallback rate that is applicable under "USD-SOFR-COMPOUND" following the occurrence of a SOFR Index Cessation Event (as such terms are defined in the ISDA Definitions), plus the applicable Replacement Benchmark Spread; **provided, further, that**:

(6) if the Unadjusted Replacement Benchmark cannot be determined in accordance with clauses (1), (2), (3) or (4) above as of the Benchmark Replacement Date and the Issuer, or its designee, (a) shall have determined, in its sole discretion, that the Unadjusted Replacement Benchmark determined in accordance with clause (5) above, if any, is not an industry-accepted successor rate for determining the rate of interest as a replacement to the Benchmark for floating rate note issuances at such time and (b) shall have selected, in its sole discretion, as of the Benchmark Replacement Date an alternate rate of interest to replace the

Benchmark that is an industry-accepted successor rate for determining a rate of interest as a replacement to the Benchmark for floating rate notes at such time, then the Replacement Benchmark shall be the rate so determined in clause (b), plus the applicable Replacement Benchmark Spread.

"**Replacement Benchmark Spread**" with respect to any Replacement Benchmark, means:

(1) the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) that shall have been selected, endorsed or recommended by the Relevant Governmental Body for the applicable Unadjusted Replacement Benchmark, **provided that**:

(2) if the Replacement Benchmark Spread cannot be determined as of the Benchmark Replacement Date in accordance with clause (1) above and the applicable Unadjusted Replacement Benchmark is equivalent to the ISDA Fallback Rate, then the Replacement Benchmark Spread shall be the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) (the "**ISDA Spread Adjustment**") that shall have been selected by ISDA as the spread adjustment that would apply to such ISDA Fallback Rate, **provided, further, that**:

(3) if (a) the Replacement Benchmark Spread cannot be determined as of the Benchmark Replacement Date in accordance with clauses (1) or (2) above or (b) the issuer, or its designee, shall have determined, in its sole discretion as of the Benchmark Replacement Date, that the ISDA Spread Adjustment determined in accordance with clause (2) above does not produce a Replacement Benchmark that is an industry-accepted successor rate for floating rate notes at such time, then the Replacement Benchmark Spread shall be the spread adjustment, or method for calculating or determining such spread adjustment, (which may be a positive or negative value or zero) determined by the issuer, or its designee, in its sole discretion (that modifies the ISDA Spread Adjustment, if available) to produce a Replacement Benchmark that is an industry-accepted successor rate for floating rate notes at such time.

"**SOFR**" means the daily Secured Overnight Financing Rate provided by the Federal Reserve Bank of New York, as the administrator of the benchmark, (or a successor administrator) on the Federal Reserve Bank of New York's Website.

"**Unadjusted Replacement Benchmark**" means the Replacement Benchmark excluding the applicable Replacement Benchmark Spread.

(c) ***Dual Currency Notes***

In the case of Dual Currency Notes, if the rate or amount of interest falls to be determined by reference to an exchange rate, the rate or amount of interest payable shall be determined in the manner specified in the applicable Pricing Supplement.

(d) ***Partly Paid Notes***

In the case of Partly Paid Notes (other than Partly Paid Notes which are Zero Coupon Notes), interest will accrue as aforesaid on the paid-up nominal amount of such Notes and otherwise as specified in the applicable Pricing Supplement.

(e) ***Accrual of Interest***

Each Note (or in the case of the redemption of part only of a Note, that part only of such Note) will cease to bear interest (if any) from the date for its redemption unless, upon due presentation thereof, payment of principal is improperly withheld or refused. In such event, interest will continue to accrue until whichever is the earlier of:

(1) the date on which all amounts due in respect of such Note have been paid; and

(2) the date on which the full amount of the moneys payable has been received by the Agent and notice to that effect has been given in accordance with Condition 15.

(f) ***Special Provisions Relating to Interest on Tier I Subordinated Notes***

Notwithstanding any provisions to the contrary in these Terms and Conditions, the following will apply with respect to interest on the Tier I Subordinated Notes:

(i) Interest on any Series of Tier I Subordinated Notes will be paid only out of the amount legally available under applicable Korean Law for payment of dividends on equity of the Issuer or, if higher, the amount legally available under applicable Korean Law for payment of interest on such Tier I Subordinated Notes (the "**Dividend Reserve**"). To the extent that the sum of (x) the amount of interest payable on any Series of Tier I Subordinated Notes on any Interest Payment Date (or, if applicable, during a fiscal year) and (y) the aggregate amount of interest and other distributions payable by the Issuer on the other Tier I Obligations during the fiscal quarter in which such Interest Payment Date falls (or, if applicable, during such fiscal year) exceeds the Dividend Reserve as of the relevant date (or, if applicable, for such fiscal year) pursuant to, and as calculated in accordance with, the requirements of applicable Korean Law, the amount of interest payable on such Tier I Subordinated Notes on such Interest Payment Date (or, if applicable, during such fiscal year) will be reduced by an amount equal to the pro rata portion (calculated based on the relative aggregate amounts of interest and other distributions payable on each Tier I Obligation during such fiscal quarter or, if applicable, such fiscal year) of such excess.

(ii) The Issuer may, in its sole discretion, elect not to pay, in whole or in part, any interest payable on any Series of Tier I Subordinated Notes on any Interest Payment Date; provided, however, that if the Issuer makes such an election, it will (unless it has set aside and deposited into an escrow account the full amount of interest that would become payable on such Tier I Subordinated Notes on the next succeeding Interest Payment Date) also make a similar election, in whole or in part on a pro rata basis, as applicable (to the fullest extent permitted by their respective terms and conditions), with respect to interest and other distributions that become payable on the other Tier I Obligations during the applicable Dividend Suspension Period (as defined below).

(iii) The Tier I Subordinated Notes will not bear any interest during an Interest Cancellation Period (as defined below), and any interest payable on the Tier I Subordinated Notes on any Interest Payment Date falling within an Interest Cancellation Period will not be paid.

(iv) Interest on the Tier I Subordinated Notes is non-cumulative. All amounts of such interest not paid in whole or in part pursuant to the preceding paragraphs will be deemed irrevocably cancelled, without the need for the consent of the holders of the Tier I Subordinated Notes, and will not be restored in any circumstances. For the avoidance of doubt, (A) any non-payment of interest, in whole or in part, by the Issuer pursuant to the preceding paragraphs will not constitute an Event of Default under the Notes, (B) holders of the Tier I Subordinated Notes will not have any claim or entitlement to any amount of such unpaid interest, and (C) any and all amounts of such unpaid interest may be applied by the Issuer for any purpose, including without limitation for the satisfaction of its other obligations that are due and payable.

(v) In the event that (x) any interest payable on any Series of Tier I Subordinated Notes on any Interest Payment Date will not be paid in whole or in part pursuant to the preceding paragraphs or (y) an Interest Cancellation Period has commenced or terminated, the Issuer will, no later than 10 Business Days prior to the relevant Interest Payment Date or five Business Days after the commencement or termination of an Interest Cancellation Period, as applicable, provide notice of such non-payment or commencement/termination to the Paying Agents and to the holders of such Tier I Subordinated Notes in accordance with Condition 15, stating the reason for such non-payment (and specifying the amount of interest payable that will not be paid) or commencement/termination; provided, however, that the failure of the Issuer to provide such notice shall not affect the effectiveness of the cancellation of the applicable interest amounts.

(vi) In the event that any interest payable on any Series of Tier I Subordinated Notes on any Interest Payment Date is not (or, if applicable, will not be) paid in whole or in part pursuant to the preceding paragraphs, the Issuer will not:

(A) declare or pay any dividends or other distributions in cash with respect to any of its common shares; and

(B) purchase, acquire or redeem any of its common shares or permit any of its Subsidiaries to do so;

in each case during the applicable Dividend Suspension Period.

As used herein:

"**Dividend Suspension Period**" means the period from and including the applicable Interest Payment Date (or, if applicable, the first day of the relevant fiscal year) to but excluding the earlier of (x) the next succeeding Interest Payment Date on which the interest payable on the applicable Series of Tier I Subordinated Notes on such date is paid in full (or, if applicable, the last day of the relevant fiscal year) and (y) the date of redemption in full or Write-Off (as defined in Condition 8) of the applicable Series of Tier I Subordinated Notes.

"**Interest Cancellation Period**" means any of the following: (x) the period during which either a "management improvement recommendation", a "management improvement requirement" or a "management improvement order" has been issued by the Financial Services Commission of Korea (the "**FSC**") against the Issuer pursuant to Article 34, 35 or 36, respectively, of the Regulation on Supervision of Banking Business and is pending; or (y) the period during which "emergency measures" have been imposed by the FSC or its chairman against the Issuer pursuant to Article 38 of the Regulation on Supervision of Banking Business and are pending.

(g) ***Interest Rate Reset***

If "Interest Rate Reset" is specified in the applicable Pricing Supplement, the Rate of Interest applicable to the Notes will be reset to the Reset Interest Rate (as defined below) effective as of each Interest Reset Date (as specified in the applicable Pricing Supplement), such that the Notes will bear interest at the Reset Interest Rate during each period from (and including) an Interest Reset Date to (but excluding) the next succeeding Interest Reset Date or, if earlier, the date of redemption (each a "**Reset Interest Period**").

The Calculation Agent will, on the Calculation Date (as defined below) for each Reset Interest Period, calculate the Reset Interest Rate for such Reset Interest Period and cause such Reset Interest Rate and the relevant Interest Reset Date to be notified to the Issuer and any stock exchange on which the Notes are for the time being listed, and the Issuer will cause notice to the Noteholders of such Reset Interest Rate and Interest Reset Date to be published in accordance with Condition 15 as soon as possible after such Calculation Date but in no event later than the fourth New York Business Day (as defined below) thereafter.

All certificates, communications, opinions, determinations, calculations, quotations and decisions given, expressed, made or obtained for the purposes of the provisions of this Condition 5(g) by the Calculation Agent shall (in the absence of wilful default, fraud or manifest error) be binding on the Issuer, the other Paying Agents and all Noteholders, Receiptholders and Couponholders and (in the absence as aforesaid) no liability to the Issuer, the Noteholders, the Receiptholders or the Couponholders shall attach to the Principal Paying Agent in connection with the exercise or non exercise by it of its powers, duties and discretions pursuant to such provisions.

As used in this Condition 5(g), unless otherwise specified in the applicable Pricing Supplement:

"**Base Rate**" means the U.S. Treasury Rate or such other rate as specified in the applicable Pricing Supplement.

"**Calculation Date**" means, in relation to a Reset Interest Period, the fifth New York Business Day (as defined below) preceding the Interest Reset Date on which such Reset Interest Period commences.

"**Comparable Treasury Issue**" means the U.S. Treasury security having a maturity comparable to the Reset Interest Period and selected by the Issuer as one that would be utilised, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities with a maturity comparable to the Reset Interest Period.

"**Comparable Treasury Price**" means, with respect to a Calculation Date, the average of the three Reference Treasury Dealer Quotations (as defined below) for such Calculation Date.

"**New York Business Day**" means a day (other than a Saturday or a Sunday) on which banks and foreign exchange markets are open for general business (including dealing in foreign exchange and foreign currency deposits) in New York City.

"**Reference Treasury Dealer Quotations**" means, with respect to a Calculation Date, the average, as determined by the Principal Paying Agent, of the bid and asked prices for the Comparable Treasury Issue, expressed in each case as a percentage of its principal amount, quoted in writing to the Issuer at 5:00 p.m. New York time on such Calculation Date by each of the three nationally recognised investment banking firms selected by the Issuer that are primary U.S. government securities dealers.

"**Reset Interest Rate**" means, in relation to a Reset Interest Period, a fixed percentage rate per annum equal to the sum of (x) the Base Rate for such Reset Interest Period and (y) the Spread (as specified in the applicable Pricing Supplement).

"**U.S. Treasury Rate**" means, in relation to a Reset Interest Period, the percentage rate per annum equal to the yield, appearing in the most recently published statistical release designated "H.15(519)" or any successor publication that is published weekly by the Board of Governors of the U.S. Federal Reserve System (available on the website thereof at http://www.federalreserve.gov/releases/h15/current/default.htm, or any successor site), within the column that presents the average yields for the week ending immediately prior to the Calculation Date for such Reset Interest Period, under the caption "U.S. government securities — Treasury constant maturities — Nominal," for U.S. Treasury securities having a maturity comparable to the Reset Interest Period. If such release does not appear on such website, "U.S. Treasury Rate" means the percentage rate per annum equal to the semi-annual or quarterly (as applicable) equivalent yield to maturity of the Comparable Treasury Issue, calculated using a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such Calculation Date.

6. **Payments**

(a) ***Method of Payment***

Subject as provided below:

(i) payments in a Specified Currency other than Euro will be made by credit or transfer to an account in the relevant Specified Currency (which, in the case of a payment in Japanese Yen to a non-resident of Japan, shall be a non-resident account) maintained by the payee with a bank in the principal financial centre of the country of such Specified Currency (which, if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi, shall be Sydney, Auckland or Hong Kong, respectively); and

(ii) payments in Euro will be made by credit or transfer to a Euro account (or any other account to which Euro may be credited or transferred) specified by the payee.

Payments will be subject in all cases to (i) any fiscal or other laws and regulations applicable thereto in the place of payment, but without prejudice to the provisions of Condition 9 and (ii) any withholding or deduction required pursuant to an agreement described in Section 1471(b) of the U.S. Internal Revenue Code of 1986, as amended (the "**Code**") or otherwise imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, official interpretations thereof, or any law implementing an intergovernmental approach thereto ("**FATCA**"). References to "**Specified Currency**" will include any successor currency under applicable law.

(b) ***Payments in respect of Definitive Bearer Notes***

Payments of principal in respect of definitive Bearer Notes will (subject as provided below) be made in the manner provided in paragraph (a) above only against surrender of definitive Bearer Notes, and payments of interest in respect of definitive Bearer Notes will (subject as provided below) be made as aforesaid only against surrender of Coupons, in each case at the specified office of any Paying Agent outside the United States (which expression, as used herein, means the United States of America (including the States and the District of Columbia, its territories, its possessions and other areas subject to its jurisdiction)) and in each case payments will not be made by a transfer of funds to an account maintained by the payee in the United States or mailed to an address in the United States.

Notwithstanding the foregoing, if any amount of principal and/or interest in respect of any Bearer Notes is payable in U.S. dollars, such U.S. dollar payments of principal and/or interest in respect of the Bearer Notes will be made at the specified office of a Paying Agent in the United States if:

(i) the Issuer has appointed Paying Agents with specified offices outside the United States with the reasonable expectation that such Paying Agents would be able to make payment in U.S. dollars at such specified offices outside the United States of the full amount of principal and interest on the Bearer Notes in the manner provided above when due;

(ii) payment of the full amount of such principal and interest at all such specified offices outside the United States is illegal or effectively precluded by exchange controls or other similar restrictions on the full payment or receipt of principal and interest in U.S. dollars; and

(iii) such payment is then permitted under United States law without involving, in the opinion of the Issuer, adverse tax consequences to the Issuer.

In respect of definitive Bearer Notes, payments of instalments of principal (if any), other than the final instalment, will (subject as provided below) be made in the manner provided in paragraph (a) above against surrender of the relevant Receipt. Payment of the final instalment will be made in the manner provided in paragraph (a) above only against surrender of the relevant Bearer Note. Each Receipt must be presented for payment of the relevant instalment together with the definitive Bearer Note to which it appertains. Receipts presented without the definitive Bearer Note to which they appertain do not constitute valid obligations of the Issuer. Upon the date on which any definitive Bearer Note becomes due and repayable, unmatured Receipts (if any) relating thereto (whether or not attached) shall become void and no payment shall be made in respect thereof.

Fixed Rate Notes in definitive bearer form (other than Dual Currency Notes or Index Linked Redemption Notes or Long Maturity Notes (as defined below)) should be presented for payment together with all unmatured Coupons appertaining thereto (which expression shall for this purpose include Coupons falling to be issued on exchange of matured Talons), failing which the amount of any missing unmatured Coupon (or, in the case of payment not being made in full, the same proportion of the amount of such missing unmatured Coupon as the sum so paid bears to the sum due) will be deducted from the sum due for payment. Each amount of principal so deducted will be paid in the manner mentioned above against surrender of the relative missing Coupon at any time before the expiry of 10 years after the Relevant Date (as defined in Condition 9) in respect of such principal (whether or not such Coupon would otherwise have become void under Condition 10) or, if later, five years from the date on which such Coupon would otherwise have become due, but in no event thereafter. Upon any Fixed Rate Note becoming due and repayable prior to its Maturity Date, all unmatured Talons (if any) appertaining thereto will become void and no further Coupons will be issued in respect thereof.

Upon the date on which any Floating Rate Note, Dual Currency Note or Index Linked Note or Long Maturity Note in definitive bearer form becomes due and repayable, unmatured Coupons and Talons (if any) relating thereto (whether or not attached) shall become void and no payment or, as the case may be, exchange for further Coupons shall be made in respect thereof. A "**Long Maturity Note**" is a Fixed Rate Note whose nominal amount on issue is less than the aggregate interest payable thereon **provided that** such Note shall cease to be a Long Maturity Note on the Interest Payment Date on which the aggregate amount of interest remaining to be paid after that date is less than the nominal amount of such Note.

If the due date for redemption of any definitive Bearer Note is not a Fixed Interest Date or an Interest Payment Date, interest (if any) accrued in respect of such Note from (and including) the preceding Fixed Interest Date or Interest Payment Date or, as the case may be, the Interest Commencement Date shall be payable only against surrender of the relevant definitive Bearer Note.

(c) ***Payments in respect of Bearer Global Notes***

Payments of principal and interest (if any) in respect of Bearer Notes represented by any global Bearer Note will (subject as provided below) be made in the manner provided in paragraph (a) above and otherwise in the manner specified in the relevant global Bearer Note (i) in the case of a global Bearer Note lodged with the CMU Service, at the direction of the bearer to the CMU Accountholders, or (ii) in the case of a global Bearer Note not lodged with the CMU Service, against presentation or surrender, as the case may be, of such global Bearer Note at the specified office of any Paying Agent outside the United States. A record of each payment made against presentation or surrender of such global Bearer Note, distinguishing between any payment of principal and any payment of interest, will be made on such global Bearer Note (in the case of a global Bearer Note not lodged with the CMU Service) by such Paying Agent or in the records of Euroclear and Clearstream, Luxembourg, as applicable or (in the case of a global Bearer Note lodged with the CMU Service) on withdrawal of such global Bearer Note by the CMU Lodging Agent, and in such case such record shall be *prima facie* evidence that the payment in question has been made.

(d) ***Payments in respect of Registered Notes***

Payments of principal (other than instalments of principal (if any) prior to the final instalment) in respect of each Registered Note (whether in definitive or global form) will be made against presentation and surrender (or, in the case of part payment of any sum due, endorsement) of the Registered Note at the specified office of the Registrar, any of the Paying Agents or, in the case of

CMU Notes, the CMU Lodging Agent. Such payments will be made by transfer to the Designated Account (as defined below) of the holder (or the first named of joint holders) of the Registered Note appearing in the register of holders of the Registered Notes maintained by the Registrar (the "**Register**") (i) where in global form, at the close of the business day (being for this purpose (x) in respect of Notes clearing through Euroclear and/or Clearstream, Luxembourg, a day on which Euroclear and/or Clearstream, Luxembourg are open for business, (y) in respect of Notes clearing through the CMU Service, a day on which the CMU Service is open for business, and (z) in respect of Notes clearing through the DTC, a day on which the DTC is open for business) immediately prior to the relevant due date, and (ii) where in definitive form, at the close of business on the third business day (being for this purpose a day on which banks are open for business in the city where the specified office of the Registrar is located) prior to the relevant due date. Notwithstanding the previous sentence, if (i) a holder does not have a Designated Account or (ii) the principal amount of the Notes held by a holder is less than U.S.$250,000 (or its approximate equivalent in any other Specified Currency), payment will instead be made by a cheque in the Specified Currency drawn on a Designated Bank (as defined below). For these purposes, "**Designated Account**" means the account (which, in the case of a payment in Japanese Yen to a non-resident of Japan, shall be a non-resident account) maintained by a holder with a Designated Bank and identified as such in the Register and "**Designated Bank**" means (in the case of payment in a Specified Currency other than Euro) a bank in the principal financial centre of the country of such Specified Currency (which, if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi, shall be Sydney, Auckland or Hong Kong, respectively) and (in the case of a payment in Euro) any bank which processes payments in Euro.

Payments of interest and payments of instalments of principal (other than the final instalment) in respect of each Registered Note (whether or not in global form) will be made in the manner specified in paragraph (a) to the holder (or the first named of joint holders) of the Registered Note appearing in the Register (i) where in global form, at the close of the business day (being for this purpose (i) (x) in respect of Notes clearing through Euroclear and/or Clearstream, Luxembourg, a day on which Euroclear and Clearstream, Luxembourg are open for business, (y) in respect of Notes clearing through the CMU Service, a day on which the CMU Service is open for business and (z) in respect of Notes clearing through the DTC, a day on which the DTC is open for business) immediately prior to the relevant due date, and (ii) where in definitive form, at the close of business on the fifteenth day (whether or not such day is a business day) prior to the relevant due date (the "**Record Date**") at his address shown in the Register on the Record Date and at his risk. Upon application of the holder to the specified office of the Registrar not less than three business days in the city where the specified office of the Registrar is located before the due date for any payment of interest in respect of a Registered Note, the payment may be made by transfer on the due date in the manner provided in the preceding paragraph. Any such application for transfer shall be deemed to relate to all future payments of interest (other than interest due on redemption) and instalments of principal (other than the final instalment) in respect of the Registered Notes which become payable to the holder who has made the initial application until such time as the Registrar is notified in writing to the contrary by such holder. Payment of the interest due in respect of each Registered Note on redemption and the final instalment of principal will be made in the same manner as payment of the principal amount of such Registered Note.

Holders of Registered Notes will not be entitled to any interest or other payment for any delay in receiving any amount due in respect of any Registered Note as a result of a cheque posted in accordance with this Condition arriving after the due date for payment or being lost in the post. No commissions or expenses shall be charged to such holders by the Registrar in respect of any payments of principal or interest in respect of the Registered Notes.

If payment in respect of any Registered Notes is required by transfer as referred to in paragraph (a) above, application for such payment must be made by the holder to the Registrar not later than the relevant Record Date.

All amounts payable to DTC or its nominee as registered holder of a Registered Global Note in respect of Notes denominated in a Specified Currency other than U.S. dollars shall be paid by transfer by the Registrar to an account of the Exchange Agent in the relevant Specified Currency on behalf of DTC or its nominee for payment in such Specified Currency or conversion into U.S. dollars in accordance with the provisions of the Agency Agreement.

In the case of Registered Notes (whether or not in global form) held in the CMU Service, payment of all amounts payable to the CMU Service or its sub-custodian as registered holder of a Registered Note (whether or not in global form) will be made at the direction of the registered holder to the CMU Accountholders and such payment shall discharge the obligations of the Issuer in respect of that payment.

None of the Issuer or the Agents will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

(e) ***General provisions applicable to payments***

The holder of a Global Note (if the Global Note is not lodged with the CMU Service), or the CMU Accountholder at the direction of the holder of a Global Note (if the Global Note is lodged with the CMU Service), shall be the only person entitled to receive payments in respect of Notes represented by such Global Note and the Issuer will be discharged by payment to, or to the order of, the holder of such Global Note in respect of each amount so paid. Each of the persons shown in the records of Euroclear, Clearstream, Luxembourg, the CMU Service or DTC as the beneficial holder of a particular nominal amount of Notes represented by such Global Note must look solely to Euroclear, Clearstream, Luxembourg, the CMU Service or DTC, as the case may be, for his share of each payment so made by the Issuer to, or to the order of, the holder of such Global Note. No person other than the holder of such Global Note shall have any claim against the Issuer in respect of any payments due on such Global Note.

(f) ***Payment Day***

If the date for payment of any amount in respect of any Note, Receipt or Coupon is not a "**Payment Day**", the holder thereof shall not be entitled to payment until the next following Payment Day in the relevant place and shall not be entitled to further interest or other payment in respect of such delay unless as otherwise specified in these Conditions or the Pricing Supplement. For these purposes, "**Payment Day**" means any day which is:

(i) a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in:

(A) in the case of Notes in definitive form only, the relevant place of presentation;

(B) London; and

(C) any Additional Financial Centre specified in the applicable Pricing Supplement;

(ii) either (1) in relation to any sum payable in a Specified Currency other than Euro, a day on which commercial banks and foreign exchange markets settle payments and are open for general business (including dealing in foreign exchange and foreign currency deposits) in the principal financial centre of the country of the relevant Specified Currency (which if the Specified Currency is Australian dollars, New Zealand dollars or Renminbi shall be Sydney, Auckland or Hong Kong, respectively) or (2) in relation to any sum payable in Euro, a day on which the TARGET2 System is open; and

(iii) in the case of any payment in respect of a Registered Note denominated in a Specified Currency other than U.S. dollars and registered in the name of DTC or its nominee and in respect of which an accountholder of DTC (with an interest in such Registered Note) has elected to receive any part of such payment in U.S. dollars, a day on which commercial banks are not authorised or required by law or regulation to be closed in New York City.

(g) ***Interpretation of Principal and Interest***

Any reference in these Terms and Conditions to principal in respect of the Notes shall be deemed to include, as applicable:

(i) any additional amounts which may be payable with respect to principal under Condition 9;

(ii) the Final Redemption Amount of the Notes;

(iii) the Early Redemption Amount of the Notes;

(iv) the Optional Redemption Amount(s) (if any) of the Notes;

(v) in relation to Notes redeemable in instalments, the Instalment Amounts;

(vi) in relation to Zero Coupon Notes, the Amortised Face Amount; and

(vii) any premium and any other amounts which may be payable by the Issuer under or in respect of the Notes.

Any reference in these Terms and Conditions to interest in respect of the Notes shall be deemed to include, as applicable, any additional amounts which may be payable with respect to interest under Condition 9.

(h) ***Renminbi Currency Event***

If "**Renminbi Currency Event**" is specified in the applicable Pricing Supplement and a Renminbi Currency Event, as determined by the Issuer acting in good faith, exists on a date for payment of any amount in respect of any Note, Receipt or Coupon, the Issuer's obligation to make a payment in Renminbi under the terms of the Notes may be replaced by an obligation to pay such amount in the Relevant Currency (selected by the Issuer, if applicable, and converted at the Alternate Settlement Rate as of a time selected by the Alternate Settlement Rate Determination Agent as specified in the applicable Pricing Supplement).

Upon the occurrence of a Renminbi Currency Event, the Issuer shall give notice not less than five days nor more than 30 days prior to the due date for payment to the Noteholders in accordance with Condition 15 stating the occurrence of the Renminbi Currency Event, giving details thereof and the action proposed to be taken in relation thereto.

For the purposes of this Condition 6(h) and unless stated otherwise in the applicable Pricing Supplement:

"**Alternate Settlement Rate**" means the spot rate, determined by the Alternate Settlement Rate Determination Agent, between Renminbi and the Relevant Currency, taking into consideration all available information which the Alternate Settlement Rate Determination Agent deems relevant (including, but not limited to, the pricing information obtained from the Renminbi non-deliverable market outside the People's Republic of China and/or the Renminbi exchange market within the People's Republic of China);

"**Governmental Authority**" means any de facto or de jure government (or any agency or instrumentality thereof), court, tribunal, administrative or other governmental authority or any other entity (private or public) charged with the regulation of the financial markets (including the central bank) of Hong Kong;

"**Relevant Currency**" means United States dollars or such other currency as may be specified in the applicable Pricing Supplement;

"**Renminbi Currency Event**" means any one of Renminbi Illiquidity, Renminbi Non- Transferability and Renminbi Inconvertibility;

"**Renminbi Illiquidity**" means the general Renminbi exchange market in Hong Kong becoming illiquid as a result of which the Issuer cannot obtain sufficient Renminbi in order to satisfy its obligation to pay interest or principal (in whole or in part) in respect of the Notes, as determined by the Issuer acting in good faith and in a commercially reasonable manner following consultation with two independent foreign exchange dealers of international repute active in the Renminbi exchange market in Hong Kong;

"**Renminbi Inconvertibility**" means the occurrence of any event that makes it impossible for the Issuer to convert any amount due in respect of the Notes in the general Renminbi exchange market in Hong Kong, other than where such impossibility is due solely to the failure of the Issuer to comply with any law, rule or regulation enacted by any Governmental Authority (unless such law, rule or regulation is enacted after the Issue Date of the first Tranche of the relevant Series and it is impossible for the Issuer, due to an event beyond the control of the Issuer, to comply with such law, rule or regulation); and

"**Renminbi Non-Transferability**" means the occurrence of any event that makes it impossible for the Issuer to deliver Renminbi between accounts inside Hong Kong or from an account inside Hong Kong to an account outside Hong Kong or from an account outside Hong Kong to an account inside Hong Kong (including where the Renminbi clearing and settlement system for participating banks in Hong Kong is disrupted or suspended), other than where such impossibility is due solely to the failure of the Issuer to comply with any law, rule or regulation enacted by any Governmental Authority (unless such law, rule or regulation is enacted after the Issue Date of the first Tranche of the relevant Series and it is impossible for the Issuer due to an event beyond the control of the Issuer, to comply with such law, rule or regulation).

Any reference in these Terms and Conditions to interest in respect of the Notes shall be deemed to include, as applicable, any additional amounts which may be payable with respect to interest under Condition 9.

7. Redemption and Purchase

(a) ***At Maturity***

Unless previously redeemed or purchased and cancelled as specified below, each Note will be redeemed by the Issuer at its Final Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement in the relevant Specified Currency on the Maturity Date.

Notwithstanding any provisions to the contrary in these Terms and Conditions, the following will apply with respect to the redemption of the Tier I Subordinated Notes:

(i) The Tier I Subordinated Notes are undated perpetual securities and shall have no fixed Maturity Date. Subject to Condition 3(c), the principal amount of the Tier I Subordinated Notes will become due and payable by the Issuer on the date on which voluntary or involuntary winding up proceedings are instituted in respect of the Issuer in accordance with, as the case may be, (x) a resolution passed at a shareholders' meeting of the Issuer, (y) any provision of the Issuer's articles of incorporation or (z) any applicable law or any decision of any judicial or administrative authority.

(ii) The Tier I Subordinated Notes may not be redeemed at any time without the prior approval of the Financial Supervisory Service of Korea (the "**FSS**") or such other relevant regulatory authorities in Korea, to the extent such approval is necessary.

(b) ***Redemption for Tax Reasons***

The Notes may be redeemed at the option of the Issuer in whole, but not in part, at any time (if this Note is neither a Floating Rate Note nor an Index Linked Interest Note) or on any Interest Payment Date (if this Note is either a Floating Rate Note or an Index Linked Interest Note), on giving not less than 30 nor more than 60 days' notice to the Principal Paying Agent and, in accordance with Condition 15, the Noteholders (which notice shall be irrevocable), if:

(i) on the occasion of the next payment due under the Notes, the Issuer has or will become obliged to pay additional amounts as provided or referred to in Condition 9 as a result of any change in, or amendment to, the laws or regulations of Korea or, if the Issuer is acting through a particular branch (as specified in the applicable Pricing Supplement (the "**Specified Branch**")), the country where that branch is located (the "**Specified Country**"), or any political subdivision or any authority thereof or therein having power to tax, or any change in the application or official interpretation of such laws or regulations (including the cessation of tax exemptions presently applicable), which change or amendment becomes effective on or after the Issue Date of the first Tranche of the Notes; and

(ii) such obligation cannot be avoided by the Issuer taking reasonable measures available to it,

provided that (1) in the case of Subordinated Notes, the prior approval of the Financial Supervisory Service of Korea (the "**FSS**") or such other relevant regulatory authorities in Korea shall have been obtained, if necessary, and (2) no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which the Issuer would be obliged to pay such additional amounts were a payment in respect of the Notes then due. Prior to the publication of any notice of redemption pursuant to this Condition, the Issuer shall deliver to the Principal Paying Agent a certificate signed by two duly authorised officers of the Issuer stating that the Issuer is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Issuer so to redeem have occurred, and an opinion of independent legal advisers or tax consultants of recognised standing to the effect that the Issuer has or will become obliged to pay such additional amounts as a result of such change or amendment.

Notes redeemed pursuant to this Condition 7(b) will be redeemed at their Early Redemption Amount referred to in paragraph (e) below together (if appropriate) with interest accrued to (but excluding) the date of redemption.

(c) ***Redemption at the Option of the Issuer ("Issuer Call")***

If Issuer Call is specified in the applicable Pricing Supplement, the Issuer shall, having given:

(i) not less than 15 nor more than 30 days' notice to the Noteholders in accordance with Condition 15; and

(ii) not less than 15 days before the giving of the notice referred to in (i), notice to the Principal Paying Agent (and the CMU Lodging Agent if applicable) and, in the case of a redemption of Registered Notes, the Registrar; (which notices shall be irrevocable), redeem all or some of the Notes then outstanding on any Optional Redemption Date and at the Optional Redemption Amount(s) specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the relevant Optional Redemption Date; **provided, however, that** in the case of Subordinated Notes, (1) such redemption may not occur within five years of the Issue Date and (2) such redemption shall be subject to the prior approval of the FSS pursuant to regulations of the Financial Services Commission of Korea (the "**FSC**") in effect at the applicable time relating to, *inter alia*, capital adequacy ratios, replacement capital and interest rates. Any such redemption must be of a nominal amount equal to the Minimum Redemption Amount or a Higher Redemption Amount. In the case of a partial redemption of Notes, the Notes to be redeemed ("**Redeemed Notes**") will be selected individually by lot, in the case of Redeemed Notes represented by definitive Notes, and in accordance with the rules of Euroclear and/or Clearstream, Luxembourg and/or, as the case may be, DTC, in the case of Redeemed Notes represented by a global Note, not more than 15 days prior to the date fixed for redemption (such date of selection being hereinafter called the "**Selection Date**"). In the case of Redeemed Notes represented by definitive Notes, a list of the serial numbers of such Redeemed Notes will be published in accordance with Condition 15 not less than 15 days prior to the date fixed for redemption. The aggregate nominal amount of Redeemed Notes represented by definitive Notes shall bear the same proportion to the aggregate nominal amount of all Redeemed Notes as the aggregate nominal amount of definitive Notes outstanding bears to the aggregate nominal amount of the Notes outstanding, in each case on the Selection Date, **provided that** such first mentioned nominal amount shall, if necessary, be rounded downwards to the nearest integral multiple of the Specified Denomination, and the aggregate nominal amount of Redeemed Notes represented by a Global Note shall be equal to the balance of the Redeemed Notes. No exchange of the relevant Global Note will be permitted during the period from and including the Selection Date to and including the date fixed for redemption pursuant to this sub-paragraph (c) and notice to that effect shall be given by the Issuer to the Noteholders in accordance with Condition 15 at least 5 business days prior to the Selection Date.

(d) ***Redemption of the Senior Notes only at the Option of the Noteholders ("Investor Put")***

If Investor Put is specified in the applicable Pricing Supplement with respect to any Series of Senior Notes only, upon the holder of any Senior Note giving to the Issuer in accordance with Condition 15 not less than 15 nor more than 30 days' notice or such other period of notice as is specified in the applicable Pricing Supplement, the Issuer will, upon the expiry of such notice, redeem, subject to, and in accordance with, the terms specified in the applicable Pricing Supplement, in whole (but not in part), such Senior Note on the Optional Redemption Date and at the Optional Redemption Amount specified in, or determined in the manner specified in, the applicable Pricing Supplement together, if appropriate, with interest accrued to (but excluding) the Optional Redemption Date. Registered Notes may be redeemed under this Condition in any multiple of their lowest specified denomination.

If this Senior Note is in definitive form, to exercise the right to require redemption of this Senior Note the holder of this Senior Note must deliver such Senior Note at the specified office of any Paying Agent (in the case of a Bearer Note) or any Transfer Agent (in the case of a Registered Note) at any time during normal business hours of such Paying Agent or Transfer Agent, as the case may be, falling within the notice period, accompanied by a duly completed and signed notice of exercise in the form (for the time being current) obtainable from any specified office of any Paying Agent or Transfer Agent (a "**Put Notice**") and in which the holder must specify a bank account (or, if payment is by cheque, an address) to which payment is to be made under this Condition.

Any Put Notice given by a holder of any Senior Note pursuant to this paragraph shall be irrevocable except where prior to the due date of redemption an Event of Default shall have occurred and be continuing in which event such holder, at its option, may elect by notice to the Issuer to withdraw the notice given pursuant to this paragraph and instead to declare such Senior Note forthwith due and payable pursuant to Condition 11.

Each Senior Note should be presented for redemption together with all unmatured Coupons relating to it, failing which such Senior Note will be redeemed only against provision of such indemnity as the Issuer may require. Upon the date on which any Senior Note falls due for redemption or is purchased for cancellation, all unmatured Coupons appertaining thereto will become void and no payment will thereafter be made in respect thereto.

(e) ***Early Redemption Amounts***

For the purpose of paragraph (b) above and Condition 11, the Notes will be redeemed at the Early Redemption Amount calculated as follows:

(i) in the case of Notes with a Final Redemption Amount equal to the Issue Price, at the Final Redemption Amount thereof;

(ii) in the case of Notes (other than Zero Coupon Notes but including Instalment Notes and Partly Paid Notes) with a Final Redemption Amount which is or may be less or greater than the Issue Price or which is payable in a Specified Currency other than that in which the Notes are denominated, at the amount specified in, or determined in the manner specified in, the applicable Pricing Supplement or, if no such amount or manner is so specified in the Pricing Supplement, at their nominal amount; or

(iii) in the case of Zero Coupon Notes, at an amount (the "**Amortised Face Amount**") calculated in accordance with the following formula:

Early Redemption Amount = $RP \times (1 + AY)^{y}$

where:

"**RP**" means the Reference Price;

"**AY**" means the Accrual Yield expressed as a decimal; and

"**y**" is a fraction, the numerator of which is equal to the number of days (calculated on the basis of a 360-day year consisting of 12 months of 30 days each) from (and including) the Issue Date of the first Tranche of the Notes to (but excluding) the date fixed for redemption or (as the case may be) the date upon which such Note becomes due and repayable and the denominator of which is 360; or

(iv) on such other calculation basis as may be specified in the applicable Pricing Supplement.

(f) ***Instalments***

If the Notes are repayable in instalments, they will be redeemed in the Instalment Amounts and on the Instalment Dates. In the case of early redemption, the Early Redemption Amount will be determined pursuant to paragraph (e) above.

(g) ***Partly Paid Notes***

If the Notes are Partly Paid Notes, they will be redeemed, whether at maturity, early redemption or otherwise, in accordance with the provisions of this Condition and the applicable Pricing Supplement.

(h) ***Purchases***

The Issuer may at any time purchase Senior Notes and, subject to obtaining the prior approval of the FSS or such other relevant authorities in Korea, if necessary, Subordinated Notes at any price (**provided that**, in the case of Bearer Notes in definitive form, these are purchased together with all unmatured Receipts, Coupons and Talons appertaining thereto) in the open market or otherwise. Such Notes may be held, reissued, resold or, at the option of the Issuer, surrendered to any Paying Agent, the Registrar or the CMU Lodging Agent for cancellation.

(i) ***Cancellation***

All Notes which are redeemed will forthwith be cancelled (together with all unmatured Receipts, Coupons and Talons attached thereto or surrendered therewith at the time of redemption). All Notes so cancelled and the Notes purchased and cancelled pursuant to paragraph (h) above (together with all unmatured Receipts, Coupons and Talons cancelled therewith) shall be forwarded to the Principal

Paying Agent (and the CMU Lodging Agent if applicable) which shall notify the Registrar of such cancelled Notes in the case of Registered Notes and such Notes cannot be reissued or resold.

(j) ***Late payment on Zero Coupon Notes***

If the amount payable in respect of any Zero Coupon Note upon redemption of such Zero Coupon Note pursuant to paragraph (a), (b), (c) or (d) above or upon its becoming due and repayable as provided in Condition 11 is improperly withheld or refused, the amount due and repayable in respect of such Zero Coupon Note shall be the amount calculated as provided in paragraph (e)(iii) above as though the references therein to the date fixed for the redemption or the date upon which such Zero Coupon Note becomes due and payable were replaced by references to the date which is the earlier of:

(i) the date on which all amounts due in respect of such Zero Coupon Note have been paid; and

(ii) the date on which the full amount of the moneys payable has been received by the Principal Paying Agent, the Registrar or the CMU Lodging Agent, as the case may be, and notice to that effect has been given to the Noteholders in accordance with Condition 15.

(k) ***Obligation to redeem***

Upon the expiry of any notice as is referred to in paragraph (b), (c) or (d) above, the Issuer shall be bound to redeem the Notes to which the notice referred at the relevant redemption price applicable at the date of such redemption together with, if appropriate, interest accrued to (but excluding) the relevant redemption date.

(l) ***Redemption of Tier I Subordinated Notes for tax non-deductibility or regulatory reasons***

Any Series of Tier I Subordinated Notes may be redeemed at the option of the Issuer in whole, but not in part, at any time, on giving not less than 30 nor more than 60 days' notice to the Principal Paying Agent (and the CMU Lodging Agent if applicable) and, in accordance with Condition 15, the Noteholders (which notice shall be irrevocable), if either a Tax Non-deductibility Event or a Regulatory Event (each as defined below) has occurred and is continuing; **provided that** (1) the prior approval of the FSS or such other relevant regulatory authorities in Korea shall have been obtained, if necessary and (2) no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which (x) the Issuer would cease to be able to claim the relevant tax deduction pursuant to such Tax Non-deductibility Event or (y) such Series of Tier I Subordinated Notes would cease to qualify (in whole or in part) as additional Tier I capital pursuant to such Regulatory Event, as applicable.

Prior to the publication of any notice of redemption pursuant to this Condition, the Issuer shall deliver to the Principal Paying Agent (1) a certificate signed by two duly authorised officers of the Issuer stating that the Issuer is entitled to effect such redemption and setting forth a statement of facts showing that the conditions precedent to the right of the Issuer so to redeem have occurred and (2) an opinion of independent legal advisers of recognised standing to the effect that such Tax Non-deductibility Event or Regulatory Event, as applicable, has occurred and is continuing.

Notes redeemed pursuant to this Condition will be redeemed at their Final Redemption Amount, together (subject to Condition 5(f)) with interest accrued to (but excluding) the date of redemption.

As used herein:

"**Regulatory Event**" means, with respect to any Series of Tier I Subordinated Notes, such Notes (after having qualified as such at the time of their issuance) will no longer qualify (in whole or in part) as additional Tier I capital of the Issuer under applicable Korean Law, as a result of a change in or amendment to, or a change in the application or official interpretation of, such Korean Law; provided, however, that such change or amendment was not pending or foreseeable at the time of issuance of such Notes.

"**Tax Non-deductibility Event**" means, with respect to any Series of Tier I Subordinated Notes, the Issuer (after having been entitled to claim such a deduction at the time of issuance of such Notes) will no longer be entitled to claim a deduction in respect of interest paid or payable on such Notes for the purposes of Korean corporation tax or tax on corporate income, as a result of a change in or amendment to, or a change in the application or official interpretation of, such Korean Law; provided, however, that such tax non-deductibility cannot be avoided by the Issuer taking reasonable measures available to it at no material cost to it.

8. **Loss Absorption Upon a Trigger Event in Respect of Subordinated Notes**

(a) ***Write-off on a Trigger Event***

Effective as of the third Korean Business Day from the occurrence of a Trigger Event, each Subordinated Note, including the then outstanding principal amount thereof and any accrued but unpaid interest thereon, shall be irrevocably cancelled in whole, without the need for the consent of the holders of the Subordinated Notes (such cancellation being referred to herein as a "**Write-off**," and "**Written-off**" shall be construed accordingly). Once the principal amount of, and any accrued but unpaid interest under, the Subordinated Notes has been Written-off, such amounts will not be restored in any circumstances, including where the relevant Trigger Event ceases to continue.

The Issuer shall provide a Trigger Event Notice to the holders of the Subordinated Notes, but such Write-off shall be effective irrespective of whether the Issuer has provided such Trigger Event Notice.

For the avoidance of doubt, any Write-off pursuant to this Condition 8(a) will not constitute an Event of Default under the Notes.

(b) ***Interpretation***

In these Conditions and unless stated otherwise in the applicable Pricing Supplement:

a "**Korean Business Day**" means a day (other than a Saturday or Sunday) on which banks and foreign exchange markets are open for business in Seoul, Korea;

a "**Trigger Event**" means (i) the designation of the Issuer as an "insolvent financial institution" pursuant to the Act on the Structural Improvement of the Financial Industry or (ii) the designation of the Issuer as an "insolvent financial company" pursuant to the Depositor Protection Act; and

a "**Trigger Event Notice**" means the notice specifying that a Trigger Event has occurred, which shall be issued by the Issuer not more than two Korean Business Days after the occurrence of a Trigger Event to the holders of the Subordinated Notes and the Principal Paying Agent in accordance with Condition 15 and which shall state in reasonable detail the nature of the relevant Trigger Event. Notwithstanding any provisions of Condition 15 to the contrary, any such notice shall be effective as of the date of its issuance by the Issuer.

9. **Taxation**

All payments of principal and interest in respect of the Notes, Receipts and Coupons by the Issuer will be made without withholding or deduction for or on account of any present or future taxes, duties, levies, imposts, assessments or other government charges and any interest, penalties or other liabilities with respect thereto ("**Taxes**") imposed or levied by or on behalf of any Tax Jurisdiction unless such withholding or deduction is required by law. In such event, the Issuer will pay such additional amounts as shall be necessary in order that the net amounts received by the holders of the Notes, Receipts or Coupons after such withholding or deduction shall equal the amounts which would otherwise have been receivable in respect of the Notes, Receipts or Coupons, as the case may be, in the absence of such withholding or deduction; except that no such additional amounts shall be payable with respect to:

(i) any Taxes with respect to a Note, Receipt or Coupon presented for payment (where presentation is necessary) in Korea (solely to the extent such Taxes would not have been imposed if such Note, Receipt or Coupon, as the case may be, were presented at an office of a Paying Agent outside Korea); or

(ii) any withholding or deduction imposed on a payment received by or on behalf of a holder of a Note, Receipt or Coupon in circumstances where such withholding or deduction would not have been required but for such holder of the Note (or fiduciary, settlor, beneficiary, member or shareholder of, or possessor of power over the relevant holder, if the relevant holder is an estate, nominee, trust or corporation) being or having been connected with a Tax Jurisdiction (as defined below) otherwise than merely by holding such Note, Receipt or Coupon, or enforcing rights thereunder; or

(iii) any Taxes with respect to a Note, Receipt or Coupon presented for payment (where presentation is necessary) more than 30 days after the Relevant Date (as defined below) except to the extent that the holder thereof would have been entitled to additional amounts on presenting the same for payment on any date during such 30-day period; or

(iv) a Note, Receipt or Coupon presented for payment by or on behalf of a holder of such Note, Receipt or Coupon who, at the time of such presentation, is able to avoid such withholding or deduction by making a declaration of non-residence or other similar claim for exemption and does not make such declaration or claim; or

(v) any withholding or deduction that would not have been imposed but for a failure by the holder or beneficial owner (or any financial institution through which the holder or beneficial owner holds any Note, Receipt or Coupon or through which payment on the Note, Receipt or Coupon is made) to comply with any certification, information, identification, documentation or other reporting requirements (including entering into and complying with an agreement with the U.S. Internal Revenue Service) imposed pursuant to Sections 1471 through 1474 of the Code, any regulations or agreements thereunder, official interpretations thereof or any law, treaty or agreement implementing an intergovernmental approach thereto; or

(vi) any combination of paragraphs (i), (ii), (iii), (iv) or (v) above;

nor will additional amounts be paid with respect to any payment on a Note, Receipt or Coupon to a holder who is a fiduciary, a partnership, a limited liability company or a holder other than the sole beneficial owner of that payment to the extent that a beneficiary or settlor with respect to such fiduciary, a member of such a partnership, an interest holder in such a limited liability company or the beneficial owner of the payment would not have been entitled to the additional amounts had the beneficiary, settlor, member or beneficial owner been the holder of such Note, Receipt or Coupon.

As used herein:

(vii) "**Tax Jurisdiction**" means Korea or any political subdivision or any authority thereof or therein having power to tax or, in addition, if the Issuer is acting through a Specified Branch, the Specified Country, or any political subdivision or any authority thereof or therein having power to tax; and

(viii) the "**Relevant Date**" means the date on which such payment first becomes due, except that, if the full amount of the moneys payable has not been duly received by the Principal Paying Agent or the Registrar, as the case may be, on or prior to such due date, it means the date on which, the full amount of such moneys having been so received, notice to that effect is duly given to the Noteholders in accordance with Condition 15.

The obligation to pay additional amounts shall not apply in relation to (a) any withholding or deduction for or on account of any estate, inheritance, gift, sales, transfer, personal property or any similar tax, assessment or other governmental charge or (b) any tax, duty, levy, impost, assessment or other governmental charge which is payable otherwise than by deduction or withholding from payments on the Notes, Receipts or Coupons; **provided that**, except as otherwise set forth in these Terms and Conditions, the Issuer shall pay all stamp and similar duties, if any, which may be imposed by Korea, the United Kingdom, the United States or any respective political subdivision or any taxing authority thereof or therein, as a consequence of the initial issuance of the Notes.

Whenever there is mentioned in any context the payment of principal of, and any premium or interest on, any Note, Receipt or Coupon, such mention shall be deemed to include payment of additional amounts to the extent that, in such context, additional amounts are, were or would be payable in respect thereof.

10. Prescription

The Notes, Receipts and Coupons will become void unless presented for payment within a period of 10 years (in the case of principal) and five years (in the case of interest) after the Relevant Date (as defined in Condition 9) therefor.

There shall not be included in any Coupon sheet issued on exchange of a Talon any Coupon the claim for payment in respect of which would be void pursuant to this Condition or Condition 6(b) or any Talon which would be void pursuant to Condition 6(b).

11. Events of Default

(a) ***Applicable to Senior Notes only***

If any of the following events (each an "**Event of Default**") occurs and is continuing:

(i) *Non-payment*: default is made in the payment of any amount of principal or interest in respect of the Senior Notes on the due date for payment thereof and such default remains unremedied for ten days or, in the case of default in the payment of interest, 15 days thereafter; or

(ii) *Breach of other obligations*: default is made in the performance or observance of any other material obligation of the Issuer under or in respect of the Senior Notes and such default remains unremedied for 30 days after written notice thereof, addressed to the Issuer by any holder of Senior Notes, has been delivered to the Issuer; or

(iii) *Cross-acceleration*: any Indebtedness (as defined below) in aggregate exceeding U.S.$20,000,000 (or its equivalent in one or more other currencies) of the Issuer either (1) becoming due and payable prior to the due date for payment thereof by reason of acceleration following a default by the Issuer or (2) not being repaid by the Issuer at, and remaining unpaid after, maturity (as extended by an originally applicable period of grace, if any) applicable thereto, or any guarantee given by the Issuer in respect of Indebtedness of any other person not being honoured and remaining dishonoured after becoming due and called; **provided that**, in the case of (1) above, if any such default under any such Indebtedness shall be cured or waived, then the default under the Notes shall be deemed not to have occurred; or

(iv) the Issuer becomes insolvent or unable to pay its debts when due or commits or permits any act of bankruptcy which terms shall include (1) the filing of a petition in any bankruptcy, reorganisation, winding-up or liquidation proceeding or other proceedings analogous in purpose or effect and the failure by the Issuer to have any such petition filed by another party discharged within 30 days, (2) the appointment of a receiver or trustee for the bankruptcy, reorganisation, winding-up or liquidation of the Issuer and such appointment is not discharged within thirty days, (3) the making by the Issuer of an assignment or an arrangement or composition with or for the benefit of its creditors, (4) the admission in writing by the Issuer of its inability to pay its debts as they fall due, (5) the entry of any court order or judgement confirming the bankruptcy or insolvency of the Issuer or, as the case may be, in relation to a substantial portion of its properties or assets, or (6) the Issuer takes corporate action to authorise or give effect to any of the foregoing; or

(v) a moratorium is agreed or declared in respect of any Indebtedness of the Issuer or any governmental agency or authority confiscates or seizes or compulsorily purchases or expropriates all or a material part of the assets or capital of the Issuer,

then the holders of not less than 25 per cent. in aggregate principal amount of the Senior Notes outstanding may, by written notice addressed to the Issuer and delivered to the Issuer or to the Principal Paying Agent in accordance with Condition 15, declare such Note to be immediately due and payable whereupon it shall become immediately due and payable at its principal amount together with accrued interest without further action or formality. Any such notice shall specify the serial number of each Note in respect of which it is given.

The Issuer shall fully indemnify each Noteholder from and against any reasonable costs, expenses, liabilities and losses which such Noteholder may suffer or incur as a direct result of the occurrence of any Event of Default (including, but without limitation, any expenses incurred in connection with legal proceedings to enforce repayment of such Note).

Nothing contained in these Conditions shall prevent the Issuer from, without the consent of the Noteholders, Receiptholders or Couponholders, consolidating with, or merging into, or selling, transferring, leasing or conveying its assets as an entirety or substantially as an entirety to any corporation organised under the laws of the respective jurisdiction of its incorporation; **provided that** (i) any successor corporation either (a) expressly assumes the applicable obligations of the Issuer under the Notes and the Agency Agreement or (b) succeeds to the applicable obligations of the Issuer under the Notes and the Agency Agreement by way of universal succession, (ii) after giving effect to the transaction, with respect to the Issuer or any such successor corporation, no Event of Default and no event which, after notice or lapse of time or both, would become an Event of Default, shall have occurred and be continuing, and (iii) the Issuer has delivered to the Principal Paying Agent a certificate executed by a duly authorised officer of the Issuer and an opinion of counsel as to matters of law stating that such consolidation, merger, sale, transfer, lease or conveyance and, if a supplemental agency agreement is required in connection with such transaction, such supplemental agency agreement comply with the Agency Agreement and the Notes and that all conditions precedent herein provided for relating to such transaction have been complied with.

(b) ***Applicable to Subordinated Notes only***

(i) If any Bankruptcy Event or the liquidation of the Issuer shall occur and be continuing (and **provided that** a Trigger Event has not occurred) then, in any such event, the holder of any Subordinated Note may by written notice to the Issuer declare such Note to be forthwith due and payable upon receipt of such notice by the Issuer whereupon such Note shall become due and repayable at its principal amount plus accrued interest (if any).

(ii) Except as expressly provided in this Condition 11(b), no holder of any Subordinated Note shall have any right to accelerate any payment of principal or interest in respect of the Subordinated Notes.

(iii) The only action the holder of a Subordinated Note may take in Korea against the Issuer on acceleration of the Subordinated Notes is to prove claims in the liquidation or other applicable proceedings in respect of the Issuer in Korea.

(c) ***Interpretation***

In these Conditions "**Indebtedness**" means any obligation or obligations (whether present or future, actual or contingent) for the payment or repayment of money borrowed and/or interest thereon.

12. **Replacement of Notes, Receipts, Coupons and Talons**

Should any Note, Receipt, Coupon or Talon be lost, stolen, mutilated, defaced or destroyed, it may be replaced at the specified office of the Principal Paying Agent or the relevant Paying Agent (in the case of Bearer Notes, Receipts, Coupons and Talons) or of any Transfer Agent (in the case of Registered Notes) upon payment by the claimant of such costs and expenses as may be incurred in connection therewith and on such terms as to evidence and indemnity as the Issuer and the relevant Paying Agent or the Transfer Agent, as the case may be, may reasonably require. Mutilated or defaced Notes, Receipts, Coupons or Talons must be surrendered before replacements will be issued.

13. **Principal Paying Agent, Registrar, Exchange Agent, Paying and Transfer Agents**

The names of the initial Principal Paying Agent, the other initial Paying Agents, the initial Exchange Agent, the initial Registrar and the other initial Transfer Agents and their initial specified offices are set out below.

The Issuer is entitled to vary or terminate the appointment of any Paying Agent, Exchange Agent Registrar or Transfer Agent and/or appoint additional or other Paying Agents, Registrars, Exchange Agents or Transfer Agents and/or approve any change in the specified office through which any of the same acts, **provided that**:

(i) so long as the Notes are listed on any stock exchange, there will at all times be a Paying Agent and, if appropriate, a Registrar and Transfer Agent with a specified office in such place as may be required by the rules and regulations of the relevant stock exchange;

(ii) there will at all times be a Paying Agent and a Transfer Agent with a specified office in a city in continental Europe;

(iii) there will at all times be a Registrar and a Transfer Agent each having a specified office in New York City;

(iv) so long as any of the Registered Global Notes payable in a Specified Currency other than U.S. dollars are held through DTC or its nominee, there will at all times be an Exchange Agent with a specified office in New York City;

(v) there will at all times be a Principal Paying Agent; and

(vi) so long as the Notes are listed on the Singapore Exchange Securities Trading Limited (the "**Singapore Stock Exchange**") and the rules of the Singapore Stock Exchange so require, if the Notes are issued in definitive form, there will at all times be a Paying Agent in Singapore unless the Issuer obtains an exemption from the Singapore Stock Exchange.

In addition, the Issuer shall forthwith appoint a Paying Agent having a specified office in New York City in the circumstances described in the second paragraph of Condition 6(b). Any variation, termination, appointment or change shall only take effect (other than in the case of insolvency, when it shall be of immediate effect) after not less than 30 nor more than 45 days' prior notice thereof shall have been given to the Noteholders in accordance with Condition 15.

In acting under the Agency Agreement, the Principal Paying Agent, the Registrar, the Exchange Agent, the other Paying Agents and the Transfer Agents act solely as agents of the Issuer and do not assume any obligation or trust for or with any Noteholders.

14. **Exchange of Talons**

On and after the Fixed Interest Date or the Interest Payment Date, as appropriate, on which the final Coupon comprised in any Coupon sheet matures, the Talon (if any) forming part of such Coupon sheet may be surrendered at the specified office of the Principal Paying Agent or any other Paying Agent in exchange for a further Coupon sheet including (if such further Coupon sheet does not include Coupons to (and including) the final date for the payment of interest due in respect of the Bearer Note to which it appertains) a further Talon, subject to the provisions of Condition 10. Each Talon shall, for the purposes of these Terms and Conditions, be deemed to mature on the Fixed Interest Date or the Interest Payment Date (as the case may be) on which the final Coupon comprised in the relative Coupon sheet matures.

15. Notices

Notices to holders of Registered Notes will be deemed to be validly given (i) if sent by first class mail or (if posted to an overseas address) by air mail to them at their respective addresses as recorded in the Register and (ii) if and for so long as the Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, if published in a daily newspaper of general circulation in Singapore. Any such notice will be deemed to have been validly given on the latter of the fourth day after the date of such mailing and, if applicable, the date of such first publication.

All notices regarding the Bearer Notes shall be published (i) in a leading English language daily newspaper of general circulation in London and (ii) if and for so long as the Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, in a daily newspaper of general circulation in Singapore. It is expected that such publication will be made in the *Financial Times* in London and the *Wall Street Journal Asia Edition*. The Issuer shall also ensure that notices are duly published in a manner which complies with the rules and regulations of any other stock exchange on which the Notes are for the time being listed. Any such notice will be deemed to have been given on the date of the first publication or, where required to be published in more than one newspaper, on the date of first publication in each such newspaper or where published in such newspapers on different dates, the last date of such first publication.

Until such time as any definitive Notes are issued, there may (**provided that**, in the case of Notes listed on a stock exchange, the rules of the stock exchange allow for and further **provided that**, for so long as the Notes are listed on the Singapore Stock Exchange and the rules of the Singapore Stock Exchange so require, notices will always be published in a daily newspaper of a general circulation in Singapore), so long as the Global Note(s) is or are held in its/their entirety on behalf of (i) Euroclear and/or Clearstream, Luxembourg or DTC, be substituted for such publication in such newspaper(s), the delivery of the relevant notice to Euroclear and/or Clearstream, Luxembourg or DTC for communication by them to the holders of the Notes and (ii) the CMU Service, be substituted for such publication in such newspaper(s) the delivery of the relevant notice to the persons shown in a CMU Instrument Position Report issued by the CMU Service on the second business day preceding the date of dispatch of such notice as holding interests in the relevant Global Note and, in addition, for so long as any Notes are listed on a stock exchange and the rules of that stock exchange (or any other relevant authority) so require, such notice will be published in a manner specified by those rules. Any such notice shall be deemed to have been given to the holders of the Notes on the seventh day after the day on which the said notice was given to Euroclear and/or Clearstream, Luxembourg or DTC or the persons shown in the relevant CMU Instrument Position Report.

Notices to be given by any holder of the Notes shall be in writing and given by lodging the same, together with the relative Note or Notes, with the Principal Paying Agent. While any of the Notes are represented by a Global Note, such notice or demand may be given or made by any holder of a Note to the Principal Paying Agent or, the Registrar through Euroclear, Clearstream, Luxembourg and/or DTC or, in the case of Notes lodged with the CMU Service, by delivery by such holder of such notice to the CMU Lodging Agent in Hong Kong, as the case may be, in such manner as the Principal Paying Agent and Registrar and Euroclear, Clearstream, Luxembourg, the CMU Service and/or DTC, as the case may be, may approve for this purpose.

16. Meetings of Noteholders, Modification and Waiver

The Agency Agreement contains provisions for convening meetings of the Noteholders to consider any matter affecting their interests, including the sanctioning by Extraordinary Resolution of a modification of the Notes, the Receipts, the Coupons or any of the provisions of the Agency Agreement. Such a meeting may be convened by the Issuer or Noteholders holding not less than ten per cent. in nominal amount of the Notes for the time being remaining outstanding. The quorum at any such meeting for passing an Extraordinary Resolution is one or more persons holding or representing not less than 50 per cent. in nominal amount of the Notes for the time being outstanding, or at any adjourned meeting one or more persons being or representing Noteholders whatever the nominal amount of the Notes so held or represented, except that at any meeting the business of which includes the modification of certain provisions of the Notes, Receipts or Coupons (including modifying the date of maturity of the Notes or any date for payment of interest thereof, reducing or cancelling the amount of principal or the rate of interest payable in respect of the Notes or altering the currency of payment of the Notes, Receipts or Coupons), the quorum shall be one or more persons holding or representing not less than 75 per cent. in nominal amount of the Notes for the time being outstanding, or at any adjourned such meeting one or more persons holding or representing a clear majority, in nominal amount of the Notes for the time being outstanding. An Extraordinary Resolution passed at any meeting of the Noteholders shall be binding on all the Noteholders, whether or not they are present at the meeting, and on all Receiptholders and Couponholders.

The Principal Paying Agent and the Issuer may agree, without the consent of the Noteholders, Receiptholders or Couponholders, to:

(i) any modification (except as mentioned above) of any of the provisions of the Notes, the Receipts, the Coupons, the Conditions, the Deed of Covenant or the Agency Agreement which is not prejudicial to the interests of the Noteholders; or

(ii) any modification of the Notes, the Receipts, the Coupons, the Conditions, the Deed of Covenant or the Agency Agreement which is of a formal, minor or technical nature or is made to correct a manifest error or to comply with mandatory provisions of the law of the jurisdiction in which the Issuer is incorporated.

Any such modification shall be binding on the Noteholders, the Receiptholders and the Couponholders and any such modification shall be notified to the Noteholders in accordance with Condition 15 as soon as practicable thereafter.

17. **Further Issues**

The Issuer shall be at liberty from time to time without the consent of the Noteholders, Receiptholders or Couponholders to create and issue further notes having terms and conditions the same as the Notes or the same in all respects save for the amount and date of the first payment of interest thereon and so that the same shall be consolidated and form a single Series with the outstanding Notes, **provided that** such further issuance constitutes a qualified reopening for U.S. federal income tax purposes.

18. **Provision of Information**

The Issuer has covenanted in the Deed Poll for the benefit of the Noteholders, Receiptholders and Couponholders that for so long as any Notes remain outstanding and are "**restricted securities**" (as defined in Rule 144(a)(3) under the Securities Act), the Issuer shall, during any period in which it is neither subject to Section 13 or 15(d) of the Exchange Act nor exempt from reporting pursuant to Rule 12g3-2(b) under the Exchange Act, make available to any Noteholder, Receiptholder or Couponholder of, or beneficial owner of an interest in, such Notes, Receipts or Coupons in connection with any resale thereof and to any prospective purchaser designated by such Noteholder, Receiptholder, Couponholder or beneficial owner, in each case upon request, the information specified in, and meeting the requirements of, Rule 144A(d)(4) under the Securities Act.

19. **Governing Law and Submission to Jurisdiction**

(a) The Agency Agreement, the Deed of Covenant, the Deed Poll, the Notes, the Receipts and the Coupons and all non-contractual obligations arising out of or in connection with such agreements and deeds are governed by English law, except that in the case of Subordinated Notes, Conditions 3(b) and 3(c) are governed by, and shall be construed in accordance with, Korean Law.

(b) The Issuer agrees, for the exclusive benefit of the Noteholders, the Receiptholders and the Couponholders that the courts of England are to have jurisdiction to settle any disputes which may arise out of or in connection with the Agency Agreement, the Deed of Covenant, the Deed Poll, the Notes, the Receipts and/or the Coupons and that accordingly any suit, action or proceedings (together referred to as "**Proceedings**") arising out of or in connection with the Agency Agreement, the Deed of Covenant, the Deed Poll, the Notes, the Receipts and the Coupons may be brought in such courts. The Issuer hereby irrevocably waives any objection which it may have now or hereafter to the laying of the venue of any such Proceedings in any such court and any claim that any such Proceedings have been brought in an inconvenient forum and hereby further irrevocably agrees that a judgement in any such Proceedings brought in the English courts shall be conclusive and binding upon it and may be enforced in the courts of any other jurisdiction. Nothing contained in this Condition shall limit any right to take Proceedings against the Issuer in any other court of competent jurisdiction, nor shall the taking of Proceedings in one or more jurisdictions preclude the taking of Proceedings in any other jurisdiction, whether concurrently or not. The Issuer appoints KEB Hana Bank, London Branch at its registered office for the time being, currently at 8 Old Jewry, London EC2R 8DN, United Kingdom as its agent for service of process, and undertakes that, in the event of it ceasing so to act or ceasing to be registered in England, it will appoint another person as its agent for service of process in England in respect of any Proceedings. Nothing herein shall affect the right to serve proceedings in any other manner permitted by law. The Issuer hereby irrevocably and unconditionally waives with respect to the Agency Agreement, the Deed of Covenant, the Deed Poll, the Notes, the Receipts and/or the Coupons any right to claim immunity from jurisdiction or execution and any similar defence and irrevocably and unconditionally consents to the giving of any relief or the issue of any process, including without limitation, the making, enforcement or execution against any property whatsoever (irrespective of its use or intended use) of any order or judgement made or given in connection with any proceedings.

20. **Contracts (Rights of Third Parties) Act 1999**

Unless expressly provided to the contrary in the terms of the Notes, any third party may not enforce any of the terms of the Notes notwithstanding the provisions in the Contracts (Rights of Third Parties) Act 1999.

USE OF PROCEEDS

The net proceeds from each issue of Notes will be: (a) applied by the Issuer for its general corporate purposes; and/or (b) if so specified in the relevant Pricing Supplement, allocated by the Issuer towards the financing or refinancing, in whole or in part, of Green Eligible Categories, Social Eligible Categories (each as defined below) or a combination of the two categories (in the case of Sustainability Bonds) in accordance with the KEB Hana Bank Sustainable Financing Framework (see "*Sustainable Financing Framework*").

According to the definition criteria set out by the ICMA Green Bond Principles, the ICMA Social Bond Principles or the ICMA Sustainability Bond Guidelines (as defined herein), only Tranches of Notes allocated exclusively to financing or refinancing Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) may be designated as "Green Bonds," "Social Bonds" or "Sustainability Bonds".

Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) have been defined in accordance with the broad categorisation of eligibility for Green Projects, Social Projects or Sustainability Projects set out by the ICMA Green Bond Principles, the ICMA Social Bond Principles or the ICMA Sustainability Bond Guidelines.

"Green Eligible Categories" are those which comprise financing within the Green Eligible Categories set out in the KEB Hana Bank Sustainable Financing Framework. Such Green Eligible Categories include those which relate to: clean transportation, renewable energy and green buildings.

"Social Eligible Categories" are those which comprise financing within the Social Eligible Categories set out in the KEB Hana Bank Sustainable Financing Framework. Such Social Eligible Categories include those which relate to: SME financing, socioeconomic advancement and empowerment, affordable housing and employment generation.

Financings within categories related to the luxury sectors, industries associated with elevated risk of child labour, adult entertainment, weapons, alcohol, tobacco, fossil fuel, nuclear, large scale hydro-power projects and biomass suitable for food production are specifically excluded from consideration for eligibility.

SUSTAINABLE FINANCING FRAMEWORK

1. Introduction

Established in 1967, KEB Hana Bank is a subsidiary of Hana Financial Group, one of the largest bank holding companies in Korea. The Bank is a provider of retail and commercial banking products and services to private individuals and corporate customers in Korea and internationally.

The Bank's branch network span across 24 countries, mainly in Europe, the Middle East, the Americas and the Asia-Pacific region. With total assets of ₩338.7 trillion as of 30 September 2018, the Bank holds a leading position among the commercial banks in Korea.

The Bank's offerings are classified into three categories:

(i) Personal Banking:

- offers retail banking products and services to individuals

(ii) Business Banking:

- offers business banking products and services to corporate clients

(iii) Foreign Exchange Services:

- provides foreign exchange services including foreign exchange rate, and trade and overseas remittance services

1.1. KEB Hana Bank's Commitment to Sustainability

Over the years, the Bank has taken strong steps towards becoming a more sustainable bank by increasing its focus on activities that generate positive social or environmental impact.

- August 2018: The Bank announced commitments to invest ₩100 billion (U.S.$89 million) in a venture investment fund and provide low-interest loans worth ₩1 trillion to promising startups in order to support job creation and venture firms.
- May 2018: Its subsidiary, KEB Hana Microfinance Limited, announced plans to raise U.S.$3 million from the International Finance Corporation. The proceeds will be used for the growth of its micro and very small enterprise loan portfolio, which increases financial inclusion and reduces poverty. In addition, the proceeds will be used to extend small loans to support the financing needs of the lower-income population, especially women, across Myanmar.
- March 2018: The Bank announced plans to provide ₩15 trillion (U.S.$13.9 billion) in "productive finance" to the country's small and medium-size enterprises by 2020. Specifically, it plans to:
  - Directly invest ₩120 billion every year for startups and small businesses;
  - Establish a venture capital fund to provide ₩100 billion of support annually until 2020;
  - Expand its financial support for tech-savvy small- and medium-sized enterprises ("**SMEs**") to ₩9 trillion; and
  - Supply ₩1.5 trillion for firms that create job opportunities.

  In a bid to support the nation's startups, the Bank has also established a task force exclusively for ventures and SMEs.
- July 2017: Hana Capital Co., Ltd. signed an agreement with Kolon Auto Platform Corp. to facilitate the sales of eco-friendly electric vehicles. It also signed a partnership with Recon High-Tech Bike Company, a local electric bike manufacturer.
- February 2017: The Bank announced plans to finance Korea's largest biomass plant, Gunsan biomass plant with 200 megawatts of capacity.
- January 2016: The Bank became Korea's first bank to sign an agreement to reduce greenhouse gas emissions with the Ministry of Environment and the Korea Climate & Environment Networks.

In October 2017, the Bank was awarded "Carbon Management Sector Honors" for two consecutive years at the 2017 Carbon Disclosure Project (CDP) Climate Change Awards. The award is attributed to the Bank's exceptional achievements in responding to climate change in the financial sector.

1.1.1. Alignment with the UN Sustainable Development Goals ("SDGs")

Hana Financial Group, the Bank's parent company, has chosen the following seven SDGs as its top priorities. The group has aligned its six strategic directions with these goals.

a) SDG 1: No Poverty

b) SDG 4: Quality Education

c) SDG 7: Affordable and Clean Energy

d) SDG 8: Decent Work and Economic Growth

e) SDG 9: Industry, Innovation and Infrastructure

f) SDG 10: Reduced Inequalities

g) SDG 13: Climate Action

1.1.2. Inclusive Financial Products

Hana Financial Group is dedicated to providing inclusive and responsible financing to support the financially underprivileged and its business partners and to spur the solar Green Loan market. It offers various inclusive financial products. See Appendix I.

1.1.3. Hana Power on Impact 2017

The Bank introduced "Hana Power on Impact Programme" to address issues arising from the existing social welfare system in Korea. As part of its social value programme, the Bank developed a system of recommending jobs to people with developmental disabilities. Through this programme, 35 people with developmental disabilities found jobs that suited their talents and interests.

1.1.4. 1Q Agile Lab (formerly 1Q Lab)

The Bank set up a fintech startup mentoring centre and provides startup businesses with open office spaces, lounges, meeting rooms for making presentations, dedicated work spaces, rest areas, computers and other work-related facilities. The lab also provides startup businesses with intellectual know-how, including management consulting, tax consulting and investment inducement advice. Small startup businesses generally have difficulty securing work spaces and receiving proper mentoring as well as tax/management related advice. The Bank provides such services for social contribution and the promotion of small startups.

1.1.5. Creation of Sustainable Financing Framework

As part of its commitment to responsible corporate citizenship, the Bank has elected to create a Sustainable Financing Framework (the "**Framework**"), which will help the Bank issue financing instruments such as bonds and loans that contribute to sustainable development.

Bonds issued under the Framework will follow, depending on the type of bond, the Green Bond Principles ("**GBP**") 2018, the Social Bond Principles ("**SBP**") 2018 or the Sustainability Bond Guideline ("**SBG**") 2018, or as they may be subsequently amended.

Loans made under the Framework will follow the Green Loan Principles ("**GLP**") 2018 or as they may be subsequently amended.

The Framework may be subsequently revised or updated as the sustainable finance market continues to evolve.

For each Sustainability Financing Transaction ("**SFT**"), the Bank will adopt (i) Use of Proceeds, (ii) Project Evaluation and Selection, (iii) Management of Proceeds and (iv) Reporting, as set out in this Framework.

2. KEB Hana Bank Sustainable Financing Framework

2.1. Use of Proceeds

The Use of Proceeds of the Bank's Social Bond/Loan and/or Green Bond/Loan issued under the Framework will be applied to finance new, or re-finance existing, projects/expenditures, in part or in full, that fall under the following Social Eligible Categories and Green Eligible Categories, respectively, while the proceeds of the Bank's Sustainability Bond/Loan will be allocated to a combination of Green and Social Eligible Categories. Eligible lending products include new loans and refinancing of existing loans that have been issued within 24 months of the date of issuance of the SFT.

- Social Eligible Categories as defined in 2.1.1
- Green Eligible Categories as defined in 2.1.2

2.1.1. Social Eligible Categories

Eligible Categories	Alignment with the SDGs	Eligibility Criteria	Sample Projects
SME Financing	 	• Access to finance for SMEs (as defined by Enforcement Decree of The Framework Act on Small and Medium Enterprises in Appendix II) • Less than 10 employees	• Provide loans to targeted SMEs
Socioeconomic Advancement and Empowerment	 	• Providing financial assistance/support to migrants and/or displaced persons • Increasing accessibility to financial services for foreign workers • Providing financing via its "Inclusive Financial Products" as defined in section 1.1.2 • Providing financing to Social Enterprises (as defined by Social Enterprise Promotion Act and its Enforcement Decree in Appendix III)	• Assist nearly 30,000 North Korean defectors by exempting them from paying fees for a range of financial services • Assist foreign workers in remitting money back to their home country • Invest in Social Enterprises
Affordable Housing		• Lending to tenants of public housing provided by 1) public housing providers under the Special Act of Public Housing; or 2) public housing providers approved by Korea Housing Finance Corporation	• Participate in affordable housing projects or loans
Employment Generation		• Loans to companies which qualify under "Job Creation Criteria" specified in Appendix IV	• Participate in employment generation loans

2.1.2. Green Eligible Categories

Eligible Categories	Alignment with the SDGs	Eligibility Criteria	Sample Projects
Clean Transportation		• Providing financing to electric vehicle manufactures and e-bike distribution	• Finance EV or its equipment manufacturers
Renewable Energy		• Providing financing of renewable energy facilities such as solar, wind, hydro (<25 megawatts) and biomass facilities • Lending to companies that save energy and increase efficiency of energy use	• Finance Gunsan biomass plant with 200 megawatts of capacity
Green Buildings		• Construction and renovation of green buildings that meet recognised Green Building Standards: LEED Gold and above, BREEAM Excellent and above, and national equivalents standards such as G-SEED 2 or above (Green Standard for Energy and Environmental Design) based on the Act on Development and Support of Green Buildings	• Finance green buildings around Korea

2.1.3. Exclusions

The following industries are excluded from consideration for eligibility:

- Luxury sectors (precious metals wholesale or brokerage, precious minerals wholesale or brokerage, artworks and antiques wholesale or brokerage, golf course services);
- Industries associated with elevated risk of child labour;
- Adult entertainment;
- Weapons;
- Alcohol;
- Tobacco;
- Fossil fuel;
- Nuclear;
- Large-scale hydro-power projects with a generating capacity of over 25 megawatts; and
- Biomass suitable for food production.

2.2. Project Evaluation and Selection

The Project Evaluation and Selection Process will ensure that the proceeds of the Bank's SFT are allocated to new lending or existing projects/expenditures that meet the criteria set out above in Section 2.1, Use of Proceeds. The Bank will set up a Sustainable Financing Working Group ("**SFWG**") to carry out the evaluation and selection process. The SBWG will consists of members from:

- Treasury Department
- Corporate Social Responsibility (CSR) Department

- Corporate Marketing Department
- Retail Marketing Department
- Retail Products Department
- Credit Planning Department
- SMEs & Startup Banking Department
- CSR Team, Hana Financial Group

The SFWG will be chaired by the Treasurer.

On an ongoing basis, eligible Use of Proceeds from the Bank's lending book will be identified and proposed by the Bank's Business Units. Relevant Business Units will screen customer information against the Eligibility Criteria set out in the Bank's Framework (see Section 2.1, Use of Proceeds), and recommend eligible projects or expenditures for inclusion as Eligible Use of Proceeds to the SFWG.

On an annual basis, the SFWG will review all proposed Eligible Use of Proceeds to determine their compliance with the Bank's Framework in order to approve the allocation of proceeds.

On an annual basis, the SFWG will review the allocation of the proceeds to the Eligible Use of Proceeds and determine if any changes are necessary (for instance, in the event that assets have been prepaid, been sold or otherwise become ineligible).

The SFWG will also review the management of proceeds (as described in Section 2.3) and facilitate reporting (as described in Section 2.4).

2.3. Management of Proceeds

To manage the proceeds of the Bank's SFT, the Bank will establish a Sustainable Financing Register. The proceeds of each of the Bank's SFT will be deposited in the general funding accounts and earmarked for allocation in the Sustainable Financing Register.

The Sustainable Financing Register will be reviewed annually by the Treasury to account for any repayments and drawings on the Green/Social Assets.

The Sustainable Financing Register will contain relevant information including:

(1) Details of the SFT: Key information including issuer/borrower entity, ISIN, pricing date, maturity date, etc.

(2) Details of Eligible Use of Proceeds, including:
    - Eligible Green and Social Projects;
    - Amount of allocation made;
    - Other necessary information so that the aggregate of issuance proceeds allocated to the Eligible Use of Proceeds is recorded at all times; and
    - Estimate of impact of Eligible Use of Proceeds.

Any balance of proceeds from an issuance not allocated to Eligible Use of Proceeds will be held in accordance with the Bank's general liquidity management policies. The unallocated proceeds can be invested domestically and internationally in money market instruments with satisfactory credit ratings and market liquidity until they are allocated to Eligible Use of Proceeds.

2.4. Reporting

The Bank commits to a high level of reporting. Until full allocation of proceeds from the SFT, and as necessary thereafter in the event of new developments, it will publish a Sustainable Financing Progress Report within one year of issuance, and on an annual basis thereafter, disclose the allocation of proceeds (Allocation Reporting) and green/social impacts from lending (Impact Reporting).

The Sustainable Financing Progress Report will be made public on the Bank's Investor Relations website at http://www.hanafn.com/eng/csr/sustainability/sustainabilityReport.do.

Allocation Reporting
- the total amount of proceeds allocated to eligible projects
- the balance of unallocated proceeds, if any
- the proceeds allocated per eligibility category

Impact Reporting
- Financing provided to SMEs (U.S. dollars or Won)
- Number of SMEs financed
- Number of jobs created
- Number of clean/electric vehicles financed
- Greenhouse gas emissions reductions
- Renewable generation capacity financed (megawatt or megawatt hour)

3. External Review

The Bank will engage Sustainalytics to provide an External Review in the form of a Second Party Opinion on the Bank's Framework, and confirm alignment with SBP and SBG.

This Second Party Opinion will be made public at http://www.hanafn.com/eng/csr/sustainability/sustainabilityReport.do.

The resulting report will be made public at http://www.hanafn.com/eng/csr/sustainability/sustainabilityReport.do.

Appendix I

Type	Product name	Description	Amount
Support for the financially underprivileged	KEB Hana Miso Drim Savings	Instalment savings that support the creation of financial assets for those who faithfully repaid their Smile Microcredit loans	₩400 million
	New Hope Seed	Credit loans for self-employed people or wage earners who meet the set criteria as well as credit loans extended to those who faithfully repaid their loans for more than one year to meet their emergency funding needs	₩530 billion
	Change Your Dream Loan	Secured loans extended to help convert high-interest rate loans into lower-rate products through the credit guarantee issued by the National Happiness Trust	₩7.9 billion
	Youth Sunshine Loan	Secured loans to support young people or undergraduate students in paying for living expenses and shifting from high to lower interest rate loans through the credit guarantee issued by the Credit Counselling and Recovery Service	₩6.7 billion
	Hope Growth Savings Account I, II	Deposits available for wage earners or near-poverty individuals whose real name was approved by the Ministry of Health and Welfare to offer earned income grants and Tomorrow Growth grants that match the amount deposited made by these individuals	₩202.6 billion

Type	Product name	Description	Amount
	Tomorrow Growth Savings Account	Deposits available for low-income individuals who participate in the government-led self-support work programme, under the condition that their real name was approved by the Ministry of Health and Welfare, to offer Tomorrow Growth grants or proceeds that match the amount deposited by these individuals	
Support for mutual cooperation with business partners	Win-Win Cooperation Loan	Loans that offer reduced interest rates to suppliers based on the deposits made by their large business partners who do business with KEB Hana Bank with an aim to lay the basis for shared growth between large businesses and their SME partners	₩18.1 billion
	Shared Growth Loan	Loans secured against electronic credit sales bonds to extend the credit offering granted by large businesses to first to fourth-tier suppliers to help these SME suppliers improve their cash flow	₩6.6 billion
Green loan	Hana Solar Loan	Loans extended to photovoltaic power generators who meet the set criteria in order to facilitate PV power generation	₩20.2 billion

Appendix II

Under the "Enforcement Decree of The Framework Act on Small and Medium Enterprises":

A small and medium enterprises as defined in Article 2 (1) 1 of the Framework Act on Small and Medium Enterprises (hereinafter referred to as the "Act") shall be a business entity that meets all the standards set forth in the following subparagraphs: <Amended by Presidential Decree No. 25302, Apr. 14, 2014; Presidential Decree No. 26356, Jun. 30, 2015; Presidential Decree No. 27087, Apr. 5, 2016; Presidential Decree No. 27106, Apr. 26, 2016>

1. A business entity that meets all the standards set forth in the following items:
   a. The main type of business in which the business entity is engaged and its average sales or annual sales (hereinafter "average sales, etc.") shall meet the standards set forth in attached Table 1;
   b. A corporation whose total assets are less than 500 billion won;
2. A business entity whose actual separation of its management and ownership does not fall under any of the following:
   a. A company that belongs to a conglomerate subject to restrictions on mutual investment, etc. under Article 14 (1) of the Monopoly Regulation and Fair Trade Act (hereafter "conglomerate subject to restrictions on mutual investment, etc." in this subparagraph) or a company notified as a company incorporated as an affiliate into a conglomerate subject to restrictions on mutual investment, etc. pursuant to Article 14-3 of the same Act;
   b. A corporation whose total assets are at least 500 billion won (including a foreign corporation, with the exception of a non-profit corporation and the one falling under any of the subparagraphs in Article 3-2 (3)) which is the largest shareholder, directly or indirectly owning 30 percent or more of the total outstanding stocks, etc. The largest shareholder referred to in such cases means a corporation or an individual owning the largest share of the relevant company independently or jointly with any of the following, and Article 2 (2) of the Enforcement Decree of the Adjustment of International Taxes Act shall apply mutatis mutandis to the calculation of the ratio of indirectly owned outstanding stocks, etc.:

      (i) If the shareholder is a corporation: Executive officers of the corporation;

      (ii) If the shareholder is an individual who does not fall under (i): Relatives by blood of such individual;
   c. In the case of a corporation belonging to a related company, a corporation whose average sales, etc. calculated according to Article 7-4 does not satisfy the standards;

d. A company which is excluded from the scope of a conglomerate under the control of the same person pursuant to Article 3-2 (2) 4 of the Enforcement Decree of the Monopoly Regulation and Fair Trade Act and no more belongs to a conglomerate subject to restrictions on mutual investment, etc., and for which three years have passed from the date it meets the requirements under Article 3 of the same Enforcement Decree.

Appendix III: Social Enterprise Criteria

Under the "Social Enterprise Promotion Act":

1. The term "social enterprise" means an entity certified as prescribed in Article 7 to be the one that pursues a social objective aimed at enhancing the quality of life of community residents by providing vulnerable social groups with social services or job opportunities or by contributing to the communities while conducting its business activities, such as the manufacture or sale of goods and services;
2. The term "vulnerable social group" means a group of people who suffer hardships in purchasing needed social services at market prices or are confronted with particular difficulties in getting a job under ordinary conditions of the labor market, for whom further detailed criteria shall be prescribed by Presidential Decree;
3. The term "social services" means services in the fields prescribed by Presidential Decree, including educational, health, social welfare, environmental, cultural and other services similar thereto;

Under the "Enforcement Decree of the Social Enterprise Promotion Act":

Article 2 (Detailed Standards for Vulnerable Groups)

"Vulnerable social group" (hereinafter referred to as "vulnerable group") referred to in subparagraph 2 of Article 2 of the Social Enterprise Promotion Act (hereinafter referred to as the "Act"), means any of the following:

1. A person whose monthly average household income does not exceed 60/100 of the national average household income;
2. An aged person referred to in subparagraph 1 of Article 2 of the Act on Prohibition of Age Discrimination in Employment and Elderly Employment Promotion;
3. A disabled person referred to in subparagraph 1 of Article 2 of the Employment Promotion and Vocational Rehabilitation of Disabled Persons Act;
4. A victim of sexual trafficking referred to in Article 2 (1) 4 of the Act on the Punishment of Acts of Arranging Sexual Traffic;
5. A person who is eligible for an incentive to promote employment under Article 26 (1) and attached Table 1 of the Enforcement Decree of the Employment Insurance Act, among youths referred to in subparagraph 1 of Article 2 of the Special Act on the Promotion of Youth Employment or among career-interrupted women referred to in subparagraph 1 of Article 2 of the Act on Promotion of Economic Activities of Career-Interrupted Women, etc.;
6. A North Korean refugee referred to in subparagraph 1 of Article 2 of the North Korean Refugees Protection and Settlement Support Act;
7. A victim referred to in subparagraph 3 of Article 2 of the Act on the Prevention of Domestic Violence and Protection, etc. of Victims;
8. A person eligible for protection referred to in Articles 5 and 5-2 of the Single-Parent Family Support Act;
9. A marriage-based immigrant referred to in subparagraph 3 of Article 2 of the Framework Act on Treatment of Foreigners Residing in the Republic of Korea;
10. A person eligible for rehabilitation referred to in Article 3 (3) of the Act on Probation, Etc.;
11. Any of the following persons:
    a. Where a victim eligible for relief referred to in Article 16 of the Crime Victim Protection Act suffers from a disability, such victim eligible for relief, his/her spouse, lineal blood-relatives, and brothers and sisters who reside with such victim eligible for relief;

b. Where a victim eligible for relief referred to in Article 16 of the Crime Victim Protection Act dies, his/her spouse, lineal blood-relatives, and brothers and sisters who have resided with such victim eligible for relief;

12. Any other person recognized by the Minister of Employment and Labor as belonging to a vulnerable group after deliberation by the employment policy deliberative council under Article 10 of the Framework Act on Employment Policy (hereinafter referred to as the “policy deliberative council”) in consideration of the situation of employment, etc., such as a person who has been unemployed for at least one year.

Article 3 (Kinds of Social Services)

“Services in the fields prescribed by Presidential Decree” referred to in subparagraph 3 of Article 2 of the Act, means any of the following:

1. A child care service;
2. An art, tourism, and sports service;
3. A forest conservation and management service;
4. A nursing and housekeeping support service;
5. A service relating to the preservation and utilization of cultural heritage;
6. A business facility management service, including cleaning;
7. An employment service referred to in subparagraph 9 of Article 2-2 of the Employment Security Act;
8. Other services recognized by the Minister of Employment and Labor after deliberation by the policy deliberative council.

Appendix IV: Job Creation Criteria

- Employment growth since 1 January 2016
- Certified as “Good employment company” by the central or local government
- Designated as “Job creation supporting company for part-time workers” by the Ministry of Employment and Labor
- Received tax benefit in consequence of employment expansion for the recent one year as per the Special Tax Treatment Control Act
- Company engaged in supporting business area of Ministry of SMEs and Startups
- Company engaged in “Young generation employment campaign” hosted by the Ministry of Employment and Labor, and Ministry of SMEs and Startups
- Designated as “Small giants company friendly to young generation” by the Ministry of Employment and Labor
- Company provided with “Employment stability subsidy” or “Employment generation subsidy” by the government
- Company that transferred its headquarters or factories from overseas to Korea during the past two years

EXCHANGE RATES

The table below sets out, for the periods and dates indicated, information concerning the Market Average Exchange Rate, which is rounded to the nearest tenth of one Won. No representation is made that the Won or U.S. dollar amounts referred to herein could have been or could be converted into U.S. dollars or Won, as the case may be, at any particular rate, or at all.

Year ended 31 December	**Low**	**High**	**Average**[(1)]	**Period-end**
		(Won per U.S.$1.00)		
2014	1,008.9	1,118.3	1,053.2	1,099.2
2015	1,068.1	1,203.1	1,131.5	1,172.0
2016	1,093.2	1,240.9	1,160.5	1,208.5
2017	1,071.4	1,208.5	1,130.8	1,071.4
2018	1,057.6	1,142.5	1,100.3	1,118.1
2019 (through 10 January)	1,118.0	1,127.5	1,121.6	1,121.6
January (through 10 January)	1,118.0	1,127.5	1,121.6	1,121.6

Source: Seoul Money Brokerage Services, Ltd.

(1) Represents the average of the daily Market Average Exchange Rate over the relevant period.

INVESTMENT CONSIDERATIONS

Prospective purchasers of Notes should carefully review the information contained in this Offering Circular, including the following matters.

Risks Relating to Our Business

Uncertainties and instability in global market conditions could adversely affect our business, financial condition and results of operations, as well as the value of the Notes.

Most of our assets are located in Korea, where we generate most of our income. Accordingly, our business and profitability are largely dependent on the general economic and social conditions in Korea, including interest rates, inflation, exports, personal expenditure and consumption, unemployment, demand for business products and services, debt service burden of households and businesses, the general availability of credit, the asset value of real estate and securities and other factors affecting the financial well-being of our corporate and retail customers. The Korean economy is closely integrated with, and is significantly affected by, developments in the global economy and financial markets.

While there have been mixed signs of recovery in the global economy in recent years, the global economic outlook for the near future continues to remain uncertain, particularly in light of the ongoing general uncertainty about economic and political conditions in Europe and Latin America, the slowdown of economic growth in China and other major emerging market economies, a potential escalation in trade conflicts between the United States and China, and continuing geopolitical and social instability in various parts of the Middle East and in the former republics of the Soviet Union, as well as the United Kingdom's vote to leave the European Union in a referendum held in June 2016 and the planned implementation of such departure in March 2019, among others. The Korean economy also continues to face difficulties, including sluggishness in domestic consumption and investment, volatility in the real estate market, rising household debt, potential declines in productivity due to ageing demographics and low birth rates, and a rise in youth unemployment. Any future deterioration of the global and Korean economies could adversely affect our business, financial condition and results of operations.

In particular, difficulties in financial and economic conditions could result in significant deterioration in the quality of our assets and accumulation of higher provisioning, allowances for loan losses and charge-offs as an increasing number of our corporate and retail customers declare bankruptcy or insolvency or otherwise face increasing difficulties in meeting their debt obligations. In addition, depending on the nature of the difficulties in the financial markets and general economy, we may be forced to scale back certain of our core lending activities and other operations and/or borrow money at a higher funding cost or face a tightening in the net interest spread, any of which may have a negative impact on our earnings and profitability. Furthermore, while we currently maintain our capital adequacy ratio at a level higher than the required regulatory minimum, there is no guarantee that an even higher capital requirement will not be imposed by the Government in case of a deepening crisis. In addition, given the highly integrated nature of financial systems and economic relationships worldwide, there may be other, unanticipated systemic or other risks that may not be presently predictable. Any of these risks, if materialised, may have a material adverse effect on our business, liquidity, financial condition and results of operations.

In addition, changes in foreign currency exchange rates, particularly in the Won to U.S. dollar exchange rates, affect the value of our assets and liabilities denominated in foreign currencies, the reported earnings of our non-Korean subsidiaries and income from foreign exchange dealings, and substantial and rapid fluctuations in exchange rates may cause difficulty in obtaining foreign currency-denominated financing in the international financial markets on commercial terms acceptable to us or at all. The performance of financial markets may affect bond and equity prices and, therefore, cause changes in the value of our investment and trading portfolios. While we have implemented risk management systems to mitigate and control these and other market risks to which we are exposed, it is difficult to predict with accuracy changes in economic or market conditions and to anticipate the effects such changes could have on our business, financial condition and results of operations.

Our exposure to large Korean conglomerates, known as "chaebols", could have an adverse effect on us.

One of our core banking businesses has historically been, and continues to be, lending to large corporations. As of 30 September 2018, on a separate basis, our exposure to our 10 largest borrowers was ₩16.1 trillion, which represented 5.6 per cent. of our total exposures, and a majority of such borrowers were named in the "Main Debtor Group", as identified and designated by the FSS. The Main Debtor Group is a list of companies maintained by the FSS which sets forth those companies whose outstanding credit amount to a financial institution exceeds 0.075 per cent. of the total credit provided by such financial institution, and includes most of the Korean conglomerates, or *chaebols*. Our largest exposure, on a separate basis, to a single *chaebol* group as of 30 September 2018 was ₩3.8 trillion, which represented 1.3 per cent. of our total exposures. See "*Description of Assets and Liabilities — Loan Concentrations*". As of 30 September 2018, our 10 largest credits, except for our credits to Daewoo Shipbuilding & Marine Engineering Co., Ltd., were all classified as normal. Our credits to Daewoo Shipbuilding & Marine Engineering Co., Ltd., are currently classified as "precautionary". See "— *We have significant exposure through our lending and other activities to a number of industries, and financial difficulties of any companies within these industries may adversely impact us*". However, if any of our large credits were to become non-performing, the quality of our total loan portfolio could be adversely affected and additional provisions may be required. In addition, we may decide to reduce or freeze the amount of credit available to certain large conglomerates in order to avoid excessive credit concentration in any single borrower or related group of borrowers, which may have an adverse impact on our profitability.

Exposure to small- and medium-sized enterprises, and financial difficulties experienced by such enterprises, may result in a deterioration of our asset quality.

We provide an extensive range of loan products and other banking services to SMEs. As of 30 September 2018, our total loans to SMEs (after allowance for loan losses but before net deferred loan fees and costs) amounted to ₩85.0 trillion, representing 35.9 per cent. of our total loan portfolio as of such date. In addition, as of 31 December 2015, 2016 and 2017 and 30 September 2018, on a separate basis, our delinquent loans (which represent loans the principal and interest amount of which is past due for one month or more) to SMEs were ₩421.8 billion, ₩333.4 billion, ₩278.1 billion and ₩380.6 billion, respectively, representing delinquency ratios (net of charge-offs and loan sales) of 0.71 per cent., 0.52 per cent., 0.39 per cent. and 0.50 per cent., respectively.

Compared to loans to large corporate borrowers, which tend to be better capitalised and better able to weather business downturns, or loans to individuals and households, which tend to be secured with homes and with respect to which the borrowers are therefore less willing to default, loans to SMEs have historically had a relatively higher delinquency ratio. Many SMEs represent sole proprietorships or very small businesses dependent on a relatively limited number of suppliers or customers and tend to be affected to a greater extent than large corporate borrowers by fluctuations in the Korean and global economy. In addition, SMEs often maintain less sophisticated financial records than large corporate borrowers. Therefore, it is generally more difficult for banks to judge the level of risk inherent in lending to these enterprises, as compared to large corporate borrowers. In addition, many SMEs have close business relationships with *chaebols* in Korea, primarily as suppliers. Any difficulties encountered by those *chaebols* would likely hurt the liquidity and financial condition of related SMEs, including those to which we have exposure, also resulting in an impairment of their ability to repay loans. In recent years, some *chaebols* have expanded into China and other countries with lower labour costs and other expenses by relocating their production plants and facilities to such countries, which may have a material adverse impact on such SMEs.

In light of the deteriorating financial condition and liquidity position of SMEs in Korea since the global financial crisis, the Government introduced policies and initiatives intended to encourage Korean banks to provide financial support to SME borrowers. For example, in 2008, the Government requested Korean banks to establish a "fast track" programme to provide liquidity assistance to SMEs on an expedited basis. As the "fast track" programme expired in 2016, the Government introduced a new financial support programme for SMEs, a five-year "expedited financial support" programme that took effect in January 2017 and is aimed at providing more comprehensive recovery solutions for troubled SMEs. As a participant of such programme, we provide liquidity assistance to qualified SME borrowers applying for such assistance, in the form of new loans or maturity extensions or interest rate adjustments with respect to existing loans, after expedited credit review and approval. The overall prospects for the Korean economy in 2019 and beyond remain uncertain, and the Government may extend or renew existing or past policies and initiatives or introduce new policies or initiatives to encourage Korean banks to provide financial support to SMEs. Our participation in such Government-led initiatives may lead us to extend credit to SME borrowers that we would not otherwise extend, or offer terms for such credit that we would not otherwise offer, in the absence of such initiatives. Furthermore, there is no guarantee that the financial condition and liquidity position of our SME borrowers benefiting from such initiatives will improve sufficiently for them to service their debt on a timely basis, or at all. Accordingly, increases in our exposure to SME borrowers resulting from such Government-led initiatives may have a material adverse effect on our financial condition and results of operations.

We have been taking active steps to curtail delinquency among our SME customers, including by way of increasing our exposure to so-called "blue-chip" companies with low credit risk profiles and reducing our exposure to companies with high credit risk profiles. Despite such efforts, there can be no assurance that delinquency levels for our loans to SMEs will not rise in the future. In particular, financial difficulties experienced by SMEs as a result of, among other things, adverse economic difficulties in Korea and globally, as well as aggressive marketing and intense competition among banks to lend to this segment, may lead to a deterioration in the asset quality of our loans to this segment in the future. Any such deterioration would result in increased charge-offs, higher provisioning and reduced interest and fee income from this segment, which could have an adverse impact on our financial condition and results of operations.

The asset quality of our household loan portfolio may deteriorate.

In recent years, consumer debt, including lending to small unincorporated businesses, has continued to increase in Korea. Our portfolio of household loans is comprised of two principal product types, namely secured household loans (which are primarily comprised of housing loans secured by real estate) and general purpose household loans (which are unsecured loans and tend to carry a higher credit risk). As of 31 December 2015, 2016 and 2017 and 30 September 2018, our household loan portfolio (before allowance for loan losses and net deferred loan fees and costs) was ₩88.7 trillion, ₩96.2 trillion, ₩100.2 trillion and ₩106.1 trillion, representing 42.0 per cent., 44.5 per cent., 44.5 per cent. and 44.7 per cent. of our total loans outstanding, respectively.

Our large exposure to consumer debt means that we are exposed to changes in economic conditions affecting Korean consumers. For example, a rise in unemployment or an increase in interest rates in Korea could adversely affect the ability of consumers to make payments and increase the likelihood of potential defaults. Accordingly, economic difficulties in Korea that hurt consumers could result in increasing delinquencies and a decline in the asset quality of our household loan portfolio, which would in turn require us to record increased provisions for credit loss and charge-offs and may materially and adversely affect our financial condition and results of operations.

In light of adverse conditions in the Korean economy affecting consumers, in March 2009, the FSC requested Korean banks to establish a "pre-workout programme," including a credit counselling and recovery service, for retail borrowers with outstanding short-term debt. The pre-workout programme has been in operation since April 2009 and, following successive extensions by the Government, is expected to continue indefinitely. Under the pre-workout programme, maturity extensions and/or interest reductions are provided for retail borrowers with total loans of ₩1.5 billion or less (consisting of no more than ₩500 million of unsecured loans and ₩1 billion of secured loans) who are in arrears on their payments for more than 30 days but less than 90 days, or for retail borrowers with an annual income of ₩40 million or less who have been in arrears on their payments for 30 days or more on an aggregate basis for the 12 months prior to their application, among others. In addition, in March 2015, in response to increasing levels of consumer debt and amid concerns over the debt-servicing capacity of retail borrowers if interest rates were to rise, the Government launched, and requested Korean banks to participate in, a mortgage loan refinancing programme aimed at reducing the payment burden on and improving the asset quality of outstanding mortgage loans. Under such refinancing programme, over 340,000 qualified retail borrowers converted their outstanding non-amortising floating-rate mortgage loans from Korean commercial banks (including us) into amortising fixed-rate mortgage loans with lower interest rates, amounting to an aggregate principal amount of ₩34 trillion for all commercial banks in 2015. Our participation in such refinancing programme may lead to a decrease in our interest income on our outstanding mortgage loans, as well as in our overall net interest margin. More generally, our participation in such government-led initiatives to provide financial support to retail borrowers may lead us to offer credit terms for such borrowers that we would not otherwise offer in the absence of such initiatives, which may have an adverse effect on our results of operations and financial condition.

In addition, we are exposed to changes in regulations and policies on consumer lending by the Government, which may adopt measures to restrict consumer lending or encourage financial institutions to provide financial support to certain types of retail borrowers. In 2014 and 2015, the Government implemented several measures to encourage consumer spending and revive the housing market in Korea, including loosening regulations on mortgage lending, which contributed to an increase in our portfolio of household loans. However, the Government introduced measures in the second half of 2016, 2017 and 2018 to tighten regulations on mortgage lending and housing subscription in response to the rapid growth in consumer debt and concerns over speculative investments in real estate in certain areas. See *"Regulation and Supervision — Principal Regulations Applicable to Banks — Regulations Relating to Retail Household Loans*". A decrease in housing prices as a result of the implementation of such measures, together with the high level of consumer debt and rising interest rate levels, could result in declines in consumer spending and reduced economic growth, which may lead to increases in delinquency levels of our household loan portfolio.

We have significant exposure through our lending and other activities to a number of industries, and financial difficulties of any companies within these industries may adversely impact us.

Many Korean companies, including certain of our borrowers, are currently facing financial difficulties. In particular, our borrowers in the construction, shipbuilding and shipping sectors have been experiencing significant challenges following the difficult macroeconomic conditions and volatility of the global credit markets. Although the construction industry in Korea has shown signs of recovery since 2015, excessive investment in residential property development projects, the recent strengthening of mortgage lending regulations by the Government, stagnation of real property prices and reduced demand for residential property in areas outside of the Seoul metropolitan area are expected to continue to negatively impact the construction industry. The shipbuilding industry in Korea has experienced a severe downturn in recent years reflecting a significant decrease in ship orders, primarily due to oversupply. Although ship orders have started to increase again, the shipbuilding industry has yet to recover fully. In the case of shipping companies in Korea, reduced shipping rates and high chartering costs, together with the slowdown in global trade, have contributed to the deterioration of their financial condition, requiring some of them to file for bankruptcy or pursue voluntary restructuring of their debt.

As of 30 September 2018, on a separate basis, we had exposures of ₩4.9 trillion, ₩1.5 trillion and ₩0.8 trillion to borrowers in the construction, shipbuilding and shipping sectors, respectively, which represented 2.1 per cent., 0.7 per cent. and 0.3 per cent., respectively, of our total credit. As of the same date, we had set aside an allowance for possible loan losses in the amount of ₩128.9 billion, ₩50.8 billion and ₩10.7 billion for our general loans to borrowers in the construction, shipbuilding and shipping sectors, respectively.

In addition to our general loan exposures, we have other exposures to such borrowers, in the form of guarantees extended for the benefit of such borrowers (which included, on a separate basis, confirmed guarantees of ₩1,733 billion for construction companies, ₩975 billion for shipbuilding companies and ₩13 billion for shipping companies as of 30 September 2018) and debt and equity securities of such borrowers held by us. For example, in the case of construction companies, such exposures include guarantees provided to us by general contractors with respect to financing extended by us for residential and commercial real estate development projects. In the case of shipbuilding companies, such exposures include refund guarantees extended by us on behalf of shipbuilding companies to cover their obligation to return a portion of the ship order contract amount to customers in the event of performance delays or defaults under shipbuilding contracts.

As of 30 September 2018, our largest single exposure (including loans, guarantees and securities) in the construction, shipbuilding and shipping sectors was to Hyundai Engineering and Construction Co., Ltd., which amounted to ₩686 billion on a separate basis, for which we established allowances of ₩0.2 billion. As of the same date, we also had credit exposures to Hyundai Heavy Industries Co., Ltd. and Booyoung Co., Ltd. in the amount of ₩431 billion and ₩375 billion, respectively, on a separate basis, for which we had allowances of ₩0.2 billion and 0.1 billion, respectively.

In response to the deteriorating financial condition and liquidity position of borrowers in the construction, shipbuilding and shipping industries, which were disproportionately impacted by adverse economic developments in Korea and globally, the Government implemented a programme in 2009 to promote expedited restructuring of such borrowers by their Korean creditor financial institutions, under the supervision of major commercial banks. In accordance with such programme, 79 companies, including 29 construction companies, seven shipbuilding companies and ten shipping companies, were designated as targets for restructuring in 2009, following review by their creditor financial institutions and the Government. Each year since 2009, the FSC and the FSS have announced the results of subsequent credit risk evaluations conducted by creditor financial institutions of companies in Korea with outstanding credit exposures of ₩50 billion or more, pursuant to which a number of companies were selected by such financial institutions for restructuring in the form of workout, liquidation or court receivership. Most recently, in August 2017, the "Results of the 2017 Periodic Review of the Credit Risk of Large Enterprises" published by the FSS indicated that 25 enterprises were designated as targets for restructuring, among which eight were companies in the construction sector and three were companies in the shipbuilding sector. However, there is no assurance that these measures will be successful in stabilising the Korean construction, shipbuilding and shipping industries. The corporate restructuring and reorganisations of Korean companies in the construction, shipbuilding and shipping sectors will likely affect the amount of non-performing credits with respect to our exposures to such companies, and our ability to make recoveries may be compromised as a result of such restructuring or reorganisation. There can be no assurance that we will not be required to allocate additional reserves for our exposures to such companies, or that losses from non-performing credits to such companies will not exceed the amounts that we have reserved against such losses, either of which could have a material adverse effect on us.

In recent years, companies in the cable TV network industry in Korea have also been experiencing financial difficulties due to decreasing revenue and subscription base, as many subscribers opt for more mobile forms of media such as Internet streaming and Internet Protocol Television services in lieu of cable TV subscription. As of 30 September 2018, our credit exposure to a major cable TV network operator, Kookmin Cable Investment Inc. ("**Kookmin Cable**"), and its subsidiary, D'Live Co., Ltd. ("**D'Live**"), amounted to ₩64.4 billion and ₩195 billion, respectively, on a separate basis, for which we established allowances of ₩1.2 billion and ₩8.8 billion, respectively. Kookmin Cable and D'Live faced the risk of defaulting on the loans from us and other creditors due to their inability to make interest payments. In July 2016, we and other creditors extended maturity and lowered interest rates of the loans and converted the loans to Kookmin Cable in the aggregate amount of ₩800 billion (of the creditors' total loans of ₩2.2 trillion to Kookmin Cable and D'Live in the aggregate) for 19.9 per cent. equity stake in Kookmin Cable. As of 30 September 2018, we held 4.19 per cent. interest in Kookmin Cable, which we received by converting our loans in the amount of ₩167.7 billion. D'Live is undergoing a sale process as of the date of this Offering Circular.

The allowances that we have established against our credit exposures to Korean companies in the above described industries may be insufficient to cover all future losses arising from such exposures. If the credit quality of our exposures to such Korean companies declines, we may be required to take substantial additional provisions for credit loss, which could adversely impact our results of operations and financial condition. Furthermore, although a portion of our loans to such Korean companies may be secured by collateral, such collateral may be insufficient to cover uncollectible amounts in respect of such loans. See "— *A decline in the value of the collateral securing our loans or our inability to fully realise the collateral value may adversely affect us*".

We have exposure to companies that are currently or may in the future be put in restructuring, and we may suffer losses as a result of additional loan loss provisions which may be required and/or the adoption of restructuring plans with which we do not agree.

As of 30 September 2018, on a separate basis, our loans to companies that were in restructuring (in the form of either workout or rehabilitation) amounted to ₩422 billion, representing 0.2 per cent. of our total loans. Our allowances for losses on these loans may not be sufficient to cover all future losses arising from our exposure to these companies. Furthermore, we have other exposure to such companies, in the form of guarantees extended for the benefit of such companies and debt and equity securities of such companies held by us (including equity securities we acquired as a result of debt-to-equity conversions). With respect to those companies that are in or may in the future enter into a workout or liquidation proceedings, we may not be able to make any recoveries against such companies. We may, therefore, experience future losses with respect to those loans. In addition, in the case of borrowers that are or become subject to workout, we may be forced to restructure our credits pursuant to restructuring plans approved by other creditor financial institutions or to dispose of our credits to other creditors on unfavourable terms, which may adversely affect our results of operations and financial condition.

In particular, as of 30 September 2018, on a separate basis, we had ₩195.5 billion of outstanding loans and ₩131.6 billion of outstanding guarantees (mainly in the form of refund guarantees relating to shipbuilding contracts), to Daewoo Shipbuilding & Marine Engineering Co., Ltd. ("**DSME**"), which has been pursuing a voluntary restructuring programme. In April 2017, the creditors of DSME agreed on a plan to provide additional financial support to DSME in connection with its voluntary restructuring programme, under which The Korea Development Bank and The Export-Import Bank of Korea would provide ₩2.9 trillion of new loans to DSME, on the condition that DSME's other creditors and bondholders agree to a ₩2.9 trillion debt-to-equity swap. The financial support plan required the Korean commercial bank creditors of DSME, including us, to swap 80 per cent. of their outstanding unsecured loans into equity of DSME and extend the maturity of the remaining loans for a period of three years. As a result of this debt-to-equity swap, as of 30 September 2018, we held 8.58 per cent. interest in DSME, which we received by converting our loans in the amount of ₩364 billion. The financial support plan also requires DSME's creditors, including us, to provide additional refund guarantees in connection with future shipbuilding contracts of DSME. The implementation of the financial support plan for DSME has required and may continue to require us to increase our loan loss provisions and recognise write-offs and impairment losses with respect to our exposure to DSME, and may therefore have a material adverse impact on our results of operations and financial condition. Furthermore, there is no guarantee that the plan will be successful in ensuring the financial viability of DSME.

In furtherance of policy objectives, the Government may promote lending and financial support to certain types of institutions to which we would not lend or provide support absent such policies, and such lending or other forms of support may negatively impact our financial condition.

Through its policies and recommendations, the Government has promoted and, as a matter of policy, may continue to attempt to promote lending by the Korean financial industry to particular types of borrowers. For example, the Government has in the past provided and may continue to provide policy loans, which encourage lending to particular types of borrowers. The Government has generally provided such loans by identifying sectors of the economy it wishes to promote and making low-interest funding available to financial institutions that may voluntarily choose to lend to these sectors. For example, the Government has in this manner provided policy loans intended to promote mortgage lending to low-income individuals and lending to SMEs. The Government may implement similar or other initiatives in the future to spur the overall economy or encourage the growth of targeted industries or relief to certain segments of the population. All loans or credits we choose to make pursuant to these policy loans would be subject to review in accordance with our credit approval procedures. However, the availability of policy loans may influence us to lend to certain sectors or in a manner in which we otherwise would not have done in the absence of such policy initiatives from the Government, and the policy-driven lending may create enhanced difficulties for us in terms of risk management and may lead to deterioration of our asset quality and reduced earnings.

In addition, the Government has requested and may in the future request financial institutions in Korea, including us, to make investments in or provide other forms of financial support to particular sectors of the Korean economy as a matter of policy, which such financial institutions, including us, may decide to accept. We may incur costs or losses as a result of providing such financial support.

Competition in the Korean banking industry is intense and may further intensify.

We compete principally with other national banks in Korea. We also face competition from a number of additional sources including regional banks, development banks, specialised banks, branches of foreign banks operating in Korea and various other types of financial service institutions. In particular, competition in the retail and SME lending business, which has traditionally been an important business for us, has increased significantly in recent years and is expected to increase further. In addition, the profitability of our retail banking operations may decline as a result of growing market saturation in the retail lending segment, increased interest rate competition and higher marketing expenses. Intense and increasing competition has made and continues to make it more difficult for us to secure retail and SME customers with the credit quality and on credit terms necessary to achieve our business objectives in a commercially acceptable manner.

Consolidation among our rival institutions and the Government’s privatisation efforts may also add competition in the markets in which we conduct business. A number of significant mergers and acquisitions in the financial industry have taken place in Korea in recent years, including Hana Financial Group’s acquisition of Korea Exchange Bank in 2012 and the resulting Merger in 2015. In addition, pursuant to the implementation of the Government’s privatisation plan with respect to Woori Finance Holdings Co., Ltd. (the former financial holding company of Woori Bank) and its former subsidiaries, certain subsidiaries of Woori Finance Holdings Co., Ltd. were sold to other financial institutions and Woori Finance Holdings Co., Ltd. itself was merged into Woori Bank in 2014. Furthermore, large financial groups have been focused on further growing their asset size and strengthening their non-banking businesses over the past few years by actively seeking acquisition targets. For example, KB Financial Group acquired LIG Insurance Co., Ltd., a general insurer, in 2015, and Hyundai Securities Co., Ltd., a securities company, in 2016. Most recently, in September 2018, Shinhan Financial Group announced that it would acquire Orange Life Insurance Ltd. (formerly ING Life Insurance Korea Ltd.) for ₩2.3 trillion.

We expect that consolidation in the financial industry will continue. Other financial institutions may seek to acquire or merge with other entities, and the financial institutions resulting from such consolidation may, by virtue of their increased size and business scope, provide significantly greater competition for us. Increased competition and continuing consolidation may lead to decreased margins, resulting in a material adverse impact on our future profitability.

Regulatory reforms and the general modernisation of business practices in Korea have also led to increased competition among financial institutions in Korea. In the second half of 2015, the FSC began to take steps to adopt the “account switch service”, which allows customers to manage or switch their automatic payment transfer accounts in a more convenient way. For example, the FSC introduced the integrated automatic payment transfer management system, which enables customers to change the bank account through which automatic payment transfers are made by following simple steps online or visiting a bank branch, with the banks being responsible for implementing the change should the customer decide to switch banks. Prior to the introduction of the account switch service, customers had the onus of making arrangements with each of the involved banks as well as the payment recipient to make the change. Furthermore, effective March 2016, the FSC introduced the individual savings account ("**ISA**") system, as part of its efforts to lower the regulatory barrier between the banking and securities sectors. The ISA is an integrated account that enables account holders to manage a number of different financial products, including cash deposits, funds and securities investment accounts, from a single account, the income from which will be eligible for tax benefits. Since this new system does not allow an individual to hold multiple ISA accounts, financial institutions have been competing to retain existing customers and attract new customers since the launch of the ISA scheme. Over 30 financial institutions, including banks, securities companies and insurance companies, have registered with the FSC to sell their ISA products, and competition among these financial institutions is expected to remain intense. As the reform of the financial sector continues, competition may become more intense among existing banks, insurance companies, securities companies and other financial organisations, and may lead to significant changes in the current Korean financial market. As a result, we may face difficulties in increasing or retaining our deposits, which in turn may result in an increase in our cost of funding, and a decrease in our settlement and remittance service fee revenue.

Furthermore, as the Korean economy further develops and new business opportunities arise, more competitors may enter the Korean banking and other financial services industry. In addition, technological advances and the growth of e-commerce have made it easier for non-depository institutions to offer products and services that traditionally were banking products and services. For example, as online service providers and technology companies with large-scale user networks, such as Kakao Corp., NAVER and Samsung Electronics, recently make significant inroads in providing virtual payment services through a system based on a growing convergence of financial services and technology commonly referred to as "fintech", competition for online customers is growing not just among commercial banks, but also from mobile payment service providers. Also, the introduction of Internet-only banks in Korea is expected to increase competition in the Korean banking industry. K Bank, the first Internet-only bank in Korea, commenced operations in April 2017, and Kakao Bank, another Internet-only bank, commenced operations in July 2017. Internet-only banks may have advantages over traditional banks as the former can pass savings in labour and overhead costs to their customers by offering higher interest rates on deposit accounts, lower loan costs and reduced service fees. Accordingly, commercial banks will likely face increasing pressure to upgrade their service platforms to attract and maintain online users, which represent a growing customer base compared to traditional customers who have primarily conducted banking in-person at physical banking branches. In addition, other large non-financial institutions, such as mobile telecommunications companies, which on a combined basis service most of the Korean population, may expand entry into the consumer finance business by way of convergence with the existing and future mobile telephone networks.

There can be no assurance that we will be able to compete effectively in the face of such increased competition. Increased competition in the Korean banking industry may make it difficult for us to increase the size of our loan portfolio and deposit base and maintain or improve our margins, which could have a material adverse effect on our results of operations and financial condition.

Changes in interest rates could hurt our net interest margin due to a mismatch in our assets and liabilities structures and other factors, which could have a material adverse effect on our asset quality and profitability.

Following the global financial crisis in 2008, Korea, like many other countries, experienced a low interest rate environment despite some marginal fluctuations, in part due to the Government's policy to stimulate the economy through active rate-lowering measures. Between 2009 and 2014, the base interest rate set by the Bank of Korea remained within a relatively narrow band between 2.00 per cent. and 3.25 per cent. Between 2015 and 2016, in an effort to support Korea's economy in light of the slowdown in Korea's growth and uncertain global economic prospects, the Bank of Korea lowered the base interest rate to a historic low of 1.25 per cent through a series of reductions. However, the Bank of Korea increased its policy rate to 1.50 per cent. in November 2017 and further to 1.75 per cent. in November 2018, in light of improved growth prospects and increasing price pressure in Korea, particularly in the housing sector, and rising interest rate levels globally.

Interest rate movements, in terms of magnitude and timing as well as their relative impacts on our assets and liabilities, have a significant impact on our net interest margin and profitability, particularly with respect to our financial products that are sensitive to such movements. For example, if the interest rates applicable to our loans (which are recorded as assets) increase at a slower pace or by a thinner margin than the interest rates applicable to our deposits (which are recorded as liabilities), our net interest margin will shrink and our profitability will be negatively affected. In addition, the relative size and composition of our variable rate loans and deposits (as compared to our fixed rate loans and deposits) may also impact our net interest margin. Furthermore, the difference in the average term of our interest-earning assets (primarily loans) compared to our interest-bearing liabilities (primarily deposits) may also impact our net interest margin. For example, since our deposits tend to have longer terms, on average, than those of our loans, our deposits are on average less sensitive to movements in the base interest rates on which our deposits and loans tend to be pegged, and therefore, a decrease in the base interest rates tend to decrease our net interest margin while an increase in the base interest rates tend to have the opposite effect. While we continually manage our assets and liabilities to minimise our exposure to interest rate volatility, such efforts may not mitigate the impact of interest rate volatility in a timely or effective manner, and our net interest margin, and in turn our financial condition and results of operations, could suffer significantly.

We cannot assure when and to what extent the Government will in the future adjust the base interest rate, to which the market interest rate correlates. A decision to adjust the base interest rate is subject to many policy considerations as well as market factors, including the general economic cycle, inflationary levels, interest rates in other economies and foreign currency exchange rates, among others. In general, a decrease in interest rates adversely affects our interest income due to the different maturity structure for our assets and liabilities as discussed above. In contrast, if there were to be a significant or sustained increase in interest rates, all else being equal, such movement would lead to a decline in the value of traded debt securities and could also raise our funding costs, while reducing loan demand, especially among retail customers. Rising interest rates may therefore require us to re-balance our assets and liabilities in order to minimise the risk of potential mismatches in our asset liability management and to maintain our profitability. In addition, rising interest rates may adversely affect the Korean economy and the financial condition of our corporate and retail borrowers, which in turn may lead to deterioration of asset quality for our credit portfolio. Since most of our retail and corporate loans bear interest at rates that adjust periodically based on prevailing market rates, a sustained increase in interest rates will increase the funding costs of our borrowers and may adversely affect their ability to make payments on their outstanding loans.

The application of Korean IFRS 1109 Financial Instruments commenced in 2018 may adversely impact our reported results of operations and financial condition.

K-IFRS 1109 *Financial Instruments*, which is based on International Financial Reporting Standard 9 Financial Instruments issued by the International Accounting Standard Board in July 2014, is a new accounting standard aimed at improving and simplifying the accounting treatment of financial instruments. K-IFRS 1109 was published on 25 September 2015 and is effective for annual periods beginning on or after 1 January 2018, replacing K-IFRS 1039 *Financial Instruments: Recognition and Measurement*. Key features of K-IFRS 1109 include (i) classification and measurement of financial assets on the basis of an entity's business model for managing financial assets and the contractual cash flow characteristics of the financial assets, (ii) impairment methodology that reflects the "expected credit loss" model for financial assets, as opposed to "incurred losses" (as was the case under K-IFRS 1039) and (iii) expanded scope of hedged items and hedging instruments which qualify for hedge accounting and changes in assessment method for effect of hedging relationships. The impact on our financial statements due to the application of K-IFRS 1109 depends on judgements made by us in applying the new standard, the nature of financial instruments held by us and macroeconomic variables. See Note 3.2 of the notes to our annual and interim consolidated financial statements included elsewhere in this Offering Circular.

We have applied K-IFRS 1109 in our interim consolidated financial statements as of and for the nine months ended 30 September 2018 included elsewhere in this Offering Circular. As permitted by the transition rules of K-IFRS 1109, our comparative consolidated financial statements as of and for the years ended 31 December 2015, 2016 and 2017 and for the nine months ended 30 September 2017 included elsewhere in this Offering Circular have not been restated to retroactively apply K-IFRS 1109. Therefore, the application of K-IFRS 1109 impacts the comparability of certain items between 2018 and the previous periods. For information regarding the impact of the application of K-IFRS 1109 to our consolidated financial statements, see Note 3.2 of the notes to our annual and interim consolidated financial statements included elsewhere in this Offering Circular.

Among other things, the application of K-IFRS 1109 resulted in a one-off increase of ₩96.0 billion in our allowance for credit losses (and a corresponding decrease within our retained earnings) in the opening balances as of 1 January 2018 as compared to the closing balances as of 31 December 2017 for our consolidated statement of financial position. The application of K-IFRS 1109 may continue to result in higher impairment loss allowances that are recognised earlier, on a more forward-looking basis and on a broader scope of financial instruments than was the case under K-IFRS 1039. In addition, the move from incurred to expected credit losses will have the potential to impact our performance under stressed economic conditions or regulatory stress tests. Measurement requires increased complexity in our impairment modelling as it involves a greater degree of management judgement with respect to forward-looking information. We expect that impairment charges will tend to be more volatile as a result. Furthermore, K-IFRS 1109 introduced additional requirements for a financial asset to be classified as measured at amortised costs or fair value through other comprehensive income compared to the prior guidance in K-IFRS 1039, and therefore would potentially increase the proportion of financial assets that are measured at FVTPL, thereby increasing volatility in our profit or loss.

Korea Exchange Bank's merger with Hana Bank in 2015 may continue to pose risks and challenges, and we may not realise the full anticipated benefits of the Merger.

In February 2012, Hana Financial Group completed the purchase of 51.02 per cent. of the issued and outstanding shares of common stock of Korea Exchange Bank from an affiliate of the Lone Star Funds and an additional 6.25 per cent. from The Export-Import Bank of Korea, for an aggregate purchase price of approximately ₩4.4 trillion. In April 2013, the common stock of Korea Exchange Bank was delisted following Hana Financial Group's acquisition of the remaining 42.73 per cent. stake in Korea Exchange Bank through a share swap at an exchange rate of one share of Hana Financial Group to 0.1894302 share of Korea Exchange Bank. Effective 1 September 2015, Hana Bank merged with and into Korea Exchange Bank, and Korea Exchange Bank changed its name to KEB Hana Bank. See "*KEB Hana Bank — Integration and Merger*".

While we have successfully completed most of the post-Merger integration process, including the integration of the information technology ("**IT**") systems and labour unions of the two banks, certain post-Merger integration activities are still ongoing, including the integration of the employee compensation and benefit plans. Realignment and/or expansion of our business activities in connection with and following the Merger have exposed, and may continue to expose, us to a number of risks and challenges. Although both Korea Exchange Bank and Hana Bank had been operating under common control of Hana Financial Group for over two years prior to the Merger, the Merger has had a material impact on our business, corporate structure, financial condition and results of operations. In addition, the successful implementation of the post-Merger integration involves significant uncertainties and is also dependent on several factors including factors beyond our control. The ongoing integration process may disrupt our businesses and, if implemented ineffectively or if impacted by unforeseen negative economic or market conditions or other factors, we may not realise the full anticipated benefits of the Merger, including cost savings and growth opportunities.

There can be no assurance that we will be able to accomplish the objectives of the Merger successfully and in a timely manner and the realisation of any of the risks described above could affect our ability to implement our business strategy effectively, which could, in turn, have a material adverse effect on our business, financial condition and results of operations.

A decline in the value of the collateral securing our loans or our inability to fully realise the collateral value may adversely affect us.

A substantial portion of our home and mortgage loans are secured by borrowers' homes, other real estate or other securities and guarantees (which are principally provided by the Government and other financial institutions), and a large portion of our corporate loans are also secured, including by real estate. The secured portion of our loans amounted to ₩140.5 trillion, or 43 per cent., of our total loans as of 30 September 2018, on a separate basis. Although our general policy for home and mortgage loans is to lend up to 70 per cent. (or lower in the case of houses located in areas designated by the Government as speculative) of the appraised value of the collateral and to periodically re-appraise the value of the collateral, a downturn in the real estate market in Korea may result in declines in the value of the collateral securing our home and mortgage loans. If collateral values decline in the future, they may not be sufficient to cover uncollectible amounts in respect of our secured loans. Any future declines in the value of the real estate or other collateral securing our loans, or our inability to obtain additional collateral in the event of such declines, may result in the deterioration of our asset quality and require us to take additional loan loss provisions.

In Korea, foreclosure on collateral generally requires a written petition to a Korean court. Foreclosure procedures in Korea typically take ten to fourteen months from initiation to collection depending on the nature of the collateral, and foreclosure applications may be subject to delays and administrative requirements, which may result in a decrease in the recovery value of such collateral. We cannot assure that we will be able to realise the full value of the collateral as there can be, among other factors, delays in foreclosure proceedings, defects in the perfection of the collateral and general declines in the collateral value. Our failure to recover the expected value of the collateral could expose us to significant losses.

Payment guarantees received in connection with our real estate financing may not provide sufficient coverage.

We, alone or together with other financial institutions, provide financing to real estate development projects, which are concentrated in the construction of residential and, to a lesser extent, commercial complexes. Developers in Korea commonly use project financing to acquire land and to cover related project development costs. It is market practice for general contractors to guarantee loans raised by special purpose financing vehicles established by the developers in order to procure the construction orders, as most developers tend to be small and highly leveraged. While general contractors tend to be large and well-established construction companies, given the severe downturn in the real estate market and the construction industry in general, there can be no guarantee that even such companies will have sufficient liquidity to back up their payment guarantees if the real estate development projects do not generate sufficient cash flow from pre-sales of the residential or commercial units. In particular, development projects outside the Seoul metropolitan area have had lower-than-expected levels of pre-sales in the past. If defaults arise under our loans to real estate development projects and payment guarantees are not paid in sufficient amounts to cover the amount of our financings, our business, financial condition and results of operations may be adversely affected.

Any deterioration in the asset quality of our guarantees and acceptances will likely have a material adverse effect on our financial condition and results of operations.

In the normal course of our banking activities, we make various commitments and incur certain contingent liabilities in the form of guarantees and acceptances, which are recorded as off-balance sheet items in the notes to our financial statements. As of 30 September 2018, we had aggregate guarantees and acceptances of ₩17.4 trillion, for which we provided allowances for losses of ₩69.8 billion. No assurance can be given that such allowances will be sufficient to cover any actual losses resulting in respect of these instruments.

We may incur significant losses from our investments and, to a lesser extent, trading activities due to market fluctuations.

We enter into and maintain large investment positions in the fixed income markets, primarily through our treasury and investment business. We also maintain smaller trading positions, including securities and derivative financial instruments, as part of our banking operations. Maintaining these positions entails making assessments about financial market conditions and trends. The revenues and profits that we derive from many of these positions and related transactions are dependent on market prices, which are beyond our control. When we own assets such as debt securities, a decline in market prices, as a result of fluctuating market interest rates, can expose us to losses. If market prices move in a way that we have not anticipated, we may experience losses. In addition, when markets are volatile and subject to rapid changes in the price directions, the actual market prices may be contrary to our assessments and lead to lower-than-anticipated revenues or profits, or even result in losses, with respect to the related transactions and positions.

We may incur losses from our commission- and fee-based business.

Downturns in stock markets are likely to lead to a decline in the volume of transactions that we execute for our customers and, therefore, to a decline in our non-interest revenues. In addition, because the fees that we charge for managing our clients' portfolios are in many cases based on the size of the assets under management, a market downturn which has the effect of reducing the value of our clients' portfolios or increasing the amount of withdrawals may reduce the revenues that we receive from our trust account management. Even in the absence of a market downturn, below-market performance by our trust account services may result in increased withdrawals and reduced inflows, which may reduce the revenue that we receive from these businesses. In addition, protracted market movements resulting in declines of asset prices can reduce liquidity for assets held by us and lead to material losses if we cannot close out or otherwise dispose of deteriorating positions in a timely way or at commercially reasonable prices.

Our business may be adversely affected by legal claims and regulatory actions against us.

We and our employees are subject to the risk of legal claims and regulatory actions, which may expose us to monetary damages and legal costs, injunctive relief, criminal and civil penalties, sanctions against our management and employees and regulatory restrictions on our operations, as well as reputational harm. See "*KEB Hana Bank — Legal Proceedings*".

We are unable to predict the outcome of the legal claims and regulatory actions in which we and our employees are involved, and the scope of the claims or actions or the total amount in dispute in such matters may increase. Furthermore, adverse final determinations, decisions or resolutions in such matters could encourage other parties to bring related claims and actions against us. Accordingly, the outcome of current and future legal claims and regulatory actions, particularly those for which it is difficult to assess the maximum potential exposure or the ultimate adverse impact with any degree of certainty, may materially and adversely impact our business, reputation, results of operations and financial condition.

We may not be able to successfully execute our overseas expansion strategy.

As part of our business strategy, we have been seeking opportunities to expand our operations in markets outside Korea, including through the opening of additional overseas branches and offices as well as strategic acquisitions and investments, particularly in China and Southeast Asia. While we will continue to explore opportunities to expand our global presence, the expansion of our operations abroad may be difficult due to the presence of established competitors in the relevant local markets. In addition, overseas expansion and the management of international operations may require significant financial expenditures as well as management resources, and will subject us to the challenges of operating in an unfamiliar business environment with different regulatory, legal and taxation systems and political, economic and social risks. Accordingly, there is no guarantee that we will be successful in executing our overseas expansion strategy. The failure of our overseas expansion strategy could have an adverse impact on our business, results of operations and financial condition.

Reductions in our credit ratings could, among other things, increase the cost of borrowing funds and may have an adverse impact on our ability to raise new funds or refinance maturing debt on commercially acceptable terms.

Credit ratings are an indicator of our financial and liquidity profile. Among other factors, our credit ratings are based on our financial strength, the credit quality of and concentrations in our loan portfolio, the level and volatility of our earnings, our capital adequacy, the quality of our management, the liquidity of our balance sheet, the availability of a significant base of core and retail deposits and our ability to access a broad range of funding sources. Any reduction in our credit ratings could adversely affect our liquidity and competitive position, increase our borrowing costs and limit our access to the capital markets and funding sources on commercially acceptable terms. Such events could adversely affect our financial condition and results of operations. A reduction in our ratings could also adversely affect the ratings of the Notes.

Our risk management policies and procedures may not be fully effective at all times.

In the course of our operations, we must manage a number of risks, such as credit risks, market risks and operational risks. We seek to monitor and manage our risk exposure through a comprehensive risk management platform, encompassing centralised risk management organisation and credit evaluation systems, reporting and monitoring systems, early warning systems and other risk management infrastructure, using a variety of risk management strategies and techniques. See "*Risk Management*". Although we devote significant resources to developing and improving our risk management policies and procedures and expect to continue to do so in the future, our risk management techniques may not be fully effective at all times in mitigating risk exposures in all market environments or against all types of risk, including risks that are unidentified or unanticipated. Management of credit, market and operational risks requires, among other things, policies and procedures to properly record and verify a large number of transactions and events, and we cannot assure that these policies and procedures will prove to be fully effective at all times against all the risks that we face.

We may experience disruptions, delays and other difficulties relating to our information technology systems.

We rely on our IT systems for our daily operations, including billing, effecting online and offline financial transactions and recordkeeping. We also upgrade from time to time our group-wide customer data sharing and other customer relations management systems. We may experience disruptions, delays or other difficulties relating to our IT systems, and may not integrate or upgrade our systems as currently planned. Any of these developments may have an adverse effect on our business and adversely impact our customers' confidence in us.

We are subject to cyber security risk.

We are subject to a risk of cyber-attacks, the nature of which is continually evolving. Cyber security risks include unauthorised access, through system-wide "hacking" or other means, to privileged and sensitive customer information, including passwords and account information and illegal use thereof. Cyber security risk is generally on the rise as a growing number of our customers increasingly rely on Internet- and mobile phone-based banking services for various types of financial transactions. While we vigilantly protect customer data through encryption and other security programmes and have made substantial investments to build and upgrade our systems to address the growing threats from cyber-attacks, there is no assurance that such data will not be subject to future security breaches as a result of illegal activities by our employees, outside consultants or hackers, or otherwise.

We have not experienced any material security breaches in the past. However, major financial institutions in Korea have fallen victim to cyber security attacks in the past, and given the unpredictable and continually evolving nature of cyber security threats due to advances in technology or other reasons, there is no assurance that, notwithstanding our best efforts at maintaining the best-in-class cyber security systems, we will not be vulnerable to major cyber security attacks in the future.

The public is developing heightened awareness about the importance of keeping their personal data private and the financial regulators are placing greater emphasis on data protection by financial service providers. As such, in light of the various incidents of security breaches involving financial institutions, the Government has implemented heightened consumer protection measures. For example, under the Personal Information Protection Act, as last amended in July 2017, financial institutions, as personal information managers, may not collect, store, maintain, utilise or provide resident registration numbers of their customers, unless other laws or regulations specifically require or permit the management of resident registration numbers. Further, under the Use and Protection of Credit Information Act, as last amended on and with effect from 31 December 2018, a financial institution has a higher duty to protect all information that it collects from its customers and is required to treat such information as credit information. A financial institution's ability to transfer or provide the information to its affiliate or holding company is considerably restricted. Treble damages may be imposed on a financial institution for leakage of such information. In addition, under the Electronic Financial Transaction Act, as last amended in April 2017, a financial institution is primarily responsible for compensating its customers harmed by a cyber security breach affecting the financial institution, even if the breach is not directly attributable to the financial institution.

If a cyber or other security breach were to happen, it may result in litigation by affected customers or other third parties (including class action), compensation for any losses suffered by victims of cyber security attacks, reputational damage, loss of customers, heightened regulatory security and related sanctions, more stringent compliance with the present and future regulatory restrictions, and other costs related to damage control, reparation and reinforcement of information security systems, any of which may have a material adverse effect on our business, financial condition and results of operations.

We may be required to raise additional capital if our capital adequacy ratio deteriorates or the applicable capital requirements change in the future, but we may not be able to do so on favourable terms or at all.

Pursuant to the capital adequacy requirements of the FSC, we are required to maintain a minimum common equity Tier I capital adequacy ratio of 8.0 per cent., a minimum Tier I capital adequacy ratio of 9.5 per cent. and a combined Tier I and Tier II capital adequacy ratio of 11.5 per cent., each on a consolidated basis (including applicable additional capital buffers and requirements as described below). Tier II capital is included in calculating the combined Tier I and Tier II capital adequacy ratio up to 100.0 per cent. of Tier I capital. Our Tier I capital adequacy ratio and our combined Tier I and Tier II capital adequacy ratio were 14.17 per cent. and 16.51 per cent., respectively, as of 30 September 2018, each of which exceeded the minimum levels required by the FSC. See "*Capitalisation — Capital Adequacy*". However, our capital base and capital adequacy ratio may deteriorate in the future if our results of operations or financial condition deteriorates for any reason, including as a result of a deterioration in the asset quality of our loans to households, SMEs and/or large conglomerates, or if we are not able to deploy our funding into suitably low-risk assets.

The current capital adequacy requirements of the FSC are derived from a new set of bank capital measures, referred to as Basel III ("**Basel III**"), which the Basel Committee on Banking Supervision initially introduced in 2009 and began phasing in starting from 2013. Commencing in July 2013, the FSC promulgated a series of amended regulations implementing Basel III, pursuant to which Korean banks and bank holding companies were required to maintain a minimum ratio of Tier I common equity capital (which principally includes equity capital, capital surplus and retained earnings) to risk-weighted assets of 3.5 per cent. and Tier I capital to risk-weighted assets of 4.5 per cent. from 1 December 2013, which minimum ratios increased to 4.0 per cent. and 5.5 per cent., respectively, from 1 January 2014 and increased further to 4.5 per cent. and 6.0 per cent., respectively, from

1 January 2015. Such requirements are in addition to the pre-existing requirement for a total minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8.0 per cent., which remains unchanged. The amended regulations also require an additional capital conservation buffer of 1.25 per cent. in 2017 and 1.875 per cent. in 2018, with such buffer to increase to 2.5 per cent. by 2019, as well as a potential counter-cyclical capital buffer of up to 2.5 per cent., which is determined on a quarterly basis by the FSC. Furthermore, we were designated as one of six domestic "systemically important banks" for 2018 by the FSC and were subject to an additional capital requirement of 0.75 per cent. in 2018. In June 2018, we were again designated as a domestic systemically important bank for 2019 and were subject to an additional capital requirement of 1.0 per cent. in 2019. The implementation of Basel III in Korea may have a significant effect on the capital requirements of Korean financial institutions, including us.

We may be required to obtain additional capital in the future in order to remain in compliance with more stringent capital adequacy and other regulatory requirements. However, we may not be able to obtain additional capital on favourable terms, or at all. Our ability to obtain additional capital at any time may be constrained to the extent that banks or other financial institutions in Korea or from other Asian countries are seeking to raise capital at the same time. To the extent that we fail to comply with applicable capital adequacy ratios or other regulatory requirements in the future, Korean regulatory authorities may impose penalties on us ranging from a warning to suspension or revocation of our banking licence.

We are a heavily regulated entity and operate in a legal and regulatory environment that is subject to change, and violations could result in penalties and other regulatory actions.

As a financial services provider, we are subject to a number of regulations that are designed to maintain the safety and soundness of Korea's financial system, to ensure our compliance with economic and other obligations and to limit our risk exposure. These regulations may limit our activities, and changes in these regulations may increase our costs of doing business. Regulatory agencies frequently review regulations relating to our business and implement new regulatory measures, including increasing the minimum required provisioning levels or capital adequacy ratios applicable to us from time to time. We expect the regulatory environment in which we operate to continue to change. Changes in regulations applicable to us and our business or changes in the implementation or interpretation of such regulations could affect us in unpredictable ways and could adversely affect our business, results of operations and financial condition.

In June 2016, the FSC proposed the enactment of the Act on the Financial Consumer Protection Framework, which was submitted to the Korean National Assembly in May 2017. If the act is adopted as proposed, banks as financial instrument distributors will be subject to heightened investor protection measures, including stricter distribution guidelines, improved financial dispute resolution procedures, increased liability for customer losses and newly imposed penalty surcharges. We may also become subject to other restrictions on our operations as a result of future changes in laws and regulations, including more stringent liquidity requirements under Basel III, which are being adopted in phases in Korea in consideration of, among other things, the pace and scope of international adoption of such requirements. Specifically, Basel III includes a new minimum liquidity standard, known as the liquidity coverage ratio ("**LCR**"), which is designed to ensure that banks have an adequate stock of unencumbered high quality liquid assets ("**HQLA**") that can be easily and speedily converted into cash in the private marketplace to survive a significant stress scenario lasting 30 calendar days. The LCR is computed as (a) the value of a banking organisation's HQLA, divided by (b) its total expected net cash outflows over the next 30 calendar days under stress scenarios. The FSC required us and other Korean banks to maintain LCR of not less than 85 per cent. for 2016, 90 per cent. for 2017 and 95 per cent. for 2018, respectively. Starting from 2019, we are required to maintain LCR of 100 per cent. In addition, we were previously required to maintain (i) a foreign currency liquidity ratio (defined as foreign currency liquid assets due within three months divided by foreign currency liabilities due within three months) of not less than 85 per cent. and (ii) a ratio of foreign currency liquid assets due within a month less foreign currency liabilities due within a month, divided by total foreign currency assets, of not more than 10 per cent. Any of these regulatory developments may have a material adverse effect on our ability to expand operations or adequately manage our risks and liabilities.

In addition, violations of law and regulations could expose us to significant liabilities and sanctions. For example, the FSC conducts periodic audits on banks and, from time to time, we have received institutional warnings from the FSC. If the FSC determines as part of such audit or otherwise that our financial condition is unsound or that we have violated applicable law or regulations, including FSC orders, or if we fail to meet applicable regulatory standards, such as minimum capital adequacy and liquidity ratios, as the case may be, set forth under Korean law, the FSC may order, among other things, capital increases or reductions, suspension of officers from performing their duties and appointment of custodians, stock cancellations, consolidations, transfers of business, sales of assets, closures of branch offices, mergers with other financial institutions and/or suspensions of a part or all of our business operations. If any of such measures is imposed on us as a result of unsound financial condition or failure to comply with minimum capital adequacy requirements or for other reasons, it will have a material adverse effect on our business, financial condition and results of operations.

For further details on the principal laws and regulations applicable to us, see *"Regulation and Supervision"*.

We may be assessed additional taxes in respect of prior periods as a result of tax audits by Korean tax authorities.

From time to time, we are subject to tax audits by Korean tax authorities. The Seoul Regional Tax Office conducted a tax audit of Korea Exchange Bank in 2012, of Hana Bank in 2014 and of KEB Hana Bank in the first half of 2018, none of which resulted in any material findings or penalties. Although we believe that we have complied with our obligations under applicable Korean tax laws and regulations in all material respects, there can be no assurance that we will not be involved in disputes with, or will not be assessed additional income or other taxes with respect to prior periods or in connection with the Merger by, Korean tax authorities as a result of tax audits of us. Any such additional taxes assessed against us, if significant, may have an adverse effect on our results of operations and financial condition.

We currently engage in limited activities with sanctions targets in the Russian Federation ("Russia") and historical sanctions targets in Myanmar, and operated as a settlement bank for Euro-denominated transactions with Iran in the past, any of which may subject us to legal and reputational risks.

The U.S. Department of the Treasury's Office of Foreign Assets Control ("**OFAC"**) administers and enforces certain laws and regulations ("**OFAC Sanctions**") that impose restrictions upon U.S. persons with respect to dealings with or related to certain countries, governments, entities and individuals that are the subject of OFAC Sanctions, including Russia and Iran, and maintains a list of specially designated nationals (the "**SDN List**"), whose assets are blocked and with whom U.S. persons are generally prohibited from dealing. OFAC also publishes a Sectoral Sanctions Identifications ("**SSI**") list to identify certain persons operating in sectors of the Russian economy identified by the Secretary of the Treasury pursuant to Executive Order 13662 and the four directives issued thereunder. Depending on the directive implicated, U.S. persons are prohibited from engaging in certain activities with those entities designated on the SSI list. Some OFAC Sanctions require a U.S. nexus in order to apply ("**Primary Sanctions**"), while other OFAC Sanctions on certain dealings with or related to Iran, North Korea, and Russia apply even in the absence of a U.S. nexus ("**Secondary Sanctions**"). Non-U.S. persons are subject to Secondary Sanctions and can also be held liable for violations of OFAC Sanctions on various legal grounds, such as causing violations by U.S. persons by engaging in transactions completed in part in the United States or engaging in certain transactions with Iran and Iranian entities.

The European Union ("**EU**") also enforces certain laws and regulations that impose restrictions upon nationals and entities of, and business conducted in, member states with respect to activities or transactions with certain countries, governments, entities and individuals that are the subject of such laws and regulations. The United Nations Security Council and other governmental entities also impose similar sanctions.

In Russia, we engage in certain dealings with Sberbank and VTB Bank, both of which are currently named to the SSI list and subject to limited sanctions based upon their respective SSI designations. We maintain Russian ruble accounts with Sberbank and VTB Bank to facilitate the transfer of money from Russia to Korea. Both Sberbank and VTB Bank are targets of OFAC sanctions pursuant to Directive 1 (as amended) issued under Executive Order 13662, and they are included on OFAC's SSI list. Under Directive 1, certain activities by U.S. persons or conducted within the United States relating to debt or equity of certain SSI targets are prohibited. Sberbank and VTB Bank are also targets of restrictive measures under Council Regulation (EU) 833/2014 ("**Regulation 833/2014**").

As the SSI sanctions on Sberbank and VTB Bank do not apply to non-U.S. persons and entities, we believe our activities relating to Sberbank and VTB Bank are not sanctionable under the OFAC sanctions. We also believe our activities relating to Sberbank and VTB Bank are not sanctionable under Regulation 833/2014. However, there is no guarantee that such activities will not be found to violate applicable sanctions laws. Moreover, future changes in law concerning Sberbank or VTB Bank specifically or Russia generally could also adversely affect us. Accordingly, our activities relating to Russia subject us to legal and reputational risks.

With regards to our Iran dealings, in August 2016, the Government authorised us to act as a settlement bank for Euro-denominated transactions between South Korean and Iranian businesses. Pursuant to this authorisation, we processed Euro-denominated settlement transactions involving Iranian companies for a limited period of time. In April 2018, however, we suspended our settlement system for Euro-denominated transactions with Iranian businesses, and as of the date of this Offering Circular, we have no plans to resume operating this system in the future. We are committed to engaging only in lawful activities and in obeying all relevant OFAC and EU sanctions but cannot guarantee that actions taken by our employees will not violate such sanctions should we re-engage in settling transactions involving Iranian businesses.

On 8 May 2018, U.S. President Donald Trump announced his decision to terminate the participation of the United States in the Joint Comprehensive Plan of Action (the "**JCPOA**"), pursuant to which certain relief of OFAC Sanctions relating to Iran had been provided. Following two wind-down periods, one ending 6 August 2018 and the other ending 4 November 2018, all Iran-related Secondary Sanctions that had been waived pursuant to the JCPOA were re-imposed and, as a result, non-U.S. persons may again face risk of Secondary Sanctions for dealing with certain key sectors of the Iranian economy or for providing associated services related to the targeted activities. Thus, our activities related to Iran may subject us to OFAC Sanctions and to potential legal and reputational risks in the future.

We are also engaged in operating activities relating to Myanmar, including limited activities with two banks in Myanmar that were formerly designated on the SDN List. In October 2012, Hana Bank established a liaison office in Yangon, Myanmar. In addition, in November 2012, Hana Bank entered into a memorandum of understanding with Ayeyarwady Bank, a major commercial bank in Myanmar, setting forth the terms of a strategic alliance between Hana Bank and Ayeyarwady Bank. Following the signing of the memorandum of understanding, Hana Bank provided a one-time employee training programme for Ayeyarwady Bank between May 2013 and June 2013, and in October 2013, Ayeyarwady Bank opened a U.S. dollar account with Hana Bank to facilitate the transfer of money from Korea to Myanmar by Myanmar workers in Korea. We are also engaged in limited transactions with Kanbawza Bank, a private bank based in Yangon, primarily involving transfer of money from Korea to Myanmar by Myanmar workers in Korea.

Myanmar was subject to certain sanctions administered by the OFAC until 2016. However, on 7 October 2016, the United States officially lifted the sanctions against Myanmar, and as a result of such lifting, both Ayeyarwady Bank and Kanbawza Bank were removed from the SDN List. We believe that our activities relating to Ayeyarwady Bank and Kanbawza Bank specifically, as well as to Myanmar generally, were not, and are currently not, sanctionable under the OFAC Sanctions or other applicable sanctions laws of relevant jurisdictions. However, our historical activities undertaken while the sanctions were in effect may subject us to increased scrutiny and potential reputational risk, as well as potential legal risk in the event of a finding of past violation.

You may not be able to enforce a judgement of a foreign court against us.

We are a corporation with limited liability organised under the laws of Korea. Substantially all of our directors and officers and other persons named in this Offering Circular reside in Korea, and all or a significant portion of the assets of our directors and officers and other persons named in this Offering Circular as well as substantially all of our assets are located in Korea. As a result, it may not be possible for investors to effect service of process within the United States or certain other jurisdictions, or to enforce against them or us in the United States or certain other jurisdictions judgements obtained in courts in such jurisdictions based on the civil liability provisions of such jurisdictions. There is doubt as to the enforceability in Korea, either in original actions or in actions for enforcement of judgements of courts in such jurisdictions, of civil liabilities predicated on the laws of such jurisdictions.

Risks Relating to Korea

Adverse developments in Korea may have adverse effects on us.

We are incorporated in Korea, where most of our assets are located and most of our income is generated. As a result, our performance and successful fulfilment of our operational strategies are necessarily dependent on the overall Korean economy. The economic indicators in Korea in recent years have shown mixed signs of growth and uncertainty, and future growth of the economy is subject to many factors beyond our control.

In recent years, adverse conditions and volatility in the worldwide financial markets, fluctuations in oil and commodity prices and the general weakness of the global economy have contributed to the uncertainty of global economic prospects in general and have adversely affected, and may continue to adversely affect, the Korean economy. See "*Risks Relating to Our Business — Uncertainties and instability in global market conditions could* *adversely affect our business, financial condition and results of operations, as well as the value of the Notes*". The value of the Won relative to major foreign currencies in general and the U.S. dollar in particular has also fluctuated significantly. Furthermore, as a result of adverse global and Korean economic conditions, there has been volatility in the stock prices of Korean companies in recent years. Future declines in the Korea Composite Stock Price Index ("**KOSPI**") and large amounts of sales of Korean securities by foreign investors and subsequent repatriation of the proceeds of such sales may adversely affect the value of the Won, the foreign currency reserves held by financial institutions in Korea, and the ability of Korean companies to raise capital. Any future deterioration of the Korean or global economy could adversely affect our business, financial condition and results of operations.

Developments that could have an adverse impact on Korea's economy include:

- continued volatility or deterioration in Korea's credit and capital markets;
- difficulties in the financial sectors in Europe, China and elsewhere and increased sovereign default risks in select countries and the resulting adverse effects on the global financial markets;
- global market volatility in connection with "Brexit", the United Kingdom's vote to leave the European Union in a referendum held in June 2016, and the planned implementation of such departure in March 2019;
- declines in consumer confidence and a slowdown in consumer spending and corporate investments;
- adverse changes or volatility in foreign currency reserve levels, commodity prices (including oil prices), exchange rates (including fluctuation of the U.S. dollar, the Euro or the Yen exchange rates or revaluation of the Chinese Renminbi), interest rates, inflation rates or stock markets;
- increasing levels of household debt;
- increasing delinquencies and credit defaults by retail and SME borrowers;
- continuing adverse conditions in the economies of countries and regions that are important export markets for Korea, such as the United States, Europe, Japan and China, or in emerging market economies in Asia or elsewhere;
- the economic impact of any pending or future free trade agreements or changes in existing free trade agreements;
- the adoption and expansion of trade restrictions or the occurrence of trade wars;
- social and labour unrest;
- decreases in the market prices of Korean real estate;
- increases in social expenditures to support an ageing population in Korea or decreases in economic productivity due to the declining population size in Korea;
- geopolitical uncertainty and risk of further attacks by terrorist groups around the world;
- the occurrence of severe health epidemics in Korea or other parts of the world (such as the Middle East Respiratory Syndrome outbreak in Korea in 2015, followed by the reappearance of a case in September 2018);
- deterioration in economic or diplomatic relations between Korea and its trading partners or allies, including deterioration resulting from territorial or trade disputes or disagreements in foreign policy (such as the controversy between Korea and China regarding the deployment of a Terminal High Altitude Area Defense system in Korea by the United States commencing in March 2017 and the ensuing economic and other retaliation measures imposed by China against Korea);
- political uncertainty or increasing strife among or within political parties in Korea, and political gridlock within the government or in the legislature, which prevents or disrupts timely and effective policy making;
- political scandal, including but not limited to, bribery, power abuse and illegal dealings by the government officials;
- investigations of several Korean conglomerates and their senior management for bribery, embezzlement and other possible misconduct;
- hostilities or political or social tensions involving oil producing countries in the Middle East and North Africa and any material disruption in the global supply of oil or significant decrease or increase in the price of oil; and

- natural or man-made disasters that have a significant adverse economic or other impact on Korea (such as the sinking of the Sewol ferry in 2014, which significantly dampened consumer sentiment in Korea) or its major trading partners.

Escalations in tensions with North Korea could have an adverse effect on us and the market value of the Notes.

Relations between Korea and North Korea have been tense throughout Korea's modern history. The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In particular, there have been heightened security concerns in recent years stemming from North Korea's nuclear weapon and ballistic missile programmes as well as its hostile military actions against Korea. Some of the significant incidents in recent years include the following:

- North Korea renounced its obligations under the Nuclear Non-Proliferation Treaty in January 2003 and conducted six rounds of nuclear tests since October 2006, including claimed detonations of hydrogen bombs, which are more powerful than plutonium bombs, and warheads that can be mounted on ballistic missiles. Over the years, North Korea has also conducted a series of ballistic missile tests, including missiles launched from submarines and intercontinental ballistic missiles that it claims can reach the United States mainland. In response, the Government has repeatedly condemned the provocations and flagrant violations of relevant United Nations Security Council resolutions. In February 2016, the Government also closed the inter-Korea Gaesong Industrial Complex in response to North Korea's fourth nuclear test in January 2016. Internationally, the United Nations Security Council has passed a series of resolutions condemning North Korea's actions and significantly expanding the scope of sanctions applicable to North Korea, most recently in December 2017 in response to North Korea's intercontinental ballistic missile test in November 2017. Over the years, the United States and the European Union have also expanded their sanctions applicable to North Korea.
- In August 2015, two Korean soldiers were injured in a landmine explosion near the Korean demilitarised zone. Claiming the landmines were set by North Koreans, the Korean army re-initiated its propaganda programme toward North Korea utilising loudspeakers near the demilitarised zone. In retaliation, the North Korean army fired artillery rounds on the loudspeakers, resulting in the highest level of military readiness for both Koreas. High-ranking officials from North Korea and Korea subsequently met for discussions and entered into an agreement on 25 August 2015 intending to defuse military tensions.
- In March 2010, a Korean naval vessel was destroyed by an underwater explosion, killing many of the crewmen on board. The Government formally accused North Korea of causing the sinking, while North Korea denied responsibility. Moreover, in November 2010, North Korea fired more than one hundred artillery shells that hit Korea's Yeonpyeong Island near the Northern Limit Line, which acts as the de facto maritime boundary between Korea and North Korea on the west coast of the Korean peninsula, causing casualties and significant property damage. The Government condemned North Korea for the attack and vowed stern retaliation should there be further provocation.

North Korea's economy also faces severe challenges, including severe inflation and food shortages, which may further aggravate social and political tensions within North Korea. In addition, reunification of Korea and North Korea could occur in the future, which would entail significant economic commitment and expenditure by Korea that may outweigh any resulting economic benefits of reunification.

A series of recent diplomatic contacts may lead to positive developments in North Korea's relations with Korea as well as with the United States. Korean President Moon Jae-in and North Korean Chairman Kim Jong Un held inter-Korean summit meetings in April, May and September 2018, during which they discussed the denuclearization of the Korean Peninsula, establishment of a permanent peace, and progress on inter-Korean relations, among other matters. Furthermore, in June 2018, U.S. President Donald Trump and Kim held a summit meeting in Singapore, representing the first meeting between a sitting U.S. president and a North Korean chairman. In a joint statement signed by both leaders, Trump and Kim stated that the two countries commit to establishing new U.S.-North Korea relations and joining efforts to build a lasting peace regime on the Korean peninsula.

Despite such developments, there can be no assurance that the level of tensions affecting the Korean peninsula will not escalate in the future. Any increase in tension or uncertainty relating to the military, political or economic stability in the Korean peninsula, including a breakdown of diplomatic negotiations over the North Korean nuclear programme, occurrence of military hostilities, heightened concerns about the stability of North

Korea's political leadership or its actual collapse, a leadership crisis, a breakdown of high-level contacts or accelerated reunification could have a material adverse effect on our business, financial condition and results of operations, as well as a downgrade in the credit rating of Korea, us or the Notes.

We are generally subject to Korean accounting, regulatory, corporate governance and disclosure standards, which differ from those applicable to banks in other countries.

Banks in Korea, including us, are subject to Korean accounting standards and disclosure requirements, which may differ in significant respects from those applicable to banks in certain other countries, including the United States. Our financial statements are prepared in accordance with K-IFRS, which may differ in certain respects from IFRS applied in other countries. In addition, we are subject to corporate governance standards applicable to Korean banks, which differ in many respects from standards applicable in other countries. There may also be less publicly available information about Korean banks, such as us, than is regularly made available by public or non-public companies in other countries. Such differences in accounting and corporate governance standards as well as less available public information could result in corporate governance practices or disclosures that are perceived as less than satisfactory by investors in certain countries.

Risks Relating to the Notes

Capitalised terms used but not defined in this section shall have the meanings given to them in the "*Terms and Conditions of the Notes*".

The Notes are unsecured obligations.

Because the Notes are unsecured obligations, their repayment may be compromised if:

- we enter into bankruptcy, liquidation, reorganisation or other winding-up proceedings;
- there is a default in payment under our future secured indebtedness or other unsecured indebtedness; or
- there is an acceleration of any of our indebtedness.

If any of these events occurs, our assets may not be sufficient to pay amounts due on any of the Notes.

The Notes may have limited liquidity.

The Notes, when issued, will constitute a new issue of securities for which there will be no existing trading market. Although the Dealers may make a market for the Notes, they are not obligated to do so, and any market-making activity with respect to the Notes, if commenced, may be discontinued at any time without notice.

No assurances can be given that a market for the Notes will develop in the future. If such a market were to develop, the Notes could trade at prices that may be higher or lower than the offering price depending on many factors, including, among others:

- prevailing interest rates;
- our financial condition, performance and prospects;
- the rate of exchange between Won and the currency of the Notes;
- political and economic developments in Korea; and
- the market conditions for similar securities.

The Notes are subject to transfer restrictions.

The Notes will not be registered under the Securities Act or any state securities laws and may not be offered or sold within the United States, except to certain persons in offshore transactions in reliance on Regulation S, or, if available, pursuant to another exemption from, or in another transaction not subject to, the registration requirements of the Securities Act and, in each case, in accordance with applicable state securities laws. For a further discussion of the transfer restrictions applicable to the Notes, see "*Subscription and Sale and Transfer and Selling Restrictions*".

The Notes may be redeemed by us in certain circumstances.

The Notes may be redeemable at our option, in whole but not in part, on any of the optional redemption dates specified in the applicable Pricing Supplement at their outstanding principal amount together (if applicable) with interest accrued to (but excluding) the date of redemption. Furthermore, the Notes may be redeemable at our option, in whole but not in part, at their outstanding principal amount together (if applicable) with interest accrued to (but excluding) the date of redemption, upon the occurrence of certain changes in applicable tax laws and regulations which (i) require us to pay additional amounts on payments of principal and interest in respect of the Notes due to withholding or deduction required by law or (ii) in the case of Notes that are Tier I Subordinated Notes, cause us to no longer be entitled to claim a deduction in respect of interest paid on the Tier I Subordinated Notes for purposes of Korean corporation tax. In addition, the Notes that are Tier I Subordinated Notes may be redeemed by us, in whole but not in part, at their outstanding principal amount together (if applicable) with interest accrued to (but excluding) the date of redemption, upon the occurrence of a regulatory event that would cause the Tier I Subordinated Notes to no longer qualify as additional Tier I capital. Such redemptions at our option are subject to necessary prior approval by the FSS or such other relevant regulatory authorities in Korea. See "*Terms and Conditions of the Notes — Redemption and Purchase*".

Accordingly, holders of the Notes should not rely on being able to hold the Notes until their maturity date. The date on which we may elect to redeem the Notes may not align with the preference of holders of the Notes, and such election by us may be disadvantageous to holders of the Notes in light of market conditions or the individual circumstances of such holders. In addition, if the Notes are redeemed prior to their maturity date, there is no guarantee that the holders of the Notes will be able to reinvest the amounts received upon redemption at a rate that will provide the same return as the investment in the Notes.

The Notes that are Subordinated Notes are subordinated and have only limited rights of acceleration.

The relevant Pricing Supplement may specify that the Notes will be Subordinated Notes (as defined in Condition 3(c) of the Terms and Conditions of the Notes), which will be our subordinated obligations. Payments on the Subordinated Notes will be subordinate in right of payment upon the occurrence of a Subordination Event (as defined in Condition 3(c) of the Terms and Conditions of the Notes) to the prior payment in full of all deposits and other liabilities of us, except those liabilities which rank equally with or junior to the Subordinated Notes. As a consequence of these subordination provisions, if any of such events should occur, the holders of the Subordinated Notes may recover proportionately less than the holders of our deposit liabilities or the holders of our other unsubordinated liabilities.

Only those limited events described herein regarding our bankruptcy or liquidation will permit a holder of Subordinated Notes to accelerate payment of such Subordinated Notes. In such event, the only action the holder may take in Korea against us is to make a claim in our liquidation or other applicable proceeding. Furthermore, if our indebtedness were to be accelerated, our assets may be insufficient to repay in full borrowings under all such debt instruments, including the Subordinated Notes.

In addition, subject to complying with applicable regulatory requirements in respect of our leverage and capital ratios, there is no restriction on the amount or type of other securities or indebtedness that we may issue or incur, as the case may be, that rank senior to, or *pari passu* with, the Subordinated Notes. The issue of any such other securities or the incurrence of any such other indebtedness may reduce the amount, if any, recoverable by holders of the Subordinated Notes on our liquidation or winding-up and may increase the likelihood of a non-payment or reduction of interest on the Subordinated Notes. The issue of any such other securities or the incurrence of any such other indebtedness might also have an adverse impact on the market price of the Subordinated Notes and the ability of holders to sell the Subordinated Notes.

Holders of Notes that are Subordinated Notes will have no creditor objection rights in connection with our future merger with another entity.

Under the Korean Commercial Code, a Korean company that has resolved to merge with another entity is required to provide notice of the impending merger to its creditors and, if any creditor raises an objection to the merger during the applicable creditor objection period, to either repay the relevant debt owed to such creditor or provide adequate collateral to secure such debt. However, pursuant to Condition 3(c) of the Terms and Conditions of the Notes, holders of Subordinated Notes will be deemed to have waived, and agreed not to exercise, any such creditor objection rights that may arise in connection with our merger with another entity. Accordingly, holders of Subordinated Notes will have no creditor objection rights in connection with our future merger.

The Notes that are Subordinated Notes may be fully written off upon the occurrence of certain trigger events, in which case holders of the Subordinated Notes will lose all of their investment.

The Subordinated Notes will be subject to loss absorption provisions pursuant to which we will irrevocably effect a full write-off of the outstanding principal amount and accrued but unpaid interest on the Subordinated Notes (without the need for the consent of the holders) upon the occurrence of a trigger event tied to our performance and viability. A trigger event would occur upon (i) the designation of us as an "insolvent financial institution" pursuant to the Act on Structural Improvement of the Financial Industry or (ii) the designation of us as an "insolvent financial company" pursuant to the Depositor Protection Act. Such write-off will come into effect on the third business day in Korea from the date of occurrence of such trigger event.

Under Article 2 of the Act on Structural Improvement of the Financial Industry, an "insolvent financial institution" is defined as a financial institution that is:

- determined by the FSC or the Deposit Insurance Committee (the "**DIC**") established within the Korea Deposit Insurance Corporation (the "**KDIC**"), based on an actual survey of such financial institution's business operations as (i) having liabilities that exceed its assets (each as valued and calculated in accordance with standards established by the FSC), or (ii) facing apparent difficulty in its normal operations because its liabilities exceed its assets (each as valued and calculated in accordance with standards established by the FSC) as a result of the occurrence of a major financial scandal or the accrual of non-performing loans;
- subject to a suspension of payment of claims (including deposits) or repayment of money borrowed from other financial institutions; or
- determined by the FSC or the DIC to be unable to make payments of claims (including deposits) or repayments of money borrowed, without external support or additional borrowings (other than borrowings accruing from ordinary course financial transactions).

In the event that the Subordinated Notes are written off, such written-off amount will be irrevocably lost and holders of the Subordinated Notes will cease to have any claims for any principal amount and accrued but unpaid interest on the Subordinated Notes. See "*Terms and Conditions of the Notes — Loss Absorption Upon a Trigger Event in Respect of Subordinated Notes*".

Potential investors should consider the risk that, due to the existence of such loss absorption features, a holder of Subordinated Notes may lose all of its investment in such Subordinated Notes in the event that a trigger event occurs.

The applicable Korean laws and regulations relating to the trigger event and loss absorption features of capital instruments like the Subordinated Notes are relatively new and have yet to be tested. There is considerable uncertainty as to the circumstances under which the relevant Korean regulatory authorities will decide to effect a trigger event with respect to a particular financial institution. The occurrence of a trigger event with respect to us is therefore inherently unpredictable and is subject to factors that are outside our control, which will make it difficult for investors to anticipate when, if at all, a write-off of the Subordinated Notes will take place. Accordingly, the trading behaviour with respect to the Subordinated Notes may not follow trading behaviour associated with other types of securities of us or other issuers. Any indication that we are trending towards a possible trigger event could have a material adverse effect on the market price of the Subordinated Notes. A potential investor should not invest in the Subordinated Notes unless it has knowledge and expertise to evaluate how the Subordinated Notes will perform under changing market conditions and the resulting effect on the likelihood of a write-down and on the market value of the Notes.

Under Article 38 of the Depositor Protection Act, the KDIC (upon a resolution by the DIC) may provide financial assistance to an insured financial institution (such as us) or a financial holding company holding the insured financial institution that becomes an "insolvent or similar financial institution" (including an "insolvency-threatened financial institution") in the following circumstances: (i) there is a request to the KDIC for financial support in merging, receiving business transfer from, or receiving assignment of agreement from an insolvent or similar financial institution or from a financial holding company holding such institution or such financial assistance is deemed necessary for an orderly merger etc. of an insolvent or similar financial institution, (ii) the improvement of the financial structure of such institution is deemed necessary for the protection of depositors and the preservation of order in credit transactions, or (iii) there is a request from the FSC pursuant to Article 12(1) of the Act on Structural Improvement of the Financial Industry in consideration that the insolvent or similar financial institution can no longer continue its business due to deteriorated financial structure. An "insolvency-threatened financial institution" is defined under Article 2 of the Depositor Protection Act as an insured financial institution determined by the DIC as having a high possibility of becoming an insolvent financial institution due to its weak financial standing. The financial assistance to be provided can take the form of a loan or deposit of funds, a purchase of assets, a guarantee or assumption of obligations and an equity injection or contribution.

In addition, upon the issuance of a management improvement demand with respect to a financial institution (the "**Subject Financial Institution**") pursuant to Article 11 of the Act on Structural Improvement of the Financial Industry and Article 35 of the Regulation on Supervision of Banking Business, the FSC may demand that the Subject Financial Institution merge with another financial institution, and the KDIC may provide financial assistance or arrangements to the financial institution acquiring the Subject Financial Institution pursuant to such demand.

Pursuant to Article 8 of the Act on Structural Improvement of the Financial Industry, even where the Subject Financial Institution has not become subject to such a demand for merger from the FSC, if the Subject Financial Institution voluntarily merges with another financial institution for the improvement of its financial structure, the Government may provide financial assistance to the merged financial institution through: (i) the KDIC, (ii) the purchase by the Government's Public Capital Management Fund of certain government bonds held by the merged financial institution (such as bonds issued by the Government or local governments or bonds guaranteed by the Government), and (iii) a capital injection by the Government of state-owned assets into the merged financial institution.

In light of our size and scale and our relative importance to the Korean banking system, it is possible that, prior to the occurrence of a trigger event that leads to a write-off of the Subordinated Notes, we will be classified as an insolvency-threatened financial institution and receive some form of financial assistance from the KDIC, or that the Government will decide to provide other forms of financial assistance or capital support to us. However, since the provision of any such financial assistance or capital support would be at the discretion of the KDIC or the Government, as applicable, there is no guarantee that we will receive any financial assistance or capital support prior to the occurrence of a trigger event or that any such financial assistance or capital support received by us will be sufficient to prevent the occurrence of a trigger event leading to a write-off of the Subordinated Notes.

Pursuant to the Conditions, we will issue a Trigger Event Notice not more than two Korean Business Days after the occurrence of a Trigger Event, confirming that a Trigger Event has occurred. Although we will notify the Principal Paying Agent and the holders of the Subordinated Notes not more than two Korean Business Days after the occurrence of a Trigger Event, there may be a delay between a Trigger Event and the time that the clearing systems and the holders of the Subordinated Notes are notified of the occurrence of the relevant Trigger Event. Such delay may exceed several days during which trading and settlement in the Subordinated Notes may continue. Any such delay will not change or delay the effect of a Trigger Event or our obligations under the Subordinated Notes or the rights of the Subordinated Noteholders. We will provide at least five Business Days advance notice to the clearing systems and the Principal Paying Agent of any mark down of the Notes.

The clearing systems are expected to suspend all clearance and settlement of transfers of the Subordinated Notes by the Subordinated Noteholders following receipt of a Trigger Event Notice, and any transfer of Subordinated Notes which are scheduled to settle after commencement of such suspension is expected to be rejected by clearing systems and will not be settled within the clearing systems.

It is possible that transfers that are initiated prior to any suspension following receipt by the clearing systems of a Trigger Event Notice and scheduled to settle on a date before the clearing systems commence such suspension will be settled through the clearing system even though such transfers were initiated after the Trigger Event. In such circumstances, transferees of the Subordinated Notes may be required to pay consideration through the clearing systems even though, upon the occurrence of a Trigger Event, no amounts under the Subordinated Notes will thereafter become due, and such transferees will have no rights whatsoever under the Conditions or the Subordinated Notes to take any action or enforce any rights whatsoever against us. The settlement of the Subordinated Notes following a Trigger Event will be subject to procedures of the clearing system for the time being in effect.

The Agency Agreement contains certain protections and disclaimers as applicable to the Agents in relation to Condition 8. Each holder of Subordinated Notes shall be deemed to have authorised, directed and requested the taking of any and all necessary action to give effect to any loss absorption feature and any Write-off following the occurrence of the Trigger Event.

The Notes that are Tier I Subordinated Notes have no fixed maturity date and holders of the Tier I Subordinated Notes have no right to call for redemption of the Tier I Subordinated Notes.

The Tier I Subordinated Notes are undated perpetual securities and accordingly have no fixed final maturity date. Subject to the subordination provisions of Condition 3(c) of the Terms and Conditions of the Notes, the principal amount of the Tier I Subordinated Notes will become due and payable by us on the date on which voluntary or involuntary winding-up proceedings are instituted in respect of us in accordance with, as the case may be, (i) a resolution passed at a meeting of our shareholders, (ii) any provision of our articles of incorporation or (iii) any applicable law or any decision of any judicial or administrative authority. In addition, the holders of Tier I Subordinated Notes have no right to call for the redemption of the Tier I Subordinated Notes. Although we may redeem the Tier I Subordinated Notes at our option on any of the optional redemption dates specified in the applicable Pricing Supplement or at any time for certain tax or regulatory reasons, there are limitations on redemption of the Tier I Subordinated Notes, including a requirement to obtain the necessary prior approval of the FSS or such other relevant regulatory authorities in Korea. See "*Terms and Conditions of the Notes — Redemption and Purchase*". Accordingly, there is no guarantee as to whether or when the Tier I Subordinated Notes will be redeemed.

Interest payments on the Notes that are Tier I Subordinated Notes are discretionary and are not cumulative.

The rate of interest applicable to the Tier I Subordinated Notes may be subject to reset periodically, based on the prevailing base rate plus the spread as specified in the applicable Pricing Supplement. Furthermore, interest on Tier I Subordinated Notes may not be paid in full, or at all. We may elect, in our sole discretion, to not pay any interest, or to pay only partial interest, on Tier I Subordinated Notes on any interest payment date for any reason. In addition, Tier I Subordinated Notes will not bear any interest, and any interest payable on Tier I Subordinated Notes on any interest payment date will not be paid, during an interest cancellation period, which will be triggered upon the issuance of a management improvement recommendation, a management improvement requirement or a management improvement order, or the imposition of emergency measures, by the FSC against us.

Article 36 of the Regulation on Supervision of Banking Business provides that the FSC shall issue a management improvement order to a bank where:

- the bank constitutes an "insolvent financial institution" under the Act on Structural Improvement of the Financial Industry;
- its combined Tier I and Tier II capital adequacy ratio is no greater than 2.0 per cent. or its Tier I capital adequacy ratio is no greater than 1.5 per cent. or its Tier I common equity capital ratio is no greater than 1.2 per cent.; or
- the bank has difficulty continuing its normal operations, even though it has previously become subject to a management improvement requirement under Article 35(1), and has been urged (but has failed) to implement a management improvement plan under Article 39(6), of the Regulation on Supervision of Banking Business.

Prior to issuing a management improvement order to a bank, the FSC would be expected to (i) issue a management improvement recommendation to such bank (for example, if its combined Tier I and Tier II capital adequacy ratio is no greater than 8.0 per cent. or its Tier I capital adequacy ratio is no greater than 6.0 per cent. or its Tier I common equity capital ratio is no greater than 4.5 per cent.) under Article 34 of the Regulation on Supervision of Banking Business and (ii) subject such bank to a management improvement requirement (for example, if its combined Tier I and Tier II capital adequacy ratio is no greater than 6.0 per cent. or its Tier I capital adequacy ratio is no greater than 4.5 per cent. or its Tier I common equity capital ratio is no greater than 3.5 per cent.) under Article 35 of the Regulation on Supervision of Banking Business.

Article 38(1) of the Regulation on Supervision of Banking Business provides that the FSC or its chairman shall impose emergency measures on a bank where:

- a drastic deterioration in the liquidity of the bank causes it to experience, among others, shortages of reserves and assets for repayment of deposits or an inability to repay its external debts;
- it becomes impracticable or impossible for the bank to conduct normal business operations due to the occurrence of events such as, among others, a strike, work stoppage, labour dispute or a run on its deposits; or
- there is a manifest risk of bankruptcy or insolvency of the bank or the bank is unable to repay its deposits.

Such emergency measures may include (i) restrictions on acceptance of deposits and provision of loans by the bank; (ii) a suspension on repayment of all or any part of the bank's deposits; (iii) a prohibition on repayment of debts by the bank; and (iv) mandatory dispositions of the bank's assets under Article 38(2) of the Regulation on Supervision of Banking Business.

Furthermore, interest on any Series of Tier I Subordinated Notes will be paid only out of such amounts legally available to us from time to time under applicable Korean law for payment of dividends on our equity (or, if higher, such amounts for payment of interest on such Tier I Subordinated Notes). Under the Korean Commercial Code, we may pay an annual dividend only out of the excess of our net assets, on a non-consolidated basis, over the sum of (i) our stated capital (i.e., paid-in capital), (ii) the total amount of our capital surplus reserve and legal reserve accumulated up to the end of the relevant dividend period, (iii) the earned surplus reserve to be set aside for the annual dividend and (iv) any increase in net assets caused by the valuation of assets and liabilities performed in accordance with Korean accounting principles, against which no unrealised loss is set off. Depending on our ability to meet certain capital ratios, such amounts legally available to us under the Korean Commercial Code are subject to further restrictions pursuant to Articles 26, 26-1 and 26-2 of the Regulation on Supervision of Banking Business, which sets forth upper limits on the amounts a bank may use from its legally available amounts under the Korean Commercial Code to pay discretionary dividends, including discretionary interest payments on capital securities such as the Tier I Subordinated Notes. Specifically, we would be able to use only a certain percentage (ranging from 0 per cent. to 60 per cent., depending on the degree of the shortfall in the applicable capital adequacy ratios) of our annual consolidated net income (attributable to the controlling shareholder) as stated in our latest audited financial report after deducting the regulatory reserve for credit loss (attributable to the controlling shareholder) if our Tier I common equity capital ratio, Tier I capital adequacy ratio or combined Tier I and Tier II capital adequacy ratio were to fall below 8.0 per cent., 9.5 per cent. or 11.5 per cent., respectively. The foregoing thresholds have been calculated based on (i) an additional capital conservation buffer of 2.5 per cent., (ii) a potential countercyclical capital buffer set at 0 per cent. (which may be subject to change within the range of 0 to 2.5 per cent. based on the FSC's determination on a quarterly basis) and (iii) an additional capital requirement of 1.0 per cent. for being designated as one of six domestic systemically important banks in 2019. See "*— Risks Relating to Our Business — We may be required to raise additional capital if our capital adequacy ratio deteriorates or the applicable capital requirements change in the future, but we may not be able to do so on favourable terms or at all*" and "*Regulation and Supervision — Principal Regulations Applicable to Banks — Capital Adequacy and Allowances*".

To the extent the aggregate amount of interest and other distributions payable on any Series of Tier I Subordinated Notes and other Tier I obligations exceed such amounts legally available to us, the aggregate amount of interest payable on such Tier I Subordinated Notes would be reduced by an amount equal to the pro rata portion of such excess. Moreover, because we are entitled to not pay interest on any interest payment date in our sole discretion, we may choose to do so even if amounts are legally available for payment of dividends or interest. See "*Terms and Conditions of the Notes — Interest — Special Provisions Relating to Interest on Tier I Subordinated Notes*".

Interest payments on the Tier I Subordinated Notes are not cumulative. Accordingly, if interest is not paid or is reduced on any interest payment date as a result of any of the foregoing, such unpaid interest will be irrevocably lost, and holders of Tier I Subordinated Notes will not be entitled to receive such unpaid interest on any subsequent interest payment date or any other date, whether or not funds are, or subsequently become, available. Any non-payment of interest by us will not constitute an event of default under the Tier I Subordinated Notes. Due to these interest cancellation features, the trading behaviour with respect to the Tier I Subordinated Notes may not follow trading behaviour associated with other types of our securities or of other issuers. A potential investor should not invest in Tier I Subordinated Notes unless it has knowledge and expertise to evaluate how the Tier I Subordinated Notes will perform under changing market conditions and the resulting effect on the likelihood of an interest cancellation and on the market value of the Tier I Subordinated Notes.

Non-payment of interest may adversely affect the trading price of the Notes that are Tier I Subordinated Notes.

If interest is not paid on the Tier I Subordinated Notes on any interest payment date, the Tier I Subordinated Notes may trade at a price which is lower than the issue price or the prevailing market price prior to such interest payment date. The sale of the Tier I Subordinated Notes during any period of non-payment of interest thereon may result in the holder receiving lower returns on the investment than a holder who continues to hold the Tier I Subordinated Notes until the interest payments resume (if at all). In addition, because of the interest cancellation provisions applicable to the Tier I Subordinated Notes, the market price of the Tier I Subordinated Notes may be more volatile than that of other securities that are not subject to such provisions.

The Notes may be subject to the Proposed Financial Transactions Tax ("FTT").

On 14 February 2013, the European Commission published a proposal (the "**Commission's Proposal**") for a Directive for a common FTT in Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia (the "**participating Member States**"). However, Estonia has since stated that it will not participate.

The Commission's Proposal has very broad scope and could, if introduced, apply to certain dealings in Notes (including secondary market transactions) in certain circumstances. The issuance and subscription of Notes should, however, be exempt.

Under the Commission's Proposal, the FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in Notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, "established" in a participating Member State in a broad range of circumstances, including (a) by transacting with a person established in a participating Member State or (b) where the financial instrument which is subject to the dealings is issued in a participating Member State.

However, the FTT proposal remains subject to negotiation between the participating Member States. It may therefore be altered prior to any implementation, the timing of which remains unclear. Additional EU Member States may decide to participate.

Prospective holders of Notes are advised to seek their own professional advice in relation to the FTT.

Payments made on or with respect to the Notes may be subject to U.S. withholding tax.

Pursuant to certain provisions of the U.S. Internal Revenue Code of 1986, commonly known as FATCA, a "foreign financial institution" may be required to withhold on certain payments it makes ("**foreign passthru payments**") to persons that fail to meet certain certification, reporting, or related requirements. A number of jurisdictions (including Korea) have entered into, or have agreed in substance to, intergovernmental agreements with the United States to implement FATCA ("**IGAs**"), which modify the way in which FATCA applies in their jurisdictions. Under the provisions of IGAs as currently in effect, a foreign financial institution in an IGA jurisdiction would generally not be required to withhold under FATCA or an IGA from payments that it makes. Certain aspects of the application of the FATCA provisions and IGAs to instruments such as the Notes, including whether withholding would ever be required pursuant to FATCA or an IGA with respect to payments on instruments such as the Notes, are uncertain and may be subject to change. Even if withholding would be required pursuant to FATCA or an IGA with respect to payments on instruments such as the Notes, such withholding would not apply prior to 1 January 2019 and Notes treated as debt for U.S. federal income tax purposes issued on or prior to the date that is six months after the date on which final regulations defining "foreign passthru payments" are filed with the U.S. Federal Register generally would be "grandfathered" for purposes of FATCA withholding unless materially modified after such date. However, if additional notes (as described under "*Terms and Conditions of the Notes — Further Issues*") that are not distinguishable from previously issued Notes are issued after the expiration of the grandfathering period and are subject to withholding under FATCA, then withholding agents may treat all Notes, including the Notes offered prior to the expiration of the grandfathering period, as subject to withholding under FATCA. Holders should consult their own tax advisors regarding how these rules may apply to their investment in the Notes. In the event any withholding would be required pursuant to FATCA or an IGA with respect to payments on the Notes, no person will be required to pay additional amounts as a result of the withholding.

The regulation and reform of "benchmark" rates of interest and indices may adversely affect the value of Notes linked to or referencing such "benchmarks".

Interest rates and indices which are deemed to be or used as "benchmarks" are the subject of recent international regulatory guidance and proposals for reform, particularly in the United Kingdom. Some of these reforms are already effective whilst others are still to be implemented. These reforms may cause such benchmarks to perform differently than in the past or to disappear entirely, or have other consequences which cannot be predicted. Any such consequence could have a material adverse effect on any Notes linked to or referencing such a benchmark. Regulation (EU) 2016/1011 (the "**Benchmarks Regulation**") was published in the Official Journal of the EU on 29 June 2016 and applies from 1 January 2018 (with the exception of provisions specified in Article 59 (mainly on critical benchmarks) that apply from 30 June 2016 and 3 July 2016). The Benchmarks Regulation applies to the provision of benchmarks, the contribution of input data to a benchmark and the use of a benchmark within the EU. It will, among other things, (i) require benchmark administrators to be authorised or registered (or, if non-EU-based, to be subject to an equivalent regime or otherwise recognised or endorsed) and (ii) prevent certain uses by EU supervised entities of benchmarks of administrators that are not authorised or registered (or, if non-EU based, not deemed equivalent or recognised or endorsed).

The Benchmarks Regulation could have a material impact on any Notes linked to or referencing a benchmark, in particular, if the methodology or other terms of the benchmark are changed in order to comply with the requirements of the Benchmarks Regulation. Such changes could, among other things, have the effect of reducing, increasing or otherwise affecting the volatility of the published rate or level of the benchmark.

More broadly, any of the international reforms, particularly in the United Kingdom or the general increased regulatory scrutiny of benchmarks, could increase the costs and risks of administering or otherwise participating in the setting of a benchmark and complying with any such regulations or requirements. For example, the sustainability of the London interbank offered rate ("**LIBOR**") has been questioned as a result of the absence of relevant active underlying markets and possible disincentives (including as a result of regulatory reforms) for market participants to continue contributing to such benchmarks. On 27 July 2017, the United Kingdom Financial Conduct Authority announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR benchmark after 2021 (the "**FCA Announcement**"). The FCA Announcement indicated that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. The potential elimination of the LIBOR benchmark or any other benchmark, or changes in the manner of administration of any benchmark, could require an adjustment to the terms and conditions, or result in other consequences, in respect of any Notes linked to such benchmark (including but not limited to floating rate Notes whose interest rates are linked to LIBOR). Such factors may have the following effects on certain benchmarks: (i) discourage market participants from continuing to administer or contribute to the benchmark; (ii) trigger changes in the rules or methodologies used in the benchmark; or (iii) lead to the disappearance of the benchmark. Any of the above changes or any other consequential changes as a result of international reforms, particularly in the United Kingdom or other initiatives or investigations, could have a material adverse effect on the value of and return on any Notes linked to or referencing a benchmark.

Investors should consult their own independent advisers and make their own assessment about the potential risks imposed by the Benchmarks Regulation or any other international reforms, particularly in the United Kingdom, in making any investment decision with respect to any Notes linked to or referencing a benchmark.

The Notes may be represented by Global Notes and holders of a beneficial interest in a Global Note must rely on the procedures of the relevant Clearing System(s).

Notes issued under the Programme may be represented by one or more Global Notes. Such Global Notes will be deposited with a common depositary for Euroclear and Clearstream, Luxembourg and/or a sub-custodian for the HKMA as operator of the CMU and/or DTC (each of Euroclear, Clearstream, Luxembourg, the CMU and DTC, a "**Clearing System**"). Except in the circumstances described in the relevant Global Note, investors will not be entitled to receive definitive Notes. The relevant Clearing System(s) will maintain records of the beneficial interests in the Global Notes. While the Notes are represented by one or more Global Notes, investors will be able to trade their beneficial interests only through the Clearing Systems.

While the Notes are represented by one or more Global Notes, we will discharge our payment obligations under the Notes by making payments to the relevant Clearing System for distribution to their account holders.

A holder of a beneficial interest in a Global Note must rely on the procedures of the relevant Clearing System(s) to receive payments under the relevant Notes. We have no responsibility or liability for the records relating to, or payments made in respect of, beneficial interests in the Global Notes.

Notes issued as Green Bonds, Social Bonds or Sustainability Bonds may not be a suitable investment for all investors seeking exposure to green assets, social assets or sustainability assets.

The Issuer may issue Notes under the Programme which are specified to be "Green Bonds," "Social Bonds" or "Sustainability Bonds" in the applicable Pricing Supplement (any such Notes, Green Bonds, Social Bonds or Sustainability Bonds, respectively), in accordance with the KEB Hana Bank Sustainable Financing Framework. See "*Sustainable Financing Framework*". In connection with an issue of Green Bonds, Social Bonds or Sustainability Bonds, the Issuer may request a sustainability rating agency or sustainability consulting firm to issue an independent opinion (a "**Second Party Opinion**") confirming that any Green Bonds, Social Bonds or Sustainability Bonds are in compliance with the GBP 2018, ICMA (the "**ICMA Green Bond Principles**"), the SBP 2018, ICMA (the "**ICMA Social Bond Principles**") or the SBG 2018, ICMA (the "**ICMA Sustainability Bond Guidelines**"). The ICMA Green Bond Principles, the ICMA Social Bond Principles and the ICMA Sustainability Bond Guidelines are a set of voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the green bond, social bond and sustainability bond markets.

There is currently no market consensus on what precise attributes are required for a particular project to be defined as "green," "social" or "sustainability," and therefore no assurance can be provided to potential investors that the Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) will continue to meet the relevant eligibility criteria. Although applicable green projects, social projects or sustainability projects are expected to be selected in accordance with the categories recognised by the ICMA Green Bond Principles, the ICMA Social Bond Principles or the ICMA Sustainability Bond Guidelines and are expected to be developed in accordance with applicable legislation and standards, there can be no guarantee that adverse environmental and/or social impacts will not occur during the design, construction, commissioning and/or operation of any such green projects, social projects or sustainability projects. Where any negative impacts are insufficiently mitigated, green projects, social projects or sustainability projects may become controversial, and/or may be criticised by activist groups or other stakeholders.

Potential investors should be aware that any Second Party Opinion will not be incorporated into, and will not form part of, this Offering Circular or the applicable Pricing Supplement. Any such Second Party Opinion may not reflect the potential impact of all risks related to the structure of the relevant Series of Green Bonds, Social Bonds or Sustainability Bonds, their marketability, trading price or liquidity or any other factors that may affect the price or value of the Green Bonds, Social Bonds or Sustainability Bonds. Any such Second Party Opinion is not a recommendation to buy, sell or hold securities and is only current as of its date of issue.

Furthermore, although the Issuer may agree at the relevant issue date of any Green Bonds, Social Bonds or Sustainability Bonds to allocate the net proceeds towards the financing and/or refinancing of Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) in accordance with certain prescribed eligibility criteria as described under the KEB Hana Bank Sustainable Financing Framework, it would not be an event of default under the Green Bonds, Social Bonds or Sustainability Bonds if (i) the Issuer were to fail to comply with such undertaking or were to fail to allocate the proceeds in the manner specified in the applicable Pricing Supplement and/or (ii) any Second Party Opinion issued in connection with such Green Bonds were to be withdrawn. Any failure to allocate the net proceeds of any Series of Green Bonds, Social Bonds or Sustainability Bonds in connection with green projects, social projects or sustainability projects and/or any failure to meet, or to continue to meet, the investment requirements of certain environmentally or socially focused investors with respect to such Green Bonds, Social Bonds or Sustainability Bonds may affect the value and/or trading price of the Green Bonds, Social Bonds or Sustainability Bonds, and/or may have consequences for certain investors with portfolio mandates to invest in green assets, social assets or sustainability assets.

Neither the Issuer nor the Dealers make any representation as to the suitability for any purpose of any Second Party Opinion or whether any Green Bonds, Social Bonds or Sustainability Bonds fulfil the relevant environmental or social criteria. Prospective investors should have regard to the relevant Green Eligible Categories, Social Eligible Categories or a combination of the two categories (in the case of Sustainability Bonds) and the use of proceeds described in the applicable Pricing Supplement. Each potential purchaser of any Series of Green Bonds, Social Bonds or Sustainability Bonds should determine for itself the relevance of the information contained in this Offering Circular and in the applicable Pricing Supplement regarding the use of proceeds and its purchase of any Green Bonds, Social Bonds or Sustainability Bonds should be based upon such investigation as it deems necessary.

Risks Relating to Notes Denominated in Renminbi

A description of risks which may be relevant to an investor in Notes denominated in Renminbi ("**Renminbi Notes**") are set out below.

Renminbi is not freely convertible and there are significant restrictions on the remittance of Renminbi into and outside the PRC which may adversely affect the liquidity of Renminbi Notes.

Renminbi is not freely convertible at present. The government of the PRC (the "**PRC Government**") continues to regulate conversion between Renminbi and foreign currencies, including the Hong Kong dollar, despite significant reduction in control by it in recent years over trade transactions involving import and export of goods and services as well as other frequent routine foreign exchange transactions. These transactions are known as current account items.

However, remittance of Renminbi by foreign investors into the PRC for the purposes of capital account items, such as capital contributions, is generally only permitted upon obtaining specific approvals from, or completing specific registrations or filings with, the relevant authorities on a case-by-case basis and is subject to a strict monitoring system.

Regulations in the PRC on the remittance of Renminbi into the PRC for settlement of capital account items are developing gradually. In recent years, the People's Bank of China ("**PBoC**") and the Ministry of Commerce of the PRC have issued circulars providing guidance on simplifying certain remittance requirements for settlement of capital account items. However, such circulars are relatively new and are subject to interpretation and application by the relevant authorities in the PRC.

In the event that we decide to remit some or all of the proceeds into the PRC in Renminbi, our ability to do so will be subject to obtaining all necessary approvals from, and/or registration or filing with, the relevant PRC government authorities. Investors may be required to provide certifications and other information (including Renminbi account information) in order to be allowed to receive payments in Renminbi in accordance with the Renminbi clearing and settlement system for participating banks in Hong Kong, Singapore and Taiwan. However, there is no assurance that the necessary approvals from, and/or registration or filing with, the relevant PRC government authorities will be obtained at all or, if obtained, they will not be revoked or amended in the future.

There is no assurance that the PRC Government will continue to gradually liberalise control over cross-border remittance of Renminbi in the future, that the pilot schemes for Renminbi cross-border utilisation will not be discontinued or that new regulations in the PRC will not be promulgated in the future which have the effect of restricting or eliminating the remittance of Renminbi into or outside the PRC. In the event that funds cannot be repatriated outside the PRC in Renminbi, this may affect the overall availability of Renminbi outside the PRC and our ability to source Renminbi to finance our obligations under Notes denominated in Renminbi.

There is only limited availability of Renminbi outside the PRC, which may affect the liquidity of the Renminbi Notes and our ability to source Renminbi outside the PRC to service Renminbi Notes.

As a result of the restrictions by the PRC Government on cross-border Renminbi fund flows, the availability of Renminbi outside the PRC is limited. While the PBoC has entered into settlement agreements on the clearing of Renminbi business with financial institutions in a number of financial centres and cities (the "**Renminbi Clearing Banks**"), including but not limited to Hong Kong and is in the process of establishing Renminbi clearing and settlement mechanisms in several other jurisdictions (the "**Settlement Arrangements**"), the current size of Renminbi-denominated financial assets outside the PRC is limited.

There are restrictions imposed by PBoC on Renminbi business participating banks in respect of cross-border Renminbi settlement, such as those relating to direct transactions with PRC enterprises. Furthermore, Renminbi business participating banks do not have direct Renminbi liquidity support from the PBoC. The Renminbi Clearing Banks only have access to onshore liquidity support from the PBoC for the purpose of squaring open positions of participating banks for limited types of transactions and are not obliged to square for participating banks any open positions resulting from other foreign exchange transactions or conversion services. In such cases, the participating banks will need to source Renminbi from outside the PRC to square such open positions.

Although it is expected that the offshore Renminbi market will continue to grow in depth and size, its growth is subject to many constraints as a result of PRC laws and regulations on foreign exchange. There is no assurance that new PRC regulations will not be promulgated or the existing Settlement Arrangements will not be terminated or amended in the future which will have the effect of restricting availability of Renminbi outside the PRC. The limited availability of Renminbi outside the PRC may affect the liquidity of the Renminbi Notes. To the extent we are required to source Renminbi in the offshore market to service our Renminbi Notes, there is no assurance that we will be able to source such Renminbi on satisfactory terms, if at all.

Investment in the Renminbi Notes is subject to exchange rate risks.

The value of Renminbi against the U.S. dollar and other foreign currencies fluctuates from time to time and is affected by changes in the PRC and international political and economic conditions as well as many other factors.

We will make all payments of interest and principal with respect to the Renminbi Notes in Renminbi unless otherwise specified. As a result, the value of these Renminbi payments may vary with the changes in the prevailing exchange rates in the marketplace. If the value of Renminbi depreciates against the U.S. dollar or other currencies, the value of the investment made by a holder of the Renminbi Notes in U.S. dollars or any other foreign currency terms will decline.

Investment in the Renminbi Notes is subject to interest rate risks.

The PRC Government has gradually liberalised its regulation of interest rates in recent years. Further liberalisation may increase interest rate volatility. Consequently, the trading price of the Renminbi Notes will vary with the fluctuations in the Renminbi interest rates. If holders of the Renminbi Notes propose to sell their Notes before their maturity, they may receive an offer lower than the amount they have invested.

Payments with respect to the Renminbi Notes may be made only in the manner designated in the Renminbi Notes.

Except in the limited circumstances where the Renminbi is not available for delivery outside the PRC, all payments to investors in respect of the Renminbi Notes will be made solely (i) for so long as the Renminbi Notes are represented by global certificates held with the common depositary or common safekeeper, as the case may be, for Clearstream, Luxembourg, Euroclear or the CMU Service, as the case may be, by transfer to a Renminbi bank account maintained in Hong Kong, or (ii) for so long as the Renminbi Notes are in definitive form, by transfer to a Renminbi bank account maintained in Hong Kong in accordance with prevailing rules and regulations of Clearstream, Luxembourg, Euroclear or the CMU Service, as the case may be. We cannot be required to make payment by any other means (including in any other currency or by transfer to a bank account in the PRC).

Gains on the transfer of the Renminbi Notes may be subject to income tax under PRC tax laws.

Under the New Enterprise Income Tax Law and its implementation rules, any gains realised on the transfer of Renminbi Notes by holders who are deemed under the New Enterprise Income Tax Law as non-resident enterprises may be subject to PRC enterprise income tax if such gains are regarded as income derived from sources within the PRC. However, there remains uncertainty as to whether the gains realised from the transfer of the Renminbi Notes would be treated as income derived from sources within the PRC and be subject to PRC tax. This will depend on how the PRC tax authorities interpret, apply or enforce the relevant laws and rules. According to an arrangement between the PRC and Hong Kong, for the avoidance of double taxation, noteholders who are Hong Kong residents, including both enterprise holders and individual holders, will be exempted from PRC income tax on capital gains derived from a sale or exchange of the Renminbi Notes.

Therefore, if a noteholder, being a non-resident enterprise, is required to pay any PRC income tax on gains on the transfer of the Renminbi Notes (such enterprise income tax is currently levied at the rate of 10 per cent. of the gross proceeds, unless there is an applicable tax treaty between the PRC and the jurisdiction in which such non-resident enterprise holders of Renminbi Notes reside that reduces or exempts the relevant tax), the value of their investment in the Renminbi Notes may be materially and adversely affected.

Similarly, if a noteholder, as a non-resident individual holder, is required to pay any PRC income tax on gains on the transfer of the Renminbi Notes (such individual income tax is currently levied at the rate of 20 per cent. of the gross proceeds, unless there is an applicable tax treaty between the PRC and the jurisdiction in which the relevant non-resident individual holder of the Renminbi Notes resides that reduces or exempts the relevant tax), the value of such noteholder’s investment in the Renminbi Notes may be affected.

Investors should contact their own financial, legal, accounting and tax advisers about the risks associated with an investment in the Renminbi Notes, the appropriate tools to analyse that investment, and the suitability of the investment in each investor’s particular circumstances. No investor should purchase the Renminbi Notes unless that investor understands and has sufficient financial resources to bear the price, market liquidity, structure and other risks associated with an investment in the Renminbi Notes.

Before entering into any transaction, investors should ensure that they fully understand the potential risks and rewards of that transaction and independently determine that the transaction is appropriate given their objectives, experience, financial and operational resources and other relevant circumstances. Investors should consider consulting with such advisers as they deem necessary to assist them in making these determinations.

CAPITALISATION

The following table shows our capitalisation, which is equal to the sum of borrowings, debentures and total shareholders' equity, as of 30 September 2018. This information has been extracted from our unaudited interim consolidated financial statements as of 30 September 2018.

	As of 30 September	
	2018	2018(2)
	(In billions of Won and millions of US dollars)	
Indebtedness(1)		
Borrowings	₩15,822	U.S.$14,220
Debentures	25,264	22,705
Total indebtedness	41,086	36,925
Shareholders' equity		
Common stock	5,360	4,817
Capital surplus	9,670	8,691
Hybrid equity securities	180	162
Capital adjustments	(44)	(39)
Retained earnings	9,797	8,805
Accumulated other comprehensive income	(874)	(785)
Equity attributable to equity holders of the parent	24,089	21,650
Non-controlling shareholders' equity	88	79
Total shareholders' equity	24,177	21,728
Total capitalisation	₩65,263	U.S.$58,653

Notes:

(1) See "*Description of Assets and Liabilities — Funding — Borrowings*" for further details on our borrowings.

(2) Translated from Won to U.S. dollars at the rate of ₩1,112.7 to U.S.$1.00, the Market Average Exchange Rate in effect on 30 September 2018.

There have been no material changes to our capitalisation since 30 September 2018.

Capital Adequacy

We are subject to FSC capital adequacy requirements applicable to Korean banks. The requirements applicable prior to December 2013 were formulated based on Basel II, which was first published by the Basel Committee on Banking Supervision, Bank for International Settlements in 2004. The requirements applicable commencing in December 2013 pursuant to amended FSC regulations promulgated in July 2013 were formulated based on Basel III, which was first introduced by the Basel Committee on Banking Supervision, Bank for International Settlements in December 2009. Under the amended FSC regulations, all banks in Korea are required to maintain certain minimum ratios of Tier I common equity capital, total Tier I capital and total Tier I and Tier II capital to risk-weighted assets. See "*Investment Considerations — Risks Relating to Our Business — We may be required to raise additional capital if our capital adequacy ratio deteriorates or the applicable capital requirements change in the future, but we may not be able to do so on favourable terms or at all*" and "*Regulation and Supervision — Principal Regulations Applicable to Banks — Capital Adequacy and Allowances*".

Pursuant to the capital adequacy requirements of the FSC as of the date hereof, we are required to maintain a minimum common equity Tier I capital adequacy ratio of 8.0 per cent., a minimum Tier I capital adequacy ratio of 9.5 per cent. and a combined Tier I and Tier II capital adequacy ratio of 11.5 per cent.

The following table sets out a summary of our capital base and capital adequacy ratios, on a consolidated basis and calculated in accordance with the standards set by the FSC, as of 30 September 2018.

	As of 30 September 2018
	(In billions of Won, except percentages)
Tier I capital	
Common equity capital	
Issued capital	₩ 5,360
Capital surplus	—
Capital adjustments	(0)
Retained earnings	9,797
Accumulated other comprehensive income (and other reserves)	8,753
Total minority interest given recognition in common equity	25
Deductions	(822)
Common equity capital	₩ 23,112
Additional Tier I capital	
Hybrid securities	₩ 171
Other instruments that meet additional Tier I criteria	5
Deductions	—
Additional Tier I capital	₩ 176
Total Tier I capital	₩ 23,289
Tier II capital	
Provisions	₩ 217
Subordinated debts	3,615
Others	18
Deductions	—
Total Tier II capital	₩ 3,850
Total Tier I and Tier II capital	₩ 27,139
Risk-weighted assets ("RWA")[(1)]	
Credit RWA	₩149,329
Operational RWA	9,040
Market RWA	6,002
Total RWA	₩164,371
Common equity Tier I capital adequacy ratio	14.06%
Tier I capital adequacy ratio	14.17%
Tier II capital adequacy ratio	2.34%
Combined Tier I and Tier II capital adequacy ratio	16.51%

(1) Based on market risks.

There have been no material changes to our capital base and capital adequacy ratios since 30 September 2018.

SELECTED FINANCIAL INFORMATION

The following tables set forth selected financial data in respect of the Bank as of and for the years ended 31 December 2015, 2016 and 2017 and as of 30 September 2018 and for the nine months ended 30 September 2017 and 2018. The selected financial data set forth below have been derived from the audited annual consolidated financial statements of the Bank as of and for the years ended 31 December 2015, 2016 and 2017 and the unaudited interim consolidated financial statements of the Bank as of 30 September 2018 and for the nine months ended 30 September 2017 and 2018, each included elsewhere in this Offering Circular.

The financial reporting periods shown in this section include periods prior to the Merger. The Merger has affected the financial statements of the Bank significantly, which also affects the comparability of the results of operations of the Bank as presented in this section for certain periods. Any statement of financial position data of the Bank as of 31 December 2015, 2016 and 2017 and 30 September 2018 represents the financial position of the Bank as of such dates giving effect to the Merger, which was consummated effective 1 September 2015. Any statement of comprehensive income data of the Bank for the years ended 31 December 2016 and 2017 and for the nine months ended 30 September 2018 represents the results of the Bank (giving effect to the Merger) for such period, and any statement of comprehensive income data of the Bank for the year ended 31 December 2015 represents the results of the Bank (giving effect to the Merger) from 1 September 2015 to 31 December 2015 and those of Korea Exchange Bank (prior to the Merger) from 1 January 2015 to 31 August 2015.

The audited annual consolidated financial statements of the Bank as of and for the years ended 31 December 2015, 2016 and 2017 have been audited by Ernst & Young Han Young, whose reports thereon are included elsewhere in this Offering Circular. The unaudited interim consolidated financial statements of the Bank as of 30 September 2018 and for the nine months ended 30 September 2017 and 2018 have been reviewed by Ernst & Young Han Young, whose reports thereon are included elsewhere in this Offering Circular. The financial statements included in this Offering Circular have been prepared in accordance with K-IFRS.

Our results of operations for the nine months ended 30 September 2018 may not be indicative of our result of operations for any future interim period or for the full year 2018.

Consolidated Statement of Comprehensive Income Data

	Year Ended 31 December		
	2015[1]	2016	2017
	(In billions of Won, except for per share data)		
Net interest income			
Interest income	₩ 4,649	₩ 7,583	₩ 8,111
Interest expenses	(2,016)	(3,254)	(3,297)
	₩ 2,632	₩ 4,329	₩ 4,814
Net fee and commission income			
Fee and commission income	618	802	835
Fee and commission expenses	(146)	(193)	(199)
	₩ 472	₩ 609	₩ 636
Net gain on financial instruments at FVTPL[2]	154	515	(135)
Net gain (loss) on derivative financial instruments used for hedging purposes	(4)	16	24
Net gain on available-for-sale financial assets	289	383	534
Impairment loss	(640)	(600)	(669)
General and administrative expenses	(2,424)	(3,161)	(3,092)
Other operating income (expenses)			
Other operating revenue	2,874	3,859	4,512
Other operating expenses	(2,972)	(4,371)	(3,948)
	(97)	(512)	564
Operating income	₩ 382	₩ 1,546	₩ 2,676
Non-operating income (expenses)			
Non-operating revenue	168	326	209
Non-operating expenses	(67)	(109)	(132)
	101	217	77
Net income from continuing operations before income tax expense	482	1,763	2,753
Income tax expense from continuing operations	(49)	(383)	(641)
Net income from continuing operations	433	1,380	2,112
Net income from a discontinued operation	—	—	—
Net income	₩ 433	₩ 1,380	₩ 2,112
Other comprehensive income (expenses)	(222)	(411)	(363)
Total comprehensive income	₩ 211	₩ 969	₩ 1,749
Equity holders of the Bank	206	959	1,747
Non-controlling interests	5	10	2
Earnings per share			
Continuing operations: Basic and diluted earnings per share	₩ 585	₩ 1,271	₩ 1,953
Discontinued operation: Basic and diluted earnings per share	₩ —	₩ —	₩ —

(1) Represents the results of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

(2) Fair value through profit or loss.

	Nine Months Ended 30 September		
	2017	2018	2018(1)
	(In billions of Won, except for per share data)		
Net interest income			
Interest income	₩ 5,970	₩ 6,889	U.S.$ 6,192
Interest expenses	(2,432)	(2,964)	(2,664)
	₩ 3,538	₩ 3,925	U.S.$ 3,528
Net fee and commission income			
Fee and commission income	634	627	563
Fee and commission expenses	(148)	(134)	(120)
	₩ 486	₩ 493	U.S.$ 443
Net gain on financial instruments at FVTPL(2) (K-IFRS 1039)	(168)	—	—
Net gain on financial instruments measured at FVTPL (K-IFRS 1109)	—	137	123
Net gain (loss) on derivative financial instruments used for hedging purposes	18	(9)	(8)
Net gain on available-for-sale financial assets	173	—	—
Net gain on financial instruments measured at FVOCI(3)	—	6	5
Impairment loss	510	34	31
General and administrative expenses	1,951	1,996	1,794
Other operating income (expenses)			
Other operating revenue	3,644	3,201	2,876
Other operating expenses	(3,216)	(3,172)	2,851
	428	29	26
Operating income	₩ 1,865	₩ 2,392	U.S.$ 2,150
Non-operating income (expenses)			
Non-operating revenue	147	83	75
Non-operating expenses	(41)	(48)	(43)
	106	36	32
Net income from continuing operations before income tax expense	1,971	2,428	2,182
Income tax expense from continuing operations	(452)	(665)	(597)
Net income from continuing operations	1,519	1,763	1,585
Net income from a discontinued operation	—	—	—
Net income	₩ 1,519	₩ 1,763	U.S.$ 1,585
Other comprehensive income (expenses)	83	226	203
Total comprehensive income	₩ 1,602	₩ 1,989	U.S.$ 1,788
Equity holders of the Bank	1,405	1,633	1,468
Non-controlling interests	3	0.935	1
Earnings per share			
Continuing operations: Basic and diluted earnings per share	₩ 1,405	₩ 1,405	U.S.$ 1,263
Discontinued operation: Basic and diluted earnings per share	—	—	—

(1) Translated from Won to U.S. dollars at the rate of ₩1,112.7 to U.S.$1.00, the Market Average Exchange Rate in effect on 30 September 2018.
(2) Fair value through profit or loss.
(3) Fair value through other comprehensive income.

Consolidated Statement of Financial Position Data

	As of 31 December			As of 30 September	
	2015(1)	2016	2017	2018	2018(2)
		(In billions of Won)			
Assets					
Cash and due from banks	₩ 17,026	₩ 27,552	₩ 19,984	₩ 20,777	U.S.$ 18,673
Financial assets at FVTPL(3) (K-IFRS 1039)	6,937	8,666	9,444	—	—
Financial assets measured at FVTPL (K-IFRS 1109)	—	—	—	8,624	7,750
Derivative assets used for hedging purposes	65	26	12	2	2
Available-for-sale financial assets	35,014	37,424	44,323	—	—
Financial assets measured at FVOCI(4)	—	—	—	36,991	33,245
Held-to-maturity financial assets	5,185	4,130	6,161	—	—
Securities measured at amortised cost	—	—	—	11,478	10,315
Loans	209,457	215,101	224,097	236,827	212,840
Property and equipment	2,491	2,301	1,598	1,805	1,622
Other assets(5)	16,229	15,584	16,875	22,211	19,962
Total assets	₩292,404	₩310,784	₩320,894	₩338,715	U.S.$304,408
Liabilities					
Deposits	₩204,743	₩220,613	₩230,410	₩239,610	U.S.$215,341
Financial liabilities at FVTPL (K-IFRS 1039)	5,284	6,415	6,840	—	—
Financial liabilities measured at FVTPL (K-IFRS 1109)	—	—	—	3,697	3,323
Derivative liabilities used for hedging purposes	40	99	73	164	147
Borrowings	17,133	15,311	13,775	15,822	14,220
Debentures	18,484	19,311	22,312	25,264	22,705
Other liabilities(6)	25,175	26,923	24,246	29,981	26,944
Total liabilities	₩270,860	₩288,672	₩297,655	₩314,538	U.S.$282,680
Equity					
Issued capital	₩ 5,360	₩ 5,360	₩ 5,360	₩ 5,360	U.S.$ 4,817
Capital surplus	9,668	9,669	9,669	9,670	8,691
Hybrid equity securities	180	180	180	180	162
Capital adjustments	(25)	(31)	(43)	(44)	(39)
Retained earnings	6,299	7,242	8,736	9,797	8,805
Accumulated other comprehensive income	19	(395)	(752)	(874)	(785)
Non-controlling shareholders' equity	43	88	90	88	79
Total equity	₩ 21,544	₩ 22,113	₩ 23,239	₩ 24,177	U.S.$ 21,728
Total liabilities and equity	₩292,404	₩310,784	₩320,894	₩338,715	U.S.$304,408

(1) Represents the results of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

(2) Translated from Won to U.S. dollars at the rate of ₩1,112.7 to U.S.$1.00, the Market Average Exchange Rate in effect on 30 September 2018.

(3) Fair value through profit or loss.

(4) Fair value through other comprehensive income.

(5) Includes investments in associates, investment property, intangible assets, current income tax assets, deferred income tax assets, other assets, merchant banking account assets and non-current assets held for sale.

(6) Includes net defined benefit liability, provisions, current income tax liabilities, deferred income tax liabilities, other liabilities and merchant banking account liabilities.

Selected Ratios (separate basis)

	As of or for the Year Ended 31 December			As of or for the Nine Months Ended 30 September	
	2015[1]	2016	2017	2017	2018
			(in per cent.)		
Average return on assets[2]	0.22%	0.43%	0.66%	0.64%	0.69%
Average return on equity[3]	2.70	5.49	8.72	8.48	9.31
Net interest margin[4]	1.71	1.64	1.72	1.71	1.77
Net interest spread[5]	1.35	1.32	1.44	1.43	1.50
Cost-to-income ratio[6]	71.52	59.99	47.46	46.23	46.93
Equity to total assets[7]	7.58	7.35	7.47	7.30	7.33
Non-performing loans/total loans[8]	1.18	0.81	0.68	0.62	0.52
Allowance/non-performing loans[9]	94.67% [10]	181.01%	201.43%	215.63%	241.61%

(1) Calculated based on the financial position of the Bank giving effect to the Merger (in the case of period end data) and results or daily balances of the Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015, each on a separate basis.

(2) Defined as net income (annualised for interim periods) divided by the average of the daily ending balances of total assets (calculated in accordance with FSS reporting guidelines).

(3) Defined as net income (annualised for interim periods) divided by the average of the daily ending balances of total equity (calculated in accordance with FSS reporting guidelines).

(4) Defined as net interest income (annualised for interim periods) divided by the average of the daily ending balances of interest earning assets (calculated in accordance with FSS reporting guidelines).

(5) Represents the difference between the average yield (annualised for interim periods) on interest-earning assets and the average cost (annualised for interim periods) of interest-bearing liabilities (calculated in accordance with FSS reporting guidelines).

(6) Calculated as the ratio of general and administrative expenses to operating income (prior to deducting general and administrative expenses and impairment losses on financial instruments).

(7) Represents the ratio of total equity to total assets.

(8) Represents the ratio of non-performing loans to total loans. Non-performing loans are defined as those loans that are classified as substandard or below based on the FSC's asset classification criteria. See "*Description of Assets and Liabilities — Asset Quality of Loans — Loan Loss Provisioning Policy*".

(9) Represents the ratio of the sum of allowance for possible loan losses and reserve for bad debts to non-performing loans.

(10) Prior to the Merger, Hana Bank had reserve for bad debts disposed as retained earnings in the amount of ₩1,177 billion. In connection with the Merger, this amount was replaced with capital surplus and thus not classified as reserve for bad debts of the Bank as of 31 December 2015.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with, and is qualified in its entirety by reference to, the historical consolidated financial statements and the notes thereto included elsewhere in this Offering Circular. The discussion contains forward-looking statements that involve risks, uncertainties and assumptions. Actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors such as those set forth under "Investment Considerations" and elsewhere in this Offering Circular.

The financial reporting periods encompassed by this section include periods prior to the Merger. The Merger has affected our financial statements significantly, which also affects the comparability of the results of operations and cash flows as presented in this Offering Circular for certain periods. Our discussion and analysis of financial condition and results of operations as of 31 December 2015, 2016, 2017 and 30 September 2018, for the years ended 31 December 2016 and 2017, and for the nine months ended 30 September 2017 and 2018 are based on those of KEB Hana Bank as of such dates and for such periods giving effect to the Merger, which was consummated effective 1 September 2015. Our discussion and analysis of results of operations for the year ended 31 December 2015 are based on those of KEB Hana Bank (giving effect to the Merger) from 1 September 2015 to 31 December 2015 and those of Korea Exchange Bank (prior to the Merger) from 1 January 2015 to 31 August 2015. References to "we", "us", "our", the "Bank" or other similar pronouns in this section shall be to Korea Exchange Bank prior to the Merger to the extent they appear in the discussion and analysis concerning the period prior to the Merger.

Overview

We are one of the leading commercial banks in Korea in terms of total assets, revenues, profitability and capital adequacy. As of 30 September 2018, we had total assets, total net loans (after allowance for loan losses and net deferred loan fees and costs), total deposits and shareholders' equity of ₩338.7 trillion, ₩236.8 trillion, ₩239.6 trillion and ₩24.2 trillion, respectively. As of 30 September 2018, our combined Tier I and Tier II capital adequacy ratio was 16.51 per cent., the highest among all major commercial banks in Korea.

As a full-service financial institution, we operate an extensive nationwide and overseas banking network, consisting of 758 domestic branches and sub-branches, as well as 16 international branches, two sub-branches of such international branches, five overseas representative offices, 11 overseas subsidiaries and 126 sub-branches of such overseas subsidiaries, located in 24 countries outside of Korea as of 30 September 2018.

We also operated over 4,114 automated teller machines ("**ATMs**") throughout Korea as of 30 September 2018, and offer Internet and telephone banking services. Through this nationwide and global network, we serve corporate and retail customers with a full complement of banking and financial services. We continue to hold strong market positions in the business segments where we have historically maintained competitive strengths, such as large corporate banking, foreign exchange and trade financing, and following the Merger, we have also gained a leading position in other business areas, such as retail banking, private banking and wealth management. Our leading presence in the market has been widely recognised by a number of significant industry awards over the years. In 2017, we received the "Bank of the Year in Korea" award by The Banker magazine and became the first Korean bank to receive the "Asia's Best Bank Transformation" award by Euromoney magazine. Most recently, in 2018, we received the "Best Private Bank for Digital Client Solutions" award by Global Finance magazine and the "Best Private Bank in Korea" award by both Euromoney and The Banker magazines.

In February 2012, our holding company, Hana Financial Group, completed the purchase of 51.02 per cent. of the issued and outstanding shares of common stock of Korea Exchange Bank from an affiliate of the Lone Star Funds and an additional 6.25 per cent. from The Export-Import Bank of Korea, for an aggregate purchase price of approximately ₩4.4 trillion. In April 2013, the common stock of Korea Exchange Bank was delisted following Hana Financial Group's acquisition of the remaining 42.73 per cent. stake in Korea Exchange Bank through a share swap. Hana Financial Group operated Korea Exchange Bank and Hana Bank as separate entities for a period of time after the acquisition, but ultimately it decided to integrate the two banks under one brand. On 29 October 2014, Korea Exchange Bank and Hana Bank entered into a merger agreement (the "**Merger Agreement**"), pursuant to which Hana Financial Group agreed to merge Hana Bank with Korea Exchange Bank. Effective 1 September 2015, Hana Bank merged with and into Korea Exchange Bank, with the latter as the surviving entity, and Korea Exchange Bank changed its name to KEB Hana Bank. See "*KEB Hana Bank — Integration and Merger*".

Trends in the Korean Economy and the Commercial Banking Industry

Our financial condition and results of operations have been, and will continue to be, significantly affected by the economic conditions in Korea. In recent years, the Korean economy has experienced a slow but steady recovery in line with the ongoing global economic recovery driven largely by strong demand growth in the United States as well as many emerging market economies. From the second half of 2015, a steady upbeat trend of domestic consumption as well as active stimulation efforts from the Government have eased the downward pressure on economic growth. Housing prices in Korea, particularly those in the Seoul metropolitan area, have also renewed their upward trend despite a series of the Government's measures to curb speculative house purchases. Meanwhile, major commercial banks in Korea have generally experienced a rebound in demand for loans from retail customers and small office/home office customers, and asset quality has also improved to a limited extent in terms of delinquency and non-performing loan ratios. However, net interest margin for commercial banks has generally tightened further, largely due to the continued low interest rate environment and increasing competition among Korean banks. In addition, in 2018, investment and employment are showing signs of slowdown, and uncertainties are increasing amid rising oil prices and trade conflicts between the United States and China.

We are also exposed to changes and volatility in global and Korean financial markets as a result of our liabilities and assets denominated in foreign currencies and our holdings of trading and investment securities, including structured products. The value of the Won relative to major foreign currencies in general and the U.S. dollar in particular has fluctuated in recent years, and a depreciation of the Won will have the impact of increasing our cost in Won of servicing our foreign currency-denominated debt, while continued exchange rate volatility may also result in foreign exchange losses for us. Furthermore, as a result of continued uncertainty in global and Korean economic conditions, there has been continued volatility in securities prices, including the prices of debt and equity securities held by us. Such volatility may lead to further trading and valuation losses on our trading and investment securities portfolio as well as impairment losses on our investments accounted for under the equity method.

Currently, we consider the following as potential risks to the Korean economy and financial markets: (i) a decline in exports resulting from the global economic slowdown, especially in light of Korea's heavy dependence on trade with China, which is exhibiting a slower pace of economic recovery and facing an ongoing trade dispute with the United States, (ii) the weakening of Korea's growth potential due to declines in investment and labour force, which may result in a persistently low level of economic growth in the future, and (iii) potential credit risks stemming from the rapid growth in household loans amid rising interest rate expectations. Also, Korean companies in the construction, shipbuilding and shipping industries continue to face financial difficulties. See "*Investment Considerations — Risks Relating to Our Business — We have significant exposure through our lending and other activities to a number of industries, and financial difficulties of any companies within these industries may adversely impact us*".

As for interest rate movements, like many other countries, Korea has experienced a low interest rate since 2009 despite some marginal fluctuations, in part due to the Government's policy to stimulate the economy through active rate-lowering measures. Between 2009 and 2014, the base interest rate set by the Bank of Korea remained within the band between 2.00 per cent. and 3.25 per cent. In an effort to support Korea's economy in light of the recent slowdown in Korea's growth and uncertain global economic prospects, the Bank of Korea reduced the base interest rate to 1.75 per cent. in March 2015, 1.50 per cent. in June 2015 and further reduced such rate to a historic low of 1.25 per cent. in June 2016 amid deflationary concerns and interest rate cuts by central banks around the world. However, the Bank of Korea increased its policy rate to 1.50 per cent. in November 2017 and further to 1.75 per cent. in November 2018, in light of improved growth prospects and increasing price pressure in Korea, particularly in the housing sector, and rising interest rate levels globally. All else being equal, further increases in interest rates in the future could lead to a decline in the value of our portfolio of debt securities, which generally pay interest based on a fixed rate. A sustained increase in interest rates will also raise our funding costs, while reducing loan demand, especially among consumers. Rising interest rates may therefore require us to re-balance our asset portfolio and our liabilities in order to minimise the risk of potential mismatches and maintain our profitability.

We are currently not aware of any major regulatory developments that may have a material adverse effect on the commercial banking industry in Korea. However, the prolonged low-interest rate environment has presented limited opportunities for commercial banks to generate profit by taking advantage of differences in rates between deposits and loans, and fuelled intense competition among major commercial banks for quality customers. Furthermore, with the growing popularity of online financial service platforms, online service providers and technology companies with large-scale user networks, such as Kakao Corp., NAVER and Samsung Electronics, have also intensified the competition by making significant inroads in providing virtual payment services through a system based on a growing convergence of financial services and technology commonly referred to as "fintech". In addition, Internet-only banks, which commenced operations in 2017, have been engaging in aggressive marketing activities and making significant investments to attract customers of the traditional commercial banks. Accordingly, commercial banks will likely face increasing pressure to upgrade their service platforms to attract and maintain online users, which represent a growing customer base compared to traditional customers who have primarily conducted banking in-person at physical banking branches and ATMs.

As a result of volatile conditions in the Korean and global economies, as well as factors such as the uncertainties surrounding Brexit, trade disputes and global geopolitics, anticipation of the policy rate moves by the U.S. Federal Reserve, fluctuations in oil and commodity prices and exchange rates, potential changes in fiscal and monetary policies, continued developments involving North Korea and ongoing evolution in the finance industry, the outlook for the commercial banking sector in Korea remains uncertain.

Changes in Securities Values, Exchange Rates and Interest Rates

Fluctuations of exchange rates, interest rates and stock prices affect, among other things, the demand for our products and services, the value of and rate of return on our assets, the availability and cost of funding and the financial condition of our customers. The following table shows, for the dates indicated, the stock price index of all equities listed on the KRX KOSPI Market as published in the KOSPI, the Won to U.S. dollar exchange rates and benchmark Won borrowing interest rates.

	As of 31 December			As of 30 September
	2015	2016	2017	2018
KOSPI	1,961.31	2,026.46	2,467.49	2,343.07
₩/U.S.$ exchange rates(1)	₩ 1,172.8	₩ 1,208.5	₩ 1,071.4	₩ 1,112.7
Corporate bond rate(2)	2.11%	2.13%	2.68%	2.45%
Treasury bond rate(3)	1.66%	1.64%	2.14%	2.01%

Source: KRX KOSPI Market, Seoul Money Brokerage Services, Ltd., The Bank of Korea.

Notes:

(1) Represents the Market Average Exchange Rate in effect on such dates.

(2) Measured by the yield on three-year Korean corporate bonds rated as AA- by the Korean credit rating agencies.

(3) Measured by the yield on three-year treasury bonds issued by the Ministry of Economy and Finance of Korea.

Critical Accounting Policies

The preparation of our financial statements requires management to make judgements, involving significant estimates and assumptions, in the application of certain accounting policies about the effects of matters that are inherently uncertain. These estimates and assumptions, which may materially affect the reported amounts of certain assets, liabilities, revenues and expenses, are based on information available to us as of the date of the financial statements, and changes in this information over time could materially impact amounts reported in the financial statements as a result of the use of different estimates and assumptions. Certain accounting policies, by their nature, have a greater reliance on the use of estimates and assumptions, and could produce results materially different from those originally reported because of the possibility that future events affecting these estimates and assumptions may differ significantly from our current judgement.

See Note 3 of the notes to our annual and interim consolidated financial statements included in this Offering Circular for summaries of our significant accounting policies that involve critical accounting estimates.

Changes in Accounting Standards

K-IFRS 1109 *Financial Instruments*, which is based on International Financial Reporting Standard 9 Financial Instruments issued by the International Accounting Standard Board in July 2014, is a new accounting standard aimed at improving and simplifying the accounting treatment of financial instruments. K-IFRS 1109 was published on 25 September 2015 and is effective for annual periods beginning on or after 1 January 2018, replacing K-IFRS 1039 *Financial Instruments: Recognition and Measurement*.

Key features of K-IFRS 1109 include (i) classification and measurement of financial assets on the basis of an entity's business model for managing financial assets and the contractual cash flow characteristics of the financial assets, (ii) impairment methodology that reflects the "expected credit loss" model for financial assets, as opposed to "incurred losses" (as was the case under K-IFRS 1039) and (iii) expanded scope of hedged items and hedging instruments which qualify for hedge accounting and changes in assessment method for effect of hedging relationships. The impact on our financial statements due to the application of K-IFRS 1109 depends on judgements made by us in applying the new standard, the nature of financial instruments held by us and macroeconomic variables.

We have applied K-IFRS 1109 in our consolidated financial statements as of and for the nine months ended 30 September 2018 included elsewhere in this Offering Circular. As permitted by the transition rules of K-IFRS 1109, our comparative consolidated financial statements as of and for the years ended 31 December 2015, 2016 and 2017 and for the nine months ended 30 September 2017 included elsewhere in this Offering Circular have not been restated to retroactively apply K-IFRS 1109.

The classification and measurement of certain financial assets and liabilities in accordance with K-IFRS 1039 as of 31 December 2017 and K-IFRS 1109 as of 1 January 2018 are as follows:

(in billions on Won)

Category	**Classification under K-IFRS 1039**	**31 December 2017 Amounts under K-IFRS 1039**	**Classification under K-IFRS 1109**	**Remeasurement**	**1 January 2018 Amounts under K-IFRS 1109**
Financial Assets . . .	Financial assets at FVTPL	₩ 9,444	Financial assets measured at FVTPL		₩ 9,444
				Fair value measurement	3
	Available-for-sale financial assets - equity securities	4,052	Financial assets measured at FVTPL		3,213
			Financial assets measured at FVOCI		840
	Available-for-sale financial assets - debt securities	40,270	Financial assets measured at FVTPL		3
			Financial assets measured at amortised cost		14
			Financial assets measured at FVOCI		40,254
	Held-to-maturity financial assets	6,161	Financial assets measured at amortised cost		6,161
				Expected credit losses	(1)
	Loans	224,097	Loans		223,839
			Financial assets measured at FVTPL		160
				Expected credit losses	(98)
	Other financial assets	9,585	Other financial assets		9,585
				Expected credit losses	(0)
Financial Liabilities	Financial liabilities at FVTPL	6,840	Financial liabilities measured at FVTPL		6,840

In addition, the application of K-IFRS 1109 resulted in a one-off increase of ₩96.0 billion in our allowance for credit losses (and related decreases within our retained earnings) in the opening balances as of 1 January 2018 as compared to the closing balances as of 31 December 2017 in our consolidated statement of financial position. The following table sets out in detail the changes in the balance of allowance for credit losses from 31 December 2017 to 1 January 2018 as a result of the adoption of K-IFRS 1109:

(in billions on Won)		**Provision for loss**			
		31 December 2017			**1 January 2018**
Account Classification under K-IFRS 1039	**Account Classification under K-IFRS 1109**	**Loss Allowance under K-IFRS 1039**	**Reclassification**	**Remeasurement**	**Loss Allowance under K-IFRS 1109**
Loans and Receivables	Financial assets measured at amortised cost	₩1,350	—	₩ 98	₩1,448
Loans and Receivables	Financial assets measured at FVTPL	13	(13)	—	—
Other financial assets	Financial assets measured at amortised cost	11	—	0	11
Available-for-sale financial assets	Financial assets measured at FVOCI	—	—	9	9
Held-to-maturity financial assets	Financial assets measured at amortised cost	—	—	2	2
		₩1,374	(₩13)	₩108	₩1,469
Loss allowance for financial guarantee	Loss allowance for financial guarantee	1	—	(0)	0
Loss allowance for acceptances and guarantee	Loss allowance for acceptances and guarantee	84	—	(5)	80
Loss allowance for unused credit limit	Loss allowance for unused credit limit	59	—	6	65
		144	—	0	145
	Total	₩1,518	(₩13)	₩109	₩1,614

The application of K-IFRS 1109 may continue to result in higher impairment loss allowances that are recognised earlier, on a more forward-looking basis and on a broader scope of financial instruments than was the case under K-IFRS 1039. In addition, the move from incurred to expected credit losses will have the potential to impact our performance under stressed economic conditions or regulatory stress tests. Measurement requires increased complexity in our impairment modelling as it involves a greater degree of management judgement with respect to forward-looking information. We expect that impairment charges will tend to be more volatile as a result. Furthermore, K-IFRS 1109 introduced additional requirements for a financial asset to be classified as measured at amortised costs or fair value through other comprehensive income compared to the prior guidance in K-IFRS 1039, and therefore would potentially increase the proportion of financial assets that are measured at FVTPL, thereby increasing volatility in our profit or loss.

For additional information regarding K-IFRS 1109 and the impact of its application to our consolidated financial statements, as well as other new accounting standards, interpretations and amendments applicable to us, see Note 3.2 of the notes to our annual and interim consolidated financial statements included elsewhere in this Offering Circular.

Results of Operations

Net Interest Income

The following table sets out the principal components of our net interest income for the periods indicated, as well as changes in these components over such periods in percentage terms.

	Year Ended 31 December			Nine Months Ended 30 September		Percentage Change		
	2015[1]	2016	2017	2017	2018	2015/ 2016	2016/ 2017	2017 3Q/ 2018 3Q
	(In billions of Won)					(per cent.)		
Interest income								
Due from banks	₩ 68	₩ 86	₩ 142	₩ 108	₩ 105	25.9%	65.7%	(2.5%)
Financial assets at FVTPL (K-IFRS 1039)	27	42	46	33	—	57.4	8.7	N.A.
Financial assets measured at FVTPL (K-IFRS 1109)	—	—	—	—	45	N.A.	N.A.	N.A.
Available-for-sale financial assets	398	601	653	471	—	51.0	8.6	N.A.
Financial assets measured at FVOCI	—	—	—	—	532	N.A.	N.A.	N.A.
Held-to-maturity financial assets	94	149	157	112	—	59.2	5.2	N.A.
Securities measured at amortised cost	—	—	—	—	180	N.A.	N.A.	N.A.
Loans	4,062	6,704	7,113	5,246	6,027	65.1	6.1	14.9
Total interest income	₩4,649	₩7,583	₩8,111	₩5,970	₩6,889	63.1%	7.0%	15.4%
Interest expense								
Deposit liabilities	1,529	2,405	2,461	1,809	2,231	57.3	2.3	23.4%
Borrowings	135	183	208	153	190	35.8	13.5	23.9
Financial liabilities at FVTPL (K-IFRS 1039)	7	14	12	9	—	82.6	(14.1)	N.A.
Financial liabilities measured at FVTPL (K-IFRS 1109)	—	—	—	—	9	N.A.	N.A.	N.A.
Debentures	250	494	519	387	452	97.9	5.0	16.7
Others	95	158	98	74	83	65.6	(37.9)	12.1
Total interest expense	₩2,016	₩3,254	₩3,297	₩2,432	₩2,964	61.4%	1.3%	21.9%
Net interest income	2,632	4,329	4,814	3,538	3,925	64.4%	11.2%	10.9%
Net interest margin[2]	1.71%	1.64%	1.72%	1.71%	1.77%			

N.A. means not applicable.

Notes:

(1) Represents the results of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

(2) Defined as net interest income (annualised for interim periods) divided by the average of the daily ending balances of interest-earning assets, on a separate basis (calculated in accordance with FSS reporting guidelines).

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Interest Income

Our interest income increased 15.4 per cent. from ₩5,970 billion in the first nine months of 2017 to ₩6,889 billion in the first nine months of 2018, primarily due to an increase in interest income on loans. A substantial majority of loans that were classified as "loans and receivables" under K-IFRS 1039 in 2017 are currently classified as "financial assets at amortised cost" under K-IFRS 1109, while a small portion of loans that were classified as "loans and receivables" under K-IFRS 1039 in 2017 are currently classified as "financial assets at fair value through profit or loss" under K-IFRS 1109. See "— *Changes in Accounting Standards*". On a separate basis, the average balance of our interest-earning assets increased 6.3 per cent. from ₩256,227 billion in the first nine months of 2017 to ₩272,299 billion in the first nine months of 2018, principally due to an increase in the average balance of loans from ₩208,340 billion to ₩219,765 billion. The average balances of loans increased primarily due to a continued increase in loan demand from SME and household borrowers, resulting from expectations of more stringent Governmental regulations in the future to stabilise the real estate market, as well as a gradual increase in the general level of interest rates in Korea. On a separate basis, our annualised average yields on interest-earning assets increased from 2.72 per cent. in the first nine months of 2017 to 2.98 per cent. in the first nine months of 2018.

Interest Expense

Our interest expense increased 21.9 per cent. from ₩2,432 billion in the first nine months of 2017 to ₩2,964 billion in the first nine months of 2018, primarily due to a 23.4 per cent. increase in interest expense on deposit liabilities and a 16.7 per cent. increase in interest expense on debentures. On a separate basis, the average balance of our interest-bearing liabilities increased 6.1 per cent. from ₩247,479 billion in the first nine months of 2017 to ₩262,654 billion in the first nine months of 2018, principally due to an increase in the average balance of deposits from ₩204,319 billion to ₩217,574 billion. The average balances of deposit liabilities increased primarily due to customers' continuing preference for lower-risk financial products in light of the continuing uncertainty in financial and real estate markets in the first nine months of 2018, as well as our continued marketing efforts to attract more deposit customers. The average balances of debentures also increased reflecting the growing need for stable funding in light of the increasing loan balances and tightening capital adequacy rules. On a separate basis, the annualised average cost of our interest-bearing liabilities increased from 1.29 per cent. in the first nine months of 2017 to 1.49 per cent. in the first nine months of 2018, largely as a result of the increase in the general level of interest rates in Korea.

Net Interest Margin

Net interest margin represents the ratio of net interest income (annualised for interim periods) to average of the daily ending balances of interest-earning assets. Our net interest margin on a separate basis increased from 1.71 per cent. in the first nine months of 2017 to 1.77 per cent. in the first nine months of 2018, as a 10.5 per cent. increase in our net interest income outpaced a 6.3 per cent. increase in the average balance of our interest-earning assets. Our net interest spread, which represents the difference between the average yield (annualised for interim periods) on interest-earning assets and the average cost (annualised for interim periods) of interest-bearing liabilities, also increased from 1.43 per cent. in the first nine months of 2017 to 1.50 per cent. in the first nine months of 2018, on a separate basis. These increases primarily reflect the increase in the general level of interest rates in Korea in the first nine months of 2018 compared to the first nine months of 2017, as well as our continued efforts to increase lower cost funding sources.

Comparison of 2017 to 2016

Interest Income

Our interest income increased 7.0 per cent. from ₩7,583 billion in 2016 to ₩8,111 billion in 2017, primarily due to an increase in interest income on loans, and to a lesser extent, increases in interest income on due from banks and available-for-sale financial assets. On a separate basis, the average balance of our interest-earning assets increased 6.2 per cent. from ₩243,959 billion in 2016 to ₩259,184 billion in 2017, principally due to an increase in the average balance of loans from ₩201,224 billion to ₩210,004 billion. The average balances of loans increased primarily due to increased demand for SME loans, general purpose household loans and mortgage loans. On a separate basis, our average yields on interest-earning assets remained relatively unchanged at 2.74 per cent. in 2017 compared 2.69 per cent. in 2016, as an increase in the average yield on loans was largely offset by a decrease in the average yield on securities. The base interest rate set by the Bank of Korea was reduced from 1.50 per cent. to 1.25 per cent. in June 2016, but it was raised back to 1.50 per cent. in November 2017.

Interest Expense

Our interest expense increased 1.3 per cent. from ₩3,254 billion in 2016 to ₩3,297 billion in 2017, primarily due to moderate increases in interest expenses on deposit liabilities, borrowings and debentures, which was partially offset by a decrease in interest expenses on financial liabilities at FVTPL. On a separate basis, the average balance of our interest-bearing liabilities increased 6.5 per cent. from ₩234,686 billion in 2016 to ₩250,052 billion in 2017, principally due to an increase in the average balance of deposits from ₩193,387 billion to ₩206,662 billion, as well as an increase in the average balance of debentures from ₩18,785 billion to ₩20,986 billion. The increase in deposits reflected customers' continuing preference for low-risk products in Korea in light of the continuing uncertainty in financial markets in 2017 and, to a lesser extent, our efforts to broaden a low-cost funding base by attracting more customers for our deposit products. On a separate basis, the average cost of our interest-bearing liabilities decreased slightly from 1.37 per cent. in 2016 to 1.30 per cent. in 2017, largely as a result of the increase in our low-cost funding base, as well as the repayment of certain long-term foreign currency-denominated debentures that carried higher interest rates.

Net Interest Margin

Our net interest margin, which represents the ratio of net interest income to average of the daily ending balances of interest-earning assets, increased from 1.64 per cent. in 2016 to 1.72 per cent. in 2017, on a separate basis, partly as a result of our active management of loan/deposit pricing, which led to improvements in our loan portfolio and funding base. Our net interest spread, which represents the difference between the average yield on interest-earning assets and the average cost of interest-bearing liabilities, also increased from 1.32 per cent. in 2016 to 1.44 per cent. in 2017, on a separate basis.

Comparison of 2016 to 2015

Interest Income

Our interest income increased 63.1 per cent. from ₩4,649 billion in 2015 to ₩7,583 billion in 2016, primarily due to a significant increase in the interest-earning assets resulting from the Merger, which became effective on 1 September 2015. On a separate basis, the average balance of our interest-earning assets increased 71.6 per cent. from ₩142,194 billion in 2015 to ₩243,959 billion in 2016, principally due to an increase in the average balance of loans from ₩116,494 billion to ₩201,224 billion. However, on a separate basis, our annualised average yields on interest-earning assets decreased from 2.8 per cent. in 2015 to 2.7 per cent. in 2016, which mainly reflected a decline in the general level of market interest rates driven by the reductions in the base interest rate set by the Bank of Korea, which was reduced from 2.00 per cent. to 1.75 per cent. in March 2015, to 1.50 per cent. in June 2015 and further to a historic low of 1.25 per cent. in early June 2016.

Interest Expense

Our interest expense increased 61.4 per cent. from ₩2,016 billion in 2015 to ₩3,254 billion in 2016, primarily due to a significant increase in the interest-bearing liabilities resulting from the Merger. On a separate basis, the average balance of our interest-bearing liabilities increased 73.2 per cent. from ₩135,462 billion in 2015 to ₩234,686 billion in 2016, principally due to an increase in the average balance of deposits from ₩109,650 billion to ₩193,387 billion. On a separate basis, the annualised average cost of our interest-bearing liabilities decreased from 1.5 per cent. in 2015 to 1.37 per cent. in 2016, largely as a result of the general decrease in market interest rates, and to a lesser extent, a continued increase in the proportion of low-cost short-term deposits (such as demand deposits) in the overall deposit portfolio primarily due to increased liquidity in the market.

Net Interest Margin

Our net interest margin, which represents the ratio of net interest income to average of the daily ending balances of interest-earning assets, decreased from 1.71 per cent. in 2015 to 1.64 per cent. in 2016, on a separate basis, as the growth in our net interest income was outpaced by the growth in the average balance of our interest-earning assets, reflecting the decrease in the general level of interest rates in Korea in 2016 compared to 2015, as discussed above. Our net interest spread, which represents the difference between the average yield on interest-earning assets and the average cost of interest-bearing liabilities, decreased from 1.35 per cent. in 2015 to 1.32 per cent. in 2016, on a separate basis, due to a decrease in market interest rates.

Net Fees and Commission Income

The following table sets forth the components of our net fees and commission income for the periods indicated, as well as changes in these components over such periods in percentage terms.

	Year Ended 31 December			Nine Months Ended 30 September		Percentage Change		
	2015[1]	2016	2017	2017	2018	2015/2016	2016/2017	2017 3Q/2018 3Q
	(In billions of Won)					(per cent.)		
Fees and commission income	₩618	₩802	₩835	₩634	₩627	29.7%	4.2%	(1.2%)
Fees and commission expenses	146	193	199	148	134	32.2	3.0	(9.9)
Net fees and commission income	₩472	₩609	₩636	₩486	₩493	29.0%	4.5%	1.5%

Note:

(1) Represents the results of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Our net fees and commission income increased 1.5 per cent. from ₩486 billion in the first nine months of 2017 to ₩493 billion in the first nine months of 2018, despite the 1.2 per cent. decrease in fees and commission income from ₩634 billion in the first nine months of 2017 to ₩627 billion in the first nine months of 2018, as our fees and commission expenses decreased more by 9.9 per cent. from ₩148 billion in the first nine months of 2017 to ₩134 billion in the first nine months of 2018. The decrease in fees and commission income was primarily due to a 2.0 per cent. decrease in commissions received from loans and others from ₩414 billion in the first nine months of 2017 to ₩406 billion in the first nine months of 2018, resulting mainly from a decrease in commissions from advisory services and the sale of new financial products due to a decline in the stock market. The decrease in fees and commission expenses was primarily the result of a 12.7 per cent. decrease in commissions paid for borrowings and others from ₩117 billion in the first nine months of 2017 to ₩103 billion in the first nine months of 2018, primarily due to a decrease in securities and foreign exchange trading activities.

Comparison of 2017 to 2016

Our net fees and commission income increased 4.5 per cent. from ₩609 billion in 2016 to ₩636 billion in 2017, as the 4.2 per cent. increase in fees and commission income from ₩802 billion in 2016 to ₩835 billion in 2017 outpaced in volume the 3.0 per cent. increase in fees and commission expenses from ₩193 billion in 2016 to ₩199 billion in 2017. The increase in fees and commission income was primarily due to a 6.8 per cent. increase in commissions received from loans and others from ₩507 billion in 2016 to ₩542 billion in 2017. The increase in fees and commission expenses was mainly the result of a 7.7 per cent. increase in commissions paid for borrowings and others from ₩147 billion in 2016 to ₩159 billion in 2017. Such increases in commissions received and paid were primarily due to the commencement of several large-scale project financing transactions in which we participated.

Comparison of 2016 to 2015

Our net fees and commission income increased 29.0 per cent. from ₩472 billion in 2015 to ₩609 billion in 2016, as the increase in fees and commission income from ₩618 billion in 2015 to ₩802 billion in 2016 outpaced the increase in fees and commission expenses from ₩146 billion in 2015 to ₩193 billion in 2016. The increase in fees and commission income was principally due to a 40.7 per cent. increase in commissions received from loans and others from ₩361 billion in 2015 to ₩507 billion in 2016, which resulted from a substantial increase in balance of loans arising from the Merger, despite a decrease in fee-generating activities related to bancassuarance sales and certain mortgage loans sponsored by the Korea Housing Finance Corporation due to changes in relevant government policies, as well as a decrease in fee contribution from agency business for our credit card affiliate, KEB Hana Card Co., Ltd. The increase in fees and commission expenses was primarily the result of a 49.4 per cent. increase in commissions paid for borrowings and others from ₩99 billion in 2015 to ₩147 billion in 2016, mainly due to the increase in balance of borrowings resulting from the Merger.

Net Gain (Loss) on Financial Instruments

The following table sets forth the components of our net gain (loss) on financial instruments for the periods indicated, as well as changes in these components over such periods in percentage terms.

	Year Ended 31 December			Nine Months Ended 30 September		Percentage Change		
	2015[(1)]	2016	2017	2017	2018	2015/ 2016	2016/ 2017	2017 3Q/ 2018 3Q
	(In billions of Won)					(per cent.)		
Net gain (loss) on financial instruments at FVTPL (K-IFRS 1039)	₩154	₩515	(₩135)	(₩168)	—	234.5%	(126.2%)	N.A.
Net gain on financial instruments measured at FVTPL (K-IFRS 1109)	—	—	—	—	137	N.A.	N.A.	N.A.
Net gain (loss) on derivative financial instruments used for hedging purposes	(4)	(16)	24	18	(9)	271.0	(246.4)	(151.0)
Net gain on financial instruments available-for-sale	289	383	534	173	—	32.4	39.5	N.A.
Net gain on financial instruments measured at FVOCI	—	—	—	—	6	N.A.	N.A.	N.A.
Total net gain (loss) on financial instruments	₩439	₩882	₩ 422	₩ 22	₩133	101.0%	(52.1%)	493.8%

N.A. means not applicable.

Note:

(1) Represents the results of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Our net gain on financial instruments increased 493.1 per cent. from ₩22 billion in the first nine months of 2017 to ₩133 billion in the first nine months of 2018. This increase was primarily attributable to a change in net gain (loss) on financial instruments at fair value through profit or loss from a net loss of ₩168 billion in the first nine months of 2017 (under K-IFRS 1039) to a net gain of ₩137 billion in the first nine months of 2018 (under K-IFRS 1109). Financial instruments measured at fair value through profit or loss under K-IFRS 1109 include all financial instruments at fair value through profit or loss that were classified as such under K-IFRS 1039 in 2017, as well as certain financial instruments that were classified as available-for-sale financial assets and loans under K-IFRS 1039 in 2017. The re-classification of certain financial instrument items significantly affects the comparability of our net gain (loss) on financial instruments between the first nine months of 2017 and the first nine months of 2018. For example, gains or losses from certain available-for-sale financial assets, which were recorded as capital adjustment items under K-IFRS 1039, are now recognised as operating income (loss) as such assets are classified as financial instruments measured at fair value through profit under K-IFRS 1109. See "— *Changes in Accounting Standards*".

Comparison of 2017 to 2016

Our net gain on financial instruments decreased 52.1 per cent. from ₩882 billion in 2016 to ₩422 billion in 2017. This decrease was primarily attributable to a net loss of ₩135 billion on financial instruments at FVTPL in 2017 compared to a net gain of ₩515 billion in 2016, as the value of our debt securities was negatively affected by the general increase in market interest rates towards the end of 2017. Such loss was partially offset by a 39.5 per cent. increase in net gain on disposal of available-for-sale financial assets from ₩383 billion in 2016 to ₩534 billion in 2017, in part attributable to the gain we recognised from the sale of equity securities of SK hynix Inc.

Comparison of 2016 to 2015

Our net gain on financial instruments increased 101.0 per cent. from ₩439 billion in 2015 to ₩882 billion in 2016. This increase was primarily attributable to a 234.4 per cent. increase in net gain on financial instruments available-for-sale from ₩154 billion to ₩515 billion, primarily due to an increase in trading volume for stocks and bonds and gains from the disposal of debt securities driven by favourable market conditions.

Impairment Loss on Financial Assets

Impairment losses on financial assets include impairment loss of available-for-sale financial assets, provision for possible loan losses and provision for possible other asset losses.

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Impairment losses on financial assets decreased 93.3 per cent. from ₩510 billion in the first nine months of 2017 to ₩34 billion in the first nine months of 2018, which decrease was primarily attributable to a base effect from an unusually high amount of impairments recorded in the first nine months of 2017, as well as reversal of possible losses previously recognised with respect to loans to Moneual, Inc. and securities of Kumho Tire Co., Ltd. in the first nine months of 2018.

Comparison of 2017 to 2016

Impairment losses on financial assets increased 11.6 per cent. from ₩600 billion in 2016 to ₩669 billion in 2017, which increase was primarily attributable to a 279.0 per cent. increase in impairment loss of available-for-sale financial assets from ₩37 billion in 2016 to ₩141 billion in 2017. The significant increase in impairment loss of available-for-sale financial assets was mainly due to the recognition of impairments on certain securities of distressed companies, such as Kumho Tire Co., Ltd. and Kookmin Cable. On the other hand, provision for possible loan losses decreased 4.2 per cent. from ₩551 billion in 2016 to ₩528 billion in 2017, reflecting the general improvements in the business performance and financial outlook of the borrowers in troubled sectors, as well as the reduction in our exposures to such borrowers.

Comparison of 2016 to 2015

Impairment losses on financial assets decreased 6.3 per cent. from ₩640 billion in 2015 to ₩600 billion in 2016, primarily due to a 7.3 per cent. decrease in provision for possible loan losses from ₩595 billion in the 2015 to ₩551 billion in 2016 resulting from the increase in loan balances resulting from the Merger. Our ratio of provision for possible loan losses to average loan balances decreased in 2016 compared to 2015 due to the general improvement in asset quality in the corporate and retail sectors, while we made additional provisions for possible loan losses in 2016 with respect to loans to certain troubled borrowers, such as Daewoo Shipbuilding & Marine Engineering Co., Ltd. and Hanjin Shipping Co., Ltd.

General and Administrative Expenses

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Our general and administrative expenses increased 2.3 per cent. from ₩1,951 billion in the first nine months of 2017 to ₩1,996 billion in the first nine months of 2018, primarily due to an increase in termination benefits and, to a lesser extent, an increase in advertising expenses, which was partially offset by a decrease in rental expenses. Specifically,

- Termination benefits increased 217.6 per cent. from ₩34 billion in the first nine months of 2017 to ₩107 billion in the first nine months of 2018, primarily due to one-off expenses related to the implementation of an early retirement programme in the third quarter of 2018;
- Advertising expenses increased 56.3 per cent. from ₩45 billion in the first nine months of 2017 to ₩70 billion in the first nine months of 2018, largely due to increased marketing campaigns, including those related to sports sponsorships and social programmes, in the third quarter of 2018; and
- Rental expenses decreased 17.8 per cent. from ₩209 billion in the first nine months of 2017 to ₩172 billion in the first nine months of 2018, primarily due to a continued reduction in the number of branches and sub-branches, in line with the strategy to streamline our physical distribution network.

Comparison of 2017 to 2016

Our general and administrative expenses decreased 2.2 per cent. from ₩3,161 billion in 2016 to ₩3,092 billion in 2017, primarily due to a decrease in termination benefits and, to a lesser extent, a decrease in other general and administrative expenses. Such decrease was partially offset by increases in salaries and advertising expenses. Specifically,

- Termination benefits decreased 55.9 per cent. from ₩296 billion in 2016 to ₩131 billion in 2017, primarily due to a decrease in the number of employees who participated in the early retirement programme;
- Other general and administrative expenses decreased 5.6 per cent. from ₩432 billion in 2016 to ₩408 billion in 2017, primarily due to a decrease in the number of branches and ATMs and the resulting decrease in general maintenance costs;
- Salaries increased 7.3 per cent. from ₩1,505 billion in 2016 to ₩1,615 billion in 2017, largely due to an increase in incentive payments to employees reflecting our strong financial performance; and
- Advertising expenses increased 17.8 per cent. from ₩89 billion in 2016 to ₩104 billion in 2017, largely due to sponsorship fees paid to the Korea Professional Football League (K-League) and PyeongChang 2018 Winter Olympics.

Comparison of 2016 to 2015

Our general and administrative expenses increased 30.4 per cent. from ₩2,424 billion in 2015 to ₩3,161 billion in 2016, primarily due to an increase in salaries and, to a lesser extent, increases in rental expenses and other general and administrative expenses. Specifically,

- Salaries increased 38.9 per cent. from ₩1,084 billion in 2015 to ₩1,505 billion in 2016, primarily due to an increase in the number of employees resulting from the Merger;
- Rental expenses increased 44.4 per cent. from ₩199 billion in 2015 to ₩287 billion in 2016, largely due to the inclusion of rental expenses on Hana Bank branches as a result of the Merger; and
- Other general and administrative expenses increased 37.2 per cent. from ₩315 billion in 2015 to ₩432 billion in 2016, largely due to increases in expenses such as utility costs and service costs as a result of the Merger.

Other Operating Income (Expenses)

The following table sets forth the components of our net other operating income (expenses) for the periods indicated, as well as changes in these components over such periods in percentage terms.

	Year Ended 31 December			Nine Months Ended 30 September		Percentage Change		
	2015[(1)]	2016	2017	2017	2018	2015/2016	2016/2017	2017 3Q/2018 3Q
	(In billions of Won)					(per cent.)		
Other operating income	₩2,874	₩ 3,859	₩4,512	₩3,644	₩3,201	34.3%	16.9%	(12.2%)
Other operating expenses	2,972	4,371	3,948	3,216	3,172	47.1	(9.7)	(1.4)
Total net other operating income (expenses)	(₩97)	(₩512)	₩ 564	₩ 428	₩ 29	426.6%	(210.1%)	(93.3%)

Note:

(1) Represents the results of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

The principal component of our other operating income is gain on foreign exchange transaction. Other items that comprise our other operating income include gain on disposal of loans, reversal of allowances for acceptance and guarantees, reversal of allowances for unused commitments, reversal of other provisions, trust commissions, gain on merchant banking accounts and dividends.

The principal component of our other operating expenses is loss on foreign exchange transaction. Other items that comprise our other operating expenses include loss on sales of loans, provision of allowances for acceptance and guarantees, provision of allowances for unused commitments, provision of other allowance, contribution to guarantee fund, insurance fee on deposit and loss on merchant banking accounts.

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Our net other operating income decreased 93.3 per cent. from ₩428 billion in the first nine months of 2017 compared to ₩29 billion in the first nine months of 2018.

Our other operating income decreased 12.2 per cent. from ₩3,644 billion in the first nine months of 2017 to ₩3,201 billion in the first nine months of 2018, mainly due to a 15.1 per cent. decrease in gain on foreign exchange transaction from ₩3,357 billion in the first nine months of 2017 to ₩2,851 billion in the first nine months of 2018. In addition, dividends decreased 76.9 per cent. from ₩52 billion in the first nine months of 2017 to ₩12 billion in the first nine months of 2018 primary due to a decrease in the volume of securities that pay dividends resulting from the sale of such securities.

Our other operating expenses decreased 1.4 per cent. from ₩3,216 billion in the first nine months of 2017 to ₩3,172 billion in the first nine months of 2018. This decrease was primarily attributable to a 2.2 per cent. decrease in loss on foreign exchange transaction from ₩2,759 billion in the first nine months of 2017 to ₩2,698 billion in the first nine months of 2018. On a net basis, our net gain on foreign exchange transaction decreased from ₩598 billion in the first nine months of 2017 to ₩152 billion in the first nine months of 2018. Both the gains and losses on foreign exchange transaction decreased in the first nine months of 2018 compared to the first nine months of 2017 due primarily to a temporary decrease in the foreign exchange transaction volume in the first nine months of 2018. In terms of the Market Average Exchange Rate, the Won appreciated from Won 1,146.7 to US$1.00 as of 30 September 2017 to Won 1,112.7 to US$1.00 as of 30 September 2018.

Comparison of 2017 to 2016

We recorded a net other operating income of ₩564 billion in 2017 compared to net other operating loss of ₩512 billion in 2016.

The 16.9 per cent. increase in other operating income from ₩3,859 billion in 2016 to ₩4,512 billion in 2017 was mainly attributable to a 16.4 per cent. increase in gain on foreign exchange transaction from ₩3,567 billion in 2016 to ₩4,154 billion in 2017. In addition, trust commissions increased 46.7 per cent. from ₩114 billion in 2016 to ₩167 billion in 2017 as we engaged in an extensive marketing campaign for trust management services in 2017.

The 9.7 per cent. decrease in other operating expenses from ₩4,371 billion in 2016 to ₩3,948 billion in 2017 was primarily the result of a 9.4 per cent. decrease in loss on foreign exchange transaction from ₩3,677 billion in 2016 to ₩3,331 billion in 2017. On a net basis, we recorded a net gain on foreign exchange transaction in the amount of ₩822 billion in 2017, compared to a net loss of ₩110 billion in 2016. In terms of the Market Average Exchange Rate, the Won appreciated from Won 1,208.5 to US$1.00 as of 31 December 2016 to Won 1,071.4 to US$1.00 as of 31 December 2017.

Comparison of 2016 to 2015

We recorded a net other operating expense of ₩512 billion in 2016 compared to net other operating income of ₩97 billion in 2015.

The 25.5 per cent. decrease in other operating income from ₩3,859 billion in 2015 to ₩2,874 billion in 2016 was mainly attributable to a 35.6 per cent. increase in gain on foreign exchange transaction from ₩2,631 billion in 2015 to ₩3,567 billion in 2016, which primarily resulted from the increase in monetary assets and liabilities denominated in foreign currencies as a result of the Merger. Fees and commission income also increased by 58.5 per cent. from ₩72 billion in 2015 to ₩114 billion in 2016, which primarily resulted from the increase in the volume of financial assets as a result of the Merger.

The 47.1 per cent. increase in other operating expenses from ₩2,972 billion in 2015 to ₩4,371 billion in 2016 was primarily the result of a 48.5 per cent. increase in loss on foreign exchange transaction from ₩2,477 billion to ₩3,677 billion, largely due to the increase in monetary assets and liabilities denominated in foreign currencies as a result of the Merger. On a net basis, we recorded a net loss on foreign exchange transaction of ₩110 billion in 2016 compared to our net gain on foreign exchange transaction of ₩154 billion in 2015. In terms of the Market Average Exchange Rate, the Won depreciated from Won 1,172.0 to US$1.00 as of 31 December 2015 to Won 1,208.5 to US$1.00 as of 31 December 2016. Our insurance fee on deposit also increased 86.5 per cent. from ₩158 billion in 2015 to ₩295 billion in 2016 primary due to the increase in deposit volume as a result of the Merger. Likewise, our contribution to guarantee fund also increased 41.6 per cent. from ₩196 billion in 2015 to ₩278 billion in 2016, as loans extended pursuant to the Korea Credit Guarantee Fund Act increased significantly as a result of the Merger.

Non-operating Income (Expenses)

Non-operating income principally includes rental fee income, gain on disposal of property and equipment, gain on disposal of intangible asset, gain on equity method, reversal of impairment loss in intangible asset, gain on disposal of investments in subsidiaries, reversal of impairment loss of investment stock of associates, and gain on exemption of debt.

Non-operating expenses principally include loss on disposal of property and equipment, loss on disposal of intangible asset, loss on equity method, collection expenses for written-off claims, collection commissions for written-off claims, loss on disposal of investment stock of associates, impairment loss of investment stock of associates, and donations.

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Our net non-operating income decreased 66.3 per cent. from ₩106 billion in the first nine months of 2017 to ₩36 billion in the first nine months of 2018.

The 43.4 per cent. decrease in non-operating income from ₩147 billion in the first nine months of 2017 to ₩83 billion in the first nine months of 2018 was mainly attributable to a decrease in gain on equity method. Our gain on equity method decreased 52.4 per cent. from ₩89 billion in the first nine months of 2017 to ₩42 billion in the first nine months of 2018 due to losses incurred by certain equity method investees such as Bank of Jilin and CM International Financing Leases.

The 16.4 per cent. increase in non-operating expenses from ₩41 billion in the first nine months of 2017 to ₩48 billion in the first nine months of 2018 was mainly attributable to an increase in donations. Donations increased 142.7 per cent. from ₩9 billion in the first nine months of 2017 to ₩23 billion in the first nine months of 2018, reflecting our increased commitment to social responsibility, with a particular focus on underprivileged communities.

Comparison of 2017 to 2016

Our net non-operating income decreased 64.3 per cent. from ₩217 billion in 2016 to ₩77 billion in 2017.

The 35.8 per cent. decrease in non-operating income from ₩326 billion in 2016 to ₩209 billion in 2017 was mainly attributable to decreases in gain on disposal of property and equipment and gain on disposal of investments in associates, which was partially offset by an increase in gain on equity method. Our gain on disposal of property and equipment decreased 73.1 per cent. from ₩91 billion in 2016 to ₩24 billion in 2017 due primarily to a base effect from an unusually large number of sale transactions of land and buildings occurred in 2016 as part of the post-Merger integration efforts, which was not repeated in 2017. In addition, we recorded no gain or loss on disposal of investments in associates in 2017, compared to a gain of ₩65 billion in 2016 resulting from sales of our equity interests in Sambu Construction Co., Ltd. and Taihan Electric Wire Co., Ltd. On the other hand, our gain on equity method increased 75.1 per cent. from ₩59 billion in 2016 to ₩103 billion in 2017, driven by improvements in operating results of certain equity method investees, including Hanil Hyundai Cement Co., Ltd.

The 21.0 per cent. increase in non-operating expenses from ₩109 billion in 2016 to ₩132 billion in 2017 was mainly attributable to an increase in other non-operating expenses, which was partially offset by decreases in loss on disposal of investments in associates and loss on equity method. The 175.4 per cent. increase in other non-operating expenses from ₩36 billion in 2016 to ₩100 billion in 2017 was primarily due to our capital contribution to the Korea Inclusive Finance Agency. On the other hand, in 2017, we did not record any loss on disposal of investments in associates or loss on equity method, compared to ₩23 billion in loss on disposal of investments in associates and ₩17 billion in loss on equity method in 2016.

Comparison of 2016 to 2015

Our net non-operating income increased 66.3 per cent. from ₩101 billion in 2015 to ₩168 billion in 2016.

The 93.9 per cent. increase in non-operating income from ₩168 billion in 2015 to ₩326 billion in 2016 was mainly attributable to increases in gain on disposal of property and equipment and gain on disposal of investments in subsidiaries. The increase in gain on disposal of property and equipment from ₩7 billion in 2015 to ₩91 billion in 2016 was primarily due to the post-Merger sale of land and buildings to cut redundant branches. The increase in gain on disposal of investments in subsidiaries from ₩9 billion to ₩65 billion was primarily due to the recategorization of certain assets as available-for-sale financial assets.

The 61.4 per cent. increase in non-operating expenses from ₩67 billion in 2015 to ₩109 billion in 2016 was mainly attributable to increases in other non-operating expenses and loss on equity method. The increase in other non-operating expenses from ₩13 billion in 2015 to ₩36 billion in 2016 was primarily due to the one-time recognition of expenses associated with unamortised portions of special contributions to K-Sure. The loss on equity method increased from ₩1 billion in 2015 to ₩17 billion in 2016.

Income Tax Expense

Comparison of the First Nine Months of 2018 to the First Nine Months of 2017

Our income tax expense increased 47.0 per cent. from ₩452 billion in the first nine months of 2017 to ₩665 billion in the first nine months of 2018, primarily due to a 23.2 per cent. increase in our income before income tax expense from ₩1,971 billion to ₩2,428 billion. Our effective income tax rate was 27.4 per cent. in the first nine months of 2017 and 22.9 per cent. in the first nine months of 2018, compared to the statutory tax rate of 24.2 per cent. in Korea in the first nine months of 2017 and 27.5 per cent. in the first nine months of 2018.

See Note 3.22 of the notes to our interim consolidated financial statements for the nine months ended 30 September 2017 and 2018 included elsewhere in this Offering Circular.

Comparison of 2017 to 2016

Our income tax expense increased 67.3 per cent. from ₩383 billion in 2016 to ₩641 billion in 2017, primarily due to a 56.1 per cent. increase in our income before income tax expense from ₩1,763 billion to ₩2,753 billion. Our effective income tax rate was 21.72 per cent. in 2016 and 23.28 per cent. in 2017, compared to the statutory tax rate of 24.2 per cent. in Korea in 2016 and 2017. See Note 47 of the notes to our annual consolidated financial statements for the years ended 31 December 2016 and 2017 included elsewhere in this Offering Circular.

Comparison of 2016 to 2015

Our income tax expense increased from ₩49 billion in 2015 to ₩383 billion in 2016, mainly as a result of a significant increase in our income before income tax expense from ₩482 billion to ₩1,763 billion. Our effective income tax rate was 10.25 per cent. in 2015 and 21.72 per cent. in 2016, compared to the statutory tax rate of 24.2 per cent. in Korea in 2015 and 2016. See Note 47 of the notes to our annual consolidated financial statements for the years ended 31 December 2015 and 2016 included elsewhere in this Offering Circular.

Net Income

Due to the factors described above, our net income was ₩433 billion in 2015, ₩1,380 billion in 2016 and ₩2,112 billion in 2017. Our net income was ₩1,519 billion for the first nine months of 2017 and ₩1,763 billion for the first nine months of 2018.

Financial Condition

Assets

The following table sets forth the principal components of our assets as of the dates indicated, as well as changes in these components over such dates in percentage terms.

	As of 31 December			As of 30 September	Percentage Change		
	2015	2016	2017	2018	2015/ 2016	2016/ 2017	31 December 2017/ 30 September 2018
	(In billions of Won)				(per cent.)		
Cash and due from banks	₩ 17,026	₩ 27,552	₩ 19,984	₩ 20,777	61.8%	(27.5%)	1.5%
Financial assets at FVTPL (K-IFRS 1039)	6,937	8,666	9,444	—	24.9	9.0	N.A.
Financial assets measured at FVTPL (K-IFRS 1109)	—	—	—	8,624	N.A.	N.A.	N.A.
Derivative assets used for hedging purposes	65	26	12	2	(60.5)	(54.5)	(93.4)
Available-for-sale financial assets	35,014	37,424	44,323	—	6.9	18.4	N.A.
Financial assets measured at FVOCI	—	—	—	36,991	N.A.	N.A.	N.A.
Held-to-maturity financial assets	5,185	4,130	6,161	—	(20.3)	49.2	N.A.
Securities measured at amortised cost	—	—	—	11,478	N.A.	N.A.	N.A.
Loans	209,457	215,101	224,097	236,827	2.7	4.2	5.1
Other assets[1]	18,721	17,887	16,875	24,016	(4.5)	(5.7)	2.0
Total assets	₩292,404	₩310,784	₩320,894	₩338,715	6.3%	3.3%	4.2%

N.A. means not applicable.

Note:

(1) Includes investments in associates, property and equipment, investment property, intangible assets, current income tax assets, deferred income tax assets, other assets, merchant banking account assets and non-current assets held for sale.

For further information on our assets, see "*Description of Assets and Liabilities*".

Comparison as of 30 September 2018 to 31 December 2017

Our total assets increased 5.6 per cent. from ₩320,894 billion as of 31 December 2017 to ₩338,715 billion as of 30 September 2018, due primarily to an increase in loans and accounts receivable. Our loans increased 5.7 per cent. from ₩224,097 billion as of 31 December 2017 to ₩236,827 billion as of 30 September 2018, largely driven by the increase in SME loans, general purpose household loans and mortgage loans as described above. Our accounts receivable increased 96.4 per cent. from ₩6,264 billion as of 31 December 2017 to ₩12,305 billion as of 30 September 2018, primarily reflecting a temporarily low balance of unsettled spot foreign exchange receivables at the end of the year.

Comparison as of 31 December 2017 to 31 December 2016

Our total assets increased 3.3 per cent. from ₩310,784 billion as of 31 December 2016 to ₩320,894 billion as of 31 December 2017, due primarily to increases in loans, available-for-sale financial assets and held-to-maturity financial assets. Our loans increased 4.2 per cent. from ₩215,101 billion as of 31 December 2016 to ₩224,097 billion as of 31 December 2017, largely driven by the steady growth in SME loans, general purpose household loans and mortgage loans. Available-for-sale financial assets increased 18.4 per cent. from ₩37,424 billion as of 31 December 2016 to ₩44,323 billion as of 31 December 2017. In addition, held-to-maturity financial assets increased 49.2 per cent. from ₩4,130 billion as of 31 December 2016 to ₩6,161 billion as of 31 December 2017. The increases in available-for-sale financial assets and held-to-maturity financial assets reflect our efforts to further strengthen our liquidity position and enhance our investment returns.

The effect of these increases was partially offset by a substantial decrease in cash and due from banks, which decreased 27.5 per cent. from ₩27,552 billion as of 31 December 2016 to ₩19,984 billion as of

31 December 2017, mainly as a result of the implementation of our new cash management strategy, which is focused on minimising idle cash balance while ensuring adequate liquidity to meet operating needs.

Comparison as of 31 December 2016 to 31 December 2015

Our total assets increased 6.2 per cent. from ₩292,404 billion as of 31 December 2015 to ₩310,784 billion as of 31 December 2016, principally due to an increase in cash and due from banks and an increase in loans. The 61.8 per cent. increase in cash and due from banks from ₩17,026 billion as of 31 December 2015 to ₩27,552 billion as of 31 December 2016 was primarily due to an increase in reserve deposit. The 2.7 per cent. increase in loans from ₩209,457 billion as of 31 December 2015 to ₩215,101 billion as of 31 December 2016 was primarily due to an increase in household loans.

The effect of these increases was partially offset by decreases in held-to-maturity financial assets and other assets. The 20.3 per cent. decrease in held-to-maturity financial assets from ₩5,185 billion as of 31 December 2015 to ₩4,130 billion as of 31 December 2016 was largely due to a relatively large number of held-to-maturity securities that matured in 2016 as well as a re-allocation of our investment portfolio. The 4.5 per cent. decrease in other assets from ₩18,721 billion as of 31 December 2015 to ₩17,887 billion as of 31 December 2016 was primarily the result of a decrease in property and equipment.

Liabilities and Equity

The following table sets forth the principal components of our liabilities and equity as of the dates indicated, as well as changes in these components over such dates in percentage terms.

	As of 31 December			As of 30 September	Percentage Change		
	2015	2016	2017	2018	2015/ 2016	2016/ 2017	31 December 2017/ 30 September 2018
	(In billions of Won)				(per cent.)		
Liabilities							
Deposits	₩204,743	₩220,613	₩230,410	₩239,610	7.8%	4.4%	4.0%
Financial liabilities at FVTPL (K-IFRS 1039)	5,284	6,415	6,840	—	21.4	6.6	N.A.
Financial liabilities measured at FVTPL (K-IFRS 1109)	—	—	—	3,697	N.A.	N.A.	N.A.
Derivative liabilities used for hedging purposes	40	99	73	164	146.6	(26.2)	124.1
Borrowings	17,133	15,311	13,775	15,822	(10.6)	(10.0)	14.9
Debentures	18,484	19,311	22,312	25,264	4.5	15.5	13.2
Other liabilities(1)	25,175	26,923	24,246	29,981	6.9	(9.9)	23.7
Total liabilities	₩270,860	₩288,672	₩297,655	₩314,538	6.6%	3.1%	5.7%
Equity							
Issued capital	₩ 5,360	₩ 5,360	₩ 5,360	₩ 5,360	0.0%	0.0%	0.0%
Capital surplus	9,668	9,669	9,668	9,670	0.0	0.0	0.0
Hybrid equity securities	180	180	180	180	0.0	0.0	0.0
Capital adjustments	(25)	(31)	(43)	(44)	22.5	38.5	2.4
Retained earnings	6,299	7,242	8,736	9,797	16.3	20.6	12.2
Accumulated other comprehensive income	19	(395)	(72)	(874)	(2184.0)	90.1	16.3
Equity attributable to equity owner of the Bank	21,500	22,024	23,150	24,089	2.4	5.1	4.1
Non-controlling shareholder's equity	43	88	90	88	103.2	1.5	(2.1)
Total equity	₩ 21,544	₩ 22,113	₩ 23,239	₩ 24,177	2.6%	5.1%	4.0%
Total liabilities and equity	₩292,404	₩310,784	₩320,894	₩338,715	6.3%	3.3%	5.6%

N.A. means not applicable.

Note:

(1) Other liabilities include net defined benefit liability, provisions, current income tax liabilities, deferred income tax liabilities, other liabilities and merchant banking account liabilities.

For further information on our liabilities, see "*Description of Assets and Liabilities*".

Comparison as of 30 September 2018 to 31 December 2017

Our total liabilities increased 5.7 per cent. from ₩297,655 billion as of 31 December 2017 to ₩314,538 billion as of 30 September 2018, principally as a result of an increase in deposits and accounts payable. Our deposits increased 4.0 per cent. from ₩230,410 billion as of 31 December 2017 to ₩239,610 billion as of 30 September 2018, due primarily to our efforts to broaden a low-cost funding base by attracting more customers for our deposit products, as described above. Our accounts payable increased 85.2 per cent. from ₩6,791 billion as of 31 December 2017 to ₩12,576 billion as of 30 September 2018, primarily reflecting a temporarily low balance of unsettled spot foreign exchange payables at the end of the year.

Our total equity increased 4.0 per cent. from ₩23,239 billion as of 31 December 2017 to ₩24,177 billion as of 30 September 2018, principally due to an increase in retained earnings from ₩8,736 billion as of 31 December 2017 to ₩9,797 billion as of 30 September 2018, primarily reflecting the increase in our net profit.

Comparison as of 31 December 2017 to 31 December 2016

Our total liabilities increased 3.1 per cent. from ₩288,672 billion as of 31 December 2016 to ₩297,655 billion as of 31 December 2017, principally as a result of an increase in deposits and, to a lesser extent, an increase in debentures. Our deposits increased 7.8 per cent. from ₩220,613 billion as of 31 December 2016 to ₩230,410 billion as of 31 December 2017, due primarily to customers' preference for low-risk products as well as our efforts to broaden a low-cost funding base, as discussed above. Debentures increased 15.5 per cent. from ₩19,311 billion as of 31 December 2016 to ₩22,312 billion as of 31 December 2017, largely reflecting our efforts to further enhance our liquidity position in light of the strengthened regulations governing liquidity.

Our total equity increased 5.1 per cent. from ₩22,113 billion as of 31 December 2016 to ₩23,239 billion as of 31 December 2017, principally due to an increase in retained earnings from ₩7,242 billion as of 31 December 2016 to ₩8,736 billion as of 31 December 2017, primarily reflecting the large amount of net income we recorded in 2017.

Comparison as of 31 December 2016 to 31 December 2015

Our total liabilities increased 6.6 per cent. from ₩270,860 billion as of 31 December 2015 to ₩288,672 billion as of 31 December 2016, principally as a result of an increase in deposits. The 7.8 per cent. increase in deposits from ₩204,743 billion as of 31 December 2015 to ₩220,613 billion as of 31 December 2016 was largely the result of an increase in the time and saving deposits, which was primarily due to an increase in demand for safe assets.

Our total equity increased 2.6 per cent. from ₩21,544 billion as of 31 December 2015 to ₩22,113 billion as of 31 December 2016, principally due to increases in retained earnings. Retained earnings increased 15.0 per cent. from ₩6,299 billion as of 31 December 2015 to ₩7,242 billion as of 31 December 2016, primarily as a result of the increase in net income.

Liquidity and Capital Resources

We are exposed to liquidity risk arising from withdrawals of deposits and maturities of our borrowings and debentures, as well as our need to fund our lending, trading and investment activities and to manage our trading positions. Our goal in managing liquidity is to be able, even under adverse conditions, to meet all of our liability repayments on time and to fund all investment opportunities. For a discussion of how we manage liquidity risk, see "*Risk Management — Market Risk Management — Non-Trading Activities — Liquidity Risk Management*" and Note 9 of the notes to our annual and interim consolidated financial statements appearing elsewhere in this Offering Circular. In our opinion, we have sufficient working capital to meet our requirements for the next 12 months.

The following table sets forth our source of capital as of the dates indicated.

	As of 31 December			As of 30 September
	2015	2016	2017	2018
	(In billions of Won)			
Deposits	₩204,743	₩220,613	₩230,410	₩239,610
Borrowings in Won	5,883	4,926	4,929	5,233
Borrowings in foreign currencies	8,511	6,810	6,359	8,884
Call money	2,106	2,867	2,181	1,482
Bonds sold under repurchase agreements	510	676	252	170
Bills sold	123	31	55	53
Debentures in Won	11,807	13,493	18,175	19,833
Debentures in foreign currencies	6,678	5,818	4,137	5,431
Issued capital	5,360	5,360	5,360	5,360
Total	₩245,720	₩260,594	₩271,856	₩286,056

Our primary source of funding has historically been and continues to be customer deposits. Deposits amounted to ₩204,743 billion as of 31 December 2015, ₩220,613 billion as of 31 December 2016, ₩230,410 billion as of 31 December 2017 and ₩239,610 billion as of 30 September 2018, which represented 83.3 per cent., 84.7 per cent., 84.8 per cent. and 83.8 per cent., respectively, of our total funding as of each relevant date.

As customers typically roll over a substantial majority of deposits upon maturity, deposits have generally been a stable source of funding for us. However, in times of a bullish stock market, customers tend to transfer a significant amount of bank deposits to alternative investment products, such as money market funds and other brokerage accounts maintained at securities companies, in search of higher returns, which may result in temporary difficulties in finding sufficient funding for Korean banks in general, including us. On the other hand, when the economy shows signs of slowing down, customers generally revert back to bank deposits as their investment priorities shift to maintaining the safety of their principal and stable returns, and deposits also increase due to an overall increase in liquidity from more expansionary fiscal and monetary policies designed to stimulate the economy. We cannot assure you that there will not be significant outflows in bank deposits in the future resulting from upturns in the stock market, the availability of other attractive investment alternatives or a tightening in market liquidity. While we are not facing liquidity difficulties currently, if we are unable to obtain the funding we need on terms commercially acceptable to us for an extended period of time, we may not be able to ensure our financial viability, meet regulatory requirements, implement our strategies or compete effectively.

We may use secondary and other funding sources, such as issuances of debt and equity securities, denominated in both Won and foreign currencies, to complement, or if necessary, replace, funding through customer deposits. We depend on borrowings in foreign currencies as a significant source of funding, principally in the form of corporate debt securities denominated in foreign currencies. As of 31 December 2015, 2016 and 2017 and 30 September 2018, our borrowings in foreign currencies amounted to ₩8,511 billion, ₩6,810 billion, ₩6,359 billion and ₩8,884 billion, respectively. Secondary funding sources also include call money and debentures denominated in both Won and foreign currencies, which in the aggregate amounted to ₩20,591 billion, ₩22,178 billion, ₩24,492 billion and ₩26,746 billion, as of 31 December 2015, 2016 and 2017 and 30 September 2018, respectively, representing 8.4 per cent., 8.5 per cent., 9.0 per cent. and 9.4 per cent. of our total funding as of each relevant date, respectively.

The FSC requires each Korean bank to maintain specific Won and foreign currency liquidity ratios. These ratios require us to keep our ratio of liquid assets to liquid liabilities above certain minimum levels. For a description of these requirements, see "*Regulation and Supervision — Principal Regulations Applicable to Banks — Liquidity*".

Cash Flows

The following table sets forth, for the periods indicated, the principal components of our cash flows.

	Year Ended 31 December			Nine Months Ended 30 September	
	2015[(1)]	2016	2017	2017	2018
	(In billions of Won)				
Net cash flows provided by (used in) operating activities	₩ 3,271	₩13,405	₩ 114	(₩4,729)	(₩3,493)
Net cash flows provided by (used in) investing activities	1,135	(9,820)	(3,284)	(3,500)	626
Net cash flows provided by (used in) financing activities	(2,590)	(1,990)	2,393	5,848	3,931
Net increase in cash and cash equivalents	1,817	1,595	(777)	(2,380)	1,064
Cash and cash equivalents at the beginning of the period	5,053	6,871	8,614	8,614	7,439
Effect of exchange rate changes on cash and cash equivalents	1	148	(398)	51	138
Cash and cash equivalents at the end of the period	₩ 6,871	₩ 8,614	₩ 7,439	₩ 6,285	₩ 8,641

Note:

(1) Represents the cash flows of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

Contractual Obligations

In our ordinary course of business, we make certain contractual cash obligations and commitments which extend for several years. As we are able to obtain liquidity and funding through various sources as described in "— *Liquidity and Capital Resources*" above, we do not believe that these contractual cash obligations and commitments will have a material effect on our liquidity or capital resources. The following tables set forth our contractual cash obligations as of 30 September 2018.

	Payments Due by Period (as of 30 September 2018)						
	Immediate payment	Less than 1 month	1 – 3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
	(In billions of Won)						
On-balance accounts:							
Financial liabilities at FVTPL	₩ 3,267	—	—	—	—	₩ 634	₩ 3,901
Deposits	101,251	19,058	31,795	77,984	10,270	1,860	242,218
Borrowings	3,912	2,914	1,490	4,822	2,351	443	15,932
Debentures	0	1,190	1,480	7,618	13,026	2,752	26,066
Net liabilities of derivatives used for hedging	(1)	2	4	(1)	40	(122)	(79)
Other financial liabilities	6,591	17,516	5	48	18	—	24,178
Merchant banking account liabilities	977	1,877	—	—	—	—	2,854
Sub-total	₩115,996	₩42,557	₩34,773	₩90,471	₩25,705	₩5,567	₩315,071
Off-balance accounts:							
Financial guarantee	₩ 581	—	—	—	—	—	₩ 581
Commitment	78,443	—	—	—	—	—	78,443
Merchant banking account-commitment	1,201	—	—	—	—	—	1,201
Sub-total	80,225	—	—	—	—	—	80,225
Total	₩196,221	₩42,557	₩34,773	₩90,471	₩25,705	₩5,567	₩395,295

Commitments and Guarantees

For a description of our commitments and guarantees, see "*Description of Assets and Liabilities — Commitments and Guarantees*".

Off-Balance Sheet Arrangements

We have several types of off-balance sheet arrangements, including guarantees for loans, debentures, trade financing arrangements, guarantees for other financings, credit lines, letters of credit and credit commitments.

Details of our off-balance sheet arrangements are provided in Note 29 of the notes to our annual financial statements and Note 33 of the notes to our interim financial statements included in this Offering Circular.

KEB HANA BANK

Introduction

We are one of the leading commercial banks in Korea in terms of total assets, revenues, profitability and capital adequacy. As of 30 September 2018, we had total assets, total net loans (after allowance for loan losses and net deferred loan fees and costs), total deposits and shareholders' equity of ₩338.7 trillion, ₩236.8 trillion, ₩239.6 trillion and ₩24.2 trillion, respectively. As of 30 September 2018, our combined Tier I and Tier II capital adequacy ratio was 16.51 per cent., the highest among all major commercial banks in Korea.

As a full-service financial institution, we operate an extensive nationwide and overseas banking network, consisting of 758 domestic branches and sub-branches, as well as 16 international branches, two sub-branches of such international branches, five overseas representative offices, 11 overseas subsidiaries and 126 sub-branches of such overseas subsidiaries, located in 24 countries outside of Korea as of 30 September 2018.

We also operated over 4,114 ATMs throughout Korea as of 30 September 2018, and offer Internet and telephone banking services. Through this nationwide and global network, we serve corporate and retail customers with a full complement of banking and financial services. We continue to hold strong market positions in the business segments where we have historically maintained competitive strengths, such as large corporate banking, foreign exchange and trade financing, and following the Merger, we have also gained a leading position in other business areas, such as retail banking, private banking and wealth management. Our leading presence in the market has been widely recognised by a number of significant industry awards over the years. In 2017, we received the "Bank of the Year in Korea" award by The Banker magazine and became the first Korean bank to receive the "Asia's Best Bank Transformation" award by Euromoney magazine. Most recently, in 2018, we received the "Best Private Bank for Digital Client Solutions" award by Global Finance magazine and the "Best Private Bank in Korea" award by both Euromoney and The Banker magazines.

Integration and Merger

In February 2012, Hana Financial Group completed the purchase of 51.02 per cent. of the issued and outstanding shares of common stock of Korea Exchange Bank from an affiliate of the Lone Star Funds and an additional 6.25 per cent. from The Export-Import Bank of Korea, for an aggregate purchase price of approximately ₩4.4 trillion. In April 2013, Hana Financial Group acquired the remaining 42.73 per cent. of such shares pursuant to a share exchange offer at an exchange ratio of one share of Hana Financial Group to 0.1894302 share of Korea Exchange Bank, and became the beneficial owner of 100 per cent. of the issued and outstanding share capital of Korea Exchange Bank. Following such acquisition, common shares of Korea Exchange Bank were delisted from the KRX KOSPI Market.

Hana Financial Group had initially announced that it intended to maintain and operate Korea Exchange Bank and Hana Bank as separate entities for a period of time after the acquisition. However, internal discussions among members of the senior management of Hana Financial Group as well as of Korea Exchange Bank and Hana Bank subsequently took place about the integration of the two banks' operational systems, processes and organisational structures, for the purposes of the eventual merger between Korea Exchange Bank and Hana Bank.

In July 2014, the board of directors of Korea Exchange Bank and Hana Bank officially initiated the discussion of a merger of the two banks. After three months of deliberation and negotiations, on 29 October 2014, Korea Exchange Bank and Hana Bank entered into the Merger Agreement, pursuant to which Hana Financial Group agreed to merge Hana Bank with and into Korea Exchange Bank by exchanging each common share of Hana Bank for 2.9707919 common shares of Korea Exchange Bank. The exchange ratio was revised on 10 July 2015 to one common share of Hana Bank to 2.5250728 common shares of Korea Exchange Bank, to reflect the updated financials.

Pursuant to the terms of the Merger Agreement, an integration implementation committee was established consisting of three members from Hana Financial Group, including the committee chair, two members from Hana Bank and two members from Korea Exchange Bank. Under the supervision of the integration implementation committee, a comprehensive integration plan was developed to integrate the operations of the two banks, including IT, credit evaluation and risk management systems, to unify marketing, product development and distribution processes and to harmonise employee compensation and benefit plans, among other things.

The proposed Merger initially encountered opposition from the labour union of Korea Exchange Bank, which filed for a preliminary injunction with the Seoul Central District Court to block the Merger. The management of

Hana Financial Group engaged in a series of dialogues with the labour union of Korea Exchange Bank, and on 13 July 2015, an agreement was reached, providing that the labour union would no longer seek the injunction and that the Merger would take place subject to the satisfaction of certain conditions, such as the inclusion of "KEB" in the name of the merged bank, retention of the employees and sharing of synergies expected to be achieved from the Merger. Subsequently, both the FSC and Hana Financial Group approved the Merger, which finally became effective on 1 September 2015. Upon the completion of the Merger, Korea Exchange Bank as the surviving entity changed its name to KEB Hana Bank.

History of Korea Exchange Bank

Korea Exchange Bank was established in 1967, pursuant to the Korea Exchange Bank Act, as a wholly Government-owned bank specialising in the foreign exchange and international trade finance businesses. Until 1977, Korea Exchange Bank was the only Korean bank to offer trade financing and foreign exchange services.

Following the loss of its monopoly in trade financing and foreign exchange, Korea Exchange Bank expanded its operations and diversified its activities to include a full range of commercial banking services, through expansion of its branch network and diversification of its customer base and financial product and service offerings. Korea Exchange Bank was privatised in 1989 with the repeal of the Korea Exchange Bank Act, and its shares were first offered for public ownership in 1991. Its common stock, which was listed on the KRX KOSPI Market in 1994, was delisted in April 2013 when Hana Financial Group acquired the remaining 42.73 per cent. stake in Korea Exchange Bank and became the beneficial owner of 100 per cent. of its issued and outstanding share capital. Until the Merger, Korea Exchange Bank remained independent from other member companies of Hana Financial Group with respect to its business, including its brand, employment and wage systems.

History of Hana Bank

Hana Bank was founded in 1971 as Korea's first short-term finance and investment company. It obtained a commercial banking licence in 1991 and evolved into a full service commercial bank, serving on a nationwide basis the three principal Korean banking market segments: large corporates, SMEs and households. Hana Bank expanded its operations, assets and deposit and customer bases primarily through mergers and acquisitions. It acquired certain assets and liabilities of Chungchong Bank in June 1998 and merged with Boram Bank in January 1999. Through the merger with Boram Bank, Hana Bank also strengthened its leading position in the high net-worth individuals market segment. Hana Bank continued its expansion by merging with Seoul Bank, then one of the largest commercial banks in Korea, in December 2002. Following the introduction of the Financial Holding Companies Act of Korea, Hana Financial Group was established in December 2005 and Hana Bank became the wholly-owned principal banking subsidiary of the group.

Business

Corporate Banking

Overview

We provide comprehensive commercial banking services in Korea to corporate customers, ranging from SMEs to large corporations, including the member companies of Korea's major *chaebols*. Our corporate banking operations include lending to and taking deposits from our corporate customers, mostly in Won currency. As of 30 September 2018, our corporate loans (comprising loans to large companies, SMEs and public sector and others; after allowance for loan losses but before net deferred loan fees and costs) amounted to ₩130.5 trillion, accounting for 55.2 per cent. of our total loans. We also provide our corporate customers with a variety of fee- and commission-based services, such as investment banking and foreign exchange transactions. Since 2013, we have made continuous efforts to improve our asset quality by increasing our corporate exposure to so called "blue-chip" companies with low credit risk profiles, regardless of their size, and decreasing our corporate exposure to the companies with high credit risk profiles.

The following table sets forth the balances and percentages of the total loans (after allowance for loan losses but before net deferred loan fees and costs) attributable to each category of our corporate lending business.

	As of 31 December						As of 30 September	
	2015		2016		2017		2018	
	Amount	%	Amount	%	Amount	%	Amount	%
	(In billions of Won, except percentages)							
Large companies	₩ 43,177	20.6%	₩ 33,691	15.7%	₩ 33,165	14.8%	₩ 33,125	14.0%
SMEs	66,246	31.6	73,158	34.0	77,288	34.5	84,991	35.9
Public sector and others	11,230	5.4	11,895	5.5	13,263	5.9	12,427	5.3
Total corporate loans	₩120,653	57.6%	₩118,744	55.2%	₩123,716	55.2%	₩130,542	55.2%

Large Corporate Banking

In the past, we concentrated our commercial lending activities on large Korean companies. We were also a principal creditor bank to many of Korea's largest corporate borrowers.

We now pursue a more focused, profit-oriented marketing approach toward large corporate customers. In particular, we have reoriented our large corporate banking business around a more fee-based income structure, offering a broad range of fee-earning products and services, rather than simply providing traditional lending services. Our large corporate banking business strategy includes developing new products and services, as well as cross-selling existing fee-based products and services to our core large corporate customers. As a result, we have increased the volume and proportion of our fee income from corporate banking areas such as investment banking, financial advisory services and derivatives transactions.

We also use our advanced customer relationship management technology, which allows us to segment customers by creditworthiness and profitability and identify high-quality large corporate customers on whom we can concentrate our marketing efforts. This technology also allows us to automate the pricing of products and services accordingly.

We market to potential large corporate banking customers primarily through our senior relationship managers and relationship managers, all of whom are sales professionals specifically dedicated to marketing to high credit large corporate customers.

Small- and Medium-Sized Enterprise Banking

The SME segment of the corporate banking market has grown significantly in recent years, primarily as a result of the Government's measures to encourage lending to those enterprises. As of 30 September 2018, our corporate loans denominated in Won to SMEs (after allowance for loan losses but before net deferred loan fees and costs) amounted to ₩85.0 trillion, accounting for 65.1 per cent. of our total corporate loans denominated in Won. We pursue a selective loan strategy that focuses on identifying and marketing to SME borrowers with low credit risk profiles based on our internal credit risk assessment.

Retail Banking

Overview

We offer a wide range of retail banking services in Korea through our national network of local branches and electronic delivery systems, including ATMs and the Internet. While our retail banking operations are focused primarily on retail lending and deposit-taking activities, we also provide an array of ancillary fee-based services.

Our retail banking services include mortgage and retail lending, as well as demand, savings and time deposit-taking, electronic banking (including Internet and telephone banking and ATM services), bill paying services and payroll services.

We not only view retail banking as a significant source of income, but also believe that it is a business area through which we may further enhance our brand recognition as a customer-oriented provider of comprehensive banking services. In order to better understand, serve and market to our retail clients, we have increased our efforts to improve our marketing strategies and implement a customer management system which will allow us to target more effectively the various customer groups based on each customer's financial needs, career and current marital status. We have reassessed the marketing procedures operating between our branches and headquarters in order to enhance the efficiency of our marketing strategies. As a result of such efforts, we have been recognised by retail customers for our superior banking services. According to a survey conducted by the Korea Consumer Agency in 2017, we received the highest customer satisfaction rating among eight domestic banks with nationwide networks.

The following table sets forth our deposit portfolio as of the dates indicated.

	As of 31 December			As of 30 September
	2015	2016	2017	2018
	(In billions of Won)			
Demand deposits in Won	₩ 7,983	₩ 8,781	₩ 9,164	₩ 9,234
Time and savings deposits in Won	163,760	175,108	182,682	192,761
Demand deposits denominated in foreign currency	20,007	22,358	22,402	19,889
Time and savings deposits in foreign currencies	10,726	12,384	12,779	14,932
Certificate of deposits	2,268	1,982	3,383	2,794
Total deposits	₩204,743	₩220,613	₩230,410	₩239,610

We offer various types of household loans to individuals and small unincorporated businesses. Our household loans (after allowance for loan losses and net deferred loan fees and costs) as of 30 September 2018 amounted to ₩105 trillion, on a separate basis, ₩17 trillion, or 16 per cent., of which were unsecured loans.

Private Banking Operations

We offer private banking services to high net-worth retail customers. Through our private banking network, we offer diversified, packaged products and services such as standard retail banking, loan products, brokerage, bancassurance, investment products, real estate and estate management services. These products and services, along with customer relationship management, continue to be a focal point of our retail banking growth strategy. We opened our first "VIP Centre" in Seoul in 1992 to serve the needs of high net-worth customers, advising them on tax matters and asset management. Our strength in private banking has been recognised by the industry and media through numerous awards, including the "Best Private Bank in Korea" award from Euromoney magazine in February 2018, which we received for the eleventh time, as well as the "Best Private Bank in Korea" award from The Banker Magazine in November 2018, which we received for the sixth time. With the rising number of high net-worth retail customers, we believe the Korean wealth management market offers potential for significant growth.

In order to meet the enhanced expectations and sophisticated needs of our high net-worth retail customers, we pursue a "total financial service package" approach, which encompasses a wide range of services from traditional banking to advanced asset-allocation. Following the Merger, we have further strengthened our private banking business platform by combining the resources and expertise of Korea Exchange Bank and Hana Bank, and creating a new Wealth Management Group solely focused on providing value-added and high-quality products and services to high net-worth customers. As of 30 September 2018, we had 322 professionals dedicated to private banking and wealth management services, working in 25 Gold Clubs (targeted for high net-worth customers with more than ₩500 million in total relationship balance) and 206 in-branch VIP Clubs (targeted for high net-worth customers with more than ₩100 million in total relationship balance).

Trust Management Services

We offer our customers a variety of money trust products and manage the funds that they invest in money trusts, on a fee basis. We generally manage money trusts that allow investors to share in the investment performance of the trust in proportion to the amount of their investment in the trust. We also offer property trust management services, where we manage non-cash assets for a fee. The trust management services that we offer include (i) money trusts, consisting of pension trusts, specific money trusts and retired pension trusts, and (ii) property trusts, consisting of real estate collateral trusts and money receivable trusts.

Pursuant to Korean law, the assets of our money trusts are segregated from our assets and are not available to satisfy the claims of our creditors. Accordingly, trust accounts are accounted for, and reported separately from, bank accounts. For money trusts, under the FSCMA, we are permitted to offer only specified money trust account products. Specified money trusts are established on behalf of individual customers, typically corporations, which direct our investment of trust assets.

Investment Banking and Capital Markets

We engage in different types of investment banking and capital markets activities, primarily on behalf of corporate customers in Korea, as well as for our own account. Our principal investment banking activities include:

- arrangement of project financing and other international bond issues and syndicated loans;
- arrangement and advisory services relating to issuances of asset-backed securities;
- real estate financing and advisory services; and
- acquisition financing and financial advisory services.

We invest in and trade securities for our own account, primarily to maintain adequate sources of liquidity and to generate interest and dividend income and capital gains.

Foreign Exchange and Trade Financing

We are one of the leaders in the Korean foreign exchange market and believe that we continue to hold the largest market share of any Korean bank with respect to customer-related foreign exchange transactions, with numerous awards from industry journals. In 2017, we were named the "Best Trade Finance Bank in Korea" by Global Finance for the sixteenth consecutive year.

The foreign exchange services we offer include purchases and sales of foreign currencies in the spot and forward markets on behalf of customers, which enable them to satisfy payment obligations, hedge currency exposures and meet other needs for foreign currency. During the first nine months of 2018, the foreign exchange transaction volumes handled by us amounted to U.S.$4 billion, which we estimate represented market share of approximately 22.8 per cent. We also provide international trade financing services, including documentary letters of credit, bankers' acceptances and other forms of trade financing, to meet the complex needs of our customers in the export and import business. During the first nine months of 2018, our export and import volumes in the aggregate totalled U.S.$292 billion, representing market share of approximately 33.5 per cent., according to our internal estimates.

Merchant Banking

We provide merchant banking services as a result of the merger in 1999 with our merchant banking subsidiary, Korea International Merchant Bank. Our merchant banking services principally include the following:

- commercial paper discounting, which entails purchasing at a discount notes that are issued, endorsed or guaranteed by companies to supply them with short-term working capital; and
- payment guarantees, which entail issuing guarantees in respect of notes, corporate bonds and other Won and foreign currency payment obligations in return for fees.

Bancassurance

Following the liberalisation of the bancassurance market in Korea, we have worked with third party insurance companies to offer insurance products through our branch network since 2003. We primarily offer our customers third-party insurance products, including the following:

- annuity insurance, which generally pays a fixed amount yearly or monthly during an insured's lifetime and for a fixed period after death;
- long-term savings insurance, which compensates for physical injury or disease occurring during the coverage period and reimburses the insured for premiums paid and interest accrued at the end of such coverage period; and
- travel and leisure insurance, which compensates for physical injury or disease, as well as loss of personal property incurred during travel.

We believe our focus on providing a wide variety of bancassurance products, rather than focusing on one product, allows us to better meet individual customer needs, increases customer satisfaction and drives increased sales. In addition, due to the tax favourable nature of our bancassurance products, we are seeing increased interest from high net-worth individuals, professionals and high income self- employed persons. As of 30 September 2018, our bancassurance business had alliances with 20 life insurance companies and 11 non-life insurance companies.

Domestic Branch Network and Electronic Banking

Domestic Branch Network

As of 30 September 2018, we maintained 684 domestic branches and 74 domestic sub-branches, most of which are located in Seoul and the surrounding provinces. The domestic sub-branches are "compact" branches opened to produce higher returns on investment with relatively lower operating costs, based on facility design, efficient staffing and location in relatively affluent areas. Our branch network is designed to provide one-stop banking services tailored to their respective target customers. We have grouped our branches based on regional characteristics and classified them into retail and corporate groups. Decisions as to whether to open, close or merge a branch office are based on considerations of profitability, growth potential in the branch's surrounding area, competitive concerns and impact on our branch network, among other factors.

The following table presents the geographical distribution of our domestic branch network as of 30 September 2018, according to major metropolitan areas.

	Number of Domestic Branches		
	Branch	**Sub-branch**	**Total**
Seoul metropolitan area	314	28	342
Gyeonggi Province	128	9	137
Six major cities:			
Incheon	26	7	33
Busan	39	5	44
Gwangju	11	—	11
Daegu	24	—	24
Ulsan	10	6	16
Daejeon	42	5	47
Sub-total	594	60	654
Others	90	14	104
Total	684	74	758

Electronic Banking

Since 1975, we have established an extensive network of ATMs in branches and unmanned outlets to maximise customer access to our products and services. As of 30 September 2018, we had 4,114 ATMs**.**

We actively promote the use of other electronic delivery systems as well, including telephone, Internet and mobile banking, in order to provide convenient services to customers at a lower cost and to attract more customers to bring a long-term growth of our business.

Our electronic delivery systems services include balance and transaction inquiries, money transfers, loan applications, bill payment and foreign exchange transactions. We utilise our Internet banking services to complement our branch network. As of 30 September 2018, we had approximately 14 million customers using our Internet banking services and 10 million customers using our mobile banking services.

The mobile penetration rate in Korea, which is calculated by dividing the number of mobile subscriber accounts (including multiple counting of those who subscribe to more than one mobile service) by the population of Korea, increased from 103.5 per cent. at the end of 2011 to 122.9 per cent. at the end of 2017, based on the total Korean population and mobile subscriber numbers announced by the Ministry of Science, ICT & Future Planning and the Ministry of Government Administration and Home Affairs of Korea, respectively. This growth in the mobile user base has brought many changes to the country's financial industry, including the emergence of "smart" banking. We responded to this challenge by launching a number of smart-phone-based financial services that can be accessed by both Koreans and non-Koreans. For instance, we became the first player in the country's financial industry to offer a multi-lingual smart-phone banking service called "KEB Global Banking", which helped attract non-Korean workers and students living in Korea, as well as members of multi-cultural families. KEB Global Banking was replaced mid-2015 with a new service called "KEB Smart Bank", currently available in 14 languages including Korean. Another financial service that we pioneered is the "Smart Exchange Rate" application, which provides customers with up-to-the-minute exchange rate information and coupons that entitle them to lowered charge for foreign exchange. This application service is also multi-lingual.

In October 2015, we introduced a new mobile application named "Hana Members", through which users (whether they have an account with us or not) can convert the reward points they earned from purchases at various merchants into "Hana Points" and use them like cash at over two million KEB Hana Card member stores across Korea. We plan to launch additional smart-phone-based products and build an open, web-based Internet banking platform that supports a number of operating systems and web browsers, strengthening our customers' access to our services on mobile devices. In addition, we are developing technologies to increase our level of support for people who have difficulty using computers and/or accessing the Internet.

In August 2016, Hana Financial Group established Finnq Inc. (formerly Hana-SK Fintech Co., Ltd.; "**Finnq**"), a joint venture with a mobile service provider, SK Telecom Co., Ltd. ("**SK Telecom**"), to provide fintech-based services such as mobile-oriented asset management, simplified payment and overseas transactions through a mobile application launched in 2017. We collaborate with Finnq in connection with fintech-based services. Furthermore, since June 2015, we have fostered collaboration with fintech startups through our fintech accelerator, Fintech 1Q Lab.

Overseas Network

We operate one of the largest networks of overseas branches among Korean banks to meet the needs of our customers for foreign exchange, trade finance, funds remittance and other global banking services in Korea and elsewhere around the world.

As of 30 September 2018, our overseas network consisted of 160 business units in 24 countries (23 in the Americas, 10 in Europe and the Middle East, and 127 in Asia and Oceania). Specifically, we had 16 international branches, two sub-branches of such international branches, five overseas representative offices, 11 overseas subsidiaries and 126 sub-branches of such overseas subsidiaries located overseas.

We have over 50 years of experience operating in many high-growth regions of the world. For the period ended 30 September 2018, on a separate basis, we earned an operating income of ₩313 billion from our offshore operations, which represented 13 per cent. of our total operating income for the same period. As of 30 September 2018, on a separate basis, we had total overseas assets of ₩30 trillion.

We continue to adapt the focus of our network of overseas branch operations in response to changes in the global economy. To overcome the difficulties we may face due to current market volatility and instability, we are concentrating our efforts on maintaining quality assets and creating new products for our overseas business. Under our "Global Expansion and Profitable Growth" drive, we are promoting projects to help clients restructure assets, adjust their business models and develop their scope of business.

The table below sets forth our overseas subsidiaries, branches (not including sub-branches) and representative offices as of 30 September 2018.

Business Unit[(1)]	Location	Year Established
Subsidiaries:		
Americas		
KEB Hana Bank Canada	Canada	1981
Banco KEB Hana do Brasil S.A.	Brazil	1998
KEB Hana NY Financial Corp.	United States	2004
KEB Hana LA Financial Corp.	United States	2004
KEB Hana Bank USA	United States	1986 (acquired in 2016)
Europe and the Middle East		
KEB Hana Bank (D) AG	Germany	1992
KEB HNB Rus LLC	Russia	2014
Asia		
KEB Hana Bank (China) Co., Ltd	China	2007
KEB Hana Global Finance Limited	Hong Kong	2009
PT. Bank KEB Hana Indonesia	Indonesia	2014
KEB Hana Micro Finance Ltd.	Myanmar	2014
Branches:		
Americas		
New York Agency	United States	1978
Panama Branch	Panama	1980
Europe and the Middle East		
London Branch	United Kingdom	1968
Paris Branch	France	1974
Amsterdam Branch	Netherlands	1979
Bahrain Branch	Bahrain	1977
Abu Dhabi Branch	United Arab Emirates	2012
Asia		
Tokyo Branch	Japan	1967
Osaka Branch	Japan	1967
Hong Kong Branch	Hong Kong	1967
Singapore Branch	Singapore	1973
Manila Branch	Philippines	1983
Hanoi Branch	Vietnam	1999
Sydney Branch	Australia	2014
Ho Chi Minh City Branch	Vietnam	2015
Chennai Branch	India	2015
Representative Offices:		
Americas		
Mexico Representative Office	Mexico	2015
Europe and the Middle East		
Dubai Representative Office	United Arab Emirates	2003
Istanbul Representative Office	Turkey	2013
Asia		
Ho Chi Minh City Representative Office	Vietnam	2002
Yangon Representative Office	Myanmar	2012

Note:

(1) Excludes subsidiaries, branches and representative offices planned for closure due to no actual operations.

Competition

We compete principally with other national banks in Korea, but also face competition from a number of other institutions. Our competitors include regional banks, specialised banks and subsidiaries and branches of foreign banks and financial institutions operating in Korea, as well as various other types of financial service institutions, including savings institutions (such as mutual savings and finance companies, credit unions and credit cooperatives), investment institutions (such as merchant banking corporations) and life insurance companies.

Competition in the Korean financial services industry has been, and is likely to remain, intense. In particular, in recent years, competition has increased significantly in the SME and household lending business, as most Korean banks have sought to attract retail and SME customers and an increasing number of players, such as non-bank private lenders, have recently entered the market. In addition, many Korean banks have increased their exposure to large corporate borrowers and have been focusing on developing fee income businesses, including bancassurance and investment products, as increasingly important sources of revenue. Furthermore, in recent years, Korean banks, including us, have increasingly focused on stable asset growth based on quality credit, such as corporate borrowers with high credit ratings, loans to "small office, home office" with high levels of collateralisation, and mortgage and home equity loans within the limits of the prescribed loan-to-value ratios and debt-to-income ratios. This largely shared shift in focus toward stable growth based on less risky assets has intensified competition as banks compete for the same pool of quality credit by engaging in price competition or by other means.

Regulatory reforms and the general modernisation of business practices in Korea have also led to increased competition among financial institutions in Korea. Under the current regime, financial investment companies with a dealing licence and/or brokerage licence are allowed to provide secondary services such as settlement and remittance services relating to customer deposits, and we may face difficulties in increasing or retaining its deposits, which in turn may result in an increase in our cost of funding and a decrease in our service fee revenue.

In addition, a number of significant mergers and acquisitions in the financial industry have taken place in Korea in recent years, including Hana Financial Group's acquisition of Korea Exchange Bank in 2012 and the resulting Merger in 2015. In addition, pursuant to the implementation of the Government's privatisation plan with respect to Woori Finance Holdings Co., Ltd. (the former financial holding company of Woori Bank) and its former subsidiaries, certain subsidiaries of Woori Finance Holdings Co., Ltd. were sold to other financial institutions and Woori Finance Holdings Co., Ltd. itself was merged into Woori Bank in 2014. Furthermore, large financial groups have been focused on further growing their asset size and strengthening their non-banking businesses over the past few years by actively seeking acquisition targets. For example, KB Financial Group acquired LIG Insurance Co., Ltd., a general insurer, in 2015, and Hyundai Securities Co., Ltd., a securities company, in 2016. Most recently, in September 2018, Shinhan Financial Group announced that it would acquire Orange Life Insurance Ltd. (formerly ING Life Insurance Korea Ltd.) for ₩2.3 trillion. We expect that consolidation in the financial industry will continue. Other financial institutions may seek to acquire or merge with other entities, and the financial institutions resulting from such consolidation may, by virtue of their increased size and business scope, provide greater competition for us.

Information Technology

We have a fully integrated IT system that provides information to all offices and branches. We believe that a sophisticated IT system is critical to supporting our operations management and providing high quality customer service. Accordingly, we have made, and intend to continue to make, significant investments to upgrade and expand our IT systems in order to improve our risk management, operations management and customer service. In recent years, we have developed and implemented several new technologically advanced risk management systems, including our Basel II System, Anti-Money Laundering System and BIS Risk-Weighted Asset Management System. Currently, our IT systems are capable of collecting and generating data in compliance with the Basel III requirements.

We continuously allocate considerable resources to improve the capacity and reliability of our IT infrastructure in our business divisions, which we believe is crucial to supporting our operations management and providing high-quality customer service. In addition, in connection with the Merger, we completed integration of the IT systems of Korea Exchange Bank and Hana Bank and established a centralised IT platform, including a unified data centre, in June 2016.

Properties

Our principal establishment is our self-owned headquarters building located in Seoul, Korea, which has a total floor area of approximately 53,981 square metres. In addition, we own or lease various land and buildings for our branches.

Legal Proceedings

We may from time to time become a party to various legal, arbitration or administrative proceedings arising in the ordinary course of business. As of 30 September 2018, the aggregate amounts of claims brought against us totalled ₩177.3 billion (relating to 151 cases), for which we recorded a provision of ₩86.2 billion. As of the same date, the aggregate amounts of claims brought by us totalled ₩411.6 billion (relating to 351 cases).

We are currently involved in several pending disputes or potential disputes against us and have recently been involved in certain regulatory matters, including the following:

- From May 2008 to January 2014, we provided KT ENGCORE Co., Ltd. (formerly KT ENS Corporation) with a loan that was guaranteed by Korea Investment & Securities Co., Ltd. ("**KIS**") and Shinhan Investment Corp. ("**SIC**") (collectively, the "**Guarantors**" and each a "**Guarantor**") and securitized with each Guarantor's trade receivables that turned out to be fraudulent. In 2014, we filed a claim against the Guarantors, demanding payment of their guarantee obligations to us. In August 2016, the Seoul High Court ruled in favour of us and the Guarantors fulfilled their guarantee obligations as a result. However, the Guarantors subsequently appealed the case to the Supreme Court of Korea and the case is currently pending. In addition, in January 2017, the Guarantors sued us for damages totaling Won 53 billion on grounds that we had not duly verified the substance of the fraudulent trade receivables before entering into the loan agreement. The case is currently pending at the Seoul Central District Court.
- As part of a broad governmental initiative to foster fair recruitment practices, in December 2017, the FSS launched an examination of 11 Korean commercial banks and preliminarily concluded that several banks, including the Issuer, may have given preferential treatment to certain job applicants during the recruiting process. Based on these preliminary findings by the FSS, in February 2018, the Supreme Prosecutors' Office of Korea initiated an investigation of six major commercial banks, including the Issuer, for alleged irregularities in hiring new employees. As a result of the investigation, the Supreme Prosecutors' Office indicted the Issuer and six officials of the Issuer, including the Issuer's President Young Joo Ham, on charges of illegally influencing the hiring process of new employees and manipulating hiring standards for certain candidates. The Seoul Western District Court held trials for Ham on 22 August 2018, 17 October 2018, 23 November 2018 and 11 January 2019, in which Ham denied any involvement in hiring irregularities. As of the date of this Offering Circular, the Issuer cannot predict the development and outcome of such trials. Since the indictment of its officials, the Issuer has taken measures to reform its procedures for hiring new employees, including abolishing the hiring recommendation system and outsourcing all hiring processes.
- We and our subsidiaries have been subject to fines and penalties for certain deficiencies in anti-money laundering ("**AML**") procedures in recent years. In August 2016, KEB HNB Rus LLC, our subsidiary in Russia, was charged a fine of RUB 300,000 for numerical reporting errors. We paid the fine, restructured the positions overseeing AML compliance and are currently taking steps to computerise our reporting system. In addition, we were issued penalties resulting from regular inspections conducted by the People's Bank of China. In February 2018, the Guangzhou Branch of KEB Hana Bank (China) Co., Ltd. was issued an administrative penalty of CNY 530,000 from the Guangzhou Branch of the People's Bank of China for taking inadequate measures in customer identification and reporting of suspicious transactions. In March 2018, KEB Hana Bank (China) Co., Ltd was also charged an administrative penalty of CNY 860,000 from the People's Bank of China for taking inadequate measures in customer identification. We paid both penalties imposed by the People's Bank of China and completed steps to strengthen our management and improve processes of the related operations.

Other than the matters discussed above, we are not a party to any legal or administrative proceedings, and no proceedings are known by us to be contemplated by governmental authorities or third parties, which, if adversely determined, may have a material adverse effect on our business, financial condition or results of operations.

DESCRIPTION OF ASSETS AND LIABILITIES

The tables below and accompanying discussions provide selected financial highlights regarding our assets and liabilities. Unless otherwise specified, the information provided below is presented on a consolidated basis.

Average Balance Sheets and Related Interest

The following tables set forth our average balances of assets and liabilities, on a separate basis, for the periods indicated. For interest-earning assets and interest-bearing liabilities, the tables provide the amount of interest earned or paid and the average rate (annualised for interim periods) of such interest. For the purposes of these tables, average balance has been determined based upon the average of the daily ending balances.

	Year Ended 31 December								
	2015			2016			2017		
	Average Balance(1)	Interest(2)	Yield/ Rate	Average Balance	Interest	Yield/ Rate	Average Balance	Interest	Yield/ Rate
	(In billions of Won, except percentages)								
Interest earning assets									
Loans	₩116,494	₩3,476	3.0%	₩201,224	₩5,835	2.9%	₩210,004	₩6,254	3.0%
Won	94,498	3,123	3.3	174,727	5,387	3.1	184,734	5,749	3.1
Foreign currency	21,996	353	1.6	26,497	448	1.7	25,270	504	2.0
Due from banks	5,068	39	0.8	6,845	19	0.3	7,822	72	0.9
Won	1,462	24	1.6	2,038	28	1.4	2,893	37	1.3
Foreign currency	3,606	15	0.4	4,807	19	0.4	4,929	36	0.7
Securities	20,624	474	2.3	35,888	713	2.0	41,358	760	1.8
Won	18,192	421	2.3	31,129	597	1.9	34,713	597	1.7
Foreign currency	2,433	53	2.2	4,758	115	2.4	6,645	163	2.5
Other	9	0	3.6	3	0	5.1	—	23	N.M.
Won	—	—	N.M.	—	—	N.M.	—	23	N.M.
Foreign currency	9	0	3.6	3	0	5.1	—	—	N.M.
Total interest earning assets	₩142,194	₩3,989	2.8%	₩243,959	₩6,567	2.7%	₩259,184	₩7,109	2.7%
Non-interest earning assets	25,860	—	—	42,031	—	—	38,067	—	—
Total assets	₩168,054	₩3,989	2.4%	₩285,991	₩6,567	2.3%	₩297,251	₩7,109	2.4%
Interest bearing liabilities									
Deposits	₩109,650	₩1,562	1.4%	₩193,387	₩2,496	1.3%	₩206,662	₩2,489	1.2%
Won	91,424	1,489	1.6	170,087	2,406	1.4	182,495	2,366	1.3
Foreign currency	18,226	73	0.4	22,580	90	0.4	24,167	124	0.5
Borrowings	12,359	106	0.9	15,817	147	0.9	15,548	171	1.1
Won	4,701	71	1.5	6,642	84	1.3	5,958	70	1.2
Foreign currency	7,547	35	0.5	9,175	62	0.7	9,591	102	1.1
Debenture	9,423	242	2.6	18,785	486	2.6	20,986	506	2.4
Won	4,929	145	2.9	12,900	343	2.7	15,897	370	2.3
Foreign currency	4,493	97	2.2	5,885	143	2.4	5,089	137	2.7
Other	4,031	65	1.6	6,697	92	1.4	6,856	85	1.2
Won	3,488	61	1.8	5,728	81	1.4	5,986	75	1.3
Foreign currency	543	4	0.7	969	11	1.2	870	10	1.2
Total interest bearing liabilities	₩135,462	₩1,975	1.5%	₩234,686	₩3,221	1.4%	₩250,052	₩3,253	1.3%
Non-interest bearing liabilities and stockholders' equity	32,592	—	—	51,305	—	—	47,199	—	—
Total liabilities and stockholders' equity	₩168,054	₩1,975	1.2%	₩285,991	₩3,221	1.1%	₩297,251	₩3,253	1.1%

N.M. means not meaningful.

Notes:

(1) Calculated based on the average of the daily ending balances of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

(2) Represents the amounts of interest earned or paid by KEB Hana Bank from 1 September 2015 to 31 December 2015 and by Korea Exchange Bank from 1 January 2015 to 31 August 2015.

	Nine Months Ended 30 September					
	2017			2018		
	Average Balance	Interest	Yield/Rate (annualised)	Average Balance	Interest	Yield/Rate (annualised)
	(In billions of Won, except percentages)					
Interest earning assets						
Loans	₩208,340	₩4,606	2.9%	₩219,765	₩5,355	3.2%
Won	183,125	4,236	3.1	195,185	4,890	3.3
Foreign currency	25,215	370	2.0	24,580	465	2.5
Due from banks	8,004	54	0.9	6,391	55	1.1
Won	3,148	30	1.3	1,469	17	1.5
Foreign currency	4,856	24	0.7	4,922	38	1.0
Securities	39,883	545	1.8	46,142	667	1.9
Won	33,466	428	1.7	39,064	534	1.8
Foreign currency	6,417	118	2.4	7,078	133	2.5
Other	—	18	N.M	—	16	N.M
Won	—	18	N.M	—	16	N.M
Foreign currency	—	—	N.M	—	—	N.M
Total interest earning assets	₩256,227	₩5,223	2.7%	₩272,299	₩6,093	3.0%
Non-interest earning assets	37,958	—	—	39,102	—	—
Total assets	₩294,184	₩5,223	2.4%	₩311,401	₩6,093	2.6%
Interest bearing liabilities						
Deposits	₩204,319	₩1,829	1.2%	₩217,574	₩2,254	1.4%
Won	180,514	1,741	1.3	193,468	2,116	1.5
Foreign currency	23,806	89	0.5	24,107	137	0.8
Borrowings	15,485	124	1.1	15,462	170	1.5
Won	5,912	51	1.2	6,059	58	1.3
Foreign currency	9,573	73	1.0	9,403	112	1.6
Debenture	20,593	377	2.4	23,533	437	2.5
Won	15,275	270	2.4	19,084	327	2.3
Foreign currency	5,317	108	2.7	4,450	110	3.3
Other	7,082	65	1.2	6,084	65	1.4
Won	6,183	57	1.2	5,549	61	1.5
Foreign currency	899	8	1.1	535	5	1.1
Total interest bearing liabilities	₩247,479	₩2,396	1.3%	₩262,654	₩2,926	1.5%
Non-interest bearing liabilities and stockholders' equity	46,705	—	—	48,747	—	—
Total liabilities and stockholders' equity	₩294,184	₩2,396	1.1%	₩311,401	₩2,926	1.3%

N.M. means not meaningful.

Analysis of Changes in Net Interest Income — Volume and Rate Analysis

The following table provides analyses of our changes in interest income, interest expense and net interest income based on changes in volume and changes in rates, on a separate basis, for the periods indicated. Information is provided with respect to (i) effects attributable to changes in volume (changes in volume multiplied by prior rate) and (ii) effects attributable to changes in rate (changes in rate multiplied by prior volume). Changes attributable to the combined impact of changes in rate and volume have been allocated proportionately to the changes due to volume changes and changes due to rate changes.

	Year Ended 31 December 2016 Compared to the Year Ended 31 December 2015[1]			Year Ended 31 December 2017 Compared to the Year Ended 31 December 2016			Nine Months Ended 30 September 2018 Compared to the Nine Months Ended 30 September 2017		
	Changes in Average Volume	Changes in Average Rate	Net Change	Changes in Average Volume	Changes in Average Rate	Net Change	Changes in Average Volume	Changes in Average Rate	Net Change
	(a)	(b)	(a) + (b)	(a)	(b)	(a) + (b)	(a)	(b)	(a) + (b)
	(In billions of Won)								
Increase (decrease) in interest income from:									
Loans in Won									
Corporate	₩1,120	(₩128)	₩ 991	₩ 69	₩ 68	₩137	₩139	₩146	₩285
Household	1,386	(113)	1,273	243	6	249	164	203	367
Total loans in Won	2,506	(242)	2,264	312	74	396	303	349	652
Loans in foreign currency	76	19	95	(25)	80	56	(12)	107	95
Due from banks	12	(4)	8	9	16	25	(14)	15	1
Securities	293	(54)	239	96	(49)	47	90	31	121
Other interest-bearing assets	—	—	—	—	—	—	—	—	—
Total increase (decrease) in interest income	₩2,887	₩ (280)	₩2,607	₩393	₩ 121	₩514	₩368	₩502	₩870
Increase (decrease) in interest expense on:									
Deposits									
Demand deposits	₩ 7	₩ 4	₩ 11	₩ 4	₩ 11	₩ 15	₩ 0	₩ 20	₩ 20
Time and savings deposits	1,121	(197)	924	132	(169)	(37)	140	248	388
Other deposits	—	—	—	16	0	16	12	4	16
Total deposits	1,128	(194)	934	151	(158)	(7)	152	272	425
Borrowings	32	8	40	(3)	28	25	(0)	46	46
Debenture	242	2	244	53	(33)	20	55	5	59
Other interest-bearing liabilities	—	—	—	2	(9)	(7)	(11)	11	1
Total increase (decrease) in interest expense	₩1,402	(₩184)	₩1,219	₩203	(₩172)	₩ 32	₩196	₩334	₩530
Net increase (decrease) in net interest income	₩1,485	(₩96)	₩1,388	₩189	₩ 293	₩482	₩172	₩167	₩339

Note:

(1) Represents changes in volume and rate based on the results of KEB Hana Bank for the year ended 31 December 2016, compared against such changes based on the results of KEB Hana Bank from 1 September 2015 to 31 December 2015 and Korea Exchange Bank from 1 January 2015 to 31 August 2015.

Loan Portfolio

As of 31 December 2015, 2016 and 2017 and 30 September 2018, the balance of our total loan portfolio before allowance for loan losses and net deferred loan fees and costs was ₩211,088 billion, ₩216,307 billion, ₩225,198 billion and ₩237,775 billion, respectively, 82.9 per cent., 84.1 per cent., 85.8 per cent. and 86.6 per cent., respectively, of which was denominated in Won and 17.1 per cent., 15.9 per cent., 14.2 per cent. and 13.4 per cent., respectively, of which was denominated in other currencies, principally in U.S. dollars.

As of 31 December 2015, 2016 and 2017 and 30 September 2018, our total loan portfolio after allowance for loan losses and net deferred loan fees and costs was ₩209,457 billion, ₩215,101 billion, ₩224,097 billion and ₩236,827 billion, respectively.

Guarantees are not categorised as loans unless and until we have made a payment on behalf of a customer in relation to the guarantee.

Borrower Types

The table below set forth our summaries of loans by type of borrower (after allowance for loan losses but before net deferred loan fees and costs) as of the dates indicated.

	As of 31 December						As of 30 September	
	2015		2016		2017		2018	
	Amount	%	Amount	%	Amount	%	Amount	%
	(In billions of Won, except percentages)							
Large-sized businesses	₩ 43,177	20.6%	₩ 33,691	15.7%	₩ 33,165	14.8%	₩ 33,125	14.0%
SMEs	66,246	31.6	73,158	34.0	77,288	34.5	84,991	35.9
Households	88,560	42.3	96,101	44.7	100,119	44.7	105,985	44.8
Public sector and others	11,230	5.4	11,895	5.5	13,263	5.9	12,427	5.3
Total	₩209,213	99.9%	₩214,844	99.9%	₩223,835	99.9%	₩236,527	100.0%

Loan Types

The following table presents our loans by type as of the dates indicated.

	As of 31 December			As of 30 September
	2015	2016	2017	2018
	Amount	Amount	Amount	Amount
	(In billions of Won)			
Loans in Won	₩170,854	₩177,781	₩187,647	₩200,345
Loans denominated in foreign currencies	22,617	21,859	19,879	21,654
Bills purchased in Won	347	336	67	98
Bills purchased denominated in foreign currencies	5,617	5,844	5.663	6,113
Call loans	4,919	2,477	2,164	1,719
Bonds purchased under resale agreements	1,251	2,959	4,525	1,785
Others	5,483	5,051	5,253	6,061
Total loans (before allowance for loan losses and net deferred loan fees)	₩211,088	₩216,307	₩225,198	₩237,775
Total loans in Won	₩175,072	₩181,933	₩193,111	₩205,991
Total loans in denominated foreign currencies	36,016	34,374	32,087	31,784
Allowance for loan losses	(1,875)	(1,463)	(1,363)	(1,248)
Net deferred loan fees	244	256	261	300
Total loans (after allowance for loan losses and net deferred loan fees)	₩209,457	₩215,101	₩224,097	₩236,827

Loan Concentrations

We limit our total exposure to any single borrower as required by Korean regulations and pursuant to our internal policies. "Exposures" refer to our credits and other exposures, including debt securities held by us.

"Credits" refer to our total credits (as reported to the FSC based on the FSC's asset classification criteria), the principal components of which include the total loan portfolio of our bank accounts, loans provided from our trust accounts and merchant bank accounts, and confirmed guarantees and acceptances (which are off-balance sheet items).

We determine our exposure limit based on the borrower's credit rating provided by our Credit Analysis System and adjust it if it would otherwise exceed the limit imposed by Korean regulations.

10 Largest Exposures by Borrower

As of 30 September 2018, on a separate basis, our 10 largest exposures totalled ₩16,142 billion and accounted for 5.6 per cent. of our total exposure. The following table sets forth our total exposures to these top 10 borrowers as of 30 September 2018, on a separate basis.

	As of 30 September 2018			
	Loans and Other On-Balance Sheet Items	Confirmed Guarantees and Acceptances	Debt Securities	Total
	(In billions of Won)			
Korea Housing Finance Corporation	₩ —	₩—	₩ 4,516	₩ 4,516
Korea Development Bank	—	—	2,867	2,867
Samsung Electronics Co., Ltd.	2,451	15	—	2,466
The Export-Import Bank of Korea	—	18	1,577	1,595
Industrial Bank of Korea	56	—	1,143	1,199
Small & Medium Business Corporation	—	—	847	847
Korea Electric Power Corporation	—	14	702	716
Hyundai Engineering & Construction Co., Ltd.	4	672	10	686
The Korea Securities Finance Corporation	42	—	600	642
NongHyup Bank	341	—	268	609
Total	₩2,894	₩718	₩12,529	₩16,142

Exposure to Main Debtor Groups

As of 30 September 2018, on a separate basis, 3.8 per cent. of our total exposure was to the main debtor groups as designated by the FSS. The main debtor groups consist mostly of *chaebols*. The following table shows, as of 30 September 2018, on a separate basis, our total exposure to the 10 *chaebol* groups to which we have the largest exposure.

	As of 30 September 2018			
	Loans and Other On-Balance Sheet Items	Confirmed Guarantees and Acceptances	Debt Securities	Total
	(In billions of Won)			
Samsung	₩3,130	₩ 599	₩ 70	₩ 3,799
Hyundai Motors	1,138	636	209	1,983
SK	849	470	—	1,319
Hyundai Heavy Industries	455	616	55	1,126
Lotte	356	343	185	884
POSCO	321	225	50	596
Hanhwa	287	191	—	478
GS	261	73	—	334
Daewoo Shipbuilding & Marine Engineering	201	41	—	242
LG	87	79	20	186
Total	₩7,085	₩3,273	₩589	₩10,947

Loan Concentration by Industry

The following table shows, as of 30 September 2018, the aggregate balances of our total loans by industry concentration. The amounts disclosed are before allowance for loan losses and net deferred loan origination fees and costs.

	As of 30 September 2018	
	Aggregate Loan Balance	Percentage of Loan Balances
	(In billions of Won, except percentages)	
Corporate loans		
Manufacturing	₩ 37,663	15.8%
Wholesale and retail	16,112	6.8
Real estate, renting and leasing	31,123	13.1
Financial services	13,747	5.8
Construction	3,518	1.5
Public sector and others	29,440	12.4
Subtotal	₩131,603	55.3%
Household loans	106,173	44.7
Total loans	₩237,775	100.0%

Maturity Analysis (Loans in Won)

The following table sets out the scheduled maturities (time remaining until maturity) of our loan portfolio as of 30 September 2018, on a separate basis. The amounts disclosed below are before allowance for loan losses and net deferred loan fees and costs.

	As of 30 September 2018			
	1 Year or Less	Over 1 Year but Not More than 5 Years	Over 5 Years	Total
	(In billions of Won)			
Corporate loans	₩56,508	₩34,557	₩ 6,130	₩ 97,195
Household loans	39,396	21,852	43,700	104,948
Total gross loans in Won	₩95,904	₩56,409	₩49,830	₩202,143

We may roll over our corporate loans (primarily consisting of working capital loans and facility loans) and retail loans (to the extent not payable in instalments) after we conduct our normal loan review in accordance with our loan review procedures. In general, our corporate loans may be extended for periods of up to one year for a maximum aggregate term of six years from the date the relevant loan is initially made. Facilities loans that are bullet loans may be extended for periods of up to one year for a maximum term of 10 years, with partial payment of 10 per cent. or more of the initial loan amount required for each extension. Our working capital loans may be extended on an annual basis for an aggregate term of three to five years for unsecured loans and up to five years for secured loans. Facilities loans, which are generally secured, may be extended once for a maximum term of five years from the date when the relevant loan is initially made. Retail loans may be extended for additional terms of up to 12 months for a maximum aggregate of 10 years for both unsecured loans and secured loans.

Interest Rate Sensitivity (Loans in Won)

The following table shows, on a separate basis, our loans denominated in Won by interest rate sensitivity as of 30 September 2018.

	As of 30 September 2018		
	Due Within 1 Year	Due After 1 Year	Total
	(In billions of Won)		
Fixed rate loans(1)	₩14,066	₩ 3,851	₩ 17,918
Variable or adjustable rate loans(2)	81,838	102,388	184,225
Total gross loans in Won	₩95,904	₩106,239	₩202,143

Notes:
(1) Fixed rate loans are loans for which the interest rate is fixed for the entire term.
(2) Variable or adjustable rate loans are loans for which the interest rate is not fixed for the entire term.

For additional information regarding our management of interest rate risk for our loans, see "*Risk Management — Market Risk Management — Trading Activities*".

Asset Quality of Loans

Loan Classifications

The FSC generally requires Korean financial institutions to analyse and classify their assets by quality into one of five categories. In making these classifications, we take into account a number of factors, including the financial position, profitability and transaction history of the borrower, and the value of any collateral or guarantee taken as security for the extension of credit. This classification method and our related provisioning policy are intended to fully reflect the borrower's capacity to repay.

The following is a summary of the asset classification criteria we apply for corporate and retail credits based on the asset classification guidelines of the FSC. We also apply different criteria for other types of credits such as loans to the Government or to government related or controlled entities, certain bills of exchange and certain receivables.

Asset Classification	Characteristics
Normal	Credits to customers that, based on our consideration of their business, financial position and future cash flows, do not raise concerns regarding their ability to repay the credits.
Precautionary	Credits to customers that: • based on our consideration of their business, financial position and future cash flows, show potential risks with respect to their ability to repay the credits, although showing no immediate default risk; or • are in arrears for one month or more but less than three months.
Substandard	Either: • credits to customers that, based on our consideration of their business, financial position and future cash flows, are judged to have incurred considerable default risks as their ability to repay has deteriorated; or • the portion that we expect to collect of total credits (1) extended to customers that have been in arrears for three months or more, (2) extended to customers that have incurred serious default risks due to the occurrence of, among other things, final refusal to pay their debt instruments, entry into liquidation or bankruptcy proceedings, or closure of their businesses, or (3) extended to customers who have outstanding credits that are classified as "doubtful" or "estimated loss".
Doubtful	Credits exceeding the amount we expect to collect of total credits to customers that: • based on our consideration of their business, financial position and future cash flows, have incurred serious default risks due to noticeable deterioration in their ability to repay; or • have been in arrears for three months or more but less than 12 months.

Asset Classification	Characteristics
Estimated Loss	Credits exceeding the amount we expect to collect of total credits to customers that: • based on our consideration of their business, financial position and future cash flows, are judged to have to be accounted as a loss as the inability to repay became certain due to serious deterioration in their ability to repay; • have been in arrears for 12 months or more; or • have incurred serious risks of default in repayment due to the occurrence of, among other things, final refusal to pay their debt instruments, liquidation or bankruptcy proceedings or closure of their business.

We classify our corporate loans based on the borrower's capacity to repay in consideration of its business operations, financial position and future cash flows, the past due period (if any) of the loans and status of any bankruptcy proceedings in which the borrower is involved. Loans to small companies and to households, however, are classified not by evaluating the debt repayment capability of the borrower but by the past due period (if any) of the loans and status of any bankruptcy proceedings in which the borrower is involved. We generally classify all credits to a single borrower in the same category of classification, but guaranteed credits or credits secured by bank deposits, real estate or other collateral may be classified differently based on the guarantor's capability to perform under its guarantee or based on the value of collateral securing the credits.

Loan Loss Provisioning Policy

We have established an allowance for loan losses to absorb losses that we incur in our loan portfolio.

We first assess whether objective evidence of impairment exists individually for financial assets that exceed the individual assessment threshold of ₩1 billion and are therefore considered individually significant. For financial assets that are not individually significant, we assess whether the objective evidence of impairment exists collectively. If we determine that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, we include the asset in a group of financial assets with similar credit risk characteristics and collectively assess them for impairment.

Impairment loss is deducted from allowance for possible losses on credits when it is considered unrecoverable. If it is subsequently recovered, allowance for possible losses on credits increases and the changes are recognised in net income.

Allowance for possible losses on credits by individual assessment

Allowance for possible losses on credits is recognised by the difference between the asset's carrying amount and the present value of future cash flows expected to be collected, considering the borrower's management performance, financial position, overdue period and mortgage amount.

Allowance for possible losses on credits by collective assessment

Allowance for possible losses on credits is recognised by adjusting probability of default and loss given default from Basel III for the purpose of accounting and applying that to carrying amount. Such approach considers various elements, including borrower type, credit rating, size of portfolio, loss emergence period and collection period, and applies consistent assumptions so as to model the measurement of inbuilt loss and determine variables based on historical loss experience and current conditions.

Similar provisioning requirements apply to other types of credits such as guarantees and acceptances and loans from the trust accounts.

Allowances for Loan Losses

Analysis of Allowance for Loan Losses

The following table presents the changes in our allowance for possible loan losses for the periods indicated.

	Years Ended 31 December			Nine Months Ended 30 September	
	2015[1]	2016	2017	2017	2018
	(In billions of Won)				
Balance at the beginning of the period	₩ 677	₩1,875	₩1,463	₩1,463	₩1,448
Business combination under common control[2]	1,079	5	—	—	—
Total charge-offs	(507)	(978)	(386)	(301)	(298)
Total recoveries	109	207	207	149	115
Net charge-offs	(398)	(772)	(179)	(153)	(183)
Disposal of non-performing loans	(29)	(53)	(34)	(27)	(28)
Other	(49)	(143)	(415)	(400)	(22)
Provision for possible loan losses	595	551	528	429	33
Balance at the end of the period	₩1,875	₩1,463	₩1,363	₩1,312	₩1,248

Notes:

(1) Reflects the amounts in respect of KEB Hana Bank for the period from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and in respect of Korea Exchange Bank for the period from 1 January 2015 to 31 August 2015.

(2) Represents the increase in allowance for possible loan losses resulting from the Merger.

The following table sets forth summaries of our credits, on a separate basis and as reported to the FSC, as of the dates indicated. "Credits" refer to our total credits (as reported to the FSC based on the FSC's asset classification criteria), the principal components of which include the total loan portfolio of our bank accounts, loans provided from our trust accounts and merchant bank accounts, and confirmed guarantees and acceptances (which are off-balance sheet items).

	As of 31 December						As of 30 September	
	2015		2016		2017		2018	
	Principal Amount	% of Total Credit	Principal Amount	% of Total Credit	Principal Amount	% of Total Credit	Principal Amount	% of Total Credit
	(In billions of Won, except percentages)							
Normal	₩215,277	98.2%	₩207,058	98.3%	₩214,028	98.5%	₩227,998	98.6%
Precautionary	1,430	0.7	1,883	0.9	1,646	0.8	2,042	0.9
Substandard	1,514	0.7	988	0.5	799	0.4	738	0.3
Doubtful	488	0.2	435	0.2	600	0.3	367	0.2
Estimated loss	522	0.2	343	0.2	184	0.1	159	0.1
Total credits	₩219,230	100.0%	₩210,707	100.0%	₩217,257	100.0%	₩231,304	100.0%
Allowances for credit losses	₩ 1,757	0.8%	₩ 1,347	0.6%	₩ 1,283	0.6%	₩ 1,137	0.5%

Allocation of Allowance for Loan Losses

The following table presents the allocation of our loan loss allowance by loan type as of the dates indicated.

	As of 31 December						As of 30 September	
	2015		2016		2017		2018	
	Amount	Loans as % of Total Loans	Amount	Loans as % of Total Loans	Amount	Loans as % of Total Loans	Amount	Loans as % of Total Loans
	(In billions of Won, except percentages)							
Large companies	₩ 840	44.8%	₩ 696	47.6%	₩ 750	55.0%	₩ 435	34.81%
SMEs	826	44.1	635	43,4	452	33.1	596	47.74
Individuals	160	8.5	127	8.7	144	10.6	188	15.04
Others	49	2.6	5	0.3	18	1.3	30	2.41
Total allowance for loan losses	₩1,875	100.0%	₩1,463	100.0%	₩1,363	100.0%	₩1,248	100.0%

Loan Ageing Schedule

The following table shows the loan ageing schedules, excluding accrued interest and before allowance for loan losses and net deferred loan fees and costs, for all our loans as of the dates indicated.

	Current		Past Due up to 3 Months		Past Due 3 to 6 Months		Past Due More than 6 Months		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount
As of:	(In billions of Won, except percentages)								
31 December 2015	₩201,221	99.3%	₩ 865	0.4%	₩228	0.1%	₩377	0.2%	₩202,691
31 December 2016	205,587	99.5	661	0.3	107	0.1	275	0.1	206,631
31 December 2017	214,464	99.5	774	0.4	107	0.0	173	0.1	215,518
30 September 2018	225,801	99.2	1,474	0.6	157	0.1	233	0.1	227,665

Loans to Companies in Workout and Rehabilitation

Our loans to borrowers under restructuring are managed and collected by our Credit Group. As of 31 December 2015, 2016 and 2017 and 30 September 2018, on a separate basis, 0.4 per cent, 0.3 per cent., 0.2 per cent. and 0.2 per cent., respectively, of our total loans, or ₩823 billion, ₩583 billion, ₩433 billion and ₩422 billion, respectively, was to borrowers under restructuring, on a separate basis.

Non-Performing Loans

Non-performing loans are defined as loans past due by more than three months. These loans are generally rated "substandard" or below under the FSC guidelines.

The following tables set forth, as of the dates indicated, our total non-performing loans by type of borrower, on a separate basis.

	As of 31 December					
	2015			2016		
	Total Loans[(1)]	Non-Performing Loans	Non-Performing Loans %	Total Loans	Non-Performing Loans	Non-Performing Loans %
	(In billions of Won, except percentages)					
Corporate[(2)]	₩114,977	₩2,140	1.9%	₩111,472	₩1,464	1.3%
Retail	87,714	246	0.3	95,158	205	0.2
Total	₩202,691	₩2,387	1.2%	₩206,631	₩1,668	0.8%

	As of 31 December			As of 30 September		
	2017			2018		
	Total Loans	Non-Performing Loans	Non-Performing Loans %	Total Loans	Non-Performing Loans	Non-Performing Loans %
	(In billions of Won, except percentages)					
Corporate[(2)]	₩116,313	₩1,274	1.1%	₩122,426	₩ 956	0.8%
Retail	99,204	200	0.2	105,239	227	0.2
Total	₩215,518	₩1,474	0.7%	₩227,665	₩1,183	0.5%

Notes:

(1) Before allowance for loan losses and net deferred loan fees and costs.

(2) Includes loans to large corporations, SMEs and public and other.

10 Largest Non-Performing Loans

As of 30 September 2018, on a separate basis, our 10 largest non-performing loans accounted for 37.9 per cent. of our total non-performing loan portfolio. The following table shows, as of 30 September 2018, certain information regarding our 10 largest non-performing loans, on a separate basis.

	As of 30 September 2018		
	Principal Outstanding	Allowance for Loan Losses	Industry
	(In billions of Won)		
Borrower 1	₩ 98	₩ 35	Manufacture of steel products
Borrower 2	73	64	General construction
Borrower 3	65	0	Manufacturer of ferro-alloys
Borrower 4	60	31	Shipping
Borrower 5	36	—	Individual
Borrower 6	26	—	Other financial service activities
Borrower 7	25	2	General construction
Borrower 8	22	12	Construction of highways, streets and roads
Borrower 9	22	—	Plate-making and typesetting services
Borrower 10	21	2	Shipbuilding
Total	₩448	₩147	

Sales of Non-Performing Loans

We have also issued securities backed by non-performing loans and other assets through special purpose companies. Some of these transactions involved transfers of loans in connection with asset securitisations. The assets are not included in our balance sheet as these transactions are classified as sold under K-IFRS.

We sell non-performing loans to savings banks and the Korea Asset Management Corporation. The aggregate principal amounts, on a separate basis, of non-performing loans we sold in connection with asset securitisation transactions were ₩155 billion for the year ended 31 December 2015 (which represents such amounts of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015), ₩251 billion for the year ended

31 December 2016, ₩243 billion for the year ended 31 December 2017, ₩198 billion for the nine months ended 30 September 2017 and ₩98 billion for the nine months ended 30 September 2018.

Non-Performing Loan Strategy

One of our primary objectives is to prevent our loans from becoming non-performing. Through our corporate credit rating system, we strive to limit or reduce our credit risk relating to future non-performing loans. Our credit rating system is designed to prevent our loan officers from extending new loans to borrowers with high credit risks based on the borrower's credit rating. Our early warning system is designed to bring any sudden increase in a borrower's credit risk to the attention of our loan officers, who then closely monitor such loans.

Notwithstanding the above**,** if a loan becomes non-performing**,** an officer at the branch level responsible for monitoring non-performing loans will commence due diligence of the borrower's assets, send a notice demanding payment or a notice that we will take legal action or prepare for legal action.

At the same time, we also initiate our non-performing loan management process, which begins with:

- identifying loans subject to a proposed sale by assessing the estimated losses from such sale based on the estimated recovery value of collateral, if any, for such non-performing loans;
- identifying loans subject to charge-off based on the estimated recovery value of collateral, if any, for such non-performing loans and the estimated rate of recovery of unsecured loans; and
- on a limited basis, identifying commercial loans subject to normalisation efforts based on the cash flow situation of the borrower.

Once the details of a non-performing loan are identified, we pursue early solutions for recovery. Actual recovery efforts on non-performing loans are handled by several of our departments or units, depending on the nature of such loans and of the borrower.

The officers or agents of the responsible departments and units use a variety of methods to resolve non-performing loans, including:

- making phone calls and paying visits to the borrower requesting payment;
- continuing to assess and evaluate assets of our borrowers; and
- if necessary, initiating legal action such as foreclosures, attachments and litigation.

In order to promote speedy recovery on loans subject to foreclosures and litigation, our policy is to permit the branch responsible for handling these loans to transfer them to the relevant unit at headquarters or regional headquarters.

Foreclosure and Collateral

Generally when a non-performing loan becomes overdue for more than three months, we foreclose on mortgages or exercise our security interests in respect of other collateral. At that time, we will petition a court to foreclose on collateral and to sell that collateral through a court-supervised auction. Under Korean law, that petition must be filed with a court that has jurisdiction over the mortgaged property, and must be filed together with a copy of the mortgage agreement and an extract of the court registry regarding the subject property. The court will then issue an order to commence the foreclosure auction, which will be registered in the court registry of the subject property. If no bidder bids at least the minimum amount set by the court on the first auction date, the court will set another date for a subsequent auction approximately one month later. Each time a new auction date is set, the minimum auction price will typically be lowered by 20.0 per cent. Korean law does not provide for non-judicial foreclosure.

Korean financial institutions, including us, maintain general policies to assess a potential customer's eligibility for loans based on that entity's credit quality**,** rather than requiring a particular level of collateral, especially in the case of large corporate borrowers. As a result, the ratio of our collateral to non-performing corporate loans is relatively low when compared with our total exposures. For secured household loans, however, we generally impose limits on loan amounts based on the collateral we receive.

We reflect this collateral level when we estimate the future cash flow for our loans, which we calculate using a discounted cash flow method. With respect to loans to borrowers that we do not believe will be going concerns in the future, the lower collateral ratio has a direct effect on cash flow estimates and results in a higher level of allowances. With respect to loans to borrowers that we expect to be going concerns, the lower collateral ratio has an effect on cash flow estimates, but we also consider other factors, including future operating income and future asset disposals and restructuring, in determining allowance levels. Accordingly, for these latter borrowers, the effect of lower collateral levels on allowances is mitigated by other characteristics of the borrower, and that lower collateral level will not necessarily result in a higher level of allowances.

Loan Charge-Offs

Our gross charge-offs were ₩507 billion for the year ended 31 December 2015 (which represents our gross charge-offs from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015), ₩978 billion for the year ended 31 December 2016, ₩386 billion for the year ended 31 December 2017, ₩301 billion for the nine months ended 30 September 2017 and ₩298 billion for the nine months ended 30 September 2018.

Basic Principles

We attempt to minimise loans to be charged-off, by practicing a sound credit approval process based on credit risk analysis prior to extending loans and a systematic management of outstanding loans.

Loans to be Charged-Off

Loans are charged-off if they are deemed to be uncollectible by falling under any of the following categories:

- loans for which collection is not foreseeable due to insolvency, bankruptcy, dissolution or the shutting down of the business of the debtor;
- loans for which collection is not foreseeable due to the death or disappearance of the debtor;
- loans for which expenses of collection exceed the collectable amount;
- loans on which collection is not possible through legal or any other means; or
- the portion of loans classified as "estimated loss", net of any recovery from collateral, which is deemed to be uncollectible.

Procedure for Charge-Offs

All applications for our loan charge-off are submitted to our credit group, whether they are corporate loans or individual loans. Such applications for charge-off are generally submitted immediately after the relevant loan becomes one month past due, which our credit group will then evaluate. Once loans are charged-off, they are derecognised from our balance sheet.

Credit Portfolio

The table below sets forth, on a separate basis, our credit portfolio (as reported to the FSC based on FSC's asset classification criteria) as of the dates indicated.

	As of 31 December			As of 30 September
	2015	2016	2017	2018
	(In billions of Won)			
Banking account				
Loans	₩202,691	₩206,631	₩215,518	₩227,665
Commercial papers (including guaranteed notes)	0	—	—	—
Other receivables	10	4	2	5
Confirmed acceptances and guarantees	16,366	13,019	11,081	10,812
Sub-total	₩219,068	₩219,653	₩226,600	₩238,482
Trust account				
Trust loans	₩ 32	₩ 42	₩ 214	₩ 219
Privately-placed corporate bonds	—	—	—	—
CP (including guaranteed notes)	1	1	0	—
Sub-total	₩ 33	₩ 43	₩ 215	₩ 219
Merchant banking account				
Loans	₩ 130	₩ 53	₩ 4	₩ 4
Financial leases	—	—	—	—
Confirmed acceptances and guarantees	—	—	—	—
Sub-total	₩ 130	₩ 53	₩ 4	₩ 4
Total credits	₩219,230	₩219,749	₩226,819	₩238,704

Investment Portfolio

We invest in and trade Won-denominated and, to a lesser extent, foreign currency-denominated securities for our own account to:

- maintain the stability and diversification of our assets;
- maintain adequate sources of back-up liquidity to match our funding requirements; and
- supplement income from our core lending activities.

In making securities investments, we take into account a number of factors, including macroeconomic trends, industry analysis and evaluation of credit.

Our investments in securities are also subject to a number of guidelines, including limitations prescribed under the Bank Act. Under these regulations, we must limit our investments in shares and securities with a maturity in excess of three years (other than monetary stabilisation bonds issued by the Bank of Korea, national government bonds and government guaranteed bonds) to 100.0 per cent. of our total Tier I and Tier II capital. Generally, we are also prohibited from acquiring more than 15.0 per cent. of the shares with voting rights issued by any other corporation (other than for the purpose of establishing or acquiring a subsidiary). Further information on the regulatory environment governing our investment activities is set out in "*Regulation and Supervision*".

Securities Classifications

The classification guidelines and methods of valuation for securities are as follows:

Classification under K-IFRS 1039 (effective through 31 December 2017)	Valuation Method
Financial assets at FVTPL	Financial assets at fair value through profit or loss ("**FVTPL**") are stated at fair value, with any gains or losses arising on remeasurement recognised in net income. Transaction costs attributable to acquisition upon initial recognition are immediately recognised in net income in the period incurred.

Classification under K-IFRS 1039 (effective through 31 December 2017)	Valuation Method
Available-for-sale financial assets	Non-derivative financial assets that are not classified as at held-to-maturity, held for trading designated as at FVTPL, or loans and receivables, are classified as available-for-sale financial assets. Available-for-sale financial assets are initially recognised at fair value plus directly related transaction costs. They are subsequently measured at fair value. Gains and losses arising from changes in fair value are recognised in other comprehensive income and accumulated in the investment revaluation reserve, with the exception of impairment losses, interest calculated using the effective interest method, and foreign exchange gains and losses on monetary assets, which are recognised in net income. Unquoted equity investments for which fair values cannot be measured reliably are carried at cost. Where the investment is disposed of or is determined to be impaired, the cumulative gain or loss previously accumulated in the investment revaluation reserve is reclassified to net income. Dividends on available-for-sale equity instruments are recognised in net income when our right to receive the dividends is established. The fair value of available-for-sale monetary assets denominated in a foreign currency is determined in that foreign currency and translated at the spot rate at the end of the reporting period. The available-for-sale non-monetary assets measured at the amortised cost are translated at the exchange rate on the trade date, while assets measured at the fair value are translated at the exchange rate on the date when the fair value is determined.
Held-to-maturity investments	Non-derivative financial assets with fixed or determinable payments and fixed maturity dates that we have the positive intent and ability to hold to maturity are classified as held-to-maturity investments. Held-to-maturity investments are measured at amortised cost using the effective interest rate method, less any impairment, with revenue recognised on an effective yield basis.

Classification under K-IFRS 1109 (effective from 1 January 2018)	Valuation Method
Financial assets measured at FVTPL	Financial assets measured at fair value through profit or loss (FVTPL) include financial assets held-for-trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held-for-trading if they are acquired for the purpose of selling or repurchasing in the short term. Also, financial assets can be designated at FVTPL if assets or liabilities are measured in accordance with different standards or in order to get rid of or reduce accounting mismatch. Financial assets measured at FVTPL are measured at fair value and the gain or loss on valuation is recognised as profit or loss. Dividends and interest income from the financial assets are also recognised as profit or loss.

Classification under K-IFRS 1109 (effective from 1 January 2018)	Valuation Method
Financial assets measured at FVOCI	Financial assets that meet the following two conditions must be measured at fair value through other comprehensive income (FVOCI): (i) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and (ii) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. Financial assets at FVOCI are measured at fair value after initial recognition. Gain or loss from changes in the fair value is recognised as other comprehensive income, except for (i) interest income in accordance with the effective interest rate method, (ii) dividends and (iii) foreign exchange differences on monetary assets that are directly recognised as profit or loss. When financial assets measured at FVOCI are disposed of, the cumulative income recognised in other comprehensive income is transferred to the current profit or loss. However, the cumulative income recognised for equity securities designated as financial assets measured at FVOCI is not transferred to the current profit or loss. The fair value of financial assets measured at FVOCI presented in foreign currencies is translated using the exchange rate as at the end of the reporting period. Changes in the fair value from exchange differences due to changes in amortised cost are recognised in the current profit or loss, while other changes are recognised directly in equity.
Financial assets measured at amortised cost	Financial assets that meet the following two conditions must be measured at amortised cost: (i) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and (ii) the objective of the entity's business model is to hold the financial asset to collect the contractual cash flows. After initial recognition, the financial assets are recognised at amortised cost using the effective interest rate, net of the allowance for doubtful accounts.

Privately-placed commercial paper, privately-placed corporate bonds and guaranteed notes are not subject to the above valuation method. Instead, they are classified as loans and are subject to the corresponding loan loss provisioning method.

Book Value

The following tables set out the book value of securities in our investment portfolio as of the dates indicated.

	As of 31 December		
	2015	2016	2017
	(In billions of Won)		
Available-for-sale			
Equity securities	₩ 738	₩ 1,010	₩ 768
Investments in partnerships	172	141	145
Government and public bonds	11,311	13,720	14,401
Finance bonds	8,393	9,469	14,998
Corporate and other bonds	7,096	4,832	3,803
Beneficiary certificates	2,886	1,510	2,330
Securities denominated in foreign currencies	4,417	6,740	7,878
Others	—	1	—
Sub-total	₩35,014	₩37,423	₩44,323
Held-to-Maturity			
Government and public bonds	₩ 838	₩ 856	₩ 1,135
Finance bonds	1,623	351	741
Corporate bonds and others	2,485	2,096	2,691
Securities denominated in foreign currencies	239	826	1,595
Sub-total	₩ 5,185	₩ 4,129	₩ 6,161
Financial assets at FVTPL			
Stocks	₩ 23	₩ 46	₩ 51
Government and public bonds	1,180	1,215	1,404
Financial bonds	851	772	991
Corporate bonds and others	181	293	430
Beneficiary certificates	—	—	—
Securities denominated in foreign currencies	—	—	11
Derivative assets for trading	4,702	6,230	6,557
Sub-total	₩ 6,937	₩ 8,666	₩ 9,444
Total securities(1)	₩47,136	₩50,218	₩59,927

	As of 30 September 2018
	(In billions of Won)
Financial assets measured at FVOCI	
Equity securities	₩ 842
Investments in partnerships	—
Government and public bonds	14,168
Finance bonds	11,929
Corporate and other bonds	3,505
Beneficiary certificates	—
Securities denominated in foreign currencies	6,547
Others	—
Sub-total	₩36,991
Securities measured at amortised cost	
Government and public bonds	₩ 1,210
Finance bonds	2,362
Corporate bonds and others	6,072
Securities denominated in foreign currencies	1,836
Sub-total	₩11,480
Financial assets measured at FVTPL	
Stocks	₩ 141
Government and public bonds	1,335
Financial bonds	501
Corporate bonds and others	1,381
Beneficiary certificates	1,272
Securities denominated in foreign currencies	561
Derivative assets for trading	3,432
Sub-total	₩ 8,623
Total securities	₩57,094

Note:
(1) Excluding investment stocks using the equity method.

Maturity Analysis

The following table categorises our securities (carrying amount) by maturity as of 30 September 2018.

	As of 30 September 2018				
	Within 1 Year	Over 1 but Within 5 Years	Over 5 but Within 10 Years	Over 10 Years	Total
	(In billions of Won)				
Financial assets measured at FVOCI					
Government and public bonds	₩ 1,144	₩12,938	₩—	₩—	₩14,082
Finance bonds	10,002	1,885	—	—	11,887
Corporate and other bonds	1,549	1,936	—	—	3,485
Bonds denominated in foreign currencies	4,114	4,216	960	143	9,433
Total	₩16,809	₩20,975	₩960	₩143	₩38,887
Securities measured at amortised cost					
Government and public bonds	₩ 316	₩ 831	₩ 56	₩—	₩ 1,203
Finance bonds	40	2,322	—	—	2,362
Corporate and other bonds	141	5,788	116	29	6,074
Bonds denominated in foreign currencies	673	1,112	265	—	2,051
Total	₩ 1,170	₩10,053	₩438	₩ 29	₩11,690

Concentrations of Risk

We held no securities of individual issuers where the aggregate book value of those securities exceeded 10 per cent. of our stockholders' equity as of 30 September 2018.

Commitments and Guarantees

In the normal course of our operations, we make various commitments and guarantees to meet the financing and other business needs of our customers. Commitments and guarantees are usually in the form of, among others, payment guarantees for issuance of debentures, letters of guarantee for importers, commercial letters of credit and performance guarantees. The contractual amount of these financial instruments represents the maximum possible loss that would occur if the counterparty were to draw down the commitment or we were to fulfil our obligation under the guarantee and the counterparty were to fail to perform under the contract.

The following table sets forth our credit-related commitments and guarantees, as of the dates indicated.

	As of 31 December			As of 30 September
	2015	2016	2017	2018
	(In billions of Won)			
Acceptances and guarantees				
Financial guarantees in Won	₩ 763	₩ 658	₩ 589	₩ 505
Financial guarantees in foreign currencies	1,440	217	96	76
Confirmed acceptance and guarantees in Won	2,085	1,847	1,634	1,608
Confirmed acceptance and guarantees in foreign currencies	13,727	12,271	10,884	11,050
Contingent acceptance and guarantees	3,800	3,484	3,664	4,133
Sub-total	₩21,815	₩18,476	₩16,867	₩17,371
Bills endorsed	40	46	47	27
Total acceptances and guarantees and bills endorsed	₩21,856	₩18,522	₩16,915	₩17,398
Commitments				
Loans in Won	₩65,464	₩45,655	₩42,970	₩55,812
Loans in foreign currencies	24,946	25,052	19,243	19,899
Credit lines on asset-backed securities	1,253	1,230	1,395	937
Purchase of securities(1)	773	1,535	1,332	1,796
Total commitments	₩92,435	₩73,473	₩64,940	₩78,443

Note:

(1) Includes purchases of asset-backed commercial papers.

We have credit-related commitments that are not reflected on the balance sheet, which primarily consist of commitments to extend credit and letters of credit. Commitments to extend credit, including credit lines, represent unfunded portions of authorisations to extend credit in the form of loans. These commitments expire on fixed dates and a customer is required to comply with predetermined conditions to draw funds under the commitments.

Commercial letters of credit are undertakings on behalf of customers authorising third parties to draw drafts on us up to a stipulated amount under specific terms and conditions. They are generally short-term and collateralised by the underlying shipments of goods to which they relate and therefore have less risk.

Other financial and performance guarantees are irrevocable promises to make payments to beneficiaries in the event that our customers fail to fulfil their obligations or to perform under certain contracts. Liquidity facilities to special purpose entities ("**SPEs**") represent irrevocable commitments to provide contingent liquidity credit lines to SPEs established by our customers in the event that a triggering event such as shortage of cash occurs.

The commitments and guarantees do not necessarily represent our exposure since they often expire unused.

Funding

We fund our lending and other activities using various sources, both domestic and foreign. Our primary funding strategy is to maintain stable and low-cost funding. We have in the past achieved this in part by increasing the average balances of low-cost customer deposits, in particular demand deposits and savings deposits. Customer deposits are our principal funding source. We also acquire funding through borrowings (including from other financial institutions, the Bank of Korea, other Government-affiliated funds and entities and other lenders, call money, bonds sold under repurchase agreements and bills sold) and debentures (including senior and subordinated debentures).

Deposits

Although the majority of our deposits are short-term, it has been our experience that the majority of our depositors generally roll over their deposits at maturity, providing us with a stable source of funding. The following tables show our average balances of deposits and the average rates paid on our deposits, on a separate basis, for the periods indicated.

	Years Ended 31 December								
	2015			2016			2017		
	Average Balance[1]	Interest Paid[2]	Average Rate Paid	Average Balance	Interest Paid	Average Rate Paid	Average Balance	Interest Paid	Average Rate Paid
	(In billions of Won, except percentages)								
Demand deposits in Won	₩ 4,027	₩ 6	0.2%	₩ 7,402	₩ 15	0.2%	₩ 8,581	₩ 19	0.2%
Time deposits in Won	86,833	1,497	1.7	161,823	2,397	1.5	174,067	2,038	1.2
Demand deposits denominated in foreign currency	18,226	49	0.3	22,608	59	0.3	18,249	20	0.1
Certificate of deposits	565	9	1.6	1,553	25	1.6	2,502	41	1.6
Total deposits	₩109,650	₩1,562	1.4%	₩193,387	₩2,496	1.3%	₩203,400	₩2,118	1.0%

	Nine Months Ended 30 September					
	2017			2018		
	Average Balance	Interest Paid	Average Rate Paid (Annualised)	Average Balance	Interest Paid	Average Rate Paid (Annualised)
	(In billions of Won, except percentages)					
Demand deposits in Won	₩ 8,501	₩ 14	0.2%	₩ 9,044	₩ 17	0.3%
Time deposits in Won	172,665	1,504	1.2	184,131	1,843	1.3
Demand deposits denominated in foreign currency	17,959	14	0.1	17,692	30	0.2
Certificate of deposits	2,011	24	1.6	2,870	41	1.9
Total deposits	₩201,136	₩1,556	1.0%	₩213,736	₩1,932	1.2%

Notes:

(1) Calculated based on the average of the daily ending balances of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015.

(2) Represents the amounts of interest paid by KEB Hana Bank from 1 September 2015 to 31 December 2015 and those by Korea Exchange Bank from 1 January 2015 to 31 August 2015.

Maturities of Deposits

The following table presents, on a consolidated basis, the remaining maturities of our deposits as of 30 September 2018.

	As of 30 September 2018						
	On Demand	Less than 1 Month	1 – 3 Months	3 Months – 1 Year	1 Year – 5 Years	More than 5 Years	Total
	(In billions of Won)						
Deposits	₩101,251	₩19,058	₩31,795	₩77,984	₩10,270	₩1,860	₩242,218

Borrowings

The following table presents information regarding our borrowings as of the dates indicated.

	As of 31 December						As of 30 September	
	2015		2016		2017		2018	
	Balance Outstanding	Interest Rate	Balance Outstanding	Interest Rate	Balance Outstanding	Interest Rate	Balance Outstanding	Interest Rate
	(In billions of won, except percentages)							
Borrowing in Won								
Borrowing from Bank of Korea	₩ 2,072	0.50~0.75%	₩ 1,579	0.50~0.75%	₩ 1,607	0.50~0.75%	₩ 1,430	0.50~0.75%
Borrowing from Government	2,473	0.00~3.10%	1,569	0.49~2.10%	1,456	1.44~2.50%	1,450	0.50~2.50%
Other borrowings	1,337	0.00~4.25%	1,778	0.00~5.03%	1,866	0.00~3.28%	2,353	0.00~3.70%
Sub-total	₩ 5,883		₩ 4,926		₩ 4,929		₩ 5,233	
Borrowing in foreign currencies								
Bank overdrafts	₩ 97	0.00~18.38%	₩ 516	1.00~12.75%	₩ 587	0.65~6.25%	₩ 1,095	1.10~7.25%
Other borrowings	8,414	0.00~4.90%	6,294	0.00~10.50%	5,772	0.00~10.50%	7,789	-0.15~7.25%
Sub-total	₩ 8,511		₩ 6,810		₩ 6,359		₩ 8,884	
Call money								
Call money in Won	—	—	—	—	₩ 174	1.33~1.47%	—	0%
Call money in foreign currencies	2,106	0.12~0.70%	2,867	0.01~9.00%	2,007	0.00~6.50%	1,482	0.01~6.95%
Sub-total	₩ 2,106		₩ 2,867		₩ 2,181		₩ 1,482	
Bonds sold under repurchase agreements								
Bonds sold under repurchase agreements in Won	₩ 0	0.00~3.95%	₩ 0	0.00~0.80%	₩ 0	0.00~0.00%	₩ 0	0%
Bonds sold under repurchase agreements in foreign currencies	510	0.19~3.14%	676	0.09~3.83%	252	1.59~4.05%	170	2.85~3.05%
Sub-total	₩ 510		₩ 677		₩ 252		₩ 170	
Others								
Bills sold	₩ 123	0.90~2.24%	31	0.00~1.54%	55	0.00~2.15%	53	0.00~2.15%
Total	₩17,133		₩15,311		₩13,775		₩15,822	

RISK MANAGEMENT

As a financial services provider, we are exposed to various risks related to our lending and trading businesses, our deposit-taking activities and our operating environment. We strive to maintain a comprehensive system of risk management to understand, measure and monitor such risks in order to ensure the soundness of our assets and stabilise long-term profitability. With the Merger, which became effective 1 September 2015, we have further strengthened our risk management system to better serve these goals.

Our Risk Management Group monitors and manages our risk exposure and directly implements and ensures compliance with our risk policies and guidelines at an operational level. It reports to our Risk Management Committee and our Risk Management Steering Committee and is divided into three departments:

- the credit risk management department, which is responsible for credit risk and credit concentration risk;
- the credit review department, which is responsible for planning and executing credit review policies; and
- the integrated risk management department, which is responsible for market risk, operational risk and other risks.

Our Risk Management Committee, comprised of three Outside Directors and one Non-Standing Director, is the centralised body ultimately responsible for risk management. It provides board-level direction regarding risk management strategies and policies and reports to our board of directors. Our Risk Management Steering Committee, consisting of the Heads of six Groups (Risk Management Group, Global Business Group, Marketing Group, Management Planning Group, Credit Group and Financial Markets Group), reports directly to the Risk Management Committee and our president and chief executive officer, and works with our Risk Management Group to implement the execution of these strategies and policies.

Credit Risk Management

Credit Risk Assessment and Management

Credit risk is the risk of losses in the event of borrower defaults. Our policy objectives in credit risk management are to improve asset quality, reduce non-performing loans and minimise credit concentration risk through diversified, balanced and risk-weighted loan portfolios. To this end, we manage credit risk by establishing credit risk limits, assessing current risk levels and monitoring the status of borrowers, including their compliance with risk limits, asset quality, default rate and level of risk exposure.

We assess and manage all types of credit exposures, including loans, guarantees, investment securities and derivative products. The current level of credit risk is determined by “expected” and “unexpected” loss levels. We calculate the expected loss level based on the probability of default, the loss given default and the exposure at default, and use the measured expected loss to determine interest rates and provision levels in relation to new or renewed credits. The unexpected loss level, which incorporates the possibility of fluctuations in the expected loss level, is calculated by the Advanced Internal Rating-Based method as proposed by the Basel Committee for internal control purposes and by a risk-weighted method approved by the FSS for use with regard to external regulations.

Credit Evaluation and Approval

In general, we evaluate the credit of every loan applicant and guarantor before approving any loans. The evaluation and approval process differs depending on whether the loan is a corporate loan or a retail loan.

Our corporate credit evaluation system assigns credit risk ratings to corporate borrowers by measuring and analysing various quantitative and qualitative risk factors. After a preliminary credit rating is generated in light of the borrower’s probability of default and past ratings, the rating is adjusted based on the borrower’s ownership structure, corporate history, outlook, contingent liabilities, credit history and other special considerations to produce a final credit rating. We may apply different models tailored to specific characteristics of the potential borrower to make the rating more predictive and ensure a more stable calculation of the probability of default. Evaluation results are used to determine loan approval and loan size and to set loan limits at the industry level and the individual loan account level.

Retail exposure consists of secured exposures (consisting primarily of housing loans) and other unsecured exposures. For evaluating and approving retail credit applications, we use a probability of default segmentation system that classifies retail exposures to appropriate asset categories based on borrower- and transaction-specific characteristics and arrears information. The system is designed to form asset categories consisting of exposures with similar risk characteristics and reclassifies exposures when there is reason for significant changes in the probability of default.

Market Risk Management — Non-Trading Activities

Liquidity Risk Management

Liquidity risk is the risk of insolvency, default or loss due to disparities between inflow and outflow of funds. It includes the risk of having to obtain funds at a high price or having to dispose of securities at an unfavourable price due to lack of available funds. We seek to minimise liquidity risk through early detection of risk factors related to sourcing and managing funds and by maintaining an appropriate level of liquidity through systematic management.

Our liquidity risk management covers all classes of assets and liabilities on and off the balance sheet that are related to capital inflows and outflows. Liquidity risk is managed in accordance with the risk limits and guidelines established internally and by relevant regulatory authorities. Pursuant to principal regulations applicable to banks as promulgated by the FSC, we are required to keep a specific Won currency liquidity coverage ratio and a foreign currency liquidity coverage ratio and we must maintain relevant ratios above certain minimum levels. Specifically, the FSC requires Korean banks, including us, to maintain a liquidity coverage ratio of 100.0 per cent. effective from 1 January 2019. From 1 January 2018 to 31 December 2018, the minimum liquidity coverage ratio requirement was 95.0 per cent.

The FSC defines liquidity coverage ratio as high liquid assets that can be easily converted to cash, as divided by the net amount of cash outflow for the next thirty days period, under the stress level established according to the liquidity coverage ratio, pursuant to the Regulation on the Supervision of the Banking Business, which was amended as of 25 October 2018 (and further amended from time to time), to implement the liquidity coverage ratio requirements under Basel III. In addition, the FSC requires a foreign currency liquidity ratio, which is defined as foreign currency-denominated liquid assets due within three months (including marketable securities) divided by foreign currency-denominated liabilities due within three months, of at least 85.0 per cent. In addition, we use a customer behaviour model for more advanced forecasting of asset and liability maturities and manage a contingency plan for timely response to liquidity crises.

The following tables show our (i) average liquidity coverage ratio and (ii) average foreign currency liquidity coverage ratio, each for the month of September 2018 in accordance with the regulations of the FSC.

Average Liquidity Coverage Ratio

	For the Month of September 2018
	(in billions of Won, except percentages)
High liquid assets (A)	₩50,129
Net cash outflows over the next 1 month (B)	48,872
Cash outflow	71,174
Cash inflow	22,301
Liquidity coverage ratio (A/B)	102.57%

Average Foreign Currency Liquidity Coverage Ratio

	For the Month of September 2018
	(in millions of US$, except percentages)
High liquid assets (A)	$ 6,770
Net cash outflows over the next 1 month (B)	6,756
Liquidity coverage ratio (A/B)	100.21%

Market Risk Management — Trading Activities

Trading activities we recognise as entailing market risk exposure include:

- trading activities for our account to realise short-term profits in debt and equity markets and foreign exchange markets based on short-term forecast of changes in the market situation; and
- trading activities involving derivatives, such as swaps, forwards, futures and option transactions, to realise profits primarily from arbitrage transactions and, to a lesser extent, from selling derivative products to our customers and to hedge market risk incurred from those activities.

Our Risk Management Committee decides the overall price risk ceiling and distributes appropriate risk limits to each trading activity.

The main instrument we use to measure and monitor market risk exposure is the value at risk ("**VaR**") method. A VaR is a statistically estimated maximum amount of loss that can occur for a given holding period. We currently use the 10-day 99 per cent. confidence level-based VaR for purposes of calculating our "economic" capital used for internal management purposes, which is a concept used in determining the amount of our requisite capital in light of the market risk, and stressed VaR for purposes of calculating the regulatory capital used in reporting to the FSS. We also perform stress testing to assess market risk exposure to abnormal market fluctuations and use the one-day 99 per cent. confidence level-based VaR on a supplemental basis for purposes of setting and managing risk limits specific to each desk or team in our operating units as well as for back-testing purposes.

The following table presents an overview of market risk from our trading activities, measured by VaR on a separate basis, as of 30 September 2018.

	Trading Profit VaR for the Nine Months Ended 30 September 2018		
	Average	**Minimum**	**Maximum**
		(in millions of Won)	
Interest Rate Risk	₩ 30	₩22	₩ 46
Foreign currency risk	109	98	125
Stock price risk	30	18	52
Option risk	5	5	5
Total risk[(1)]	₩110	₩90	₩143

(1) Reflects correlation of risk factors and volatility on the moving average method. The calculation of the total risk VaR takes into consideration the correlation and diversification effects between each risk factor and therefore, it is not the same as the total VaRs.

Price Risk Management

Price risk is the risk of holding or taking positions in equities and equity-related derivatives' delta equivalent position. We separate price risk due to general market variables such as stock prices, exchange rates and interest rates from price risk due to events that only affect particular issuers.

Our trading equity portfolio consists of stocks listed on the KRX KOSPI Market or the KRX KOSDAQ Market and nearest-month or second nearest-month futures contracts under strict limits on diversification as well as limits on positions. We have been particularly focused on managing risk in these equities due to the level of volatility in the Korean stock market. On a separate basis, we held ₩7 billion of equity securities denominated in Won in our trading account as of 30 September 2018.

Interest Rate Risk Management

Interest rate risk arises when interest rate fluctuations cause unexpected changes in the value of rate sensitive assets and liabilities. The principal objectives of our interest rate risk management are to generate stable net interest income and to protect our net asset value against such fluctuations.

We monitor and manage our interest rate risk based on various analytical measures such as interest rate gap, duration gap and net portfolio value and net interest income simulations, and also monitor our interest rate VaR limits, interest rate earnings at risk ("**EaR**") limits and interest rate gap ratio limits on a monthly basis. Using the standard framework established by the Bank for International Settlements, we measure our interest rate VaR and interest rate EaR based on simulated estimations of the maximum decrease in net asset value and net interest income in a one-year period based on various scenario analyses of historical interest rates. Our integrated risk management department monitors compliance with interest rate risk exposure limits set by our Risk Management Committee.

Operational and Other Risk Management

Operational Risk Management

We define operational risk broadly to include all financial and non-financial risks, other than credit and market risk, resulting from inadequate internal processes, personnel and systems or from external events. Such risks include legal risk, but exclude strategic and reputational risk.

Through our operational risk management, we strive to not only satisfy regulatory requirements, but also provide internal support through the cultivation of a strong risk management culture, reinforcement of internal controls, improvement of work processes and provision of timely feedback to our management members and staff. We regularly measure operational risk and refine operational risk policies and procedures to manage and control the level of risk arising from changes in operational environment and internal control. In addition, we maintain a risk and control self- assessment (RCSA) system to ensure proper monitoring and measurement of operational risk in each of our business groups and have internal control managers in all of our departments and branches to update such self-assessments on a quarterly basis.

Other Risk Management

Other risks include strategic and reputational risks. As these risks are difficult to quantify, we use qualitative risk and control self-assessments to monitor and limit the level of risk.

MANAGEMENT AND EMPLOYEES

Management

Board of Directors

Our board of directors has the ultimate responsibility for managing our affairs. The board currently comprises two Standing Directors, one Non-Standing Director and five Outside Directors.

Our articles of incorporation provide that the board must have at least five and up to eleven directors. Standing directors must comprise less than 50 per cent. of the total number of directors. Each standing director is elected for a term of office up to three years as decided in the meeting of shareholders, and each outside director is elected for a term of office up to two years. These terms are subject to the Korean Commercial Code, the Bank Act, the Act on the Corporate Governance of Financial Companies (in effect since 1 August 2016) and related regulations. Each director may be re-elected, subject to these laws and regulations.

Our board of directors meets regularly on a quarterly basis to discuss and resolve various corporate matters. The board may also convene for additional extraordinary meetings at the request of any of the directors.

The names and positions of our directors are set forth below. The business address of all of the directors is our registered office at 35 Eulji-ro, Jung-gu, Seoul, Korea.

Standing Directors

As of the date of this Offering Circular, we had two Standing Directors, who are full-time employees of the Bank and hold executive positions as below.

Name	Age	Position	Officer Since	Term Ends
Young Joo HAM	62	President and Chief Executive Officer	1 September 2015	Annual General Meeting 2018
Ju Hyung LEE	59	Standing Audit Committee Member	20 March 2017	Annual General Meeting 2019

Mr. Young Joo HAM, age 62, has served as our President and CEO since 1 September 2015. Prior to serving as our President and CEO, he worked as deputy president of the Chungchong business group of Hana Bank. Mr. Ham has an undergraduate degree from Dankook University in accounting.

Mr. Ju Hyung LEE, age 59, has served as our Standing Member of Audit Committee since 20 March 2017. Prior to serving as our Standing Director, he was the Senior Managing Director of Hanwha Energy Corporation. Mr. Kim has an undergraduate degree from Sungkyunkwan University in statistics and a master's degree from University of Oregon in economics.

Non-Standing Directors

As of the date of this Offering Circular, we had one Non-Standing Director, who is neither a full-time employee of the Bank nor holds an executive position with the Bank but is otherwise affiliated with the Bank, as below.

Name	Age	Position	Director Since	Term Ends	Position outside the Bank
Cheol Seung KWARK . . .	59	Non-Standing Director	24 March 2016	Annual General Meeting 2018	Chief Financial Officer, Hana Financial Group

Outside Directors

Our Outside Directors are selected based on their experience and knowledge in diverse areas, which include law, finance, economics, management and accounting. We currently have five Outside Directors, all of whom were nominated by the Outside Director Candidate Recommendation Committee and approved by our shareholders. As of the date of this Offering Circular, our outside directors are as follows:

Name	Age	Position	Director Since	Term Ends
In Bae KIM	56	Outside Director (Chairman)	22 March 2018	Annual General Meeting 2018
Young Il KO	67	Outside Director	22 March 2018	Annual General Meeting 2018
Jung Won LEE	62	Outside Director	22 March 2018	Annual General Meeting 2019
Nam Soo KIM	63	Outside Director	1 April 2017	Annual General Meeting 2018
Deog Nam HWANG	61	Outside Director	16 March 2017	Annual General Meeting 2018

Board Practices

Committees of the Board of Directors

We currently have four management committees that serve under the board:

- Audit Committee;
- Evaluation and Compensation Committee;
- Outside Director Candidate Recommendation Committee; and
- Risk Management Committee.

The board appoints each member of the above committees except for members of the Audit Committee, who are elected by our shareholders at the annual general meeting.

Audit Committee

The Audit Committee consists of one Outside Director, Ms. Deog Nam Hwang, and one Standing Director, Mr. Ju Hyung Lee. The chairperson is Ms. Deog Nam Hwang. This committee reviews all audit and compliance-related matters and makes recommendations to our board. It is also responsible for the following:

- establishing, executing and evaluating the results of our internal audit plan (including business, financial, management, compliance and IT audits);
- appointing and/or dismissing the general manager of our auxiliary audit division;
- evaluating our internal control system; and
- appointing and overseeing our outside auditors and setting internal procedures or making decisions on matters that are related to auditing.

The committee holds regular meetings quarterly.

The names and positions of our executive officers as of 31 December 2018 are set out below. All of our executive officers are employed on a full-time basis.

Name	Age	Position	Officer Since	Term Ends
Young Joo HAM	62	President and Chief Executive Officer	1 September 2015	Annual General Meeting 2018
Kyung Hoon JANG	55	Deputy President	1 January 2017	31 December 2018
Jun Seong HAN	52	Deputy President	1 September 2015	31 December 2018
Hyosang HWANG	58	Deputy President	1 January 2016	31 December 2019
Sung Kyu JI	55	Deputy President	1 January 2018	31 December 2018
Seong Muk KANG	54	Senior Managing Director	1 January 2016	31 December 2018
Chang Hoon KANG	57	Senior Managing Director	1 January 2016	31 December 2018
In Suk KIM	55	Senior Managing Director	1 January 2018	31 December 2018
Jae Young KIM	55	Senior Managing Director	1 January 2016	31 December 2018
Inhong MIN	55	Senior Managing Director	1 January 2017	31 December 2018
Seungoh PARK	54	Senior Managing Director	1 January 2017	31 December 2018
Ei Soo PARK	54	Senior Managing Director	1 January 2018	31 December 2018
Jihwan PARK	57	Senior Managing Director	1 January 2017	31 December 2018
Ki Ju BAE	54	Senior Managing Director	1 January 2018	31 December 2018
Hyun Gi BAE	53	Senior Managing Director	3 July 2017	31 December 2018
Mi Kyung BAEK	54	Senior Managing Director	1 January 2018	31 December 2018
Young Keun AHN	57	Senior Managing Director	1 January 2016	31 December 2018
Tae Kyun OH	57	Senior Managing Director	1 January 2017	31 December 2018
Giseok OK	55	Senior Managing Director	1 January 2017	31 December 2018
Si Wan YOO	56	Senior Managing Director	1 September 2015	31 December 2018
Seung Yul LEE	55	Senior Managing Director	1 January 2017	31 December 2018
Taesoo LEE	55	Senior Managing Director	1 January 2017	31 December 2018
Ho Seoung LEE	54	Senior Managing Director	1 January 2016	31 December 2018
Suk Hwa CHONG	53	Senior Managing Director	1 January 2018	31 December 2018
Chun Sik CHONG	55	Senior Managing Director	1 January 2016	31 December 2018

Employees

As of 30 September 2018, on a separate basis, we had a total of 13,218 employees consisting of 12,567 full-time employees and 561 contract-based employees (including 135 part-time contract-based employees). Employee compensation is based on a combination of base salary and wages, overtime and periodic bonuses. Bonuses are paid based on individual performance and business unit performance. We grant members of our full-time employees annual increases in base salary. For the years ended 31 December 2016 and 2017 and the nine months ended 30 September 2018, our salaries (which include regular wages, overtime and bonuses) amounted to ₩1,431.1 billion, ₩1,505.1 billion and ₩1,101.7 billion, which represented 48.3 per cent., 47.6 per cent. and 51.1 per cent. of our total general and administrative expenses, respectively. For the year ended 31 December 2015, our salaries amounted to ₩1,083.7 billion (which represents such expenses of KEB Hana Bank from 1 September 2015 (the effective date of the Merger) to 31 December 2015 and those of Korea Exchange Bank from 1 January 2015 to 31 August 2015), which represented 44.7 per cent. of our total general and administrative expenses. We also provide a wide range of benefits to members of our full-time employees, including medical insurance, employment insurance and life insurance. We believe that our compensation package is similar to that offered by our peer financial institutions. We have not experienced any material strikes or labour disputes in recent years, and we consider labour relations with members of our work force to be good. However, there can be no assurance that we will be able to maintain such a working relationship with our employees and will not experience labour disputes resulting from disagreements with the labour unions in the future.

As of the date of this Offering Circular, we have one labour union, which was created in 1 January 2017 upon the merger of the two existing unions, the Korea Exchange Bank branch of the Korean Financial Industry Union (established in 1960) and the Hana Bank branch of the Korean Financial Industry Union (established in 1982). Every two years, our management and labour union negotiate and enter into a new collective bargaining agreement that has a two-year duration, while annual wage adjustments are negotiated every year. We are currently negotiating the collective bargaining agreement for 2019.

In accordance with the National Pension Act, we contribute an amount equal to 4.5 per cent. of employee wages, and each employee contributes 4.5 per cent. of his or her wage into each employee's personal pension account. In addition, in accordance with the Guarantee of Worker's Retirement Benefits Act, we have adopted a retirement pension plan for our employees. Contributions under the retirement pension plan are deposited annually into a financial institution, and an employee may elect to receive a monthly pension or a lump-sum amount upon retirement. Our retirement pension plan is in the form of a defined benefit plan, which guarantees a certain payout at retirement, according to a fixed formula based on the employee's average salary and the number of years for which the employee has been a plan member. Under Korean law, we may not terminate the employment of full-time employees except under certain circumstances.

Shareholders

The following table presents information regarding the beneficial ownership of our common shares as of 30 September 2018 by each person or entity known to us to own beneficially more than 5.0 per cent. of our outstanding common shares.

Except as otherwise indicated, each shareholder identified by name has:

- sole voting and investment power with respect to its shares; and
- record and beneficial ownership with respect to its shares.

Beneficial Owner	Number of Common Shares Owned	% of Ownership
Hana Financial Group	1,071,915,717	100%
Total	1,071,915,717	100%

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

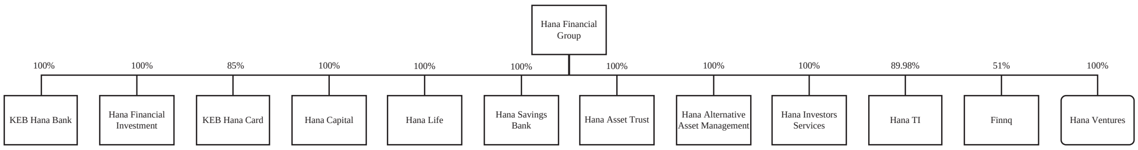
As of 30 September 2018, there was ₩8 billion loans outstanding made by us to the members of our board of directors or our executive officers. There are no guarantees provided by us and our consolidated subsidiaries for the benefit of any of our directors or executive officers. None of the directors or executive officers has or has had any interest in any transactions effected by us which are or were unusual in their nature or conditional or significant to our business and which were effected during the current or immediately preceding year or were effected during an earlier year and remain in any respect outstanding or unperformed.

As a subsidiary of Hana Financial Group, we engage from time to time in ordinary course of business activities with other subsidiaries of Hana Financial Group, including cross-selling activities. See Note 57 of the notes to our interim consolidated financial statements included in this Offering Circular.

HANA FINANCIAL GROUP

Hana Financial Group was established on 1 December 2005 through a share transfer in accordance with the Commercial Act of Korea and the Financial Holding Companies Act. After obtaining the necessary approvals from the FSC, the shareholders of Hana Bank, Hana Financial Investment Co., Ltd. (formerly Daehan Investment & Securities Co., Ltd.; "**Hana Financial Investment**"), Hana Information & System Co., Ltd. and Hana Institute of Finance (together, the "**Original HFG Subsidiaries**") transferred all of their common shares in the Original HFG Subsidiaries to the newly formed Hana Financial Group in exchange for common shares of Hana Financial Group in proportion to their respective shareholdings in the relevant Original HFG Subsidiaries. On 12 December 2005, the common shares of Hana Financial Group were listed on the Korea Exchange.

The Bank and Hana Financial Investment serve as the main distribution channels for Hana Financial Group. Through the network of 758 domestic branches of the Bank, 16 overseas branches of the Bank and 57 domestic branches of Hana Financial Investment, each as of 30 September 2018, Hana Financial Group delivers a wide range of financial products and services to customers, while KEB Hana Card, Hana Capital, Hana Life, Hana Asset Trust and Finnq (all as defined below) focus their efforts on developing innovative financial products. The following is the organisational chart of Hana Financial Group as of the date of this Offering Circular:



Hana Financial Investment

Hana Financial Investment (renamed on 1 September 2015 from Hana Daetoo Securities Co., Ltd.) is a wholly owned subsidiary of Hana Financial Group, engaged in the asset management and investment banking business. On 31 May 2005, Hana Bank acquired 100 per cent. of the outstanding common shares of Hana Financial Investment from the Korea Deposit Insurance Corporation for ₩475 billion. Hana Financial Investment was incorporated in January 1977 as an asset management company. In connection with the establishment of Hana Financial Group, Hana Bank transferred all of the outstanding common shares of Hana Financial Investment to Hana Financial Group on 1 December 2005, for 16,278,619 common shares of Hana Financial Group. On 1 December 2008, Hana Financial Investment expanded its business into investment banking by merging with Hana Investment Bank. Hana Futures Co., Ltd. (previously a wholly-owned subsidiary of Hana Financial Group), which provides domestic and overseas trading and brokerage services, merged with and into Hana Financial Investment in August 2016.

KEB Hana Card

KEB Hana Card Co., Ltd. ("**KEB Hana Card**") provides credit cards and other related services as permitted under the Specialized Credit Financial Business Act. It was incorporated in October 2009 as a result of a spin-off of Hana Bank's credit card business. Pursuant to the spin-off plan, Hana Bank transferred to Hana Card Co., Ltd., a newly formed company, the assets and liabilities related to Hana Bank's credit card business (other than those relating to corporate purchase cards, which were retained by Hana Bank), and all common stock of Hana Card Co., Ltd. was distributed to Hana Financial Group. On 11 December 2009, Hana Financial Group entered into a joint investment agreement with SK Telecom, a Korean telecommunications services company, pursuant to which SK Telecom acquired a 49 per cent. equity interest in Hana Card Co., Ltd. for ₩400 billion on 25 February 2010, and Hana Card Co., Ltd. was renamed Hana SK Card Co., Ltd. On 1 December 2014, Hana SK Card Co., Ltd. merged with and into the credit card business spun off from Korea Exchange Bank, and the surviving entity from the merger was renamed KEB Hana Card. As of 30 September 2018, Hana Financial Group owned 85 per cent. of KEB Hana Card, while the remaining 15 per cent. was held by SK Telecom.

Hana Capital

Established in February 1987, Hana Capital Co., Ltd. ("**Hana Capital**") provides facility leasing, instalments, and personal loans to consumers. Originally a member company of the Kolon Group, Hana Capital became a subsidiary of Hana Bank in 2004. Following the formation of the Hana Financial Group, Hana Bank transferred all of its common shares of Hana Capital to Hana Financial Group. In February 2018, Hana Financial Group acquired the remaining 49.87 per cent. stake in Hana Capital from Kolon Industries Inc. and other small shareholders, and Hana Capital became a wholly-owned subsidiary of Hana Financial Group.

Hana Life

Hana Life Insurance Co., Ltd. ("**Hana Life**") engages in the life insurance business and sells life insurance products through the Bank's branch network. Hana Life was incorporated in November 1991 under the name of France Life Insurance Company and was acquired by Allianz AG in 1998. On 21 February 2003, Hana Bank acquired 50.0 per cent. of the issued share capital of France Life Insurance Company and changed its name to Hana Life Insurance Co., Ltd. In 2007, Hana Bank acquired the remaining 50.0 per cent. stake in Hana Life from Allianz AG and subsequently contributed all of its shares of Hana Life to Hana Financial Group. In March 2008, Hana Financial Group formed a strategic alliance with HSBC Insurance (Asia-Pacific) Holdings Limited ("**HSBC Insurance**") and sold a 50.0 per cent. minus one share stake in Hana Life to HSBC Insurance. In May 2013, following HSBC Insurance's decision to exit the Korean market, Hana Financial Group reacquired the 50.0 per cent. minus one share stake in Hana Life from HSBC Insurance, and Hana Life again became a wholly-owned subsidiary of Hana Financial Group.

Hana Savings Bank

Hana Savings Bank was incorporated on 8 February 2012 upon Hana Financial Group's acquisition of certain assets and liabilities of Jeil II Savings Bank and Ace Mutual Savings Bank. In September 2012, Hana Savings Bank acquired Korea Savings Bank. Hana Savings Bank provides a range of deposit products and small-loan finance services and operates eight branches located in Korea.

Hana Asset Trust

Established in 2004, Hana Asset Trust Co., Ltd. (formerly Hana Daol Trust Co., Ltd.; "**Hana Asset Trust**") provides real estate trust products and related services.

Hana Alternative Asset Management

Established in 2006, Hana Alternative Asset Management Co., Ltd. (renamed on 23 November 2017 from Hana Asset Management Co., Ltd.; "**Hana Alternative Asset Management**") provides asset management and investment consulting services. Hana Alternative Asset Management became a wholly-owned subsidiary of Hana Financial Group in 2016.

Hana Investors Services

Established in 2003, Hana Investors Services Co., Ltd. ("**Hana Investors Services**") provides financial trust management and accounting services for corporations, banks or institutional investors. Hana Investors Services became a wholly-owned subsidiary of Hana Financial Group in 2015.

Hana TI

Hana Financial TI Co., Ltd. (renamed on 19 June 2017 from Hana Information & System Co., Ltd.; "**Hana TI**") was established in August 1990 as a subsidiary of Hana Bank. Hana TI develops and maintains the IT systems of the member companies of Hana Financial Group as well as other third party clients. In connection with the establishment of Hana Financial Group, Hana Bank transferred all of the outstanding common shares of Hana TI to Hana Financial Group on 1 December 2005, for 178,442 common shares of Hana Financial Group. As of 30 September 2018, Hana Financial Group owned 89.98 per cent. of Hana TI, with the remaining 10.02 per cent. held by DPR International Investments LLC, an investment arm of U.S.-based DPR Construction.

Finnq

Finnq Inc. (formerly Hana-SK Fintech Co., Ltd.; "**Finnq**") was incorporated on 24 August 2016 as a joint venture with SK Telecom, a mobile service provider, with Hana Financial Group holding a 51.0 per cent. stake. Finnq provides fintech-based services such as mobile-oriented asset management, simplified payment and facilitation of overseas transactions through a mobile application launched in 2017.

Hana Ventures

Hana Ventures Inc. ("**Hana Ventures**") was established on 4 October 2018 as a wholly-owned subsidiary of Hana Financial Group. Hana Ventures plans to invest in various startups in sectors ranging from fintech and information and communications technology (ICT) to healthcare and Internet-based content.

Principal Shareholders of Hana Financial Group

The following table sets out certain information regarding the ownership of Hana Financial Group's common shares as of 30 September 2018. Each entity known to the Bank to beneficially own more than 5.0 per cent. of the outstanding common shares of Hana Financial Group is listed below.

Beneficial Owner	Number of Common Shares Owned	% of Ownership
Korea National Pension Fund	28,683,201	9.55%
Capital Group, Inc.	15,046,561	5.01%

REGULATION AND SUPERVISION

Principal Regulations Applicable to Banks

Capital Adequacy and Allowances

The Bank Act requires national banks, such as the Issuer, to maintain a minimum paid-in capital of ₩100 billion and regional banks to maintain a minimum paid-in capital of ₩25 billion. All banks, including foreign bank branches in Korea, are also required to maintain a prescribed solvency position. A bank must also set aside in its legal reserve an amount equal to at least 10 per cent. of the net income after tax each time it pays dividends on net profits earned until its legal reserve reaches at least the aggregate amount of its paid-in capital.

Under the Bank Act, the capital of a bank is divided into two categories, Tier I and Tier II capital. Tier I capital (core capital) consists of shareholders' equity, capital surplus, retained earnings, the comprehensive aggregate of other profit/loss amounts and hybrid Tier I capital instruments. Tier II capital (supplementary capital) includes capital and capital surplus arisen from the issuance of supplementary capital, allowance for loan losses set aside for loans classified as normal or precautionary (up to certain limits) and certain other subordinated debt.

All banks must meet minimum ratios of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets, determined in accordance with FSC requirements that have been formulated based on BIS standards. These standards were adopted and became effective in 1996. All domestic banks and foreign bank branches must meet a minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk-weighted assets of 8 per cent.

The FSS amended the Detailed Rules on the Supervision of the Banking Business and, as a result, the following risk-weight ratios must be applied by Korean banks in respect of home mortgage loans:

(1) for banks which adopted a standardised approach for calculating credit risk capital requirements, to the extent that a mortgage obtained in relation to a home mortgage loan is a first priority mortgage, a risk-weight ratio of 35 per cent. shall apply, **provided that** a higher risk-weight ratio may be applied to home mortgage loans subject to certain exceptions; and.

(2) for banks which adopted an internal ratings-based approach for calculating credit risk capital requirements, a risk-weight ratio calculated with reference to the probability of default, loss given default and exposure at default (each term as defined under the Detailed Rules on the Supervision of the Banking Business).

Under the Regulation on the Supervision of the Banking Business, banks must generally maintain allowances for credit losses in respect of their outstanding loans and other credits (including trust account loans) in an aggregate amount covering not less than:

- 0.85 per cent. in the case of normal credits comprising loans to corporate borrowers (0.9 per cent. in the case of normal credits comprising loans to borrowers in the "construction", "wholesale and retail", "accommodation and restaurant" and "real estate and rent" industries (as classified under the Korean Industry Classification Standard)), 1.0 per cent. in the case of normal credits comprising loans to individuals and households, 1.1 per cent. in the case of normal credits comprising outstanding credit card receivables and 2.5 per cent. in the case of normal credits comprising outstanding card loans and revolving loans;
- 7.0 per cent. of precautionary credits, 10 per cent. in the case of precautionary credits comprising loans to individuals and households, 40 per cent. in the case of precautionary credits comprising outstanding credit card receivables and 50 per cent. in the case of precautionary credits comprising outstanding card loans and revolving loans;
- 20 per cent. of substandard credits, 60 per cent. in the case of substandard credits comprising outstanding credit card receivables and 65 per cent. in the case of substandard credits comprising outstanding card loans and revolving loans;
- 50 per cent. of doubtful credits, 55 per cent. in the case of doubtful credits comprising loans to individuals and households and 75 per cent. in the case of doubtful credits comprising outstanding credit card receivables, card loans and revolving loans; and
- 100 per cent. of estimated loss credits.

Furthermore, under the Regulation on the Supervision of the Banking Business, Korean banks must establish allowances in respect of any confirmed guarantees (including confirmed acceptances) and outstanding unused credit lines as of the date of settlement in an aggregate amount calculated at the same rates applicable to normal, precautionary, substandard and doubtful credits comprising their outstanding loans and other credits as set out above. See "— *Regulations Relating to Retail Household Loans*".

FSC amended the Regulations concerning the Supervision of the Banking Business as of 28 June 2007 in order to reflect the Basel II (or the new BIS standard) to the Regulations. The amendment became effective as of 1 January 2008. Under the amended Regulations, with respect to the evaluation of the credit risk for the calculation of the required capital ratio, banks may select either the Internal Rating-Based Approach ("**IRB**") established by themselves or the Standard Approach provided by FSC. To select the IRB, a bank has to obtain the approval of the FSS. Under the new BIS standard, there is no change to the market risk, and the evaluation of the operating risk is required in addition to the credit risk and the market risk when calculating the required capital ratio. For the evaluation of the operating risk, banks may select either the Standard Approach, for which no Governmental approval is required, or Advanced Measurement Approaches, for which the FSS approval is required.

In May 2013, the FSC announced its decision, in conjunction with the Ministry of Economy and Finance, FSS and the Bank of Korea, to gradually implement Basel III by 1 December 2013. Under the regulations, which came into effect as of 1 December 2013, Korean banks were required to maintain a minimum ratio of Tier I common capital (which principally includes equity capital, capital surplus and retained earnings less reserve for credit losses) to risk weighted assets of 3.5 per cent. and Tier I capital to risk weighted assets of 4.5 per cent. from 2013. Such minimum ratios of Tier I common capital to risk weighted assets and Tier I capital to risk weighted assets were increased to 4.0 per cent. and 5.5 per cent., respectively, from 2014 and 4.5 per cent. and 6.0 per cent., respectively, from 2015. These requirements would be in addition to the existing requirement for a total minimum ratio of Tier I and Tier II capital (less any capital deductions) to risk weighted assets of 8.0 per cent., which remains unchanged. The regulations also contemplate an additional capital conservation buffer of 0.625 per cent. starting from 2016, with such buffer to increase to 1.25 per cent. in 2017, 1.875 per cent. in 2018 and 2.5 per cent. in 2019, respectively.

In December 2015, the FSC approved the implementation of countercyclical capital buffer requirement (to range from 0 per cent. to 2.5 per cent.) to be determined by the FSC under Basel III, effective as of January 2016. As of 31 March 2016, the countercyclical capital buffer requirement was set at 0 per cent. subject to the FSC's further announcement. Furthermore, in December 2015, the FSC designated Hana Financial Group, Shinhan Financial Group, KB Financial Group and NongHyup Financial Group as domestic systemically important bank holding companies and Woori Bank as a domestic systemically important bank and introduced more stringent capital requirements for these financial institutions. According to these new regulations, such financial institutions are required to maintain an additional capital buffer of 0.25 per cent. starting on 1 January 2016, with such buffer to increase by 0.25 per cent. annually to 1.00 per cent. by 1 January 2019.

Liquidity

All banks are required to ensure adequate liquidity by matching the maturities of their assets and liabilities in accordance with the Bank Act. Banks may not invest an amount exceeding 100 per cent. of their Tier I and Tier II capital (less any capital deductions) in stocks, derivatives linked securities and other securities with a maturity of over three years. This stipulation does not apply to Korean government bonds, to bond principal and interest payments guaranteed by the Korean government or to Monetary Stabilisation Bonds issued by the Bank of Korea. The FSC also requires each Korean bank to:

(i) maintain a liquidity coverage ratio (defined as high liquidity assets divided by net cash outflow of the next one month) of not less than 100 per cent. and to make monthly reports to the FSS; **provided**, **however, that** the minimum liquidity coverage ratio shall be 85 per cent. for 2016, 90 per cent. for 2017 and 95 per cent. for 2018, respectively, despite the current provision, in accordance with the addendum thereto;

(ii) maintain minimum foreign currency liquidity coverage ratio (defined as high liquidity assets divided by net cash outflow of the next 30 days with respect to foreign currency assets and liabilities) of 70 per cent. for 2017, 80 per cent. for 2018 and 90 per cent. for 2019, respectively; and

(iii) submit monthly reports with respect to the maintenance of these ratios.

The Monetary Policy Committee of the Bank of Korea is empowered to fix and alter minimum reserve requirements that banks must maintain against their deposit liabilities. The current minimum reserve ratio is:

- 7.0 per cent. of average balances for Won currency demand deposits outstanding;

- 0 per cent. of average balances for Won currency long-term house purchase savings deposits and asset establishment savings deposits; and
- 2.0 per cent. of average balances for Won currency time deposits, mutual instalments, housing instalments and certificates of deposit outstanding.

Additionally, the FSC is separately empowered to establish minimum reserve ratio requirements that must be accumulated and maintained for certain types of obligations designated by the FSC from time to time.

For foreign currency deposit liabilities, a 2.0 per cent. minimum reserve ratio is applied to foreign currency time deposits which reach maturity no earlier than 1 month, foreign currency certificate of deposits which reach maturity no earlier than 30 days, foreign currency instalments savings deposits which reach maturity no earlier than 6 months and a 7.0 per cent. minimum reserve ratio is applied to other deposits. A 1.0 per cent. minimum reserve ratio applies to offshore accounts, immigrant accounts and resident accounts opened by foreign exchange banks.

Financial Exposure to Any Individual Customer and Major Shareholder

Under the Bank Act, the sum of large exposures by a bank — in other words, the total sum of its credits to single individuals, juridical persons or business groups that exceed 10 per cent. of the sum of Tier I and Tier II capital (less any capital deductions) — generally must not exceed five times the sum of Tier I and Tier II capital (less any capital deductions). In addition, banks generally may not extend credit (including loans, guarantees, purchases of securities (only in the nature of a credit) and any other transactions that directly or indirectly create credit risk) in excess of 20 per cent. of the sum of Tier I and Tier II capital (less any capital deductions) to a single individual or juridical person, or grant credit in excess of 25 per cent. of the sum of Tier I and Tier II capital (less any capital deductions) to a single group of companies as defined in the Monopoly Regulations and Fair Trade Act.

Recent amendments to the Bank Act, which became effective on 10 October 2009, strengthened restrictions on extending credits to a major shareholder. A "**major shareholder**" is defined as:

- a shareholder holding (together with persons who have a special relationship with that shareholder) in excess of 10 per cent. (or 15 per cent. in the case of regional banks) in the aggregate of the bank's total issued voting shares; or
- a shareholder holding (together with persons who have a special relationship with that shareholder) in excess of 4 per cent. in the aggregate of the bank's (excluding regional banks) total issued voting shares (excluding shares subject to the shareholding restrictions on "non-financial business group companies" as described below), where the shareholder is the largest shareholder or has actual control over the major business affairs of the bank through, for example, appointment and dismissal of the officers pursuant to the Enforcement Decree of the Bank Act. Non-financial business group companies primarily consist of: (i) any single shareholding group whose total amount of gross capital for non- financial company comprise no less than 25 per cent. of its total amount of gross capital; (ii) any single shareholding group whose non-financial company assets comprise no less than ₩2 trillion in aggregate; (iii) any investment company under the FSCMA of which any single shareholding group identified in (i) or (ii) above, owns more than 4 per cent. of the total issued and outstanding shares; or (iv) a private equity fund under the FSCMA which meets certain requirements as prescribed in the Bank Act.

In addition to the existing restrictions which prohibit banks from extending credits to a major shareholder (together with persons who have a special relationship with that shareholder) in an amount greater than the lesser of (x) 25 per cent. of the sum of the bank's Tier I and Tier II capital (less any capital deductions) and (y) the relevant major shareholders' shareholding ratio multiplied by the sum of the bank's Tier I and Tier II capital (less any capital deductions) and require that the total sum of credits granted to all major shareholders must not exceed 25 per cent. of the bank's Tier I and Tier II capital (less any capital deductions), under these amendments, banks may not extend credit to a major shareholder for the purpose of financing such shareholder's investment in other companies or on terms more advantageous to such shareholder. Furthermore, banks may not transfer its assets and/or properties to a major shareholder without being paid a consideration.

The Financial Holding Company Act imposes limits on extending credit to single borrowers and to major capital contributors similar to the limits imposed by the Bank Act with regard to extending credit to single borrowers and major shareholders. The definition of a "**major capital contributor**" under the Financial Holding Company Act, which is similar to the definition used in the Bank Act, is as follows:

- a shareholder holding (together with persons who have a special relationship with that shareholder) in excess of 10 per cent. (or 15 per cent. in the case of regional bank holding companies) in the aggregate of a bank holding company's total issued voting shares; or
- a shareholder holding (together with persons who have a special relationship with that shareholder) in excess of 4 per cent. in the aggregate of a bank holding company's (excluding regional bank holding companies) total issued voting shares (excluding shares subject to the shareholding restrictions on "non-financial business group companies" under the Financial Holding Company Act), where the shareholder is the largest shareholder or has actual control over the major business affairs of a bank holding company and its subsidiaries, sub-subsidiaries and any subsidiaries thereof (and under the Financial Holding Company Act, this includes any foreign subsidiaries of sub-subsidiaries (as brought into the holding structure of the financial holding company) and companies controlled by them through, for example, appointment and dismissal of the officers, as determined pursuant to the provisions of an applicable Presidential Decree, and includes non-financial business group companies that participate in the business management of a relevant financial institution through, for example, appointment and dismissal of the officers, as determined pursuant to the provisions of an applicable Presidential Decree.

According to the Financial Holding Company Act, the total amount of credit that may be extended by a financial holding company and its subsidiaries, etc. ("**financial holding company, etc.**") to any single individual, juridical person or business group is not permitted to exceed an amount equal to 25 per cent. of the total net capital of the financial holding company, etc.

Additionally, the total amount of credit that may be extended by a bank holding company and its subsidiaries ("**bank holding company, etc.**") to a major capital contributor (including specially related persons thereof) is not permitted to exceed the lesser of (x) the amount equal to 25 per cent. of the total net capital of the bank holding company, etc. and (y) the relevant major capital contributors' shareholding ratio in the bank holding company. The total amount of credit that may be extended by a bank holding company, etc. to all of major capital contributors (including specially related persons thereof) is not permitted to exceed an amount equal to 25 per cent. of the total net capital of the bank holding company, etc.

A bank holding company, etc. is not permitted to extend credit to major capital contributors (including specially related persons thereof) in support of such major capital contributors' investments in other companies, and is not permitted to transfer assets to major capital contributors without consideration.

The above provisions will be applicable with regard to KEB Hana Bank extending credit to any major capital contributors of Hana Financial Group, since Hana Financial Group is a bank holding company and KEB Hana Bank is a subsidiary of Hana Financial Group.

Interest Rates

Korean banks generally depend on deposits as their primary funding source. There are no legal controls on interest rates on loans extended by the financial institutions in Korea. Historically, interest rates on deposits and lending rates were regulated by the Monetary Policy Committee of the Bank of Korea. Controls on deposit interest rates in Korea have been gradually reduced and, in February 2004, the Korean government removed restrictions on all interest rates, except for the prohibition on interest payments on current account deposits. This deregulation process has increased competition for deposits based on interest rates offered and, therefore, may increase a bank's interest expense.

Lending to Small- and Medium-Sized Enterprises

In order to obtain funding from the Bank of Korea at concessionary rates for their SME loans, banks are required to allocate a certain minimum percentage of any monthly increase in their Won currency lending to SMEs. Currently, this minimum percentage is 45 per cent. in the case of national banks and 60 per cent. in the case of regional banks. If a bank does not comply with this requirement, the Bank of Korea may:

- require the bank to prepay all or a portion of funds provided to that bank in support of loans to SMEs; or
- lower the bank's credit limit.

Disclosure of Management Performance

In order to assist the general public, especially depositors and shareholders, in monitoring bank management performance, the FSS requires commercial banks to make mandatory public disclosures of the following:

- loans bearing no profit made to a single business group in an amount exceeding 10 per cent. of the sum of the bank's Tier I and Tier II capital (less any capital deductions) as of the end of the previous month (where the loan exposure to that borrower is calculated as the sum of substandard credits, doubtful credits and estimated loss credits), unless the loan exposure to that group is not more than ₩4 billion; and
- any loss due to court judgements or similar decisions in civil proceedings in an amount exceeding 1 per cent. of the sum of the bank's Tier I and Tier II capital (less any capital deductions) as of the end of the previous month, unless the loss is not more than ₩1 billion.

Restrictions on Lending

Pursuant to the Bank Act, commercial banks may not provide:

- loans directly or indirectly secured by a pledge of a bank's own shares;
- loans directly or indirectly to enable a natural or juridical person to buy the bank's own shares;
- loans to any of the bank's officers or employees, other than petty loans of up to ₩20 million in the case of a general loan, ₩50 million in the case of a general loan plus a housing loan or ₩60 million in the aggregate for general loans, housing loans and loans to pay damages arising from wrongful acts of employees in financial transactions; or
- credit (including loans) secured by a pledge of shares of a subsidiary corporation of the bank or to enable a natural or juridical person to buy shares of a subsidiary corporation of the bank.

Regulations Relating to Retail Household Loans

The FSC has implemented a number of changes to the mechanisms by which a bank evaluates and reports its retail household loan balances and has proposed implementing further changes. As a result of the rapid increase in retail household loans and related credit risks, in 2007, the FSC and the FSS increased the minimum provisioning requirements for retail household loans. These minimum requirements are set forth in the following table:

	Provisioning Ratio on Retail Household Loans	
Asset Quality Classification	**Before 2007**	**Current**
Normal	0.75% or above	1.0% or above
Precautionary	8.0% or above	10.0% or above
Substandard	20.0% or above	20.0% or above
Doubtful	55.0% or above	55.0% or above
Estimated loss	100.0%	100.0%

In addition, due to a rapid increase in loans secured by homes and other forms of housing, the FSC and the FSS implemented regulations designed to reduce the rate of increase in these loans. Effective from the third quarter of 2002, the FSC and the FSS raised minimum provisioning requirements for new loans secured by housing located in the areas of wide-spread real property speculation, with respect to the portion of the new loan that exceeds the loan-to-value ratio of 60.0 per cent., to 1.0 per cent. from 0.75 per cent. for normal loans and to 10.0 per cent. from 5.0 per cent. for precautionary loans. They also raised the minimum provisioning requirements for household loans classified as precautionary from 2.0 per cent. to 8.0 per cent. with effect from the fourth quarter of 2002.

In a further effort to curtail extension of new or refinanced loans secured by housing, the FSC and the FSS subsequently:

- reduced the average loan-to-value ratio (the aggregate principal amount of credit over the approval value of collateral) that Korean commercial banks must maintain for new loans secured by housing located in Korea to below 60 per cent.; and
- increased risk-weights for loans secured by housing meeting certain criteria in connection with the capital adequacy calculation for commercial banks.

On 8 November 2002, the FSC and the FSS issued guidelines that:

- require Korean commercial banks to implement stronger internal control systems and stricter credit review and approval policies with respect to loans secured by housing;
- introduce sharing of information on multiple housing loans to a single borrower within the financial industry;
- require Korean commercial banks to appoint two to three qualified market value appraisal institutions and to use the lowest of the appraisal valuations; and
- discourage the use of incentive-based compensation systems by Korean commercial banks.

Furthermore, on 29 October 2003, the FSC announced more stringent guidelines that require Korean commercial banks to maintain loan-to-value ratios equal to or less than 40 per cent. for new loans secured by real estate located in the areas of wide-spread real property speculation. On 30 August 2005, the FSC further announced another set of guidelines under which the Korean commercial banks are required to maintain the debt-to-income ratio of 40 per cent. or less for each new loan in addition to the loan-to-value ratio requirement in case such loan is borrowed for the purpose of financing each additional home exceeding the one home per household and secured by a home located in the wide-spread real property speculation areas.

Again on 30 March 2006, the FSC announced stronger guidelines that require Korean commercial banks to maintain debt-to-income ratio equal to 40 per cent. or less for any new loans secured by real estate of which value is ₩600 million or more in the areas of wide-spread real property speculation.

In addition, due to a rapid increase in the number of loans secured by homes and other forms of housing, the FSC and the FSS amended the Regulation on the Supervision of the Banking Business in July 2007, November 2008, November 2010 and May 2013 to implement measures designed to reduce the rate of increase in these loans secured by housing, including the following:

- in respect of loans secured by collateral consisting of housing located in Korea, the loan- to-value ratio (the aggregate principal amount of loans secured by such collateral over the appraised value of the collateral) should not exceed 70 per cent.;
- in respect of loans secured by collateral consisting of housing (including apartments) located in areas of excessive investment as designated by the Government, (i) the loan- to-value ratio for loans with a maturity of not more than three years should not exceed 50 per cent., (ii) the loan-to-value ratio for loans with a maturity of more than three years should not exceed 60 per cent. and (iii) the loan-to-value ratio for loans to be amortised over the period of ten years should not exceed 70 per cent.;
- in respect of loans secured by collateral consisting of housing (excluding apartments) located in areas of high speculation as designated by the Government, (i) the loan to value ratio for loans with a maturity of not more than three years should not exceed 50 per cent., (ii) the loan to value ratio for loans with a maturity of more than three years should not exceed 60 per cent. and (iii) the loan-to-value ratio for loans to be amortised over the period of ten years should not exceed 70 per cent.;
- in respect of loans secured by collateral consisting of apartments located in areas of high speculation as designated by the Government, (i) the loan-to-value ratio for loans with a maturity of not more than ten years should not exceed 40 per cent.; and (ii) the loan-to- value ratio for loans with a maturity of more than ten years should not exceed (a) 40 per cent., if the price of such apartment is over ₩600 million, and (b) 60 per cent., if the price of such apartment is ₩600 million or lower;
- in respect of loans extended for the acquisition of a new apartment and secured by such apartment with an appraisal value of more than ₩600 million in areas of high speculation as designated by the Government or in certain metropolitan areas designated as areas of excessive investment by the Government, the borrower's debt-to-income ratio (calculated as (i) the aggregate annual total payment amount of (x) the principal of and interest on loans secured by such apartment(s) and (y) the interest on other debts of the borrower over (ii) the borrower's annual income) should not exceed 40 per cent.;
- in respect of a borrower (i) whose spouse already has a loan secured by housing or (ii) who is single and under the age of 30, the debt-to-income ratio of the borrower in respect of loans secured by apartment(s) located in areas of high speculation as designated by the Government should not exceed 40 per cent.;
- in respect of apartments located in areas of high speculation as designated by the Government, a borrower is permitted to have only one new loan secured by such apartment; and

- where a borrower has two or more loans secured by apartments located in areas of high speculation as designated by the Government, the loan with the earliest maturity date must be repaid first and the number of loans must eventually be reduced to one.

Moreover, under the Regulation on the Supervision of the Banking Business (as amended and effective as of 23 August 2018) (also known as "*August 2 Housing Market Stabilization Measures*"), a bank is (i) subject to certain loan-to-value ratio (LTV) and debt-to-income ratio (DTI) limits of 40 per cent each when extending home mortgage loans for the purchase of homes located in areas designated as "speculative" or "excessively speculative" (**provided that**, if a borrower has no pre-existing housing, or his/her annual income combined with his/her spouse is equal to ₩70 million or less, or such pre-existing housing is appraised at a market value of less than ₩600 million, the loan-to-value ratio (LTV) and debt-to-income ratio (DTI) limits will be decreased by 10 per cent each); (ii) entitled to an increase of the loan-to-value ratio (LTV) and debt-to-income ratio (DTI) limits by 10 per cent each when the purpose of extending the home mortgage loan is to fund the borrower's purchase of additional housings irrespective of the location of the borrower's pre-existing housing; and (iii) subject to a restriction that only one (1) home mortgage loan is allowed to be extended for the purchase of any apartment located in areas designated as "speculative" (which means that a home mortgage loan will not be permitted in areas designated as "speculative" for any borrowers who have already obtained one or more home mortgage loan(s) without regard to the location of the borrower's pre-existing apartment, **provided that**, if the borrower promises to sell their pre-existing apartment within 2 years, the borrower can obtain a new home mortgage loan).

In addition, the supervising authorities in Korea from time to time issue administrative instructions to Korean banks, which have the effect of regulating the access of borrowers to housing loans and, as such, demand for real estate properties. For example, the FSS issued administrative instructions to financial institutions to (except in limited circumstances) verify the borrower's ability to repay based on proof of income prior to making a mortgage and home equity loan regardless of the type or value of the collateral or the location of the property, which has had the effect of practically barring the grant of any new mortgage and home equity loans to borrowers without verifiable income.

Restrictions on Investments in Property

A bank may possess real estate property only to the extent necessary for the conduct of its business, unless the aggregate value of that property does not exceed 60 per cent. of the sum of the bank's Tier I and Tier II capital (less any capital deductions). Any property that a bank acquires by exercising its rights as a secured party, or which a bank is prohibited from acquiring under the Bank Act, must be disposed of within three years.

Restrictions on Shareholdings in Other Companies

Under the Bank Act, a bank may not own more than 15 per cent. of shares outstanding with voting rights of another corporation, except where, among other reasons:

- that corporation engages in a category of financial businesses set forth by the FSC; or
- the acquisition is necessary for the corporate restructuring of the corporation and is approved by the FSC.

In the above exceptional cases, a bank must satisfy either of the following requirements:

- the total investment in corporations in which the bank owns more than 15 per cent. of the outstanding shares with voting rights does not exceed 20 per cent. of the sum of Tier I and Tier II capital (less any capital deductions); or
- if the application requirements set by the FSC are met, voting shares shall not exceed 30 per cent. of the sum of Tier I and Tier II capital.

The Bank Act provides that a bank may not acquire the shares of another corporation that is a major shareholder of the bank in excess of an amount equal to 1 per cent. of the sum of Tier I and Tier II capital (less any capital deductions).

The Financial Holding Company Act provides that a bank holding company, etc. may not acquire the shares issued by its major capital contributors in an amount greater than 1 per cent. of the total net capital of the bank holding company, etc.

Restrictions on Bank Ownership

Under the Bank Act, a single shareholder, together with any persons who have a special relationship with that shareholder may acquire generally beneficial ownership of no more than 10 per cent. of a national bank's total issued and outstanding shares with voting rights and no more than 15 per cent. of a regional bank's total issued and outstanding shares with voting rights. The Government, KDIC and bank holding companies qualified under the Financial Holding Company Act are not subject to this limit. However, by obtaining an approval from the FSC, a person (whether a Korean national or a foreign investor), with the exception of non-financial business group company as described below, may acquire more than 10 per cent. of a national bank's total voting shares issued and outstanding (or 15 per cent. in the case of regional banks) and such approval from the FSC is required in each instance where the total holding of such person will exceed 10 per cent. (or 15 per cent. in the case of regional banks), 25 per cent. or 33 per cent. of the bank's total voting shares issued. In addition, if (i) a person's shareholding in a national bank reaches 4 per cent. of that bank's outstanding voting shares, (ii) such person becomes the largest shareholder of the bank, (iii) there is a change in the shareholding of such person by 1 per cent. or more or (iv) where a private equity fund or investment purpose company under the FSCMA holds in excess of 4 per cent. of that bank's outstanding voting shares and there is a change in the members and/or shareholder of the private equity fund or investment purpose company, such person or the private equity fund or the investment purpose company shall file a report to the FSC. Furthermore, according to the Financial Holding Company Act, a single shareholder is not permitted to hold more than 10 per cent. of the total issued and outstanding voting shares of a bank holding company (or 15 per cent. in the case of a regional bank holding company's shares). The Government and the KDIC are not subject to this limit. Such limit also does not apply to a financial holding company's holding of shares of a bank holding company under its control. The FSC may grant approval for exceptions to the above-referenced 10 per cent. holding limit (or 15 per cent. in the case of regional bank holding companies).

Meanwhile, a non-financial business group company is not allowed to own more than 4 per cent. or 15 per cent., respectively, of the total issued and outstanding shares with voting rights of a national bank or a regional bank. However, the non-financial business group company may be permitted to own up to 10 per cent. of the total issued and outstanding shares of a national bank by obtaining an approval from the FSC on condition that such non-financial business group company will not exercise voting rights in excess of the 4 per cent. threshold.

Deposit Insurance System

The Depositor Protection Act provides insurance for certain deposits of banks in Korea through a deposit insurance system. Under the Depositor Protection Act, all banks governed by the Bank Act are required to pay an insurance premium to the KDIC on a quarterly basis. The rate is determined under the Enforcement Decree to the Depositor Protection Act, and may not exceed 0.5 per cent. of the bank's insurable deposits in any given year. The current insurance premium is 0.02 per cent. of insurable deposits for each quarter. If the KDIC makes a payment on an insured amount, it will acquire the depositors' claims with respect to that payment amount. The KDIC insures a maximum of ₩50 million for deposits and interest, regardless of when the deposits were made and the size of the deposits.

Restrictions on Foreign Exchange Position

Under the Korean Foreign Exchange Transaction Regulation, each of a bank's net overpurchased and oversold positions may not exceed 50 per cent. of its shareholders' equity as of the end of the prior month.

Laws and Regulations Governing Other Business Activities

A bank must register with the Ministry of Economy and Finance to enter the foreign exchange business, which is governed by the Foreign Exchange Transaction Law. Under the FSCMA, which became effective as of 4 February 2009 (replacing the Securities and Exchange Act), a bank wishing to engage in (i) the purchase, sale or underwriting of financial investment products for its own account is required to obtain a licence for dealing business from the FSC and (ii) the purchase and sale of financial investment products for the account of another person is required to obtain a licence for brokerage business. Financial investment products are classified into two categories (securities products and derivatives products) depending on the nature of the risk involved. Securities products refer to any investment product (e.g. a stock or bond) which has a possibility of loss up to the amount of the principal invested. Derivatives products refer to any investment product which has a possibility of loss over and above the amount of the principal invested. If a bank previously had a licence to engage in the securities business from the FSC under the Securities Exchange Act, such licence will remain effective so long as the bank satisfied its reporting requirements to the FSC in accordance with the FSCMA for a certain period of time prior to the FSCMA becoming effective.

Trust Business

A bank must obtain a licence for trust business from the FSC to engage in trust business pursuant to the FSCMA (which replaced the Trust Business Act and Indirect Investment Asset Management Business Act). A licence for trust business obtained by a bank under the Trust Business Act remains effective so long as the bank satisfied its reporting requirements to the FSC in accordance with the FSCMA for a certain period of time prior to the FSCMA becoming effective.

Under the Bank Act, assets accepted in trust by a bank in Korea must be segregated from the other assets in the accounts of such bank. This requires banks engaged in both banking and trust businesses to maintain two separate sets of accounts and two separate sets of records. The depositors and other general creditors of a bank cannot obtain or assert claims against the assets comprising the trust accounts in the event such bank is liquidated or wound up.

Since January 1999, the Government has prohibited Korean banks from offering new guaranteed fixed rate trust account products that guarantee the principal invested and interest payments. In the event that a bank qualifies and operates as a collective investment business servicer, a trustee or a custodian under the FSCMA, it is required to establish relevant operation and management systems to prevent potential conflicts of interest among the banking business, the collective investment business and the trustee or custodian business. These measures include:

- prohibitions against officers, directors and employees of one particular business operation from serving as an officer, director and employee in another business operation;
- prohibitions against the joint use or sharing of computer equipment or office equipment; and
- prohibitions against the sharing of information by and among officers, directors and employees engaged in the different business operations.

Financial Investment Services and Capital Markets Act

On 3 July 2007, the National Assembly of Korea passed the FSCMA. This new legislation consolidated six Acts regulating capital markets and financial investment business and products in Korea into one Act. The FSCMA became effective as of 4 February 2009. The following is a summary of the major changes introduced by the FSCMA.

Consolidation of Capital Markets-Related Laws

Prior to the effective date of the FSCMA, there were separate laws regulating each type of financial organisation (e.g., the Securities and Exchange Act for securities companies, the Futures Business Act for companies dealing in futures, the Trust Business Act for trust business companies and the Indirect Investment Asset Management Business Act for asset management companies) and subjecting financial organisations to different licencing and on-going regulatory requirements. By applying one uniform set of rules to financial businesses carrying out the same economic function, the FSCMA intends to improve the capital markets system and address issues caused by the previous regulatory system under which the same economic function relating to capital markets-related businesses was governed by several different sets of rules. To this end, the FSCMA categorises capital markets-related businesses into six different functions (collectively, the "**Financial Investment Businesses**" and each a "**Financial Investment Business**"), as follows:

- dealing (trading and underwriting of financial investment products),
- brokerage (brokerage of financial investment products),
- collective investment (establishment of collective investment schemes and the management thereof),
- investment advice,
- discretionary investment management, and
- trusts.

Therefore, all previous financial businesses relating to financial investment products have been reclassified as one or more of the Financial Investment Businesses described above and financial organisations are now subject to the regulations applicable to their relevant Financial Investment Business(es), irrespective of the type of financial organisation.

Banking and insurance are not subject to the FSCMA and continue to be regulated under separate laws. However, Korean banks and insurance companies are subject to the FSCMA if they intend to engage in Financial Investment Businesses and may need to obtain appropriate licences under the FSCMA.

Comprehensive Definition of Financial Investment Products

In an effort to encompass the various types of securities and derivative products available in the capital markets, the FSCMA sets forth a comprehensive term "financial investment products", defined to mean all financial products with a risk of loss in respect of the amount invested (in contrast to deposits where the principal is protected). Under the FSCMA, financial investment products are classified into two major categories: (i) securities" (meaning financial investment products in respect of which the risk of loss is limited to the amount invested) and (ii) "derivatives" (meaning financial investment products of which the risk of loss may exceed the amount invested).

As a result of the general and open-ended manner in which financial investment products are defined, any future financial product could potentially fall within the scope of the definition of financial investment products, thereby enabling the financial organisation licenced under the FSCMA ("**Financial Investment Business Entity**") to handle a broader range of financial products. Under the FSCMA, securities companies, asset management companies, companies dealing in futures and other entities engaging in any Financial Investment Business are classified as Financial Investment Business Entities.

New Licence System and the Conversion of Existing Licences

Under the FSCMA, the financial investment business units (each being a unit of business pursuant to which financial organisations shall be licenced) are classified into numerous categories depending on the type of (i) financial investment service, (ii) financial investment product, and (iii) target customers to which financial investment products may be sold or dealt (i.e., general investors or professional investors). Financial Investment Business Entities are able to choose which Financial Investment Business(es) to engage in (via a "check the box" method set forth in the relevant licence application) by specifying the desired financial investment business unit or units. Under the FSCMA, Financial Investment Business Entities are permitted to engage in multiple types of Financial Investment Businesses, subject to satisfying relevant regulations (such as minimum capital requirements and maintaining an adequate "**Chinese Wall**").

Financial organisations previously engaging in business activities constituting a Financial Investment Business were required to take certain steps, such as renewal of their licence or registration, in order to continue engaging in such business activities. Banks and insurance companies are permitted to engage in certain categories of Financial Investment Business upon obtaining the appropriate licence(s) under the FSCMA, to the extent permitted under the Bank Act or the Insurance Business Act, as the case may be.

Expanded Business Scope of Financial Investment Business Entities

Under the FSCMA, by integrating businesses involving financial investment products into a single Financial Investment Business and allowing Financial Investment Business Entities to choose multiple Financial Investment Businesses to engage in, the business scope and opportunities of the licenced Financial Investment Business Entities are expanded.

Under the FSCMA, Financial Investment Business Entities may engage in business(es) incidental to the Financial Investment Business ("**incidental businesses**"), including settlement and remittance services, after reporting to the FSC at least 7 days before starting such incidental business. Furthermore, under the Enforcement Decree of FSCMA, a dealer of securities investments (including underwriting services) may conduct corporate finance business; and a dealer of securities and over-the-counter derivatives (including underwriting services) may conduct payment guarantees business. Therefore, corporate finance business and payment guarantees business can be carried out by both banks and financial organisations which have received licences on respect of the relevant business units. In addition, a Financial Investment Business Entity is permitted to outsource marketing activities by contracting "introducing brokers" that are individuals but not employees of the Financial Investment Business Entity.

Improvement in Investor Protection Mechanism

While the FSCMA widens the scope of Financial Investment Businesses, a more rigorous investor protection mechanism is imposed upon Financial Investment Business Entities dealing in financial investment products. The

FSCMA distinguishes general investors from professional investors and provides the former with new or enhanced protections. The FSCMA expressly provides for a strict know-your- customer rule for general investors and imposes an obligation on Financial Investment Business Entities to market financial investment products that are suitable for each general investor, using written explanatory materials. Under the FSCMA, a Financial Investment Business Entity could be liable if a general investor proves (i) the absence of the requisite written explanatory materials and (ii) damage or loss resulting from the general investor's investment in financial investment products solicited by such Financial Investment Business Entity (without having to prove fault or causation). With respect to conflicts of interest between Financial Investment Business Entities and investors, the FSCMA expressly requires (i) disclosure of any conflict of interest to investors and (ii) mitigation of conflicts of interest to an acceptable level or abstaining from the relevant transaction.

Regulations on the Class Actions Regarding Securities

The Law on Class Actions Regarding Securities was enacted as of 20 January 2004 and an amendment to such law was enacted as of 10 March 2005, 3 August 2007, 31 March 2010 and 28 May 2013. The Law on Class Actions Regarding Securities governs class actions suits instituted by one or more representative plaintiff(s) on behalf of 50 or more persons who claim to have been damaged in a capital markets transaction involving securities issued by a listed company in Korea.

Applicable causes of action with respect to such suits include:

- claims for damages caused by misleading information contained in, or material fact omitted from, a registration statement or investment prospectus;
- claims for damages caused by the filing of a misleading business report, semi-annual report, quarterly report, material fact report or a document attached thereto or by an omission of a description or representation of a material fact therein;
- claims for damages caused by insider trading, market manipulation or unfair trading; and
- claims instituted against auditors for damages caused by accounting irregularities.

Any such class action may be instituted upon approval from the presiding court and the outcome of such class action will have a binding effect on all potential plaintiffs who have not joined the action, with the exception of those who have filed an opt out notice with such court.

The Law on Class Actions Regarding Securities came into effect on 1 January 2005 with respect to companies with a total asset value of less than ₩2 trillion, and on 1 January 2007 for all other companies and will apply to all applicable claims arising out of acts committed since its enactment.

TAXATION

Korea

The Information provided below does not purport to be a complete summary of Korean tax law and practice currently applicable. Prospective investors who are in any doubt as to their tax position should consult with their own professional advisers.

The taxation of non-resident individuals and non-Korean corporations ("**Non-Residents**") generally depends on whether they have a "permanent establishment" (as defined under Korean law and applicable tax treaty) in Korea to which the relevant Korean source income is attributable or with which such income is effectively connected. Non-Residents without a permanent establishment in Korea are taxed in the manner described below. Non-Residents with permanent establishments in Korea are taxed in accordance with different rules.

Tax on Interest

Interest payable to Non-Residents in respect of the Notes, if qualified as certain foreign currency-denominated bonds issued outside of Korea pursuant to the Special Tax Treatment Control Law ("**STTCL**"), is exempt from income tax and corporate tax (whether payable by withholding or otherwise) pursuant to the STTCL.

The rate of income tax or corporate tax applicable to interest on the Notes without the tax exemption under the STTCL, for a Non-Resident without a permanent establishment in Korea, is currently 14 per cent. of income. In addition, a tax called a local income tax would be imposed at the rate of 10 per cent. of the income or corporate tax (raising the total tax rate to 15.4 per cent.).

In addition, in order to obtain the benefit of a reduced rate available under applicable tax treaties, a Non-Resident holder must submit an application for reduced rate to either the payor or the entity obligated to withhold such tax liable for the withholding before the receipt of the relevant interest payment (if there is no change in the contents of such application, it is not required to submit such application again within three years thereafter), together with a certificate of the Non-Resident holder's tax residence issued by a competent authority of the Non-Resident holder's resident country. If the Non-resident holder was unable to receive the benefit of a reduced rate due to his or her failure to timely submit the aforementioned application, the Non-Resident holder may still receive a tax return if the submission to the relevant tax office is made within five years from the last day of the month in which the date of withholding occurs.

The tax rates may be reduced or exempted by applicable tax treaty, convention or agreement between Korea and the country of the recipient of the income. The relevant tax treaties are discussed below.

Tax on Capital Gains

Korean tax laws currently exclude from Korean source income made by a Non-Resident without a permanent establishment in Korea from the sale of Notes to Non-Residents (other than to their permanent establishments in Korea). In addition, capital gains earned by Non-Residents from the transfer outside Korea of Notes to Non-Residents are currently exempt from taxation by virtue of the STTCL.

If the exclusion or exemption from Korean taxation referred to above were to cease to be in effect, in the absence of an applicable treaty or any other special tax laws reducing or eliminating tax on capital gains, the applicable rate of tax is the lower of 11 per cent. (including local income tax) of the gross realisation proceeds and (subject to the production of satisfactory evidence of the acquisition cost and certain direct transaction costs of the relevant Note) 22 per cent. (including local income tax) of the realised gain (i.e., the excess of the gross realisation proceeds over the acquisition cost and certain direct transaction costs) made. If such evidence shows that no gain (or a loss) was made on the sale, no Korean tax is payable. There is no provision under relevant Korean law for offsetting gains and losses or otherwise aggregating transactions for the purpose of computing the net gain attributable to sales of instruments issued by Korean companies. The purchaser or any other designated withholding agent of Notes is obliged under Korean law to withhold the applicable amount of Korean tax and make payment thereof to the relevant Korean tax authority. Unless the seller can claim the benefit of an exemption from tax under an applicable tax treaty or on the failure of the seller to produce satisfactory evidence of his acquisition cost and certain direct transaction costs in relation to the Notes being sold, the purchaser or such withholding agent must withhold an amount equal to 11 per cent. of the gross realisation proceeds. Any amounts withheld by the purchaser or withholding agent must be paid to the relevant Korean tax authority. The purchaser or withholding agent must pay any withholding tax no later than the tenth day of the month following the month in which the payment for the purchase of the relevant Notes occurred. Failure to transmit the withheld tax to the Korean tax authorities in time subjects the purchaser to penalties under Korean tax laws. The Korean tax authorities may attempt to collect such tax from a Non-Resident who is liable for payment of any Korean tax, either as a seller of Notes or as a purchaser or withholding agent who is obliged to withhold such tax through proceedings against payments due to the Non-Resident from its Korean investments and the assets or revenues of any of the Non-Resident's branch or representative offices in Korea.

Inheritance Tax and Gift Tax

Korean inheritance tax is imposed upon (a) all assets (wherever located) of the deceased if at the time of his death he was domiciled in Korea and (b) all property located in Korea which passes on death (irrespective of the domicile of the deceased). Gift tax is imposed in similar circumstances to the above. The taxes are imposed if the value of the relevant property is above a certain limit and the rate varies from 10 per cent. to 50 per cent. depending on the price of the assets and the nature of the relationship between the parties. At present, Korea has not entered into any tax treaties regarding its inheritance or gift taxes.

Under Korean inheritance and gift tax laws, bonds issued by Korean corporations are deemed located in Korea irrespective of where they are physically located or by whom they are owned, and consequently, the Korean inheritance and gift taxes will be imposed on transfers of the Notes by inheritance or gift. Prospective purchasers should consult their personal tax advisors regarding the consequences of the imposition of the Korean inheritance or gift tax.

Stamp Duty and Securities Transaction Tax

No stamp, issue or registration duties will be payable in Korea by the holders in connection with the issue of the Notes except for nominal amount of stamp duty on certain documents executed in Korea. No securities transaction tax will be imposed on the transfer of Notes.

Tax Treaties

At the date of this Offering Circular, Korea has tax treaties with, *inter alia*, Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, Malaysia, the Netherlands, New Zealand, Norway, Singapore, Sweden, Switzerland, the United Kingdom and the United States under which the rate of withholding tax on interest (including local income tax) is reduced, generally to between 5 and 16.5 per cent. and the tax on capital gains is often eliminated.

The special withholding tax system took effect 1 July 2006. Under the system, residents of Labuan, Malaysia are presumed to be tax treaty shopping, and are denied tax treaty benefits. Instead, payments made to the residents of Labuan, Malaysia will be subject to the default Korean withholding tax rates (generally 15.4 per cent. for interest and 22 per cent. for capital gain (including local income tax)) rather than the reduced or exempted rate available under the Korea-Malaysia tax treaty. A Labuan taxpayer, however, will be given an opportunity to get refund by proving that it is entitled to the tax treaty benefits as a substantive owner of the income and a real resident of Labuan, Malaysia. A Labuan taxpayer may also file an application with the National Tax Service (the "**NTS**") for confirmation that it is entitled to the tax treaty benefits and obtain an advance confirmation from the NTS prior to receiving Korean source income.

Each holder should enquire for himself whether he is entitled to the benefit of a tax treaty with respect to any transaction involving Notes. It is the responsibility of the party claiming the benefits of a tax treaty in respect of interest payments to file with the payer or the Issuer a certificate as to his residence. In the absence of sufficient proof, the payer or the Issuer must withhold taxes in accordance with the above discussion. Each holder must submit an application for entitlement to reduced tax rate on domestic source income in order to benefit from reduced rates under a tax treaty for any income (e.g., interest).

Further, in order for a non-resident to obtain the benefit of a tax exemption under an applicable tax treaty, Korean tax law requires such non-resident (or its agents) to submit to the payer of such Korean source income an application for tax exemption under a tax treaty along with a certificate of tax residency of such non-resident issued by a competent authority of the non-resident's country of residence, subject to certain exceptions. If the Korean source incomes are paid to Non-Residents through an overseas investment vehicle, such investment vehicle must obtain an application for tax exemption from each Non Resident, who are the beneficial owners of such investment vehicle and submit to the payer of such Korean source incomes an overseas investment vehicle report, together with the applications for tax exemption prepared by the Non-Resident beneficial owners. An application for tax exemption submitted by a Non-Resident remains effective for three years from submission, and if any material changes occur with respect to information provided in the application, an application reflecting such change must be newly submitted.

The payer of such Korean source income, in turn, is required to submit such application to the relevant district tax authority by the ninth day of the month following the date of the first payment of such income. However, this requirement does not apply to tax exemptions under Korean tax laws.

Withholding and Gross Up

As mentioned above, interest under the Notes could be exempt from any withholding or deduction on account of income tax or corporate tax pursuant to the STTCL. However, in the event that the payer or the Issuer is required by law to make any withholding or deduction for or on account of any Korean taxes (as more fully described in Condition 9), the Issuer has agreed to pay (subject to the customary exceptions as set out in such Condition 9) such additional amounts as may be necessary in order that the net amounts receivable by the holder of any Note or Coupon after such withholding or deduction shall equal the respective amounts which would have been receivable by such holder in the absence of such withholding or deduction.

United States

Except where otherwise stated, the following is a summary of certain U.S. federal income tax consequences of the acquisition, ownership and disposition of Registered Notes by a U.S. Holder that acquired such Registered Notes at initial issuance, that will hold the Registered Notes as capital assets, and whose functional currency is the U.S. dollar. The discussion does not cover all aspects of U.S. federal income taxation that may be relevant to the acquisition, ownership or disposition of Registered Notes by particular investors. In particular, this summary does not discuss all of the tax considerations that may be relevant to certain types of investors subject to special treatment under the U.S. federal income tax laws (such as banks and other financial institutions, tax-exempt organisations, dealers in securities or currencies, traders in securities that elect to use a mark-to-market method of accounting, persons subject to special tax accounting rules as a result of gross income with respect to any Registered Note being taken into account in an applicable financial statement, corporations that accumulate earnings to avoid U.S. federal income tax, persons who have ceased to be U.S. citizens or to be taxed as U.S. lawful permanent residents, "expatriated entity" subject to Section 7874 of the United States Internal Revenue Code of 1986, as amended (the "**Code**"), and investors that will hold the Registered Notes as part of straddles, hedging or conversion transactions, or as part of a synthetic security for U.S. federal income tax purposes).

As used herein, the term "**U.S. Holder**" means a beneficial owner of Registered Notes that is, for U.S. federal income tax purposes: (i) a citizen or individual resident of the United States; (ii) a corporation, or other entity treated as a corporation, created or organised in or under the laws of the United States, the District of Columbia, or any State thereof; (iii) an estate, the income of which is subject to U.S. federal income tax without regard to its source; or (iv) a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust.

If a partnership (or any other entity treated as fiscally transparent for U.S. federal income tax purposes) holds Notes, the tax treatment of a partner in such partnership generally will depend upon the status of the partner and the activities of the partnership. Any such partner or partnership should consult their tax advisers as to the U.S. federal income tax consequences to them of the acquisition, ownership and disposition of Notes.

Bearer Notes are not being offered to U.S. Holders. A U.S. Holder who owns a Bearer Note may be subject to limitations under United States income tax laws, including the limitations provided in Sections 165(j) and 1287(a) of the Code.

INVESTORS SHOULD CONSULT THEIR TAX ADVISERS TO DETERMINE THE TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF REGISTERED NOTES, INCLUDING THE APPLICATION TO THEIR PARTICULAR SITUATION OF THE U.S. FEDERAL INCOME TAX CONSIDERATIONS DISCUSSED BELOW, AS WELL AS THE APPLICATION OF THE MEDICARE CONTRIBUTION TAX ON INVESTMENT INCOME, ALTERNATIVE MINIMUM TAX AND ANY STATE, LOCAL, NON-U.S. OR OTHER TAX LAWS.

The Issuer generally intends to treat Notes issued under the Programme as debt. Certain Notes, however, may be treated as equity or some other type of instrument or interest for U.S. federal income tax purposes. The tax treatment of Notes to which a treatment other than debt may apply may be discussed in a supplement to the Offering Circular. This summary does not discuss Notes with a maturity of greater than 30 years, the impact of redenomination of a Note, Notes that by their terms may be retired for an amount less than their principal amount and Notes subject to special rules. The terms and U.S. federal income tax treatment of certain Notes that the Issuer and the relevant Dealers may agree to issue under the Programme may be set out in a Pricing Supplement (if applicable).

Payment of Interest

Interest on a Note, whether payable in U.S. dollars or a currency other than U.S. dollars ("**foreign currency**" interest on a "**Foreign Currency Note**"), other than interest on a Discount Note that is not "qualified stated interest" (each as defined below under "*Original Issue Discount — General*"), will be taxable to a U.S. Holder as ordinary income at the time it is received or accrued, in accordance with the U.S. Holder's method of accounting for tax purposes. Interest paid by the Issuer on the Notes and original issue discount ("**OID**"), if any, accrued with respect to the Notes (as described below under "*Original Issue Discount — General*") generally will constitute income from sources outside the United States for the purposes of the rules regarding the foreign tax credit allowable to a U.S. Holder (and the limitations imposed thereon). Prospective purchasers should consult their tax advisers concerning the foreign tax credit implications of the payment of any foreign taxes with respect to the Notes (if applicable).

Original Issue Discount

General

A Note that only provides for the payment of amounts that are qualified stated interest before maturity, other than a Note with a term of one year or less (a "**Short-Term Note**"), will be treated as issued with OID (a "**Discount Note**") if the excess of the Note's stated redemption price at maturity over its issue price is equal to or more than a *de minimis* amount (0.25 per cent. of the Note's stated redemption price at maturity multiplied by the number of complete years to its maturity). An obligation that provides for the payment of amounts other than qualified stated interest before maturity (an "**instalment obligation**") will be treated as a Discount Note if the excess of the Note's stated redemption price at maturity over its issue price is greater than 0.25 per cent. of the Note's stated redemption price at maturity multiplied by the weighted average maturity of the Note. A Note's weighted average maturity is the sum of the following amounts determined for each payment on a Note (other than a payment of qualified stated interest): (i) the number of complete years from the issue date until the payment is made multiplied by (ii) a fraction, the numerator of which is the amount of the payment and the denominator of which is the Note's stated redemption price at maturity. Generally, the issue price of a Note will be the first price at which a substantial amount of Notes included in the issue of which the Note is a part is sold to persons other than bond houses, brokers or similar persons or organisations acting in the capacity of underwriters, placement agents or wholesalers. The stated redemption price at maturity of a Note is the total of all payments provided by the Note that are not payments of qualified stated interest. A qualified stated interest payment generally is any one of a series of stated interest payments on a Note that are unconditionally payable at least annually at a single fixed rate (with certain exceptions for lower rates paid during some periods), or a variable rate (in the circumstances described under "*— Variable Interest Rate Notes*"), applied to the outstanding principal amount of the Note (qualified stated interest). Solely for the purposes of determining whether a Note has OID, the Issuer will be deemed to exercise any call option that has the effect of decreasing the yield on the Note, and the U.S. Holder will be deemed to exercise any put option that has the effect of increasing the yield on the Note. if a Note has *de minimis* OID, a U.S. Holder must include the *de minimis* amount in income as stated principal payments are made on the Note, unless the U.S. Holder makes the election described under "*— Election to Treat All Interest as Original Issue Discount*". A U.S. Holder can determine the includible amount with respect to each such payment by multiplying the total amount of the Note's *de minimis* OID by a fraction equal to the amount of the principal payment made divided by the stated principal amount of the Note.

U.S. Holders of Discount Notes must include OID in income calculated on a constant yield method before the receipt of cash attributable to the income, and generally will have to include in income increasingly greater amounts of OID over the life of the Discount Notes. The amount of OID includible in income by a U.S. Holder of a Discount Note is the sum of the daily portions of OID with respect to the Discount Note for each day during the taxable year or the portion of the taxable year in which the U.S. Holder holds the Discount Note ("**accrued OID**"). The daily portion is determined by allocating to each day in any accrual period a *pro rata* portion of the

OID allocable to that accrual period. Accrual periods with respect to a Note may be of any length selected by the U.S. Holder and may vary in length over the term of the Notes as long as: (i) no accrual period is longer than one year; and (ii) each scheduled payment of interest or principal on the Note occurs on either the final or first day of an accrual period. The amount of OID allocable to an accrual period equals the excess of: (a) the product of the Discount Note's adjusted issue price at the beginning of the accrual period and the Discount Note's yield to maturity (determined on the basis of compounding at the close of each accrual period and properly adjusted for the length of the accrual period) over (b) the sum of the payments of qualified stated interest on the Note allocable to the accrual period. The adjusted issue price of a Discount Note at the beginning of any accrual period is the issue price of the Note increased by: (x) the amount of accrued OID for each prior accrual period and decreased by (y) the amount of any payments previously made on the Note that were not qualified stated interest payments.

Acquisition Premium

A U.S. Holder that purchases a Discount Note for an amount less than or equal to the sum of all amounts payable on the Note after the purchase date, other than payments of qualified stated interest, but in excess of its adjusted issue price (any such excess being "**acquisition premium**") and that does not make the election described under "— *Election to Treat All Interest as Original Issue Discount*", is permitted to reduce the daily portions of OID by a fraction, the numerator of which is the excess of the U.S. Holder's adjusted basis in the Note immediately after its purchase over the Note's adjusted issue price, and the denominator of which is the excess of the sum of all amounts payable on the Note after the purchase date, other than payments of qualified stated interest, over the Note's adjusted issue price.

Election to Treat All Interest as Original Issue Discount

A U.S. Holder may elect to include in gross income all interest that accrues on a Note using the constant yield method described under "— *General*", with certain modifications. For the purposes of this election, interest includes stated interest, OID, *de minimis* OID, market discount, *de minimis* market discount and unstated interest, as adjusted by any amortisable bond premium (described under "— *Notes Purchased at a Premium*") or acquisition premium. If a U.S. Holder makes this election for the Note, then, when the constant yield method is applied the issue price of the Note will equal its cost, the issue date of the Note will be the date of acquisition, and no payments on the Note will be treated as payments of qualified stated interest. This election generally will apply only to the Note with respect to which it is made and may not be revoked without the consent of the United States Internal Revenue Service ("**IRS**"). However, if the Note has amortisable bond premium, the U.S. Holder will be deemed to have made an election to apply amortisable bond premium against interest for all debt instruments with amortisable bond premium (other than debt instruments, the interest on which is excludible from gross income) held as of the beginning of the taxable year to which the election applies or any taxable year thereafter. If the election to apply the constant yield method to all interest on a Note is made with respect to a Market Discount Note (as defined below under "— *Market Discount*"), the electing U.S. Holder will be treated as having made the election discussed under "— *Market Discount*" to include market discount in income currently over the life of all debt instruments with market discount held or thereafter acquired by the U.S. Holder. U.S. Holders should consult their tax advisers concerning the advisability and consequences of making this election.

Short-Term Notes

In general, an individual or other cash basis U.S. Holder of a Short-Term Note is not required to accrue OID (calculated as set forth below for the purposes of this paragraph) for U.S. federal income tax purposes unless it elects to do so (but may be required to include any stated interest in income as the interest is received). Accrual basis U.S. Holders and certain other U.S. Holders are required to accrue OID on Short-Term Notes on a straight line basis or, if the U.S. Holder so elects, under the constant yield method (based on daily compounding). In the case of a U.S. Holder not required and not electing to include OID in income currently, any gain realised on the sale or retirement of the Short-Term Note will be ordinary income to the extent of the OID accrued on a straight line basis (unless an election is made to accrue the OID under the constant yield method) through the date of sale or retirement. U.S. Holders who are not required and do not elect to accrue OID on Short-Term Notes will be required to defer deductions for interest on borrowings allocable to Short-Term Notes in an amount not exceeding the deferred income until the deferred income is realised.

For the purposes of determining the amount of OID subject to these rules, all interest payments on a Short-Term Note are included in the Short-Term Note's stated redemption price at maturity. A U.S. Holder may elect to determine OID on a Short-Term Note as if the Short-Term Note had been originally issued to the U.S. Holder at the U.S. Holder's purchase price for the Short-Term Note. This election shall apply to all obligations with a maturity of one year or less acquired by the U.S. Holder on or after the first day of the first taxable year to which the election applies, and may not be revoked without the consent of the IRS.

Market Discount

A Note, other than a Short-Term Note, that is not acquired at its original issue generally will be treated as purchased at a market discount (a "**Market Discount Note**") if the Note's stated redemption price at maturity or, in the case of a Discount Note, the Note's revised issue price, exceeds the amount for which the U.S. Holder purchased the Note by at least 0.25 per cent. of the Note's stated redemption price at maturity or revised issue price, respectively, multiplied by the number of complete years to the Note's maturity (or, in the case of a Note that is an instalment obligation, the Note's weighted average maturity). If this excess is not sufficient to cause the Note to be a Market Discount Note, then the excess constitutes *de minimis* market discount. For this purpose, the revised issue price of a Note generally equals its issue price, increased by the amount of any OID that has accrued on the Note and decreased by the amount of any payments previously made on the Note that were not qualified stated interest payments.

Any gain recognised on the maturity or disposition of a Market Discount Note (including any payment on a Note that is not qualified stated interest) will be treated as ordinary income to the extent that the gain does not exceed the accrued market discount on the Note. Alternatively, a U.S. Holder of a Market Discount Note may elect to include market discount in income currently over the life of the Note. This election will apply to all debt instruments with market discount acquired by the electing U.S. Holder on or after the first day of the first taxable year to which the election applies. This election may not be revoked without the consent of the IRS. A U.S. Holder of a Market Discount Note that does not elect to include market discount in income currently generally will be required to defer deductions for interest on borrowings incurred to purchase or carry a Market Discount Note that is in excess of the interest and OID on the Note includible in the U.S. Holder's income, to the extent that this excess interest expense does not exceed the portion of the market discount allocable to the days on which the Market Discount Note was held by the U.S. Holder.

Market discount will accrue on a straight line basis unless the U.S. Holder elects to accrue the market discount on a constant yield method. This constant yield election applies only to the Market Discount Note with respect to which it is made and is irrevocable.

Notes Purchased at a Premium

A U.S. Holder that purchases a Note for an amount in excess of its principal amount (or, for a Discount Note, the sum of all amounts payable on the Note after the purchase date, other than payments of qualified stated interest) may elect to treat the excess as amortisable bond premium, in which case the amount required to be included in the U.S. Holder's income each year with respect to interest on the Note will be reduced by the amount of amortisable bond premium allocable (based on the Note's yield to maturity) to that year. Any election to amortise bond premium shall apply to all bonds, (other than bonds, the interest on which is excludable from gross income for U.S. federal income tax purposes) held by the U.S. Holder at the beginning of the first taxable year to which the election applies or thereafter acquired by the U.S. Holder, and is irrevocable without the consent of the IRS. Please see also "*— Election to Treat All Interest as Original Issue Discount*". A U.S. Holder that does not elect to take bond premium (other than acquisition premium) into account currently will generally recognise a capital loss when the Note matures.

Purchase, Sale and Retirement of Notes

A U.S. Holder's tax basis in a Note generally will be its cost, increased by the amount of any OID or market discount included in the U.S. Holder's income with respect to the Note and the amount, if any, of income attributable to *de minimis* OID and *de minimis* market discount included in the U.S. Holder's income with respect to the Note, and reduced by: (i) the amount of any payments that are not qualified stated interest payments; and (ii) the amount of any amortisable bond premium applied to reduce interest on the Note.

A U.S. Holder generally will recognise gain or loss on the sale or retirement of a Note equal to the difference between the amount realised on the sale or retirement and the tax basis of the Note. Amounts realised on the sale or retirement of a Note are taxable as interest income to the extent of accrued but unpaid interest not previously included in income. Except to the extent described under "*Original Issue Discount — Market Discount*", "*Original Issue Discount — Short-Term Notes*" or "*Contingent Payment Notes*" or attributable to accrued but unpaid interest or changes in exchange rates (as discussed below), gain or loss recognised on the sale or retirement of a Note will be capital gain or loss and generally will be treated as from U.S. sources for purposes of the U.S. foreign tax credit limitation. In the case of a U.S. Holder that is an individual, estate or trust, the maximum marginal federal income tax rate applicable to capital gains is currently lower than the maximum marginal rate applicable to ordinary income if the Notes are held for more than one year. The deductibility of capital losses is subject to significant limitations.

Contingent Payment Notes

If the terms of the Notes provide for certain contingencies that affect the timing and amount of payments (including Notes with a variable rate or rates that do not qualify as "variable rate debt instruments" for purposes of the original issue discount rules) they generally will be "contingent payment debt instruments" for U.S. federal income tax purposes. Under the rules that govern the treatment of contingent payment debt instruments, no payment on such Notes qualifies as qualified stated interest. Rather, a U.S. Holder must account for interest for U.S. federal income tax purposes based on a "comparable yield" and the differences between actual payments on the Note and the Note's "projected payment schedule" as described below. The comparable yield is determined by the Issuer at the time of issuance of the Notes. The comparable yield may be greater than or less than the stated interest, if any, with respect to the Notes. Solely for the purpose of determining the amount of interest income that a U.S. Holder will be required to accrue on a contingent payment debt instrument, the Issuer will be required to construct a "projected payment schedule" that represents a series of payments the amount and timing of which would produce a yield to maturity on the contingent payment debt instrument equal to the comparable yield.

Neither the comparable yield nor the projected payment schedule constitutes a representation by the Issuer regarding the actual amount, if any, that the contingent payment debt instrument will pay.

For U.S. federal income tax purposes, a U.S. Holder will be required to use the comparable yield and the projected payment schedule established by the Issuer in determining interest accruals and adjustments, unless the Holder timely discloses and justifies the use of a different comparable yield and projected payment schedule to the IRS.

A U.S. Holder, regardless of the Holder's method of accounting for U.S. federal income tax purposes, will be required to accrue interest income on a contingent payment debt instrument at the comparable yield, adjusted upward or downward to reflect the difference, if any, between the actual and the projected amount of any contingent payments on the contingent payment instrument (as set forth below).

A U.S. Holder will be required to recognise interest income equal to the amount of any net positive adjustment, i.e., the excess of actual payments over projected payments, in respect of a contingent payment debt instrument for a taxable year. A net negative adjustment, i.e., the excess of projected payments over actual payments, in respect of a contingent payment debt instrument for a taxable year:

- will first reduce the amount of interest in respect of the contingent payment debt instrument that a Holder would otherwise be required to include in income in the taxable year; and
- to the extent of any excess, will give rise to an ordinary loss equal to so much of this excess as does not exceed the excess of:
  - the amount of all previous interest inclusions under the contingent payment debt instrument over
  - the total amount of the U.S. Holder's net negative adjustments treated as ordinary loss on the contingent payment debt instrument in prior taxable years.

A net negative adjustment is not subject to Section 67 of the Code (the 2-percent floor on miscellaneous itemised deductions). Any net negative adjustment in excess of the amounts described above will be carried forward to offset future interest income in respect of the contingent payment debt instrument or to reduce the amount realised on a sale, exchange or retirement of the contingent payment debt instrument. Where a U.S. Holder purchases a contingent payment debt instrument for a price other than its adjusted issue price, the difference between the purchase price and the adjusted issue price must be reasonably allocated to the daily portions of interest or projected payments with respect to the contingent payment debt instrument over its remaining term and treated as a positive or negative adjustment, as the case may be, with respect to each period to which it is allocated.

Upon a sale, exchange or retirement of a contingent payment debt instrument, a U.S. Holder generally will recognise taxable gain or loss equal to the difference between the amount realised on the sale, exchange or retirement and the Holder's adjusted basis in the contingent payment debt instrument. A U.S. Holder's adjusted basis in a Note that is a contingent payment debt instrument generally will be the acquisition cost of the Note, increased by the interest previously accrued by the U.S. Holder on the Note under these rules, disregarding any net positive and net negative adjustments, and decreased by the amount of any noncontingent payments and the projected amount of any contingent payments previously made on the Note. A U.S. Holder generally will treat any gain as interest income, and any loss as ordinary loss to the extent of the excess of previous interest inclusions in excess of the total net negative adjustments previously taken into account as ordinary losses, and the balance as capital loss. The deductibility of capital losses is subject to limitations. In addition, if a Holder recognises loss above certain thresholds, the Holder may be required to file a disclosure statement with the IRS.

A U.S. Holder will have a tax basis in any property, other than cash, received upon the retirement of a contingent payment debt instrument equal to the fair market value of the property, determined at the time of retirement. The Holder's holding period for the property will commence on the day immediately following its receipt. Special rules apply to contingent payment debt instruments that are denominated, or provide for payments, in a currency other than the U.S. dollar ("**Foreign Currency Contingent Payment Notes**"). Very generally, these Notes are accounted for like a contingent payment debt instrument, as described above, but in the currency of the Foreign Currency Contingent Payment Notes. The relevant amounts must then be translated into U.S. dollars. The rules applicable to Foreign Currency Contingent Payment Notes are complex and U.S. Holders are urged to consult their own tax advisors regarding the U.S. federal income tax consequences of the acquisition, ownership and disposition of such Notes.

Foreign Currency Notes

Interest

If an interest payment is denominated in, or determined by reference to, a foreign currency, the amount of income recognised by a cash basis U.S. Holder will be the U.S. dollar value of the interest payment, based on the exchange rate in effect on the date of receipt, regardless of whether the payment is in fact converted into U.S. dollars. An accrual basis U.S. Holder may determine the amount of income recognised with respect to an interest payment denominated in, or determined by reference to, a foreign currency in accordance with either of two methods.

Under the first method, the amount of income accrued will be based on the average exchange rate in effect during the interest accrual period (or, in the case of an accrual period that spans two taxable years of a U.S. Holder, the part of the period within the taxable year). Under the second method, the U.S. Holder may elect to determine the amount of income accrued on the basis of the exchange rate in effect on the last day of the accrual period (or, in the case of an accrual period that spans two taxable years, the exchange rate in effect on the last day of the part of the period within the taxable year). Additionally, if a payment of interest is actually received within five business days of the last day of the accrual period, an electing accrual basis U.S. Holder may instead translate the accrued interest into U.S. dollars at the exchange rate in effect on the day of actual receipt. Any such election will apply to all debt instruments held by the U.S. Holder at the beginning of the first taxable year to which the election applies or thereafter acquired by the U.S. Holder, and will be irrevocable without the consent of the IRS.

Upon receipt of an interest payment (including a payment attributable to accrued but unpaid interest upon the sale or retirement of a Note) denominated in, or determined by reference to, a foreign currency, the U.S. Holder may recognise U.S. source exchange gain or loss (taxable as ordinary income or loss) equal to the difference between the amount received (translated into U.S. dollars at the spot rate on the date of receipt) and the amount previously accrued, regardless of whether the payment is in fact converted into U.S. dollars.

OID

OID for each accrual period on a Discount Note that is denominated in, or determined by reference to, a foreign currency, will be determined in the foreign currency and then translated into U.S. dollars in the same manner as stated interest accrued by an accrual basis U.S. Holder, as described above under "– *Interest*". Upon receipt of an amount attributable to OID (whether in connection with a payment on the Note or a sale of the Note), a U.S. Holder may recognise U.S. source exchange gain or loss (taxable as ordinary income or loss) equal to the difference between the amount received (translated into U.S. dollars at the spot rate on the date of receipt) and the amount previously accrued, regardless of whether the payment is in fact converted into U.S. dollars.

Market Discount

Market Discount on a Note that is denominated in, or determined by reference to, a foreign currency, will be accrued in the foreign currency. If the U.S. Holder elects to include market discount in income currently, the accrued market discount will be translated into U.S. dollars at the average exchange rate for the accrual period (or portion thereof within the U.S. Holder's taxable year). Upon the receipt of an amount attributable to accrued market discount, the U.S. Holder may recognise U.S. source exchange gain or loss (which will be taxable as ordinary income or loss) determined in the same manner as for accrued interest or OID. A U.S. Holder that does not elect to include market discount in income currently will recognise, upon the disposition or maturity of the Note, the U.S. dollar value of the amount accrued, calculated at the spot rate on that date, and no part of this accrued market discount will be treated as exchange gain or loss.

Bond Premium

Bond premium (including acquisition premium) on a Note that is denominated in, or determined by reference to, a foreign currency, will be computed in units of the foreign currency, and any such bond premium that is taken into account currently will reduce interest income in units of the foreign currency.

On the date bond premium offsets interest income, a U.S. Holder may recognise U.S. source exchange gain or loss (taxable as ordinary income or loss) measured by the difference between the spot rate in effect on that date, and on the date the Notes were acquired by the U.S. Holder.

Purchase, Sale and Retirement of Notes

A U.S. Holder generally will recognise gain or loss on the sale or retirement of a Note equal to the difference between the amount realised on the sale or retirement and its tax basis in the Note. A U.S. Holder's tax basis in a Foreign Currency Note will be determined by reference to the U.S. dollar cost of the Note. The U.S. dollar cost of a Note purchased with foreign currency generally will be the U.S. dollar value of the purchase price on the date of purchase or, in the case of Notes traded on an established securities market, as defined in the applicable U.S. Treasury regulations, that are purchased by a cash basis U.S. Holder (or an accrual basis U.S. Holder that so elects), on the settlement date for the purchase.

The amount realised on a sale or retirement for an amount in foreign currency will be the U.S. dollar value of this amount on the date of sale or retirement or, in the case of Notes traded on an established securities market, as defined in the applicable U.S. Treasury regulations, sold by a cash basis U.S. Holder (or an accrual basis U.S. Holder that so elects), on the settlement date for the sale. Such an election by an accrual basis U.S. Holder must be applied consistently from year to year and cannot be revoked without the consent of the IRS.

A U.S. Holder will recognise U.S. source exchange rate gain or loss (taxable as ordinary income or loss) on the sale or retirement of a Note equal to the difference, if any, between the U.S. dollar values of the U.S. Holder's purchase price for the Note: (i) on the date of sale or retirement; and (ii) on the date on which the U.S. Holder acquired the Note. Any exchange rate gain or loss recognised on the sale or retirement of a Note (including any exchange rate gain or loss with respect to the receipt of accrued but unpaid interest and OID in the transaction) shall be realised only to the extent of the total gain or loss realised on the transaction.

Disposition of Foreign Currency

Foreign currency received as interest on a Note or on the sale or retirement of a Note will have a tax basis equal to its U.S. dollar value at the time the interest is received or at the time of the sale or retirement. Foreign currency that is purchased generally will have a tax basis equal to the U.S. dollar value of the foreign currency on the date of purchase. Any gain or loss recognised on a sale or other disposition of a foreign currency (including its use to purchase Notes or upon exchange for U.S. dollars) will be U.S. source ordinary income or loss.

Backup Withholding and Information Reporting

Payments of interest and accrued OID on, and the proceeds of a sale, exchange, redemption or other disposition of, Notes, payable to a U.S. Holder by a paying agent or other intermediary, may be subject to information reporting to the IRS. In addition, certain U.S. Holders may be subject to backup withholding tax in respect of such payments if they do not provide an accurate taxpayer identification number or certification of exempt status to a paying agent or other intermediary or otherwise comply with the applicable backup withholding requirements.

Backup withholding is not an additional tax. The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle the U.S. Holder to a refund, provided that the required information is timely furnished to the IRS in the manner required. Certain U.S. Holders (including, among others, corporations) are not subject to information reporting or backup withholding. U.S. Holders should consult their tax advisers as to their qualification for exemption from information reporting and/or backup withholding.

U.S. Holders should consult their own tax advisers regarding any filing or reporting requirements that may apply to their purchase, ownership and disposition of Notes. Failure to comply with certain reporting obligations could result in the imposition of substantial penalties.

Proposed Financial Transactions Tax ("FTT")

On 14 February 2013, the European Commission published a proposal (the "**Commission's proposal**") for a Directive for a common FTT in Belgium, Germany, Estonia, Greece, Spain, France, Italy, Austria, Portugal, Slovenia and Slovakia (the "**participating Member States**"). However, Estonia has since stated that it will not participate.

The Commission's proposal has very broad scope and could, if introduced, apply to certain dealings in the Notes (including secondary market transactions) in certain circumstances. Under the Commission's proposal, FTT could apply in certain circumstances to persons both within and outside of the participating Member States. Generally, it would apply to certain dealings in the Notes where at least one party is a financial institution, and at least one party is established in a participating Member State. A financial institution may be, or be deemed to be, "established" in a participating Member State in a broad range of circumstances, including (a) by transacting with a person established in a participating Member State or (b) where the financial instrument which is subject to the dealings is issued in a participating Member State.

However, the FTT proposal remains subject to negotiation between participating Member States. It may therefore be altered prior to any implementation, the timing of which remains unclear. Additional EU Member States may decide to participate.

Prospective holders of the Notes are advised to seek their own professional advice in relation to the FTT.

BOOK-ENTRY CLEARANCE SYSTEMS

*The information set out below is subject to any change in or reinterpretation of the rules, regulations and procedures of DTC, Euroclear or Clearstream, Luxembourg (together, the "**Clearing System**") currently in effect. The information in this section concerning the Clearing System has been obtained from sources that the Issuer believes to be reliable, but none of the Issuer nor any Dealer takes any responsibility for the accuracy thereof. Investors wishing to use the facilities of any of the Clearing Systems are advised to confirm the continued applicability of the rules, regulations and procedures of the relevant Clearing System. None of the Issuer nor any other party to the Agency Agreement will have any responsibility or liability for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the Notes held through the facilities of any Clearing System or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.*

Book-entry Systems

Depositary Trust Company

DTC has advised the Issuer that it is a limited purpose trust company organised under the New York Banking Law, a "banking organisation" within the meaning of the New York Banking Law, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to Section 17A of the Exchange Act. DTC holds securities that its participants ("**Participants**") deposit with DTC. DTC also facilitates the settlement among Participants of securities transactions, such as transfers and pledges, in deposited securities through electronic computerised book-entry changes in Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations and certain other organisations. Access to the DTC System is also available to others such as securities brokers and dealers, banks and trust companies that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("**Indirect Participants**").

Under the rules, regulations and procedures creating and affecting DTC and its operations (the "**Rules**"), DTC makes book-entry transfers of Registered Notes among Direct Participants on whose behalf it acts with respect to Notes accepted into DTC's book-entry settlement system ("**DTC Notes**") as described below and receives and transmits distributions of principal and interest on DTC Notes. The Rules are on file with the Securities and Exchange Commission. Direct Participants and Indirect Participants with which beneficial owners of DTC Notes ("**Owners**") have accounts with respect to the DTC Notes similarly are required to make book-entry transfers and receive and transmit such payments on behalf of their respective Owners. Accordingly, although Owners who hold DTC Notes through Direct Participants or Indirect Participants will not possess Registered Notes, the Rules, by virtue of the requirements described above, provide a mechanism by which Direct Participants will receive payments and will be able to transfer their interest in respect of the DTC Notes.

Purchases of DTC Notes under the DTC system must be made by or through Direct Participants, which will receive a credit for the DTC Notes on DTC's records. The ownership interest of each actual purchaser of each DTC Note ("**Beneficial Owner**") is in turn to be recorded on the Direct and Indirect Participant's records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the DTC Notes are to be accomplished by entries made on the books of Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in DTC Notes, except in the event that use of the book-entry system for the DTC Notes is discontinued.

To facilitate subsequent transfers, all DTC Notes deposited by participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co. The deposit of DTC Notes with DTC and their registration in the name of Cede & Co. effect no change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the DTC Notes; DTC's records reflect only the identity of the Direct Participants to whose accounts such DTC Notes are credited, which may or may not be the Beneficial Owners. The Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices shall be sent to Cede & Co. If less than all of the DTC Notes within an issue are being redeemed, selection of Notes for such partial redemption will be made in accordance of rules and procedures of DTC.

Neither DTC nor Cede & Co. will consent or vote with respect to DTC Notes. Under its usual procedures, DTC mails an Omnibus Proxy to the Issuer as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the DTC Notes are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Principal and interest payment on the DTC Notes will be made to DTC. DTC's practice is to credit Direct Participants' accounts on the due date for payment in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on the due date. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name", and will be the responsibility of such Participant and not of DTC or the Issuer, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of principal and interest to DTC is the responsibility of the Issuer, disbursement of such payments to Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners is the responsibility of Direct and Indirect Participants.

Under certain circumstances, including if there is an Event of Default under the Notes, DTC will exchange the DTC Notes for definitive Registered Notes, which it will distribute to its Participants in accordance with their proportionate entitlements and which, if representing interests in a Rule 144A Global Note, will be legended as set forth under "*Subscription and Sale and Transfer and Selling Restrictions*".

Since DTC may only act on behalf of Direct Participants, who in turn act on behalf of Indirect Participants, any Owner desiring to pledge DTC Notes to persons or entities that do not participate in DTC, or otherwise take actions with respect to such DTC Notes, will be required to withdraw its Registered Notes from DTC as described below.

Euroclear and Clearstream, Luxembourg

Euroclear and Clearstream, Luxembourg each holds securities for its customers and facilitates the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream, Luxembourg provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream, Luxembourg also deal with domestic securities markets in several countries through established depository and custodial relationships. Euroclear and Clearstream, Luxembourg have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream, Luxembourg customers are world-wide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream, Luxembourg is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system.

Book-entry Ownership of and Payments in respect of DTC Notes

The Issuer may apply to DTC in order to have any Tranche of Notes represented by a Registered Global Note accepted in its book-entry settlement system. Upon the issue of any such Registered Global Note, DTC or its custodian will credit, on its internal book-entry system, the respective nominal amounts of the individual beneficial interests represented by such Registered Global Note to the accounts of persons who have accounts with DTC. Such accounts initially will be designated by or on behalf of the relevant Dealer. Ownership of beneficial interests in such Registered Global Note will be limited to Direct Participants or Indirect Participants, including, in the case of any Regulation S Global Note, the respective depositaries of Euroclear and Clearstream, Luxembourg. Ownership of beneficial interests in a Registered Global Note accepted by DTC will be shown on, and the transfer of such ownership will be effected only through, records maintained by DTC or its nominee (with respect to the interests of Direct Participants) and the records of Direct Participants (with respect to interests of Indirect Participants).

Payments in U.S. dollars of principal and interest in respect of a Registered Global Note accepted by DTC will be made to the order of DTC or its nominee as the registered holder of such Note. In the case of any payment in a currency other than U.S. dollars, payment will be made to the Exchange Agent on behalf of DTC or its nominee and the Exchange Agent will (in accordance with instructions received by it) remit all or a portion of such payment for credit directly to the beneficial holders of interests in the Registered Global Note in the currency in which such payment was made and/or cause all or a portion of such payment to be converted into U.S. dollars and credited to the applicable Participants' account.

The Issuer expects DTC to credit accounts of Direct Participants on the applicable payment date in accordance with their respective holdings as shown in the records of DTC unless DTC has reason to believe that it will not receive payment on such payment date. The Issuer also expects that payments by Participants to beneficial owners of Notes will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers, and will be the responsibility of such Participant and not the responsibility of DTC, the Principal Paying Agent, the Registrar or the Issuer. Payment of principal, premium, if any, and interest, if any, on Notes to DTC is the responsibility of the Issuer.

Transfers of Notes Represented by Registered Global Notes

Transfers of any interests in Notes represented by a Registered Global Note within DTC, Euroclear and Clearstream, Luxembourg will be effected in accordance with the customary rules and operating procedures of the relevant clearing system. The laws in some States within the United States require that certain persons take physical delivery of securities in definitive form. Consequently, the ability to transfer Notes represented by a Registered Global Note to such persons may depend upon the ability to exchange such Notes for Notes in definitive form.

Similarly, because DTC can only act on behalf of Direct Participants in the DTC system who in turn act on behalf of Indirect Participants, the ability of a person having an interest in Notes represented by a Registered Global Note accepted by DTC to pledge such Notes to persons or entities that do not participate in the DTC system or otherwise to take action in respect of such Notes may depend upon the ability to exchange such Notes for Notes in definitive form. The ability of any holder of Notes represented by a Registered Global Note accepted by DTC to resell, pledge or otherwise transfer such Notes may be impaired if the proposed transferee of such Notes is not eligible to hold such Notes through a direct or indirect participant in the DTC system.

Subject to compliance with the transfer restrictions applicable to the Registered Notes described under "*Subscription and Sale and Transfer and Selling Restrictions*", cross-market transfers between DTC, on the one hand, and directly or indirectly through Clearstream, Luxembourg or Euroclear accountholders, on the other will be effected by the relevant clearing system in accordance with its rules and through action taken by the Registrar, the Principal Paying Agent and any custodian ("**Custodian**") with whom the relevant Registered Global Notes have been deposited.

On or after the Issue Date for any Series, transfers of Notes of such Series between accountholders in Clearstream, Luxembourg and Euroclear and transfers of Notes of such Series between participants in DTC will generally have a settlement date three business days after the trade date (T+3). The customary arrangements for delivery versus payment will apply to such transfers.

Cross-market transfers between accountholders in Clearstream, Luxembourg or Euroclear and DTC participants will need to have an agreed settlement date between the parties to such transfer. Because there is no direct link between DTC, on the one hand, and Clearstream, Luxembourg and Euroclear, on the other, transfers of interests in the relevant Registered Global Notes will be effected through the Registrar, the Principal Paying Agent and the Custodian receiving instructions (and, where appropriate, certification) from the transferor and arranging for delivery of the interests being transferred to the credit of the designated account for the transferee. In the case of cross-market transfers, settlement between Euroclear or Clearstream, Luxembourg accountholders and DTC participants cannot be made on a delivery versus payment basis. The securities will be delivered on a free delivery basis and arrangements for payment must be made separately.

DTC, Clearstream, Luxembourg and Euroclear have each published rules and operating procedures designed to facilitate transfers of beneficial interests in Registered Global Notes among participants and accountholders of DTC, Clearstream, Luxembourg and Euroclear. However, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued or changed at any time. None of the Issuer, the Agents or any Dealer will be responsible for any performance by DTC, Clearstream, Luxembourg or Euroclear or their respective direct or indirect participants or accountholders of their respective obligations under the rules and procedures governing their operations and none of them will have any liability for any aspect of the records relating to or payments made on account of beneficial interests in the Notes represented by Registered Global Notes or for maintaining, supervising or reviewing any records relating to such beneficial interests.

CMU Notes

Unless otherwise specified in the applicable Pricing Supplement, CMU Notes will initially be issued in registered form and represented by a global certificate (the "**CMU Global Note**") registered in the name of HKMA, in its capacity as operator of the CMU Service and shall be delivered to and held by a sub-custodian nominated by the HKMA as operator of the CMU Service, or the CMU operator. The CMU Global Note will be held for the account of CMU members who have accounts with the CMU operator, or the CMU participants. For persons seeking to hold a beneficial interest in the Notes through Euroclear or Clearstream, Luxembourg, such persons will hold their interests through an account opened and held by Euroclear or Clearstream, Luxembourg with the CMU operator. Interests in the CMU Global Note will only be shown on, and transfers of interests will be effected through, records maintained by the CMU operator.

Because the CMU operator can act only on behalf of the CMU participants, who in turn may act on behalf of persons who hold interests through them, or indirect participants, the ability of persons having interests in the CMU Global Note to pledge such interests to persons or entities that are not CMU participants, or otherwise take action in respect of such interests, may be affected by the lack of definitive notes.

While the CMU Global Note representing the Notes is held by or on behalf of the CMU operator, payments of interest or principal will be made to the persons for whose account a relevant interest in the CMU Global Note is credited as being held by the CMU operator at the relevant time, as notified to the Principal Paying Agent by the CMU operator in a relevant CMU instrument position report (as defined in the rules of the CMU) or in any other relevant notification by the CMU operator. So long as the Notes are represented by the CMU Global Note that is held by or on behalf of the CMU operator, such payment by the Issuer will discharge the Issuer's obligations in respect of that payment. Any payments by the CMU participants to indirect participants will be governed by arrangements agreed between the CMU participants and the indirect participants and will continue to depend on the inter- bank clearing system and traditional payment methods. Such payments will be the sole responsibility of such CMU participants.

Payments, transfers, exchanges and other matters relating to interests in the CMU Global Note may be subject to various policies and procedures adopted by the CMU operator from time to time. None of the Issuer, the Principal Paying Agent, the Registrar, the Paying Agents, the CMU Lodging Agent or any other Agent will have any responsibility or liability for any aspect of the CMU operator's records relating to, or for payments made on account of, interests in the CMU Global Note, or for maintaining, supervising or reviewing any records relating to such interests.

For so long as all of the Notes are represented by the CMU Global Note and such CMU Global Note is held on behalf of the CMU operator, notices to Noteholders may be given by delivery of the relevant notice to the persons shown in a CMU instrument position report issued by the CMU operator on the business day preceding the date of dispatch of such notice as holding interests in the CMU Global Note for communication to the CMU participants. Any such notice shall be deemed to have been given to the Noteholders on the second business day on which such notice is delivered to the persons shown in the relevant CMU instrument position report as aforesaid. Indirect participants will have to rely on the CMU participants (through whom they hold the Notes, in the form of interests in the global certificate) to deliver the notices to them, subject to the arrangements agreed between the indirect participants and the CMU participants.

The CMU operator is under no obligation to maintain or continue to operate the CMU Service and the CMU operator is under no obligation to perform or continue to perform the procedures described above. Accordingly, the CMU and such procedures may be discontinued or modified at any time. None of the Issuer, the Principal Paying Agent, the Registrar, the Paying Agents, the CMU Lodging Agent or any other Agent will have any responsibility for the performance by the CMU operator or the CMU participants of their respective obligations under the rules and procedures governing their operations.

SUBSCRIPTION AND SALE AND TRANSFER AND SELLING RESTRICTIONS

The Dealers have, in an amended and restated programme agreement dated 8 January 2016, as amended and supplemented by the First Supplemental Programme Agreement dated 5 October 2016, the Second Supplemental Programme Agreement dated 21 March 2017 and the Third Supplemental Programme Agreement dated 11 January 2019 (as further amended, restated or supplemented from time to time, the "**Programme Agreement**"), agreed with the Issuer a basis upon which they or any of them may from time to time agree to purchase Notes. Any such agreement will extend to those matters stated under "*Form of the Notes*" and "*Terms and Conditions of the Notes*" above. In the Programme Agreement, the Issuer has agreed to reimburse the Dealers for certain of their expenses in connection with the establishment of the Programme and the issue of Notes under the Programme and to indemnify the Dealers against certain liabilities incurred by them in connection therewith.

In order to facilitate the offering of any Tranche of the Notes, certain persons participating in the offering of the Tranche may, to the extent permitted by applicable laws and regulations, engage in transactions that stabilise, maintain or otherwise affect the market price of the relevant Notes during and after the offering of the Tranche. Specifically, such persons may over-allot or create a short position in the Notes for their own account by selling more Notes than have been sold to them by the Issuer. Such persons may also elect to cover any such short position by purchasing Notes in the open market. In addition, such persons may stabilise or maintain the price of the Notes by bidding for or purchasing Notes in the open market and may impose penalty bids, under which selling concessions allowed to syndicate members or other broker-dealers participating in the offering of the Notes are reclaimed if Notes previously distributed in the offering are repurchased in connection with stabilisation transactions or otherwise. The effect of these transactions may be to stabilise or maintain the market price of the Notes at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of the Notes to the extent that it discourages resales thereof. No representation is made as to the magnitude or effect of any such stabilising or other transactions. Such transactions, if commenced, may be discontinued at any time. Stabilisation activities are subject to certain prescribed time limits in certain jurisdictions.

Transfer Restrictions

As a result of the following restrictions, purchasers of Notes in the United States are advised to consult legal counsel prior to making any purchase, offer, sale, resale or other transfer of such Notes.

Each purchaser of Registered Notes (other than a person purchasing an interest in a Registered Global Note with a view to holding it in the form of an interest in the same Global Note) or person wishing to transfer an interest from one Registered Global Note to another or from global to definitive form or *vice versa*, will be required to acknowledge, represent and agree as follows (terms used in this paragraph that are defined in Rule 144A or in Regulation S are used herein as defined therein):

(i) that either (a) it is a QIB, purchasing (or holding) the Notes for its own account or for the account of one or more QIBs and it is aware that any sale to it is being made in reliance on Rule 144A or (b) it is an Institutional Accredited Investor which has delivered an IAI Investment Letter or (c) it is outside the United States and is not a U.S. person;

(ii) that the Notes are being offered and sold in a transaction not involving a public offering in the United States within the meaning of the Securities Act, and that the Notes have not been and will not be registered under the Securities Act or any other applicable U.S. State securities laws and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except as set forth below;

(iii) that, unless it holds an interest in a Regulation S Global Note and is either a person located outside the United States or not a U.S. person, if in the future it decides to resell, pledge or otherwise transfer the Notes or any beneficial interests in the Notes, it will do so, prior to the date which is one year after the later of the last Issue Date for the Series and the last date on which the Issuer or an affiliate of the Issuer was the owner of such Notes, only (a) to the Issuer or any affiliate thereof, (b) inside the United States to a person whom the seller reasonably believes is a QIB purchasing for its own account or for the account of a QIB in a transaction meeting the requirements of Rule 144A, (c) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act, (d) pursuant to the exemption from registration provided by Rule 144 under the Securities Act (if available) or (e) pursuant to an effective registration statement under the Securities Act, in each case in accordance with all applicable U.S. State securities laws;

(iv) it will, and will require each subsequent holder to, notify any purchaser of the Notes from it of the resale restrictions referred to in paragraph (iii) above, if then applicable;

(v) that Notes initially offered in the United States to QIBs will be represented by one or more Rule 144A Global Notes, that Notes offered to Institutional Accredited Investors will be in the form of Definitive IAI Registered Notes and that Notes offered outside the United States in reliance on Regulation S will be represented by one or more Regulation S Global Notes;

(vi) that the Notes, other than the Regulation S Global Notes, will bear a legend to the following effect unless otherwise agreed to by the Issuer:

"THIS SECURITY HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (A) REPRESENTS THAT (1) IT IS A "**QUALIFIED INSTITUTIONAL BUYER**" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) PURCHASING THE SECURITIES FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF ONE OR MORE QUALIFIED INSTITUTIONAL BUYERS OR (2) IT IS AN INSTITUTIONAL "**ACCREDITED INVESTOR**" (AS DEFINED IN RULE 501(A)(1), (2), (3) OR (7) UNDER THE SECURITIES ACT) (AN "**INSTITUTIONAL ACCREDITED INVESTOR**"); (B) AGREES THAT IT WILL NOT RESELL OR OTHERWISE TRANSFER THE SECURITIES EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND, PRIOR TO THE DATE WHICH IS ONE YEAR AFTER THE LATER OF THE LAST ISSUE DATE FOR THE SERIES AND THE LAST DATE ON WHICH THE ISSUER OR AN AFFILIATE OF THE ISSUER WAS THE OWNER OF SUCH SECURITIES OTHER THAN (1) TO THE ISSUER OR ANY AFFILIATE THEREOF, (2) INSIDE THE UNITED STATES TO A PERSON WHOM THE SELLER REASONABLY BELIEVES IS A QUALIFIED INSTITUTIONAL BUYER WITHIN THE MEANING OF RULE 144A UNDER THE SECURITIES ACT PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF A QUALIFIED INSTITUTIONAL BUYER IN A TRANSACTION MEETING THE REQUIREMENTS OF RULE 144A, (3) OUTSIDE THE UNITED STATES IN COMPLIANCE WITH RULE 903 OR RULE 904 UNDER THE SECURITIES ACT, (4) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (5) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES AND ANY OTHER JURISDICTION; AND (C) IT AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS SECURITY IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND.

THIS SECURITY AND RELATED DOCUMENTATION (INCLUDING WITHOUT LIMITATION, THE AGENCY AGREEMENT REFERRED TO HEREIN) MAY BE AMENDED OR SUPPLEMENTED FROM TIME TO TIME, WITHOUT THE CONSENT OF, BUT UPON NOTICE TO, THE HOLDERS OF SUCH SECURITIES SENT TO THEIR REGISTERED ADDRESSES, TO MODIFY THE RESTRICTIONS ON AND PROCEDURES FOR RESALES AND OTHER TRANSFERS OF THIS SECURITY TO REFLECT ANY CHANGE IN APPLICABLE LAW OR REGULATION (OR THE INTERPRETATION THEREOF) OR IN PRACTICES RELATING TO RESALES OR OTHER TRANSFERS OF RESTRICTED SECURITIES GENERALLY. THE HOLDER OF THIS SECURITY SHALL BE DEEMED, BY ITS ACCEPTANCE OR PURCHASE HEREOF, TO HAVE AGREED TO ANY SUCH AMENDMENT OR SUPPLEMENT (EACH OF WHICH SHALL BE CONCLUSIVE AND BINDING ON THE HOLDER HEREOF AND ALL FUTURE HOLDERS OF THIS SECURITY AND ANY SECURITIES ISSUED IN EXCHANGE OR SUBSTITUTION THEREFOR, WHETHER OR NOT ANY NOTATION THEREOF IS MADE HEREON).";

(vii) if it is outside the United States and is not a U.S. person, that if it should resell or otherwise transfer the Notes prior to the expiration of the distribution compliance period (defined as 40 days after the later of the commencement of the offering and the closing date with respect to the original issuance of the Notes), it will do so only (a)(i) outside the United States in compliance with Rule 903 or Rule 904 under the Securities Act or (ii) to a QIB in compliance with Rule 144A and (b) in accordance with all applicable U.S. State securities laws; and it acknowledges that the Regulation S Global Notes will bear a legend to the following effect unless otherwise agreed to by the Issuer:

"THIS SECURITY HAS NOT BEEN AND WILL NOT BE REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "**SECURITIES ACT**"), OR ANY OTHER APPLICABLE U.S. STATE SECURITIES LAWS AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT IN ACCORDANCE WITH THE AGENCY AGREEMENT AND PURSUANT TO

AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT. THIS LEGEND SHALL CEASE TO APPLY UPON THE EXPIRY OF THE PERIOD OF 40 DAYS AFTER THE COMPLETION OF THE DISTRIBUTION OF ALL THE NOTES OF THE TRANCHE OF WHICH THIS NOTE FORMS PART."; and

(viii) that the Issuer and others will rely upon the truth and accuracy of the foregoing acknowledgements, representations and agreements and agrees that if any of such acknowledgements, representations or agreements made by it are no longer accurate, it shall promptly notify the Issuer; and if it is acquiring any Notes as a fiduciary or agent for one or more accounts it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgements, representations and agreements on behalf of each such account.

Institutional Accredited Investors who purchase Registered Notes in definitive form offered and sold in the United States in reliance upon the exemption from registration provided by Regulation D of the Securities Act are required to execute and deliver to the Registrar an IAI Investment Letter. Upon execution and delivery of an IAI Investment Letter by an Institutional Accredited Investor, Notes will be issued in definitive registered form, see "*Form of the Notes*".

The IAI Investment Letter will state, among other things, the following:

(i) that the Institutional Accredited Investor has received a copy of the Offering Circular and such other information as it deems necessary in order to make its investment decision;

(ii) that the Institutional Accredited Investor understands that any subsequent transfer of the Notes is subject to certain restrictions and conditions set forth in the Offering Circular and the Notes (including those set out above) and that it agrees to be bound by, and not to resell, pledge or otherwise transfer the Notes except in compliance with, such restrictions and conditions and the Securities Act;

(iii) that, in the normal course of its business, the Institutional Accredited Investor invests in or purchases securities similar to the Notes;

(iv) that the Institutional Accredited Investor is an Institutional Accredited Investor within the meaning of Rule 501(a)(1), (2), (3) or (7) of Regulation D under the Securities Act and has such knowledge and experience in financial and business matters as to be capable of evaluating the merits and risks of its investment in the Notes, and it and any accounts for which it is acting are each able to bear the economic risk of its or any such accounts' investment for an indefinite period of time;

(v) that the Institutional Accredited Investor is acquiring the Notes purchased by it for its own account or for one or more accounts (each of which is an Institutional Accredited Investor) as to each of which it exercises sole investment discretion and not with a view to any distribution of the Notes, subject, nevertheless, to the understanding that the disposition of its property shall at all times be and remain within its control; and

(vi) that, in the event that the Institutional Accredited Investor purchases Notes, it will acquire Notes having a minimum purchase price of at least U.S.$500,000 (or the approximate equivalent in another Specified Currency) and higher integral multiples of U.S.$1,000 (or its equivalent as aforesaid).

No sale of Legended Notes in the United States to any one purchaser will be for less than U.S.$100,000 (or its foreign currency equivalent) and higher integral multiples of U.S.$10,000 (or its equivalent as aforesaid) principal amount or, in the case of sales to Institutional Accredited Investors, U.S.$500,000 (or its foreign currency equivalent) and higher integral multiples of U.S.$1,000 (or its equivalent as aforesaid) principal amount and no Legended Note will be issued in connection with such a sale in a smaller principal amount. If the purchaser is a non-bank fiduciary acting on behalf of others, each person for whom it is acting must purchase at least U.S.$100,000 (or its foreign currency equivalent) and higher integral multiples of U.S.$1,000 (or its equivalent as aforesaid) or, in the case of sales to Institutional Accredited Investors, U.S.$500,000 (or its foreign currency equivalent) and higher integral multiples of U.S.$1,000 (or its equivalent as aforesaid) principal amount of Registered Notes.

Selling Restrictions

United States of America

The Notes have not been and will not be registered under the Securities Act and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in certain transactions exempt from the registration requirements of the Securities Act.

The Notes in bearer form are subject to U.S. tax law requirements and may not be offered, sold or delivered within the United States or its possessions or to a United States person, except in certain transactions permitted by U.S. tax regulations. Terms used in this paragraph have the meanings given to them by the Code and regulations thereunder.

In connection with any Notes which are offered or sold outside the United States in reliance on an exemption from the registration requirements of the Securities Act provided under Regulation S ("**Regulation S Notes**") each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that it will not offer, sell or deliver such Regulation S Notes (i) as part of their distribution at any time or (ii) otherwise until 40 days after the completion of the distribution, as determined and certified by the relevant Dealer or, in the case of an issue of Notes on a syndicated basis, the relevant lead manager, of all Notes of the Tranche of which such Regulation S Notes are a part, within the United States or to, or for the account or benefit of, U.S. persons. Each Dealer has further agreed, and each further Dealer appointed under the Programme will be required to agree, that it will send to each dealer to which it sells any Regulation S Notes during the distribution compliance period a confirmation or other notice setting forth the restrictions on offers and sales of the Regulation S Notes within the United States or to, or for the account or benefit of, U.S. persons.

Until 40 days after the commencement of the offering of any Series of Notes, an offer or sale of such Notes within the United States by any dealer (whether or not participating in the offering) may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with an applicable exemption from registration under the Securities Act.

Dealers may (either directly or through selling agents, which may include their respective U.S. broker-dealer affiliates) arrange for the resale of Notes to QIBs pursuant to Rule 144A and each such purchaser of Notes is hereby notified that the Dealers may be relying on the exemption from the registration requirements of the Securities Act provided by Rule 144A. The minimum aggregate principal amount of Notes which may be purchased by a QIB pursuant to Rule 144A is U.S.$100,000 (or the approximate equivalent thereof in any other currency) and higher integral multiples of U.S.$1,000 (or its equivalent as aforesaid). To the extent that the Issuer is not subject to or does not comply with the reporting requirements of Section 13 or 15(d) of the Exchange Act or the information furnishing requirements of Rule 12g3-2(b) thereunder, the Issuer has agreed to furnish to holders of Notes and to prospective purchasers designated by such holders, upon request, such information as may be required by Rule 144A(d)(4).

Each issuance of Index Linked Notes or Dual Currency Notes shall be subject to such additional selling restrictions as the Issuer and the relevant Dealer may agree as a term of the issuance and purchase of such Notes, which additional selling restrictions shall be set out in the applicable Pricing Supplement.

European Economic Area

Unless the Pricing Supplement in respect of any Notes specifies the "Prohibition of Sales to EEA Retail Investors" as "Not Applicable", each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes which are the subject of the offering contemplated by this Offering Circular as completed by the pricing supplement in relation thereto to any retail investor in the European Economic Area. For the purposes of this provision:

(a) the expression "retail investor" means a person who is one (or more) of the following:

    (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or

    (ii) a customer within the meaning of Directive 2002/92/EC, as amended, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or

    (iii) not a qualified investor as defined in Directive 2003/71/EC (as amended, the "**Prospectus Directive**"); and

(b) the expression an "offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe the Notes.

If the Pricing Supplement in respect of any Notes specifies "Prohibition of Sales to EEA Retail Investors" as "Not Applicable", in relation to each Member State, each Dealer has represented and agreed, and each further

Dealer appointed under the Programme will be required to represent and agree, that it has not made and will not make an offer of Notes which are the subject of an offering contemplated by this Offering Circular as completed by the Pricing Supplement in relation thereto to the public in that Member State, except that it may make an offer of Notes to the public in that Member State:

(a) if the Pricing Supplement in relation to the Notes specifies that an offer of those Notes may be made other than pursuant to Article 3(2) of the Prospectus Directive in that Member State (a "**Non-exempt Offer**"), following the date of publication of a prospectus in relation to such Notes which has been approved by the competent authority in that Member State or, where appropriate, approved in another Member State and notified to the competent authority in that Member State, **provided that** any such prospectus has subsequently been completed by the Pricing Supplement contemplating such Non-exempt Offer, in accordance with the Prospectus Directive, in the period beginning and ending on the dates specified in such prospectus or Pricing Supplement, as applicable and the Issuer has consented in writing to its use for the purpose of that Non- exempt Offer;

(b) at any time to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(c) at any time to fewer than 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive) as permitted under the Prospectus Directive, subject to obtaining the prior consent of the relevant Dealer or Dealers nominated by the Issuer for any such offer; or

(d) at any time in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of Notes referred to in (b) to (d) above shall require the Issuer or any Dealer to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

United Kingdom

Each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that:

(i) *No deposit-taking*: in relation to any Notes having a maturity of less than one year:

  (a) it is a person whose ordinary activities involve it in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of its business; and

  (b) it has not offered or sold and will not offer or sell any Notes other than to persons:

    (A) whose ordinary activities involve them in acquiring, holding, managing or disposing of investments (as principal or agent) for the purposes of their businesses; or

    (B) who it is reasonable to expect will acquire, hold, manage or dispose of investments (as principal or agent) for the purposes of their businesses,

  where the issue of the Notes would otherwise constitute a contravention of Section 19 of the FSMA by the Issuer;

(ii) *Financial promotion*: it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuer; and

(iii) *General compliance*: it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to any Notes in, from or otherwise involving the United Kingdom.

Japan

Each Dealer has acknowledged, and each further Dealer appointed under the Programme will be required to acknowledge, that the Notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Law No. 25 of 1948, as amended) (the "**FIEA**"). Each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not offered or sold and will not offer or sell any Notes, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (as defined under Item 5, Paragraph 1, Article 6 of the Foreign Exchange and Foreign Trade Control Law (Law No. 228 of 1949, as amended)) or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEA and other applicable laws, regulations and ministerial guidelines of Japan.

Hong Kong

Each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that:

(a) it has not offered or sold, and will not offer or sell, in Hong Kong Special Administrative Region of the PRC ("**Hong Kong**"), by means of any document, any Notes (except for Notes which are a "structured product" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "**SFO**")) other than (i) to "professional investors" as defined in the SFO and any rules made under the SFO; or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong (the "**C(WUMP)O**") or which do not constitute an offer to the public within the meaning of the C(WUMP)O; and

(b) it has not issued, or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Notes, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under the SFO.

Singapore

Each Dealer has acknowledged, and each further Dealer appointed under the Programme will be required to acknowledge, that this Offering Circular has not been and will not be registered as a prospectus with the Monetary Authority of Singapore under the Securities and Futures Act, Chapter 289 of Singapore (the "**SFA**"). Accordingly, each Dealer has represented, warranted and agreed, and each further Dealer appointed under the Programme will be required to represent, warrant and agree, that it has not offered or sold the Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell the Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this Offering Circular or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor under Section 274 of the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Notes pursuant to an offer made under Section 275 of the SFA except:

(1) to an institutional investor or to a relevant person as defined in Section 275(2) of the SFA or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the SFA; or

(5) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Securities and Securities-based Derivatives Contracts) Regulations 2018.

Notification under Section 309B(1)(c) of the SFA — Unless otherwise stated in the Pricing Supplement in respect of any Notes, the Issuer has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA) that the Notes to be issued under the Programme shall be prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and

Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Canada

The Notes have not been, and will not be, qualified for distribution to the public under the securities laws of Canada or any province or territory thereof. Each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that the Notes have not been and will not be offered, sold, distributed or delivered, directly or indirectly, in Canada or to, or for the account or benefit of, any person resident in Canada in contravention of the securities laws of Canada or any province or territory thereof and also without the consent of the Issuer. Each Dealer has also agreed, and each further Dealer appointed under the Programme will be required to agree, not to distribute or deliver this Offering Circular or any other offering material or advertisement in connection with the Notes, in Canada in contravention of the securities laws of Canada or any province or territory thereof and also without the consent of the Issuer.

United Arab Emirates (excluding the Dubai International Finance Centre)

Each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that the Notes to be issued under the Programme have not been and will not be offered, sold or publicly promoted or advertised by it in the United Arab Emirates other than in compliance with any laws applicable in the United Arab Emirates governing the issue, offering and sale of securities.

Dubai International Financial Centre

Each Dealer has represented and agreed, and each further Dealer appointed under the Programme will be required to represent and agree, that it has not offered and will not offer the Notes to any person in the Dubai International Financial Centre unless such offer is:

(i) an "Exempt Offer" in accordance with the Markets Rules Module of the Dubai Financial Services Authority Rulebook; and

(ii) made only to persons who meet the Professional Client criteria set out in Rule 2.3.3 of the Conduct of Business Module of the Dubai Financial Services Authority Rulebook.

Switzerland

The Notes may not be publicly offered, sold or advertised, directly or indirectly, in, into or from Switzerland, and will not be listed on SIX Swiss Exchange ("**SIX**") or on any other exchange or regulated trading facility in Switzerland. This Offering Circular has been prepared without regard to the disclosure standards for issuance prospectuses under article 652a or article 1156 of the Swiss Code of Obligations, or the disclosure standards for listing prospectuses under article 27 et seq. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland, or the rules related to prospectuses under Swiss Federal Act on Collective Investment Schemes. Neither this Offering Circular nor any other offering or marketing material relating to the Notes or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this Offering Circular nor any other offering or marketing material relating to the Offering, the Issuer or the Notes have been or will be filed with or approved by any Swiss regulatory authority. In particular, this Offering Circular will not be filed with, and the offer of Notes will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA ("**FINMA**"). Acquirers of the Notes will not benefit from protection or supervision by FINMA.

Korea

The Notes have not been and will not be registered under the FSCMA. Each Dealer has represented and agreed each further Dealer appointed under the Programme will be required to represent and agree that the Notes have not been and will not be offered, sold or delivered, directly or indirectly, in Korea or to, or for the account or benefit of, any resident of Korea (as defined in the Foreign Exchange Transactions Law of Korea and its Enforcement Decree), or to any other person for reoffering, resale or re-delivery, directly or indirectly, in Korea or to, or for the account or benefit of, any resident of Korea, except as otherwise permitted by applicable Korean laws and regulations. In addition, each dealer has represented and agreed that, until the expiration of one year after the issuance of the Notes, a holder of Notes will be prohibited from offering, delivering or selling any Notes, directly or indirectly, in Korea or to any Korean resident except (i) in the case where the Notes are not issued as convertible bonds, bonds with warrants and exchangeable bonds, the Notes may be offered, sold or delivered to or for the account or benefit of a Korean resident which falls within certain categories of qualified institutional investors as specified in the FSCMA, its Enforcement Decree and the Regulation on Securities Issuance and Disclosure, **provided that** (x) the Notes are registered with the KOFIA by the Issuer and (y) the qualified institutional investors are registered with the KOFIA in advance, and further **provided that** all of the following requirements are satisfied: (1) the Notes shall be issued in a currency other than Won and the principal and interest shall be paid in a currency other than Won, (2) at least 80 per cent. of the Notes shall be allocated to non-residents of Korea (which applies only to the Notes acquired from the Issuer or any underwriter at the time of issuance), (3) the Notes shall be those listed on a major overseas securities market specified by the governor of the FSS, those registered with or reported to a foreign financial investment supervisory agency of the country in which a major overseas market is established, or those for which any other procedure that may be deemed a public offering is completed in the country in which a major overseas market is established, (4) measures shall be taken to state the condition that the Notes shall not be transferred to any Korean resident other than qualified institutional investors at the time of issuance or within one year from the issuance date on the face of such Notes (limited to cases where any physical instrument is issued), the underwriting agreement, subscription agreement and offering document and (5) the Issuer and the relevant Dealers shall take measures under foregoing items (1) through (4) and the Issuer and the relevant Dealers shall severally or jointly preserve evidential documents in relation thereto; or (ii) as otherwise permitted under applicable Korean laws and regulations.

Each Dealer has undertaken, and each further Dealer appointed under the Programme will be required to undertake, to ensure that any securities dealer to which it sells Notes confirms that it is purchasing such Notes as principal and agrees with such Dealer that it will comply with the restrictions described above.

General

Each Dealer has agreed, and each further Dealer appointed under the Programme will be required to agree, that it will (to the best of its knowledge and belief) comply with all applicable securities laws and regulations in force in any jurisdiction in which it purchases, offers, sells or delivers Notes or possesses or distributes this Offering Circular and will obtain any consent, approval or permission required by it for the purchase, offer, sale or delivery by it of Notes under the laws and regulations in force in any jurisdiction to which it is subject or in which it makes such purchases, offers, sales or deliveries and neither the Issuer nor any other Dealer shall have any responsibility therefor.

If a jurisdiction requires that any offering of Notes under the Programme be made by a licenced broker or dealer and any Dealer or any affiliate of a Dealer is a licenced broker or dealer in that jurisdiction, the offering shall be deemed to be made by such Dealer or such affiliate on behalf of the Issuer in such jurisdiction.

Neither the Issuer nor any of the Dealers represents that Notes may at any time lawfully be sold in compliance with any applicable registration or other requirements in any jurisdiction, or pursuant to any exemption available thereunder, or assumes any responsibility for facilitating such sale.

With regard to each Tranche, the relevant Dealer will be required to comply with such other additional restrictions as the Issuer and the relevant Dealer shall agree and as shall be set out in the applicable Pricing Supplement.

The Dealers and certain of their affiliates may have performed certain investment banking and advisory services for the Bank and/or its affiliates from time to time for which they have received customary fees and expenses and may, from time to time, engage in transactions with and perform services for the Bank and/or its affiliates in the ordinary course of their business.

The Dealers or certain of their affiliates may purchase the Notes and be allocated Notes for asset management and/or proprietary purposes and not with a view to distribution.

The Dealers or their respective affiliates may purchase the Notes for its or their own account and enter into transactions, including credit derivatives, such as asset swaps, repackaging and credit default swaps relating to the Notes and/or other securities of the Bank or its subsidiaries or associates at the same time as the offer and sale of the Notes or in secondary market transactions. Such transactions would be carried out as bilateral trades with selected counterparties and separately from any existing sale or resale of the Notes to which this Offering Circular relates (notwithstanding that such selected counterparties may also be purchasers of the Notes).

GENERAL INFORMATION

Authorisation

The establishment of the Programme and the issue of Notes under the Programme have been duly authorised by a resolution of the Board of the Issuer dated 12 May 1995.

Listing of Notes on the Singapore Stock Exchange

Approval in-principle has been received from the Singapore Stock Exchange in connection with the Programme and application will be made for the listing and quotation of Notes that may be issued pursuant to the Programme and which are agreed at or prior to the time of issue thereof to be so listed on the Singapore Stock Exchange. Such permission will be granted when the Notes have been admitted for listing and quotation on the Singapore Stock Exchange. The Singapore Stock Exchange assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained herein. Approval in-principle from, admission to the Official List of, and listing and quotation of any of the Notes on, the Singapore Stock Exchange are not to be taken as an indication of the merits of the Issuer, the Programme or the Notes.

Documents Available

From the date hereof and so long as Notes are capable of being issued under the Programme, copies of the following documents will, when published, be available for inspection at the registered office of the Issuer (in the case of clause (v) below, those documents will also be available at the specified office of the Principal Paying Agent):

(i) the constitutional documents (together with English translations) of the Issuer;

(ii) the audited consolidated and separate financial statements of the Issuer in respect of the financial years ended 31 December 2015, 2016 and 2017 (together with English translations);

(iii) the reviewed consolidated and separate financial statements of the Issuer in respect of the nine-month periods ended 30 September 2017 and 2018 (together with English translations);

(iv) the most recently published (if available) audited consolidated and separate annual financial statements of the Issuer and the most recently published (if available) reviewed consolidated and separate interim financial statements of the Issuer (together with English translations);

(v) the Programme Agreement, the Agency Agreement, the forms of the Temporary Global Notes, the Permanent Global Notes, the definitive Bearer Notes, the Receipts, the Coupons, the Talons, the Regulation S Global Notes, the Restricted Global Notes and the Definitive IAI Registered Notes, the Deed Poll and the Deed of Covenant;

(vi) a copy of this Offering Circular;

(vii) any future offering circulars, information memoranda and supplements, including Pricing Supplements (save that a Pricing Supplement relating to an unlisted Note will only be available for inspection by a holder of such Note and such holder must produce evidence satisfactory to the Issuer or the relevant Paying Agent, as the case may be, as to its holding and identity), to this Offering Circular and any other documents incorporated herein or therein by reference; and

(viii) in the case of each issue of listed Notes subscribed pursuant to a subscription agreement, the subscription agreement (or equivalent document).

Clearing Systems

The Notes have been accepted for clearance through Euroclear and Clearstream, Luxembourg. The appropriate Common Code and ISIN for each Tranche of Notes allocated by Euroclear and Clearstream, Luxembourg will be specified in the applicable Pricing Supplement. The Issuer may also apply to have the Notes accepted for clearance through the CMU Service. The relevant CMU instrument number will be specified in the applicable Pricing Supplement. For persons seeking to hold a beneficial interest in the CMU Notes held in a global certificate through Euroclear or Clearstream, such persons will hold their interests through an account opened and held by Euroclear or Clearstream with HKMA as the CMU operator. In addition, the Issuer will make an application for any Registered Notes to be accepted for trading in book-entry form by DTC. The CUSIP and/or CINS numbers for each Tranche of Registered Notes, together with the relevant ISIN and Common Code, will be specified in the applicable Pricing Supplement. If the Notes are to clear through an additional or alternative clearing system, the appropriate information will be specified in the applicable Pricing Supplement.

Significant or Material Change

Save as disclosed in this Offering Circular, there has been no significant change in the financial or trading position of the Issuer and its subsidiaries since 30 September 2018 and there has been no material adverse change in the financial position or prospects of the Issuer and its subsidiaries since 30 September 2018.

Litigation

Other than as described in "*KEB Hana Bank — Legal Proceedings*", neither the Issuer nor any of its subsidiaries (whether as defendant or otherwise) is engaged in any legal, arbitration, administrative or other proceedings, the results of which might have or have had in the recent past (covering at least the previous 12 months) a significant effect on the financial position or the operations of the Issuer and its subsidiaries nor is the Issuer aware of any such proceedings pending or being threatened.

Auditors

The consolidated financial statements of the Issuer as of and for the years ended 31 December 2015, 2016 and 2017 included in this Offering Circular have been audited by Ernst & Young Han Young, independent auditors, as stated in their reports appearing herein.

With respect to the Issuer's unaudited interim consolidated financial statements as of 30 September 2018 and for the three and nine months ended 30 September 2017 and 2018 included in this Offering Circular, Ernst & Young Han Young reported that they have applied limited procedures in accordance with professional standards for a review of such information. However, their separate report dated 13 November 2018, included herein, states that they did not audit and they do not express an opinion on such unaudited financial statements. Accordingly, the degree of reliance on their report on such information should be restricted in light of the limited nature of the review procedures applied.

INDEX TO FINANCIAL STATEMENTS

KEB Hana Bank and its subsidiaries

Interim consolidated financial statements for the nine-month periods ended September 30, 2018 and 2017 with the independent auditor's review report

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Report on review of interim consolidated financial statements

The Shareholders and Board of Directors
KEB Hana Bank and its subsidiaries

We have reviewed the accompanying interim consolidated financial statements of KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Company"), which comprise the interim consolidated statement of financial position as of September 30, 2018, and the related interim consolidated statements of comprehensive income for the three-month and nine-month periods ended September 30, 2018 and 2017, and the interim consolidated statements of changes in equity and interim consolidated statements of cash flows for the nine-month periods then ended, and notes to the interim financial statements, including a summary of significant accounting policies.

Management's responsibility for the interim consolidated financial statements

Management is responsible for the preparation and presentation of these interim consolidated financial statements in accordance with Korean International Financial Reporting Standard (KIFRS) 1034 *Interim Financial Reporting*, and for such internal control as management determines is necessary to enable the preparation of the interim financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express a conclusion on these interim consolidated financial statements based on our review.

We conducted our review in accordance with the review standards for interim financial statements in the Republic of Korea. A review of interim financial information consists of making inquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with auditing standards generally accepted in the Republic of Korea and, consequently, does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

Conclusion

Based on our review, nothing has come to our attention that causes us to believe that the accompanying interim consolidated financial statements do not present fairly, in all material respects, the financial position of the company as of September 30, 2018 and of its financial performance and cash flows for the nine-month period then ended, in accordance with KIFRS 1034.

Other matter

We have audited the consolidated statement of financial position of the Company as of December 31, 2017, and the related consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended in accordance with auditing standards generally accepted in the Republic of Korea (not presented herein), and our report dated March 5, 2018 expressed an unqualified opinion thereon. The accompanying consolidated statement of financial position as of December 31, 2017 presented for comparative purposes is not different, in all material respects, from the above audited consolidated statement of financial position.

Ernst & Young Han Young

November 13, 2018

This review report is effective as of November 13, 2018, the independent auditor's review report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditor's review report to the time this review report is used. Such events and circumstances could significantly affect the accompanying interim consolidated financial statements and may result in modifications to this review report.

KEB Hana Bank and its subsidiaries
Interim consolidated statements of financial position
as of September 30, 2018 and December 31, 2017

(Korean won in millions)

	Notes	2018-09-30(unaudited)	2017-12-31
Assets			
Cash and due from banks	5, 6, 7, 9, 11 and 56	₩ 20,777,262	₩ 19,983,916
Financial assets at FVTPL (KIFRS 1039)	5, 6, 7, 8, 9, 12 and 20	—	9,443,614
Financial assets measured at FVTPL (KIFRS 1109)	5, 6, 7, 8, 9, 13 and 20	8,623,542	—
Derivative assets used for hedging	5, 6, 7, 8, 9 and 20	1,731	11,760
Available-for-sale financial assets	5, 6, 7, 8, 9, 14 and 18	—	44,322,512
Financial assets measured at FVOCI	5, 6, 7, 8, 9, 15 and 18	36,991,269	—
Held-to-maturity financial assets	5, 6, 7, 8, 9, 16 and 18	—	6,160,922
Securities measured at amortized cost	5, 6, 7, 8, 9, 17 and 18	11,477,982	—
Loans	5, 6, 7, 8, 9, 18 and 19	236,827,355	224,096,709
Investments in subsidiaries and associates	21	991,292	935,555
Property and equipment	10 and 22	1,842,789	1,635,352
Investment property	10 and 23	532,327	786,154
Intangible assets	10 and 24	257,500	242,677
Net defined benefit assets	32	2,229	44,545
Current income tax assets		12,531	10,390
Deferred income tax assets	53	52,423	62,639
Other assets	5, 6, 7, 8, 9 and 26	16,935,286	9,733,946
Merchant banking account assets	5, 6, 7, 9 and 26	2,927,304	2,966,019
Non-current assets held for sale	25	462,409	457,699
Total assets		₩338,715,231	₩320,894,409
Liabilities and equity			
Liabilities			
Deposits	5, 6, 7, 9 and 27	₩239,610,291	₩230,410,494
Financial liabilities at FVTPL (KIFRS 1039)	5, 6, 7, 8, 9 and 28	—	6,839,559
Financial liabilities measured at FVTPL (KIFRS 1109)	5, 6, 7, 8, 9 and 29	3,697,413	—
Derivative liabilities used for hedging	5, 6, 7, 8, 9 and 20	163,626	73,024
Borrowings	5, 6, 7, 9, 30 and 56	15,822,478	13,774,502
Debentures	5, 6, 7, 9, 31 and 56	25,263,512	22,311,737
Net defined benefit liability	32	5,465	5,170
Provisions	33	202,840	286,959
Current income tax liabilities		327,263	619,535
Deferred income tax liabilities	53	187,145	52,852
Other liabilities	5, 6, 7, 8, 9 and 34	26,403,920	21,263,075
Merchant banking account liabilities	5, 6, 7, 9 and 34	2,854,183	2,018,346
Total liabilities		314,538,136	297,655,253
Equity			
Issued capital	35	5,359,578	5,359,578
Capital surplus	35	9,670,357	9,668,863
Hybrid equity securities	35	179,737	179,737
Capital adjustments	35	(43,642)	(42,624)
Retained earnings	37	9,797,415	8,735,759
(Regulatory reserve for bad debts in the amount of ₩1,934,322 and ₩1,915,033 as of September 30, 2018 and December 31, 2017, respectively)			
(Required provision for (reversal of) bad debts in the amount of ₩206,817 and ₩19,289 as of September 30, 2018 and December 31, 2017, respectively)			
(Planned provision for bad debts in the amount of ₩206,817 and ₩19,289 as of September 30, 2018 and December 31, 2017, respectively)	38		
Accumulated other comprehensive income	36	(874,024)	(751,704)
Equity attributable to equity holder of the parent		24,089,421	23,149,609
Non-controlling shareholders' equity		87,674	89,547
Total equity		24,177,095	23,239,156
Total liabilities and equity		₩338,715,231	₩320,894,409

The accompanying notes are an integral part of the interim consolidated financial statements.

KEB Hana Bank and its subsidiaries
Interim consolidated statements of comprehensive income
for the three-month and the nine-month periods ended September 30, 2018 and 2017

(Korean won in millions except per share amounts)

	Notes	For the three-month periods ended September 30 2018(unaudited)	For the three-month periods ended September 30 2017(unaudited)	For the nine-month periods ended September 30 2018(unaudited)	For the nine-month periods ended September 30 2017(unaudited)
Net interest income	10, 39 and 40				
Interest income		₩ 2,412,792	₩ 2,055,240	₩ 6,889,423	₩ 5,969,953
Interest expenses		(1,070,131)	(824,539)	(2,964,261)	(2,431,686)
		1,342,661	1,230,701	3,925,162	3,538,267
Net fee and commission income	10, 39 and 41				
Fee and commission income		205,444	217,391	626,700	634,076
Fee and commission expenses		(44,893)	(51,401)	(133,583)	(148,265)
		160,551	165,990	493,117	485,811
Net gain (loss) on financial instruments at FVTPL (KIFRS 1039)	39 and 42	—	(18,626)	—	(168,668)
Net gain (loss) on financial instruments measured at FVTPL (KIFRS 1109)	39 and 43	51,493	—	136,749	—
Net gain on derivative financial instruments used for hedging	39 and 44	(9,562)	5,934	(9,116)	17,861
Net gain on available-for-sale financial assets	39 and 45	—	59,518	—	173,066
Net gain (loss) on financial instruments measured at FVOCI	39 and 46	263	—	5,717	—
Impairment loss	39 and 47	4,431	(58,031)	(34,195)	(509,627)
General and administrative expenses	10, 39 and 48	(805,617)	(759,826)	(2,154,274)	(2,100,197)
Net other operating income					
Other operating income	39 and 49	1,001,120	1,059,823	3,200,643	3,644,374
Other operating expenses	39 and 50	(973,677)	(1,030,123)	(3,171,913)	(3,216,077)
		27,443	29,700	28,730	428,297
Operating income		771,663	655,360	2,391,890	1,864,810
Net non-operating income					
Non-operating income	10 and 51	16,961	33,345	83,356	147,180
Non-operating expenses	10 and 52	(8,616)	(13,166)	(47,523)	(40,839)
		8,345	20,179	35,833	106,341
Net income before income tax expenses		780,008	675,539	2,427,723	1,971,151
Income tax expenses	10 and 53	(213,044)	(159,046)	(664,588)	(451,963)
Net income		566,964	516,493	1,763,135	1,519,188
Net income					
Equity holder of the parent		565,493	514,437	1,757,614	1,513,250
(Adjusted income after regulatory reserve for bad debt in the amount of ₩1,559,719 and ₩1,499,792 for the nine-month periods ended September 30, 2018 and 2017, respectively)	38				
Non-controlling interests		1,471	2,056	5,521	5,938
		566,964	516,493	1,763,135	1,519,188
Other comprehensive income (loss)	36				
Items that may be reclassified subsequently to profit or loss:					
Gain on valuation of available-for-sale financial assets		—	(36,810)	—	171,582
Gain on valuation of debt securities measured at FVOCI		83,069	—	125,416	—
Exchange differences on translation of foreign operations		(82,457)	46,635	(30,089)	(61,426)
Changes in capital from valuation of equity method for investments in associates		(36,846)	20,653	14,890	(6,875)
Gain on valuation of net investment hedges of foreign operations		2,393	(12,877)	(16,490)	12,424
Gain on valuation of fair value hedges		1,800	—	(8,260)	—
Tax effect		(9,371)	(4,260)	(37,432)	(28,000)
		(41,412)	13,341	48,035	87,705
Items that will not be reclassified subsequently to profit or loss:					
Remeasurements of the defined benefit plan		(2,559)	(2,058)	(8,924)	(5,554)
Gain on valuation of equity securities measured at FVOCI		79,364	—	254,663	—
Tax effect		(21,121)	499	(67,578)	1,345
		55,684	(1,559)	178,161	(4,209)
		14,272	11,782	226,196	83,496
Total comprehensive income		₩ 581,236	₩ 528,275	₩ 1,989,331	₩ 1,602,684
Equity holder of the parent		582,240	526,913	1,988,396	1,599,572
Non-controlling interests		(1,004)	1,362	935	3,112
Earnings per share	**54**				
Basic earnings per share		₩ 525	₩ 478	₩ 1,633	₩ 1,405
Diluted earnings per share		₩ 525	₩ 478	₩ 1,633	₩ 1,405

The accompanying notes are an integral part of the interim consolidated financial statements.

KEB Hana Bank and its subsidiaries
Interim consolidated statements of changes in equity
for the nine-month periods ended September 30, 2018 and 2017

(Korean won in millions)

	Issued capital	Capital surplus	Hybrid equity securities	Capital adjustments	Retained earnings	Accumulated other comprehensive income	Equity attributable to equity holder of the parent	Non-controlling shareholders' equity	Total
As of January 1, 2017	₩5,359,578	₩9,668,897	₩179,737	₩(30,785)	₩7,242,262	₩ (395,323)	₩22,024,366	₩88,250	₩22,112,616
Dividends	—	—	—	—	(600,200)	—	(600,200)	—	(600,200)
Dividends on hybrid equity securities	—	—	—	—	(7,360)	—	(7,360)	(1,508)	(8,868)
Share-based payment transactions	—	—	—	(8,369)	—	—	(8,369)	—	(8,369)
Other capital adjustment	—	(34)	—	(157)	—	—	(191)	(2)	(193)
Acquisition of subsidiaries	—	—	—	(1,710)	—	—	(1,710)	1,710	—
	5,359,578	9,668,863	179,737	(41,021)	6,634,702	(395,323)	21,406,536	88,450	21,494,986
Net income for the period	—	—	—	—	1,513,250	—	1,513,250	5,938	1,519,188
Gain on valuation of available-for-sale financial assets	—	—	—	—	—	128,800	128,800	1,260	130,060
Exchange differences on transaction of foreign operations	—	—	—	—	—	(42,473)	(42,473)	(4,086)	(46,559)
Changes in equity on investments in associates	—	—	—	—	—	(5,211)	(5,211)	—	(5,211)
Gain on valuation of net investment hedges of foreign operations	—	—	—	—	—	9,417	9,417	—	9,417
Changes in remeasurement of the defined benefit plan	—	—	—	—	—	(4,211)	(4,211)	—	(4,211)
Total comprehensive income for the period	—	—	—	—	1,513,250	86,322	1,599,572	3,112	1,602,684
As of September 30, 2017(unaudited)	₩5,359,578	₩9,668,863	₩179,737	₩(41,021)	₩8,147,952	₩ (309,001)	₩23,006,108	₩91,562	₩23,097,670
As of January 1, 2018	₩5,359,578	₩9,668,863	₩179,737	₩(42,624)	₩8,735,759	₩ (751,704)	₩23,149,609	₩89,547	₩23,239,156
Effect of changes in accounting standards	—	—	—	—	301,831	(370,931)	(69,100)	(1,300)	(70,400)
Dividends	—	—	—	—	(972,600)	—	(972,600)	—	(972,600)
Dividends on hybrid equity securities	—	—	—	—	(7,360)	—	(7,360)	(1,508)	(8,868)
Share-based payment transactions	—	1,494	—	(1,018)	—	—	476	—	476
Reclassification of valuation gain or loss on equity securities measured at FVOCI upon derecognition	—	—	—	—	(17,829)	17,829	—	—	—
	5,359,578	9,670,357	179,737	(43,642)	8,039,801	(1,104,806)	22,101,025	86,739	22,187,764
Net income for the period	—	—	—	—	1,757,614	—	1,757,614	5,521	1,763,135
Gain on valuation of financial assets measured at FVOCI	—	—	—	—	—	274,795	274,795	(1,738)	273,057
Exchange differences on transaction of foreign operations	—	—	—	—	—	(30,395)	(30,395)	(2,848)	(33,243)
Gain on valuation of net investment hedges of foreign operations	—	—	—	—	—	(11,954)	(11,954)	—	(11,954)
Gain on valuation of fair value hedges	—	—	—	—	—	(5,989)	(5,989)	—	(5,989)
Changes in remeasurement of the defined benefit plan	—	—	—	—	—	(6,470)	(6,470)	—	(6,470)
Changes in equity on investments in associates	—	—	—	—	—	10,795	10,795	—	10,795
Total comprehensive income for the period	—	—	—	—	1,757,614	230,782	1,988,396	935	1,989,331
As of September 30, 2018(unaudited)	₩5,359,578	₩9,670,357	₩179,737	₩(43,642)	₩9,797,415	₩ (874,024)	₩24,089,421	₩87,674	₩24,177,095

The accompanying notes are an integral part of the interim consolidated financial statements.

KEB Hana Bank and its subsidiaries
Interim consolidated statements of cash flows
for the nine-month periods ended September 30, 2018 and 2017

(Korean won in millions)

	2018(unaudited)	2017(unaudited)
Operating activities		
Net income before income tax expenses	₩ 2,427,723	₩ 1,971,151
Adjustments to income:		
Interest expenses	2,964,261	2,431,686
Interest income	(6,889,423)	(5,969,953)
Dividend income	(11,911)	(51,585)
	(3,937,073)	(3,589,852)
Adjustments to non-cash items:		
Net loss on valuation of financial instruments at FVTPL (KIFRS 1039)	—	(133,156)
Net gain on valuation of financial instruments measured at FVTPL (KIFRS 1109)	(153,208)	—
Net loss on disposal of financial instruments measured at FVTPL (KIFRS 1109)	30,636	—
Net gain on valuation of derivative financial instruments used for hedging	5,126	(17,361)
Net gain on disposal of available-for-sale financial assets	—	(173,066)
Impairment loss on available-for-sale financial assets	—	79,513
Net gain on disposal of financial instruments measured at FVOCI	(5,717)	—
Loss on credit risk of financial instruments measured at FVOCI transferred in (reversed)	(1,402)	—
Allowance for securities measured at amortized cost transferred in	1,836	—
Provision of allowance	33,761	430,114
Loss on disposal of investments in subsidiaries and associates	6	—
Impairment loss on investment in subsidiaries and associates	—	226
Net gain on valuation of equity method investments	(37,520)	(89,292)
Depreciation and amortization	147,516	148,006
Net gain on disposal of property and equipment and intangible assets	(10,924)	(12,343)
Retirement benefits	88,478	100,205
Share-based payment expense	7,730	10,732
Net provisions transferred in (reversed)	(85,813)	(14,584)
Net loss on foreign exchange transactions	(233,189)	(293,569)
Others	33	(13,223)
	(212,651)	22,202
Changes in operating assets and liabilities:		
Financial assets at FVTPL (KIFRS 1039)	—	2,530,339
Financial assets measured at FVTPL (KIFRS 1109)	3,285,822	—
Derivative assets used for hedging	8,861	6,373
Loans	(12,985,097)	(12,678,068)
Net defined benefit assets	(54,690)	—
Other assets	(7,062,653)	(5,855,929)
Merchant banking account assets	38,687	(148,898)
Deposits	9,224,782	8,960,285
Financial liabilities at FVTPL (KIFRS 1039)	—	(2,686,214)
Financial liabilities measured at FVTPL (KIFRS 1109)	(3,083,610)	—
Derivative assets used for hedging	(21,264)	(4,304)
Net defined benefit liability	—	(77,489)
Provisions	1,368	(13,237)
Other liabilities	5,605,318	3,394,933
Merchant banking account liabilities	835,936	45,539
	(4,206,540)	(6,526,670)
Cash received from operating activities:		
Interest receipts	6,801,292	6,005,086
Dividend receipts	14,134	84,818
	6,815,426	6,089,904
Cash payment for operating activities:		
Interest payments	3,486,178	2,478,442
Payment of income tax	893,407	216,828
	(4,379,585)	(2,695,270)
Net cash flows used in operating activities	(3,492,700)	(4,728,535)

(Continued)

KEB Hana Bank and its subsidiaries
Interim consolidated statements of cash flows
for the nine-month periods ended September 30, 2018 and 2017

(Korean won in millions) (Continued)

	2018(unaudited)	2017(unaudited)
Investing activities		
Increase in restricted due from banks, net	₩ 467,331	₩ 4,745,131
Increase in financial assets measured at FVTPL (KIFRS 1109)	(5,865,550)	—
Decrease in financial assets measured at FVTPL (KIFRS 1109)	6,842,070	—
Increase in available-for-sale financial assets	—	(30,524,055)
Decrease in available-for-sale financial assets	—	23,581,660
Increase in financial assets measured at FVOCI	(4,166,854)	—
Decrease in financial assets measured at FVOCI	8,710,817	—
Increase in held-to-maturity financial assets	—	(2,302,437)
Decrease in held-to-maturity financial assets	—	1,116,155
Increase in securities measured at amortized cost	(5,704,548)	—
Decrease in securities measured at amortized cost	397,548	—
Increase in investments in subsidiaries and associates	(14,010)	(47,549)
Decrease in investments in subsidiaries and associates	8,186	2,665
Acquisition of property and equipment	(76,147)	(198,185)
Proceeds from disposal of property and equipment	46,478	98,619
Acquisition of intangible assets	(71,888)	(56,384)
Proceeds from disposal of intangible assets	714	3,241
Increase in non-current assets held for sale	(18,778)	—
Disposal of non-current assets held for sale	14,050	—
Increase in guarantee deposits paid, net	56,658	81,385
Net cash flows provided by investing activities	626,077	(3,499,754)
Financing activities		
Increase in borrowings, net	2,014,344	3,165,220
Issuance of debentures	8,117,711	8,414,695
Redemption of debentures	(5,219,950)	(5,122,572)
Dividends paid	(972,600)	(600,200)
Dividends on hybrid equity securities	(8,868)	(8,868)
Net cash flows provided by financing activities	3,930,637	5,848,275
Net increase (decrease) in cash and cash equivalents	1,064,014	(2,380,014)
Cash and cash equivalents at the beginning of the period	7,439,041	8,613,796
Effect of exchange rate changes on cash and cash equivalents	138,098	51,378
Cash and cash equivalents at the end of the period (Note 56)	₩ 8,641,153	₩ 6,285,160

The accompanying notes are an integral part of the interim consolidated financial statements.

1. Company information

General information on KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Company") in accordance with KIFRS 1110 is as follows.

1.1 The Bank

The Bank was established on January 30, 1967, as a government-controlled bank to engage in foreign exchange and trade finance business under the *Korea Exchange Bank Act* enacted on July 28, 1966. On December 30, 1989, the *Korea Exchange Bank Act* was repealed, and the Bank was reorganized as a corporation under the Commercial Code of the Republic of Korea. On April 4, 1994, the Bank was listed on the Korea Exchange (formerly, Korea Stock Exchange). On February 28, 2004, the Bank merged its subsidiary, Korea Exchange Bank Credit Service Co., Ltd. On August 31, 2014, the Bank spun off its credit card division.

On February 9, 2012, Hana Financial Group Inc. ("HFG") acquired 52.27% equity interest in the Bank, and later on April 5, 2013, the Bank became a wholly owned subsidiary of HFG after HFG acquired the remaining interest in the Bank through the mutual exchange of the shares.

The Bank changed to its current name on September 1, 2015 following the merger of Korea Exchange Bank ("KEB Bank") and Hana Bank.

The Bank provides commercial banking service, trust banking service, merchant banking service, foreign exchange and other related services as permitted under the *Banking Act* of the Republic of Korea. As of September 30, the Bank's headquarters is located in Seoul, with its 758 domestic branches (including 74 satellite offices) and 24 overseas branches (including 2 satellite offices and 5 offices).

The Bank is authorized to issue 2,000 million shares of common stock, and as of September 30, 2018, after a number of capital increases and decreases, stock splits and conversion of preferred shares to common shares, the Bank has 1,071,915,717 shares of common stock issued and outstanding with the total paid-in capital amounting to ₩5,359,578 million.

1.2 Scope and overview of consolidation

The Company's ownership percentages in its consolidated subsidiaries as of September 30, 2018 are summarized as follows (ownership in %):

Investee	Country	Major business	Share ratio (%)	Reporting date
Subsidiaries of KEB Hana Bank				
Hana Bank (China) Co., Ltd.	China	Bank	100.00	September 30, 2018
Hana Micro Finance Ltd.	Myanmar	Other financial business	99.99	September 30, 2018
DGB Leading Solution PEF Invest Trust 143 (*)	Korea	Asset management company	100.00	September 30, 2018
Hana UBS Power PEF Invest Trust 21 (*)	Korea	Asset management company	100.00	September 30, 2018
Hyundai Trust PEF Invest 16 (*)	Korea	Asset management company	100.00	September 30, 2018
Kyobo AXA Tomorrow PEF Invest Trust KH-1 (*)	Korea	Asset management company	100.00	September 30, 2018
Sevenstar Co., Ltd. (*)	Korea	Other financial business	—	September 30, 2018
Marine Solution Co., Ltd. (*)	Korea	Other financial business	—	September 30, 2018
Joong-ang star Co., Ltd. (*)	Korea	Other financial business	—	September 30, 2018
Antakya Co., Ltd. (*)	Korea	Other financial business	—	September 30, 2018
Cosmosolution Co., Ltd. (*)	Korea	Other financial business	—	September 30, 2018
Hana Display First Co., Ltd. (*)	Korea	Other financial business	—	September 30, 2018
Hana Indonesia Green Forest Co., Ltd	Korea	Other financial business	—	September 30, 2018

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
Trust accounts guaranteeing the repayment of principal (*)	Korea	Trust account	—	September 30, 2018
Hana F&I Inc.	Korea	Other financial business	99.58	September 30, 2018
KEB Hana Bank Canada	Canada	Financial business	100.00	September 30, 2018
KEB Hana Bank (Deutschland) A.G. (KEBDAG)	Germany	Financial business	100.00	September 30, 2018
PT Bank KEB Hana (former, PT. Bank KEB Indonesia) (KEBI)	Indonesia	Financial business	89.01	September 30, 2018
Banco KEB Hana Do Brasil S.A. (KEBB)	Brazil	Financial business	100.00	September 30, 2018
KEB Hana NY Financial Corp (NYFinCo)	USA	Financial business	100.00	September 30, 2018
KEB Hana LA Financial Corp (LAFinCo)	USA	Financial business	100.00	September 30, 2018
KEB Hana Global Finance Limited (KAF)	Hongkong	Financial business	100.00	September 30, 2018
KEB RUS LLC.	Russia	Financial business	99.99	September 30, 2018
Hana Bancorp., Inc.	USA	Financial business	90.56	September 30, 2018
KEB Hana Bank Mexico	Mexico	Financial business	99.99	September 30, 2018
Subsidiaries of Hana F&I Inc.				
KEBW First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	September 30, 2018
KEB Veritas Second Securitization Co., Ltd. (*)	Korea	Asset securitization	—	September 30, 2018
KEB Pepper First Securitization Co., Ltd. (*)	Korea	Asset securitization	5.00	September 30, 2018
KEBI First Securitization Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
KEBS Third Securitization Co., Ltd. (*)	Korea	Asset securitization	5.00	September 30, 2018
KEBT First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	September 30, 2018
KEB The Loft Co., Ltd. (*)	Korea	Asset securitization	—	September 30, 2018
HFS First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	September 30, 2018
Hana Stone First Co., Ltd. (*)	Korea	Asset securitization	—	September 30, 2018
Hana Stone Second Co., Ltd. (*)	Korea	Asset securitization	—	September 30, 2018
HFT Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	September 30, 2018
Hana Sinji First, Inc. (*)	Korea	Asset securitization	—	September 30, 2018
Hana SH First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	September 30, 2018
HFS Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	September 30, 2018
Hana K First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	September 30, 2018
HFD First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	September 30, 2018
HFDG Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	September 30, 2018
HFS 73A Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
HFS 73B Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
HFW 73 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
HFK 74 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
Hyundai Veritas First Co., Ltd. (*)	Korea	Asset securitization	—	September 30, 2018
HFSCN 81 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
HFB 81 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
Fine5th Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
Fine6th Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
HFS 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
HFF 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
HFN 82 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	September 30, 2018
HFDD 82 Co., Ltd.	Korea	Asset securitization	—	September 30, 2018
HFI 83 Securitization Specialty Co., Ltd.	Korea	Asset securitization	9.00	September 30, 2018
Subsidiaries of Hana Bancorp., Inc.				
KEB Hana Bank USA	USA	Bank	100.00	September 30, 2018

(*) Although the entity is a structured SPC, the Company recognized the entity as a subsidiary considering its exposure to variable returns and knowledge with regards to its activities.

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Condensed financial statements as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018(unaudited)					
Classification	Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩7,918,590	₩6,967,859	₩950,731	₩306,692	₩66,859	₩56,762
Hana Micro Finance., Ltd.	22,354	6,976	15,378	4,668	1,443	(309)
Hana F&I Inc. (*)	796,823	676,636	120,187	34,081	8,254	7,749
KEB Hana Bank Canada	1,233,963	1,042,929	191,034	45,488	5,854	5,817
KEB Hana Bank (Deutschland) A.G.	851,326	753,689	97,637	25,396	4,262	5,420
PT Bank KEB Hana	3,273,118	2,795,589	477,529	195,281	39,464	(3,592)
Banco KEB Hana Do Brasil S.A.	178,184	140,623	37,561	9,069	1,311	(4,865)
KEB Hana NY Financial Corp.	167,525	105,267	62,258	8,313	3,047	5,303
KEB Hana LA Financial Corp.	303,651	240,193	63,458	10,879	3,345	5,640
KEB Hana Global Finance Limited.	218,963	153,028	65,935	7,066	3,220	5,420
KEB Hana Bank Russia.	235,323	217,252	18,071	92,228	495	(2,441)
Hana Bancorp, Inc. (*)	324,433	276,911	47,522	7,184	(3,816)	(2,186)
KEB Hana Bank Mexico	36,321	—	36,321	2,047	(642)	2,355
Trust accounts guaranteeing the repayment of principal	1,821,087	1,778,752	42,335	39,520	1,842	1,842

	December 31, 2017					
Classification	Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩8,297,563	₩7,389,211	₩908,352	₩330,758	₩37,326	₩(18,903)
Hana Micro Finance., Ltd.	17,282	1,595	15,687	4,256	1,178	(1,623)
Hana F&I Inc. (*)	601,718	488,792	112,926	38,785	8,216	7,534
KEB Hana Bank Canada	1,241,767	1,056,800	184,967	54,739	4,857	(4,148)
KEB Hana Bank (Deutschland) A.G.	852,509	760,518	91,991	49,976	4,202	5,013
PT Bank KEB Hana	3,089,878	2,596,898	492,980	266,775	63,395	5,109
Banco KEB Hana Do Brasil S.A.	197,873	155,446	42,427	19,520	3,207	(2,916)
KEB Hana NY Financial Corp.	304,127	247,602	56,525	13,874	4,906	(1,991)
KEB Hana LA Financial Corp.	321,583	264,057	57,526	12,268	3,503	(3,618)
KEB Hana Global Finance Limited.	190,609	130,183	60,426	7,952	806	(7,130)
KEB RUS LLC.	216,159	196,870	19,289	67,743	352	10
Hana Bancorp., Inc. (*)	223,459	173,751	49,708	10,988	(3,335)	(8,437)
KEB Hana Bank Mexico	33,966	—	33,966	—	—	(1,206)
Trust accounts guaranteeing the repayment of principal	1,785,563	1,745,071	40,492	48,629	3,765	3,618

(*) The amounts presented are based on consolidation.

The following entity is excluded from the Company's scope of consolidation as of September 30, 2018 even though the Company holds a majority of voting rights.

Investee	Country	Major business	Share ratio(%)
KEB Hana – KVIC Unicorn Fund of Funds	Korea	Investment	90.9

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Subsidiaries included in and excluded from the consolidation scope for the nine-month period ended September 30, 2018 are as follows:

Company	Reasons
Included in scope of consolidation:	
Subsidiaries of KEB Hana Bank	
Hana Display First Co., Ltd.	Newly invested
Hana Indonesia Green Forest Co., Ltd.	Newly invested
Subsidiaries of Hana F&I Inc.	
HFSCN 81 Securitization Specialty Co., Ltd.	Newly invested
HFB 81 Securitization Specialty Co., Ltd.	Newly invested
Fine5th Securitization Specialty Co., Ltd.	Newly invested
Fine6th Securitization Specialty Co., Ltd.	Newly invested
HFS 82 Securitization Specialty Co., Ltd.	Newly invested
HFF 82 Securitization Specialty Co., Ltd.	Newly invested
HFN 82 Securitization Specialty Co., Ltd.	Newly invested
HFDD 82 Co., Ltd.	Newly invested
HFI 83 Securitization Specialty Co., Ltd.	Newly invested
Excluded from the scope of consolidation:	
Subsidiaries of KEB Hana Bank	
Okea Co., Ltd.	Excluded due to the disposal
HS First Co., Ltd.	Excluded due to the disposal
Subsidiaries of Hana F&I Inc.	
Shinseung Building Co., Ltd.	Excluded due to the disposal
Hana Stone Fifth, Inc.	Excluded due to the disposal
Subsidiaries of Hana Bancorp, Inc.	
BNB Statutory Trust I	Excluded due to the liquidation
Subsidiaries of KEB Hana Bank USA	
BNB Funding Corp.	Excluded due to the liquidation

1.2.1 Hana Bank (China) Co., Ltd. (Hana Bank China)

Hana Bank China was incorporated to engage in commercial banking, foreign currency exchanges and other related operations in China on December 14, 2007. The Bank contributed the assets and liabilities of the branches in Shanghai and Shenyang and its interests in the International Bank of Qingdao, which is the subsidiary of the Bank, to the Hana Bank China in the form of equity contributions on December 24, 2007. Hana Bank (China) Co., Ltd., one of subsidiaries in China, acquired and merged with KEB China, one of affiliates in the Hana Financial Group, on December 15, 2014. (Before the merger, equity interests in Hana Bank China were 59.7% for Hana Bank, 40.3% for Korea Exchange Bank). Its paid-in capital is 3.35 billion yuan as of September 30, 2018.

1.2.2 Hana Micro Finance, Ltd.

Hana Micro Finance Ltd., a subsidiary established in Yangon, Myanmar on August 7, 2014, is doing a small-loan finance service. The objective of the service is to satisfy low incomers' demand for small-loan finance and at the same time to lay the foundation for a retail market with excellent growth potential. As of September 30, 2018, its paid-in capital is 17.5 billion kyat and it owns a head office in Yangon.

1.2.3 Hana F&I Inc.

Hana F&I Inc. (former, KEB F&I) was established on September 11, 1989, to engage in equipment rental and other relevant businesses under the Specialized Credit Financial Business Act (formerly, Equipment Rental Business Act) and was listed on the Korea Securities Dealers Automated Quotation ("KOSDAQ") on January 15, 1995. KEB F&I has changed its name to KEB F&I Inc. KEB is restricted to control a company which runs the

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

1.2.3 Hana F&I Inc. (cont'd)

specialized credit financial business in accordance with the Financial Holding Companies Act Article 19 as on and after January 31, 2014. On October 17, 2013, KEB F&I's Board of Directors approved to change business field to investment in asset backed securities and asset management business in Asset-Backed Securitization Act. It changed its name from KEB F&I to Hana F&I Co. Ltd. on September 1, 2015. Its paid-in capital is 125,400 million won as of September 30, 2018.

1.2.4 KEB Hana Bank Canada

KEBOC was established in Toronto, Canada on October 6, 1981 to provide financial services to Korean companies and residents in Toronto and the surrounding area. The Bank holds 100% stake of the company as of September 30, 2018. Korea Exchange Bank of Canada has gone through numerous capital increases after the establishment. Its paid-in capital is 83,400 thousand Canadian dollars as of September 30, 2018.

1.2.5 KEB Hana Bank (Deutschland) AG

KEBDAG was established in Frankfurt, Germany on December 29, 1992 to provide financial services to Korean companies and residents in Frankfurt and the surrounding area. The Bank holds 100% stake of the company as of September 30, 2018. Its paid-in capital is 23,008 thousand euro as of September 30, 2018.

1.2.6 PT Bank KEB Hana

PT Bank KEB Hana was established in Jakarta, Indonesia on November 5, 1990 to provide financial services to Korean companies and residents in Jakarta. In accordance with the regulations of the Bank Indonesia, 2 or more local banks with the same ultimate parent company are prohibited to operate as an independent entity in Indonesia. Accordingly, PT Bank KEB Indonesia (KEBI), a subsidiary of the Bank, and PT Bank Hana, a subsidiary of Hana Bank, have completed a merger process on February 20, 2014 and changed the name to PT Bank KEB Hana. PT. Bank KEB Hana incorporated into a subsidiary of KEB on February 28, 2014 since KEB owned the major shares of PT. Bank KEB Hana after the acquisition. The Bank holds 89.01% stake of the company as of September 30, 2018.

1.2.7 Banco KEB Hana Do Brasil S.A. (KEBB)

KEBB was incorporated on May 21, 1999 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as of September 30, 2018. By increasing capital in 2012, its paid-in capital is 69,726 thousand real as of September 30, 2018.

1.2.8 KEB Hana NY Financial Corp. (NYFinCo)

NYFinCo was established in New York, USA on April 8, 2004 to provide financial services to Korean companies and residents in New York and the surrounding area. The Bank holds 100% stake of the company as of September 30, 2018. Its paid-in capital is 1 dollar as of September 30, 2018.

1.2.9 KEB Hana LA Financial Corp. (LAFinCo)

LAFinCo was established in Los Angeles, USA on April 8, 2004 to provide financial services to Korean companies and residents in Los Angeles and the surrounding area. The Bank holds 100% stake of the company as of September 30, 2018. Its paid-in capital is 2 dollar as of September 30, 2018.

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

1.2.10 KEB Hana Global Finance Limited (KAF)

KAF was established on July 2, 2009 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as of September 30, 2018. Its paid-in capital is 50,000 thousand dollars as of September 30, 2018.

1.2.11 KEB RUS LLC

KEB launched a Moscow representative office in 2008 to provide financial information and consulting services for Korean and local companies in Russia. KEB RUS LLC was established on August 15, 2014 after obtaining permission to operate corporation from Russian supervisory authorities in order to expand business area. The Bank holds 99.99% stake of the company as of September 30, 2018. Its paid-in capital is 1 billion roubles as of September 30, 2018.

1.2.12 Hana Bancorp., Inc.

Hana Bancorp, Inc. (formerly, BNB Financial Service Corporation) was incorporated on April 8, 1988 to engage in the bank business. HFG acquired ownership of BNB Financial Service Corporation and incorporated Hana Bancorp, Inc. as its subsidiary on August 30, 2013 and changed the name to Hana Bancorp, Inc. The Bank purchased the securities from HFG on March 28, 2016, and issued capital. The Bank holds 90.56% stake of the company as of September 30, 2018. Its paid-in capital is 16,571 thousand dollars as of September 30, 2018.

1.2.13 KEB Hana Bank Mexico

KEB Hana Bank Mexico was established in Mexico City on November 3, 2017 to engage in provision of financial services to Korean companies and local corporations. At the end of the reporting period, the Bank holds 99.99% interest in the entity. At the end of the reporting period, the local regulatory authority has not given permission to start the operations of KEB Hana Bank Mexico yet.

1.3 Structured entities

1.3.1 Consolidated structured entities

1.3.1.1 DGB Leading Solution PEF Investment Trust 143 and a set of 3 other private equity investment vehicles

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 4 private equity investment vehicles were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.2 Sevenstar Co., Ltd. and 6 other special purpose entities

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 7 special purpose companies were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.3 Trust accounts

In accordance with KIFRS 1110 *Consolidated Financial Statements*, trust accounts are included in consolidation scope because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.1 Consolidated structured entities (cont'd)

1.3.1.4 Contractual commitments to consolidated structured entities

The consolidated structured company for the securitization of assets is established for the securitization of non-performing loans (NPL). The Company is involved in the acquisition of subordinated bonds issued by the consolidated structured company and is exposed to the risk of not being able to recover the acquisition amounts based on the investment performance. Characteristics and intentions of contractual commitments offered by the Company to the consolidated structured entities are as follows:

Entity	The characteristics and purposes	Intention
Trust accounts guaranteeing the repayment of principal	The Company offers principal conservation commitment to trust accounts. The Company is required to conserve the deficit amount in case the trust account stands below the principal as a result of the operation	Credit risk mitigation on financial management of trust account
Antakya Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩50,000 million) from Antakya Co., Ltd.	Operating activities
Cosmosolution co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩14,400 million) from Cosmosolution Co., Ltd.	Operating activities
Hana Display First Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩200,000 million) from Hana Display First Co., Ltd.	Operating activities
Hana Indonesia Green Forest Co., Ltd.	The Company partially purchased ABSTB (purchase commitment of ₩1,100 million) from Hana Indonesia Green Forest Co., Ltd.	Operating activities

1.3.2 Unconsolidated structured entities

1.3.2.1 The nature of the Company's interests in unconsolidated structured entities

Details of the nature of the Company's interests in unconsolidated structured entities as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Type	Characteristics and purposes	Financing arrangement	Total assets September 30, 2018(unaudited)	Total assets December 31, 2017
Special purpose company	Securitization of backed asset	Issuing ABL/ABCP and others	₩14,601,033	₩14,197,661
Real estate finance	Operation for real estate (including SOC) development	Investment and borrowing	18,855,340	21,989,657
Shipping finance and primary market finance	Building or purchasing ships and NPL purchase, M&A	Investment and borrowing	9,772,084	10,003,122
Investment fund and trust	Managing investment property	Issuing beneficiary certificates	49,494,235	70,517,729

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.2 Unconsolidated structured entities (cont'd)

1.3.2.2 Maximum exposure to loss from interests in unconsolidated structured entities

Classification	September 30, 2018(unaudited) Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund and trust
Assets				
Loans (A)	₩1,534,698	₩1,363,289	₩603,420	₩ 635,753
Securities (B)	745	57,634	—	6,245,908
Derivatives (C)	3,492	13,591	285	4,865
Others (D)	3,502	2,703	2,894	274
Liabilities				
Derivative liabilities	2,300	6,227	8,107	33,084
Provision	3,097	4,887	293	—
Others	48	27	2	34
Net asset	₩1,536,992	₩1,426,076	₩598,197	₩6,853,682
Maximum exposure to loss	₩3,168,375	₩2,174,305	₩739,078	₩6,986,386
Financial assets (A+B+C+D)	1,542,437	1,437,217	606,599	6,886,800
Credit and other commitment	1,625,938	737,088	132,479	99,586

Classification	December 31, 2017 Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund and trust
Assets				
Loans (A)	₩1,120,816	₩1,301,989	₩553,848	₩ 716,512
Securities (B)	744	66,595	—	6,114,844
Derivatives (C)	469	13,475	12,600	4,572
Others (D)	3,450	2,463	2,103	415
Liabilities				
Derivative liabilities	6,901	7,494	18,174	35,619
Provision	1,381	37	271	2
Others	3	24	168	20
Net asset	₩1,117,194	₩1,376,967	₩549,938	₩6,800,702
Maximum exposure to loss	₩3,124,189	₩1,470,701	₩790,318	₩6,841,445
Financial assets (A+B+C+D)	1,125,479	1,384,522	568,551	6,836,343
Credit and other commitment	1,998,710	86,179	221,767	5,102

2. Scope and principles of consolidation

The Company prepares statutory consolidated financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Act on External Audit of Stock Companies.*

2.1 Subsidiaries

The Bank has the ability to determine the financial and operating policies of subsidiaries. Generally the Bank classified the entity as subsidiary in case the Bank has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee. Subsidiaries are fully consolidated from the date on which the control is transferred to the Company.

2. Scope and principles of consolidation (cont'd)

2.2 Offset of the investment accounts of the Company and the corresponding equity accounts

The investment accounts of the Company and the corresponding equity accounts of the subsidiaries are eliminated in consolidation.

2.3 Process of difference between the cost of investment

The consolidated financial statements reflect on only the share of the consolidated subsidiaries post-application of purchase accounting method. The difference between the cost of investment and the Company's share of the fair value of identifiable net assets and liabilities of the subsidiaries at the date of purchase accounting method application is presented as goodwill or negative goodwill. A review of impairment is performed at the end of each reporting date.

If the controlling company additionally acquires the subsidiaries' share, the elimination of subsidiaries' equity account is based on the acquisition date of shares. The difference between the investment accounts of the Company and the corresponding equity accounts of the subsidiaries is amounted to the consolidated capital surplus (or capital adjustment).

2.4 Elimination of intercompany transactions and the unrealized gain or loss, etc.

All significant intercompany transactions and the account balances among the consolidated companies are eliminated on consolidation. Unrealized gains or losses included in loans and borrowings arising from transactions between consolidated companies are eliminated on consolidation. The related accounts receivable and payable are also eliminated on consolidation.

2.5 Investments in associates

Investments in entities over which the Company has control or significant influence are accounted for using the equity method. Under the equity method of accounting, the Company's initial investment in an investee is recorded at acquisition cost. Subsequently, the carrying amount of the investment is adjusted to reflect the Company's share of income or loss of the investee in the statement of comprehensive income and share of changes in equity that have been recognized directly in the equity of the investee in the related equity account of the Company on the statement of financial position. If the Company's share of losses of the investee equals or exceeds its interest in the investee, it suspends recognizing its share of further losses. However, if the Company has other long-term interests in the investee, it continues recognizing its share of further losses to the extent of the carrying amount of such long-term interests. The Company resumes the application of the equity method if the Company's share of income or change in equity of an investee exceeds the Company's share of losses accumulated during the period of suspension of the equity method of accounting.

At the date of acquisition, the excess of the cost of the investment over the Company's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as goodwill or negative goodwill. The amortization expenses is included as a part of valuation gain or loss on the equity method investments in the statement of comprehensive income. The difference related to goodwill is recorded as the carrying amount. Goodwill is reviewed for the impairment when signs of damage arise and is not amortized over its useful life. Further, the Company's share of any difference between the net fair value of the investee's identifiable assets and liabilities, and the net book value of such assets and liabilities are amortized based on the investee's accounting treatments on the related assets and liabilities and charged or credited to the valuation gain or loss on the equity method investments in the statement of comprehensive income.

The Company's share in the investee's unrealized profits and losses resulting from transactions between the Company and its investee are eliminated to the extent of the interest in the investee.

2.6 Special reserve on trust accounts

A special reserve provided for the possible future losses on certain trust accounts under the arrangement of guaranteed fixed rate of return and repayment of the principal and guaranteed repayment of the principal is included under the retained earnings in the consolidated financial statements.

2. Scope and principles of consolidation (cont'd)

2.7 Non-controlling interests

Subsidiaries' equity which is not included in the Company's share is accounted as non-controlling interests. In case subsidiaries' non-controlling interests is below "0", minus non-controlling interests is presented as deduction of equity.

3. Basis of preparation and significant accounting policies

3.1 Basis of preparation

The Company prepares statutory interim consolidated financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) 1034 *Interim Financial Reporting* enacted by the *Act on External Audit of Stock Companies*. The accompanying interim consolidated financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors' review report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

3.2 Changes in accounting policies and disclosures

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Company's annual financial statements for the year ended December 31, 2017, except for the adoption of new standards and interpretation as at January 1, 2018. The nature and the impact of each new standard or amendment are described below:

3.2.1 Amendments to KIFRS 1115 ***Revenue from Contracts with Customers***

The amendments to KIFRS 1115 *Revenue from Contracts with Customers* are effective for annual periods beginning on or after 1 January 2018, with early application permitted. The new standard will supersede the following KIFRS: KIFRS 1018 *Revenue*, KIFRS 1011 *Construction Contracts*, KIFRS 2031 *Revenue-Barter Transactions Involving Advertising Services*, KIFRS 2113 *Customer Loyalty Programmes*, KIFRS *2115 Agreements for the Construction of Real Estate*, and KIFRS 2118 *Transfers of Assets from Customers.*

The current KIFRS 1018 provides the criteria for recognition of revenue relating to sale of goods, rendering of services, interest income, royalties, dividends and construction contracts. However, under the new KIFRS 1115, revenue is recognized by applying a five-stage revenue recognition model (Identification of a contract with a customer → Identification of performance obligations in the contract → Determination of the transaction price → Allocation of the transaction price to the separate performance obligations in the contract → Recognition of revenue upon satisfying the performance obligations) to all of its contracts with customers.

The adoption of KIFRS 1115 has no significant impact on the financial statements of the Company.

3.2.2 Amendments to KIFRS 2122 ***Foreign Currency Transactions and Advance Consideration***

The Interpretation clarifies that, in determining the spot exchange rate to use on initial recognition of the related asset, expense or income (or part of it) on the derecognition of a non-monetary asset or non-monetary liability relating to advance consideration, the date of the transaction is the date on which an entity initially recognises the non-monetary asset or non-monetary liability arising from the advance consideration. If there are multiple payments or receipts in advance, then the entity must determine the transaction date for each payment or receipt of advance consideration. However, since the Company's current practice is in line with the Interpretation, the Company does not expect any effect on its consolidated financial statements.

3.2.3 Amendments to KIFRS 1040 ***Transfers of Investment Property***

The amendments clarify when an entity should transfer property, including property under construction or development into, or out of investment property. The amendments state that a change in use occurs when the property meets, or ceases to meet, the definition of investment property and there is evidence of the change in

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.3 Amendments to KIFRS 1040 *Transfers of Investment Property* (cont'd)

use. A mere change in management's intentions for the use of a property does not provide evidence of a change in use. The amendments have no impact on the Company's financial statements.

3.2.4 Amendments to KIFRS 1102 *Classification and Measurement of Share-based Payment Transactions*

The KASB issued amendments to KIFRS 1102 *Share-based Payment* that address three main areas: the effects of vesting conditions on the measurement of a cash-settled share-based payment transaction; the classification of a share-based payment transaction with net settlement features for withholding tax obligations; and accounting where a modification to the terms and conditions of a share-based payment transaction changes its classification from cash settled to equity settled. On adoption, entities are required to apply the amendments without restating prior periods, but retrospective application is permitted if elected for all three amendments and other criteria are met. These amendments have no impact on the Company's financial statements as there is no share-based payment transaction with net settlement features for withholding tax obligations, and modification to the terms and conditions of a share-based payment transaction that changes its classification from cash settled to equity settled.

3.2.5 Amendments to KIFRS 1028 *Investments in Associates and Joint Ventures* – Clarification that measuring investees at fair value through profit or loss is an investment-by-investment choice

The amendments clarify that:

- An entity that is a venture capital organisation, or other qualifying entity, may elect, at initial recognition on an investment-by-investment basis, to measure its investments in associates and joint ventures at fair value through profit or loss.
- If an entity, that is not itself an investment entity, has an interest in an associate or joint venture that is an investment entity, the entity may, when applying the equity method, elect to retain the fair value measurement applied by that investment entity associate or joint venture to the investment entity associate's or joint venture's interests in subsidiaries. This election is made separately for each investment entity associate or joint venture, at the later of the date on which: (a) the investment entity associate or joint venture is initially recognised; (b) the associate or joint venture becomes an investment entity; and (c) the investment entity associate or joint venture first becomes a parent. These amendments have no impact on the financial statements of the Company.

3.2.6 KIFRS 1101 First-time Adoption of Korean International Financial Reporting Standards – Deletion of short-term exemptions for first-time adopters

Short-term exemptions in paragraphs E3 ~ E7 of KIFRS 1101 were deleted because they have now served their intended purpose. This amendment is not applicable to the Company.

3.2.7 KIFRS 1109 *Financial Instruments*

The KASB issued the final version of KIFRS 1109 *Financial Instruments* that replaces KIFRS 1039 *Financial Instruments*: *Recognition and Measurement* and all previous versions. KIFRS 1109 brings together all three aspects of the accounting for financial instruments project: classification and measurement, impairment and hedge accounting. Also, KIFRS 1107 *Financial Instruments*: *Disclosures* has been amended in accordance with KIFRS 1109.

The Company's accounting policies have been changed and the amounts recognized in the financial statements have been modified as a result of the adoption of KIFRS 1109 on January 1, 2018. In accordance with transitional provisions, the financial statements for the year ended December 31, 2017 and those for the nine months ended September 30, 2017 have not been restated.

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.7 KIFRS 1109 *Financial Instruments* (cont'd)

The main features of the standard include: a business model for the managing financial assets; classification and measurement of financial assets based on contractual cash flow characteristics of financial assets; an impairment model for financial instruments based on expected credit losses; the hedged item that meet the requirements of hedge accounting, increases in hedging instruments, or changes in the evaluation method for hedge effectiveness.

3.2.7.1 Financial asset classification and measurement

KIFRS 1109 requires a financial instrument to be classified and measured subsequently at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL), on the basis of the holder's business model and instrument's contractual cash flow characteristics as shown below. The requirements should be applied to an entire financial asset, even if it contains an embedded derivative.

	Contractual cash flow characteristics	
Business model	Composed solely of principal and interest	Other
Purpose of collecting contractual cash flows	Measured at amortized cost (*1)	
Purpose of collecting and selling contractual cash flows	Measured at FVOCI (*1)	Measured at FVTPL (*2)
Purpose of selling, others	Measured at FVTPL	

(*1) can be irrevocably designated at FVTPL in order to get rid of or reduce accounting mismatch.
(*2) can be irrevocably designated at FVOCI in case of equity securities not for held-for-trading purpose.

3.2.7.2 Financial liabilities classification and measurement

In KIFRS 1109, fair value changes of financial liabilities designated at FVTPL attributable to changes in credit risk of the financial liability shall be presented in other comprehensive income, not in profit or loss. Amounts presented in other comprehensive income shall not be subsequently recycled to profit or loss. However, the new standard allows the recognition of the full amount of change in the fair value in profit or loss only if the presentation of the changes in the financial liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss.

3.2.7.3 Impairment: financial assets and contract assets

In KIFRS 1039, impairment is recognized only when there is objective evidence of impairment based on incurred loss model. In the new KIFRS 1109, impairment of debt instruments, lease bonds, contract assets, loan commitments and financial guarantee contracts that are measured at amortized costs or at FVOCI is recognized based on the expected credit loss (ECL) impairment model.

KIFRS 1109 outlines a 'three-stage' model for impairment based on changes in credit risk since initial recognition. Loss allowance is measured based on the 12-month ECL or life-time ECL.

Classification		Loss allowance
Stage 1	Assets with no significant increase in credit risk since initial recognition	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date.
Stage 2	Assets with significant increase in credit risk since initial recognition	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument.
Stage 3	Credit-impaired assets	

In KIFRS 1109, accumulated changes in the life-time ECL after initial recognition are taken into account as loss allowance in case credit is impaired at initial recognition of financial assets.

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.7 KIFRS 1109 *Financial Instruments* (cont'd)

3.2.7.4 Hedge accounting

The KIFRS 1109 maintains mechanics of hedge accounting (fair value hedge, cash flow hedge and a hedge of a net investment in a foreign operation) as set forth in KIFRS 1039. However, unlike requirements in KIFRS 1039 that are too complex and strict, KIFRS 1109 is more practical, principle based and less strict and focuses on the entity's risk management activities. Also, KIFRS 1109 allows broader range of hedged items and hedging instruments. Under KIFRS 1039, a hedge is assessed to be highly effective only if the offset is in the range of 80-125 percentage by performing numerical test of effectiveness. In KIFRS 1109, such requirements are alleviated.

3.2.7.5 Changes in the Company's retained earnings and accumulated other comprehensive income (loss) as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions):

Classification	Amounts	
Beginning retained earnings (Under KIFRS 1039)		₩ 8,735,759
Adjustment of retained earnings due to the adoption of KIFRS 1109		301,831
Reclassified from available-for-sale financial assets to financial assets measured at FVTPL	₩ 12,157	
Revaluation of impairment loss on equity securities measured at FVOCI	511,114	
Remeasurement of financial assets measured at FVTPL	4,866	
Measurement of credit losses of loan receivable measured at amortized cost	(96,657)	
Measurement of credit losses of other financial assets measured at amortized cost	(170)	
Credit losses measurement of debt securities measured at amortized cost	(1,519)	
Credit losses measurement of loan agreements and financial guarantee contracts	(206)	
Remeasurement of merchant banking account loans receivable and loan arrangements	105	
Credit losses measurement of financial assets measured at FVOCI	(8,566)	
Changes in equity method gains and losses for associates and joint ventures	(4,175)	
Tax effect	(115,118)	
Beginning retained earnings (Under KIFRS 1109)		₩ 9,037,590
Beginning accumulated other comprehensive income (loss) (Under KIFRS 1039)		₩ (751,704)
Adjustment of accumulated other comprehensive income (loss) due to the adoption of KIFRS 1109		(370,931)
Reclassified from available-for-sale financial assets to financial assets measured at FVTPL	₩ (13,222)	
Revaluation of impairment loss on equity securities measured at FVOCI	(511,114)	
Credit losses measurement of debt securities measured at FVOCI	8,566	
Changes in equity method gains and losses for associates and joint ventures	4,175	
Tax effect	140,664	
Beginning accumulated other comprehensive income (loss) (Under KIFRS 1109)		₩(1,122,635)

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.7 KIFRS 1109 *Financial Instruments* (cont'd)

3.2.7.6 Adjustments in the statement of financial position as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions):

	December 31, 2017	Adjustments		January 1, 2018
Classification	Amounts under KIFRS 1039	Reclassification	Remeasurement	Amounts under KIFRS 1109
Financial assets:				
Cash and due from banks				
Book value (KIFRS 1039, 1109)	₩ 19,983,916	₩ —	₩ —	₩ 19,983,916
Financial assets at FVTPL				
Book value (Under KIFRS 1039)	9,443,614	—	—	—
Reclassified as financial assets measured at FVTPL	—	(9,443,614)	—	—
Book value (Under KIFRS 1109)	—	—	—	—
Derivatives assets for hedging				
Book value (KIFRS 1039, 1109)	11,760	—	—	11,760
Available-for-sale financial assets – Equity securities				
Book value (Under KIFRS 1039)	4,052,304	—	—	—
Reclassified as financial assets measured at FVTPL	—	(3,212,717)	—	—
Reclassified as financial assets measured at FVOCI	—	(839,587)	—	—
Book value (Under KIFRS 1109)	—	—	—	—
Available-for-sale financial assets – Debt securities				
Book value (Under KIFRS 1039)	40,270,208	—	—	—
Reclassified as financial assets measured at FVTPL	—	(2,562)	—	—
Reclassified as financial assets measured at amortized cost	—	(13,940)	—	—
Reclassified as financial assets measured at FVOCI	—	(40,253,706)	—	—
Book value (Under KIFRS 1109)	—	—	—	—
Held-to-maturity financial assets				
Book value (Under KIFRS 1039)	6,160,922	—	—	—
Reclassified as financial assets measured at amortized cost	—	(6,160,922)	—	—
Book value (Under KIFRS 1109)	—	—	—	—
Loans				
Book value (Under KIFRS 1039)	224,096,709	—	—	—
Reclassified as financial assets measured at FVTPL	—	(159,605)	—	—
Remeasurement : Expected credit losses	—	—	(98,189)	—
Book value (Under KIFRS 1109)	—	—	—	223,838,915
Other financial assets				
Book value (Under KIFRS 1039)	9,585,105	—	—	—
Remeasurement : Expected credit losses	—	—	(170)	—
Book value (Under KIFRS 1109)	—	—	—	9,584,935

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.7 KIFRS 1109 *Financial Instruments (cont'd)*

3.2.7.6 Adjustments in the statement of financial position as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions): (cont'd)

	December 31, 2017	Adjustments		January 1, 2018
Classification	Amounts under KIFRS 1039	Reclassification	Remeasurement	Amounts under KIFRS 1109
Merchant banking account assets				
Book value (Under KIFRS 1039)	₩ 2,966,019	₩ —	₩ —	₩ —
Reclassified as financial assets measured at FVTPL	—	(3,995)	—	—
Reclassified from loans and receivables	—	3,995	—	—
Remeasurement: Adjustment of fair value assessment	—	—	5	—
Book value (Under KIFRS 1109)	—	—	—	2,966,024
Financial assets measured at FVTPL				
Book value (Under KIFRS 1039)	—	—	—	—
Reclassified from financial assets at FVTPL	—	9,443,614	—	—
Reclassified from available-for-sale financial assets – Equity securities	—	3,212,717	—	—
Reclassified from available-for-sale financial assets – Debt securities	—	2,562	—	—
Reclassified from loans and receivables	—	159,605	—	—
Remeasurement: Adjustment of fair value assessment, etc.	—	—	3,808	—
Book value (Under KIFRS 1109)	—	—	—	12,822,306
Financial assets measured at FVOCI				
Book value (Under KIFRS 1039)	—	—	—	—
Reclassified from available-for-sale financial assets – Equity securities	—	839,587	—	—
Reclassified from available-for-sale financial assets – Debt securities	—	40,253,706	—	—
Remeasurement : Expected credit losses	—	—	—	—
Book value (Under KIFRS 1109)	—	—	—	41,093,293
Securities measured at amortized cost				
Book value (Under KIFRS 1039)	—	—	—	—
Reclassified from available-for-sale financial assets – Debt securities	—	13,940	—	—
Reclassified from held-to-maturity financial assets	—	6,160,922	—	—
Remeasurement : Expected credit losses	—	—	(1,524)	—
Book value (Under KIFRS 1109)	—	—	—	6,173,338
Total	₩316,570,557	₩ —	₩(96,070)	₩316,474,487

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.7 KIFRS 1109 *Financial Instruments (cont'd)*

3.2.7.6 Adjustments in the statement of financial position as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions): (cont'd)

	December 31, 2017	Adjustments		January 1, 2018
Classification	Amounts under KIFRS 1039	Reclassification	Remeasurement	Amounts under KIFRS 1109
Financial liabilities				
Deposits				
Book value (KIFRS 1039, 1109)	₩230,410,494	₩ —	₩ —	₩230,410,494
Financial liabilities at FVTPL				
Book value (Under KIFRS 1039)	6,839,559	—	—	—
Reclassified as financial assets measured at FVTPL	—	(6,839,559)	—	—
Book value (KIFRS 1109)	—	—	—	—
Derivatives liabilities for hedging				
Book value (KIFRS 1039, 1109)	73,024	—	—	73,024
Borrowings				
Book value (KIFRS 1039, 1109)	13,774,502	—	—	13,774,502
Debentures				
Book value (KIFRS 1039, 1109)	22,311,737	—	—	22,311,737
Financial liabilities measured at FVTPL				
Book value (KIFRS 1039)	—	—	—	—
Reclassified from financial liabilities at FVTPL	—	6,839,559	—	—
Book value (KIFRS 1109)	—	—	—	6,839,559
Total	₩273,409,316	₩ —	₩ —	₩273,409,316

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.7 KIFRS 1109 *Financial Instruments* (cont'd)

3.2.7.7 Changes in loss allowance as a result of the adoption of KIFRS 1109 are as follows (Korean won in millions):

Subsequent measurement categories		Provision for loss			
December 31, 2017	January 1, 2018	December 31, 2017			January 1, 2018
Amounts under KIFRS 1039	Amounts under KIFRS 1109	Loss allowance under KIFRS 1039	Reclassification	Remeasurement	Loss allowance under KIFRS 1109
Loans and receivables	Financial assets measured at amortized cost	₩1,349,914	₩ —	₩ 98,194	₩1,448,108
Loans and receivables	Financial assets measured at FVTPL	12,908	(12,908)	—	—
Other financial assets	Financial assets at amortized cost	10,713	—	170	10,883
Available-for-sale financial assets	Financial assets measured at FVOCI	—	—	8,566	8,566
Held-to-maturity financial assets	Financial assets measured at amortized cost	—	—	1,523	1,523
		₩1,373,535	₩(12,908)	₩108,453	₩1,469,080
Loss allowance for financial guarantee	Loss allowance for financial guarantee	765	—	(288)	477
Loss allowance for acceptances and guarantees	Loss allowance for acceptances and guarantees	84,459	—	(4,864)	79,595
Loss allowance for unused credit limit	Loss allowance for unused credit limit	58,995	—	5,591	64,586
		₩ 144,219	₩ —	₩ 439	₩ 144,658
	Total	₩1,517,754	₩(12,908)	₩108,892	₩1,613,738

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's financial statements are disclosed below.

3.2.8 KIFRS 1116 *Leases*

The Company assesses whether a contract is, or contains, a lease at inception of a contract and also assesses whether a contract is, or contains, a lease at the initial adoption of KIFRS 1116. However, the Company may not reassess all arrangements entered into before the date of initial application of the standard by applying the simplified approach.

For a contract that is, or contains a lease, the Company will account for each lease component within the contract as a lease separately from non-lease components of the contract.

A lessee will recognize an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset) and a liability representing the right to make lease payments (i.e., the lease liability). However, in case of short-term leases and leases of 'low-value' assets, the Company may elect to apply the exception under KIFRS 1116. As a practical expedient, a lessee may elect, by class of the underlying asset, not to separate non-lease components from lease components, and instead account for each lease component and any associated non-lease components as a single component.

The standard is effective for annual period beginning on or after January 1, 2019. The Company is assessing the potential effect of the amendments on its consolidated financial statements. The Company will apply these amendments on the required effective date.

3. Basis of preparation and significant accounting policies (cont'd)

3.3 Foreign currency transaction

3.3.1 Functional currency

When preparing for the consolidated financial statements, the Company measures and recognizes all items and transactions according to the functional currency. The term, functional currency, is defined as the monetary unit of account of the principal economic environment in which the entity operates, and trades between entities using its own functional currency and other currencies which are converted to the Company's functional currency to be measured and recognized.

3.3.2 Transactions and balances at the end of the reporting period

Transactions in foreign currencies are initially recorded at the spot rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the spot rate of exchange at the reporting date. Non-monetary items measured at fair value in a foreign currency are translated at the exchange rates at the end of reporting date. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss. Non-monetary items not measured at fair value in a foreign currency are translated using the exchange rates as at the dates of the initial transactions and thus there are no exchange differences.

The Company may have a monetary item that is receivable from or payable to a foreign operation. An item for which settlement is neither planned nor likely to occur in the foreseeable future is, in substance, a part of the entity's net investment in that foreign operation. Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment

3.3.3 Translation of the presentation currency

As at the reporting date, the assets and liabilities of overseas branches are translated into the Company's presentation currency, Korean won (KRW), at the rate of exchange as at the reporting date, and their statement of comprehensive income and equity are translated using the exchange rates at transaction date or the average exchange rates for the period. Exchange differences arising on translation are taken directly to a separate component of equity. On disposal of a foreign entity, the deferred cumulative amount recognized in equity related to that particular foreign operation is recognized in 'Other operating expenses' or 'Other operating income' in the statement of comprehensive income.

3.4 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position comprise of cash at Banks and on hand and short-term deposits with an original maturity of three months or less. The purpose of cash and cash equivalents is to make short-term investments and to meet short-term cash demands. Cash and cash equivalents are highly liquidable, easily convertible and subject to changes in value.

3.5 Financial assets – classification and subsequent measurement

At initial recognition, financial assets and liabilities are classified as measured at FVTPL, FVOCI and amortized cost, in accordance with their characteristics and purposes.

All financial assets are initially recognized on the trade date, i.e., the date that the Company becomes a party to the contractual provisions of the instrument. This includes 'Regular way trades': purchases or sales of financial assets that require delivery of assets within the time frame generally established by regulation or convention in the market place.

Financial assets and liabilities are initially measured at fair value, and the transaction costs directly attributable to the acquisition of financial assets (liabilities) are added to (deducted from) the fair value at initial recognition if

3. Basis of preparation and significant accounting policies (cont'd)

3.5 Financial assets – classification and subsequent measurement (cont'd)

they are not measured at FVTPL. The fair value of the financial assets and liabilities is defined as the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The fair value of financial instruments is measured at the transaction price (the fair value of the consideration received or transferred) at initial recognition.

3.5.1 Financial assets measured at FVTPL

Financial assets measured at fair value through profit or loss include financial assets held-for-trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held-for-trading if they are acquired for the purpose of selling or repurchasing in the short term.

Also, financial assets can be designated at FVTPL if assets or liabilities are measured in accordance with different standards or in order to get rid of or reduce accounting mismatch.

Financial assets measured at FVTPL are measured at fair value and the gain or loss on valuation is recognized as profit or loss. Dividends and interest income from the financial assets are also recognized as profit or loss.

3.5.2 Financial assets measured at FVOCI

The Company measures financial assets measured at FVOCI if they meet the following conditions: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. Financial assets at FVOCI are measured at fair value after initial recognition. Gain or loss from changes in the fair value is recognized as other comprehensive income except for interest income in accordance with the effective interest rate method, dividends and foreign exchange differences on monetary assets directly recognized as profit or loss.

When financial assets measured at FVOCI are disposed of, the cumulative income recognized in other comprehensive income is transferred to the current profit or loss. However, the cumulative income recognized for equity securities designated as financial assets measured at FVOCI is not transferred to the current profit or loss.

The fair value of financial assets measured at FVOCI presented in foreign currencies is translated using the exchange rate as at the end of the reporting period. Changes in the fair value from exchange differences due to changes in amortized cost are recognized in the current profit or loss, while other changes are recognized directly in equity.

3.5.3 Financial assets measured at amortized cost

Financial assets that meet the following two conditions must be measured at amortized cost: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the objective of the entity's business model is to hold the financial asset to collect the contractual cash flows. After initial recognition, the financial assets are recognized at amortized cost using the effective interest rate, net of the allowance for doubtful accounts.

The Company defers LOF/LOCs associated with originating loans and LOCs that have future economic benefits. Loan balances are reported net of these LOF/LOCs. The deferred LOF/LOCs are amortized based on the effective interest rate method with the amortization recognized as adjustments to interest income.

3.6 Derivative financial instruments and hedge accounting

Derivative financial instruments are classified as trading derivatives or hedging derivatives depending on whether hedge accounting is applied or not, and are initially recognized at fair value on the date on which a

3. Basis of preparation and significant accounting policies (cont'd)

3.6 Derivative financial instruments and hedge accounting (cont'd)

derivative contract is entered into and are subsequently remeasured at fair value. Any gains or losses arising from changes in fair value on derivatives are taken directly to the statement of comprehensive income, except for the effective portion of cash flow hedges or hedges of net investment in a foreign operation, which is recognized in other comprehensive income.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment (except for foreign currency risk)
- Cash flow hedges when hedging exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or also the foreign currency risk in an unrecognized firm commitment

At the inception of a hedge relationship, the Company formally designates and documents the hedge relationship to which the Company wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the entity will assess the effectiveness of changes in the hedging instrument's fair value in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

Hedges which meet the strict criteria for hedge accounting are accounted for as follows:

3.6.1 Fair value hedges

When fair value hedge accounting is applied, the unrealized gain or loss on hedged items that are attributable to a hedged risk and hedging instruments is symmetrically recognized in the consolidated financial statement as current income or other comprehensive income for the same reporting period to ensure that changes in the fair value of the hedged items are offset by changes in the fair value of the hedging instruments. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively. Any adjustment to the carrying amount of hedged items is amortized to profit or loss in the consolidated statement of comprehensive income over the remaining maturity using the effective interest rate method.

3.6.2 Cash flow hedges

When cash flow hedge accounting is applied, the effective portion of the unrealized gain or loss on the hedging instrument is directly recognized in other comprehensive income (loss) in the consolidated statement of financial position to ensure that changes in the cash flows of the hedged items are offset by changes in the cash flows of the hedging instruments while any ineffective portion is recognized immediately in the consolidated statement of comprehensive income. Amounts recognized as other comprehensive income are transferred to the consolidated statement of comprehensive income when the hedged transaction affects profit or loss. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively and the cumulative gain or loss on the hedging instrument previously recognized in other comprehensive income are transferred to profit or loss in the consolidated statement of comprehensive income.

3.6.3 Hedge accounting of net investment in a foreign operation

When applying hedge accounting of net investment in a foreign operation, the effective portion of changes in fair value of the hedging instrument is recognized in other comprehensive income, and the ineffective portion of the hedge is recognized as current profit or loss in order to offset changes in the fair value of the hedged item caused by the hedging with changes in the fair value of the hedging instrument. The effective portion of hedge recognized in other comprehensive income will be re- classified from other comprehensive income to current

3. Basis of preparation and significant accounting policies (cont'd)

3.6 Derivative financial instruments and hedge accounting (cont'd)

3.6.3 Hedge accounting of net investment in a foreign operation (cont'd)

profit or loss in accordance with KIFRS 1021 *The Effects of Changes in Foreign Exchange Rates* at the time of disposal of a foreign operation or disposal of a portion of its foreign operations in the future

3.6.4 Embedded derivatives

Derivatives embedded in other financial instruments or other host contracts are accounted for as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVPTL.

3.6.5 'Day 1' profit or loss

In case of derivatives in level 3 (see Note 5), whose fair value is determined using data which is not observable from markets, the difference between the transaction price and fair value at initial recognition (a 'Day 1' profit or loss) is deferred and amortized over the life of the associated instrument using the straight-line method and the amortization is recognized in the statement of comprehensive income.

3.6.6 Credit risk valuation adjustment

When assessing derivatives at fair value, expected loss from credit risk is measured and deducted from derivative assets to reflect credit risk of counterparties.

3.7 Expected credit loss for financial assets

Loss allowance is recognized for financial assets measured at FVOCI and amortized cost using the expected credit loss model.

The expected credit loss (ECL) is the weighted average amount of possible outcomes within a certain range, reflecting the time value of money, estimates on the past, current and future situations, and information accessible without excessive cost of effort.

The ECL can be measured in three followings ways:

- General approach: when financial assets do not fall into below two categories and are off-balance-sheet undrawn commitments
- Simplified approach: when financial assets are trade receivables, contract assets or lease receivables
- Credit-impaired approach: when financial assets are credit-impaired at initial recognition

The general approach is applied differently depending on the significance of the increase of the credit risk. If, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, an entity shall measure the loss allowance for that financial instrument at an amount equal to 12-month expected credit losses. If the credit risk on that financial instrument has increased significantly since initial recognition, an entity shall measure the loss allowance for a financial instrument at an amount equal to the lifetime expected credit losses at each reporting date.

The loss allowance is measured at an amount equal to lifetime expected credit losses for the simplified approach, and an entity shall only recognise the cumulative changes in lifetime expected credit losses since initial recognition as a loss allowance for purchased or originated credit-impaired financial assets at each reporting date for the credit-impaired approach.

The following non-exhaustive list of information may be relevant in assessing changes in credit risk:

- Significant changes in internal price indicators of credit risk as a result of a change in credit risk since inception

3. Basis of preparation and significant accounting policies (cont'd)

3.7 Expected credit loss for financial assets (cont'd)

- Other changes in the rates or terms of an existing financial instrument that would be significantly different
- An actual or expected significant change in the financial instrument's external credit rating.
- An actual or expected internal credit rating downgrade for the borrower or decrease in behavioural scoring used to assess credit risk internally
- An actual or expected significant change in the operating results of the borrower
- Past due information

(1) Forward-looking information

The Company measures the significance of the increase of the credit risk and the expected credit loss using forward-looking information.

The Company assumes that the risk component is correlated with changes in market conditions, and calculates the expected credit loss using the forward-looking information by modelling macroeconomic variables and risk components.

The forward-looking information used to measure the expected credit loss is derived from 'stress-case' or 'worst-case' scenarios.

(2) Measurement of expected credit loss for financial assets measured at amortized cost

Expected credit loss for financial assets measured at amortized cost is measured as the difference between the present value of the cash flows expected to be received and the cash flow expected to paid. For this purpose, the Company calculates expected cash flows for individually significant financial assets. (Individual valuation allowance)

Financial assets insignificant in value individually are measured on a collective basis with financial assets with similar credit risks (collective loss allowance).

1) Loss allowance on an individual assessment basis

Loss allowance on an individual assessment basis is based on the best estimates of management in regards to the present value of cash flows expected to be recovered from receivables. In estimating the cash flows, the Company uses all available information including the financial conditions such as the operating cash flows of counterparties and the net realizable value of collateral provided.

2) Loss allowance on a collective assessment basis

Loss allowance on a collective assessment basis uses the estimation model that accounts for the forward-looking information based on the past loss rate to measure the expected credit loss. The model considers the probability of default (PD) and the loss given default (LGD) reflecting the type of instruments and borrowers, credit rating, portfolio size and collection period. Also, certain assumptions are applied to model the expected credit loss measurement and to determine input variables based on past experiences and forward-looking information. Methodologies and assumptions for this model are regularly reviewed to minimize the difference between the loss allowance and the actual loss.

The expected credit loss for financial assets measured at amortized cost is recognized as the loss allowance, and when the financial asset is determined to be irrecoverable, the carrying amount and loss allowance are decreased. If financial assets previously written off are recovered, the loss allowance is increased and the difference is recognized in the current profit or loss.

3. Basis of preparation and significant accounting policies (cont'd)

3.7 Expected credit loss for financial assets (cont'd)

(3) Expected credit loss measurement for financial assets measured at fair value through other comprehensive income

The measurement method is the same as the one for financial assets measured at amortized cost, but the change in the loss allowance is recognized as other comprehensive income. The loss allowance for financial assets measured at fair value through other comprehensive income is reclassified from other comprehensive income to current profit or loss when the assets are disposed of or repaid.

3.8 Derecognition of financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired.
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'Pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Company has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all the risks and rewards of the asset, nor transferred control of the asset, the asset is recognized to the extent of the Company's continuing involvement in the asset. In that case, the Company also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Company has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Company could be required to repay.

3.9 Recognition and measurement of financial liabilities

All financial liabilities are classified as financial liabilities at FVTPL, borrowings or others and measured initially at their fair value plus transaction costs, except in the case of financial liabilities recorded at FVTPL.

3.9.1 Financial liabilities at FVTPL

Financial liabilities at fair value through profit or loss include financial liabilities held-for-trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held-for-trading if they are acquired for the purpose of selling in the near term. All financial liabilities including an embedded derivative separated from the host contract are reclassified as financial liabilities at fair value through profit or loss except for financial liabilities designated as effective hedging instruments or financial guarantee contracts. After initial recognition, the changes in the fair value of the financial liabilities at fair value through profit or loss and the related interest expenses are recognized as profit or loss.

The Company performs securities lending and borrowing classified to FVTPL. When the Company borrows securities from Korea Securities Depository, securities borrowed are managed as memorandum value and when selling them, they are recorded as securities sold. At closing, the difference in the price securities are sold and the market price prevailing on the closing date is taken into account as valuation gain or loss on securities sold, and at the time of selling the securities, the difference in book value and the price securities are purchased is recorded as trading gain or loss on securities sold.

3. Basis of preparation and significant accounting policies (cont'd)

3.9 Recognition and measurement of financial liabilities (cont'd)

3.9.2 Deposits, borrowings, and debentures

After initial recognition, interest bearing deposits, borrowings and debentures are subsequently measured at amortized cost using the EIR. Gains and losses are recognized in the statement of comprehensive income when the liabilities are derecognized as well as through the EIR amortization process.

3.10 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the statement of comprehensive income.

3.11 Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.

3.12 Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The provision is used only for expenditures for which the provision was originally recognized. If the effect of the time value of money is material, provisions are stated at present value.

Confirmed acceptances and guarantees, unconfirmed acceptances and guarantees and bills endorsed are not recognized on the statement of financial position, but are disclosed as off-statement financial position items in the notes to the financial statements. The Company provides a provision for such off-statement financial position items, applying a Cash Conversion Factor (Cash CF) and provision rates, and records the provision as a reserve for possible losses on acceptances and guarantees. The Company provides an allowance for possible losses on a certain portion of unused credit line. The Company records the provision for such unused balances as an allowance for possible losses on unused commitments which are calculated by applying a Credit Conversion Factor (CCF) and provision rates.

3.13 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument and is measured at fair value on date of initial recognition. After initial recognition, the Company, as an issuer of such a contract, measures it at the higher of (i) the amount determined in accordance with KIFRS 1037 and (ii) the amount initially recognized less, when appropriate, cumulative amortization recognized in accordance with KIFRS 1018.

3.14 Bonds purchased under resale agreements and bonds sold under repurchase agreements

Bonds purchased under resale agreements and bonds sold under repurchase agreements are included in loans and borrowings, respectively, in the accompanying statement of financial position. Interest income and expenses from purchase or sale are recognized as interest income on loan receivables and interest expenses on borrowings.

3.15 Property and equipment

Property and equipment are stated at historical cost, less accumulated depreciation. Such cost includes an expenditure which has directly occurred for the acquisition of the asset.

3. Basis of preparation and significant accounting policies (cont'd)

3.15 Property and equipment (cont'd)

The initial and subsequent costs are recognized as an asset when it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. The other maintenances and repairs are expensed in the year in which they are incurred and the carrying amount of certain parts that are replaced is derecognized.

Land is not depreciated. For depreciation of other assets, amount of acquisition cost less residual value is calculated on a straight-line and declining balance basis over the following estimated useful life of the asset.

Classification	Depreciation method	Years
Buildings	Straight-line method	5 to 55
Leasehold improvements	Straight-line method	3 to 10
Equipment and vehicles	Declining balance method	3 to 20

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is immediately reduced to its recoverable amount. The residual value and economic useful life are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for if necessary. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognized in 'other operating income' in the statement of comprehensive income in the year the asset is derecognized.

3.16 Investment properties

Investment properties are measured initially at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met; and excludes the costs of day-to-day servicing of an investment property. Subsequent to initial recognition, investment properties are stated using the cost model.

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of comprehensive income in the period of derecognition, and transfers are made to or from investment property only when there is a change in use. Depreciation method to measure buildings which are classified as investment properties is the straight-line method with useful lives ranging from 5 to 55 years.

3.17 Intangible assets

An intangible asset which comprises industrial property right, software, development costs and others is recognized as an asset only if it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. Intangible assets acquired individually are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as at the date of acquisition in accordance to KIFRS 1103 "*Business Combination*." Amortization of intangible assets with definite useful lives is calculated on the following amortization method over the estimated useful life of the assets.

Classification	Depreciation method	Years
Industrial property right, software, system development costs	Straight-line method	5
Other intangible assets	Straight-line method	1 to 27

Intangible assets with indefinite useful lives are not amortized but are annually tested for impairment or whenever there is an indication that the intangible asset may be impaired. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable.

3.18 Impairment of non-financial assets

The Company assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Company estimates the asset's

3. Basis of preparation and significant accounting policies (cont'd)

3.18 Impairment of non-financial assets (cont'd)

recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs to sell and its value in use. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

3.19 Net defined benefit liabilities (assets)

The Company calculates defined benefit liabilities and pension benefit expenses based on defined benefit plan and defined contribution plan when an employee retires in accordance to pension related regulations. For defined benefit plans, the cost of retirement benefits is measured by an actuary services company, using the projected unit credit method. The present value of defined benefit obligation is computed by discounting expected future cash outflows with market rate of return measured against the yield of high-graded corporate bond whose date of payment and maturity is similar to that of a defined benefit obligation. Actuarial gains and losses, incurred from the change in actuarial assumptions and the difference between the assumptions and the actual results, are recognized in other comprehensive income for the period. Past service cost is recognized immediately to the extent that the benefits are already vested and otherwise is amortized on a straight-line basis over the period until the benefits become vested.

The Company has entered into retirement trust fund and retirement pension plan agreements to pay retirement benefits to its employees. The retirement benefit obligation represents the present value of the defined benefit obligation as adjusted for unrecognized past service cost and as reduced by the fair value of plan assets. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

3.20 Share-based payment transactions

Employees (including senior executives) of the Company receive remuneration in the form of share-based payment transactions, whereby employees render services as consideration for equity instruments, or they are granted share appreciation rights, which can only be settled in cash. If the goods or services provided cannot be reliably measured, the endowed equity is indirectly estimated at fair value and the Company accounts for compensation costs and equity.

The cost of cash-settled transactions is measured initially at fair value at the grant date, taking into account the terms and conditions upon which the instruments were granted. This fair value is expensed over the period until vesting with recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to and including the settlement date, which changes in fair value recognized in the statement of comprehensive income. Also, in the case of a selectable share-based payment transaction in which the employees have a choice between a cash-settled transaction and an equity-settled transaction, the Company records the amount depending on its materiality.

3.21 Employee benefits

3.21.1 Short-term employee benefits

When employees have rendered services to the Company during an accounting period, the Company recognizes the undiscounted amount of Short-term employee benefits. This amount is expected to be settled in whole before twelve months after the end of the reporting period, in exchange for those services.

3.21.2 Termination benefits

The Company recognizes expenses for termination benefits when an employee accepts the offer or when a restriction on the Company's ability to withdraw the offer takes effect.

3.22 Income tax expenses and deferred tax assets and liabilities

Income taxes comprise of current and deferred taxes. All items related to taxes, other than those recognized directly in equity, are accounted for in the statement of comprehensive income. Accordingly, items recognized

3. Basis of preparation and significant accounting policies (cont'd)

3.22 Income tax expenses and deferred tax assets and liabilities (cont'd)

directly in equity and the related taxes are accounted for as other comprehensive income in the consolidated statements of comprehensive income. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Company operates and generates taxable income. If the applied tax laws require an interpretation, the Company calculates income tax payable expected to be paid to the taxation authorities based on the opinion made when the taxes were reported.

Deferred tax is provided on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit loss.
- In respect of taxable temporary differences associated with investments in subsidiaries and associates, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences to the extent that taxable profit will be available against which the deductible temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the years when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and taxation authority.

The Company offsets deferred assets and liabilities if, and only if (a) the Company has a legally enforceable right to set off current tax assets against current tax liabilities and, (b) the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either on (i) the same taxable entity or (ii) different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3.23 Equity

3.23.1 Classification of equity

The Company classifies financial instruments at initial recognition as either financial liabilities or financial equity depending on the contractual materiality. In the case where it is possible to avoid the related contractual obligations, the financial item is classified as a financial equity. An equity is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities.

3.23.2 Stock issuance costs

New stock issuance costs or incremental costs related to the stock issuance for business combinations are recorded as a deduction from paid-in capital net of tax effects.

3.24 Earning per share

Basic and diluted earnings per share are computed by dividing net income by the weighted average number of shares of common stock outstanding during the year.

3. Basis of preparation and significant accounting policies (cont'd)

3.25 Accounting basis for trust accounts

The Company separately maintains the books of accounts and financial statements in connection with the trust operations (the "trust accounts") from those of the Bank's accounts in accordance with the *Financial Investment Services and Capital Markets Act* ("FSCMA"). When surplus funds are generated through the management of trust assets, such funds are deposited with the Bank and are recorded as due to trust accounts of the Bank's accounts. Also, the borrowings from the Bank's accounts are recorded as due from trust accounts of the Bank's accounts. The Company receives fees for operation and management of the trust business and accounts for them as fee and commission income from trust accounts.

With respect to certain trust account products, the Company guarantees the repayment of principal and interest of these trust accounts, in certain cases, with a fixed rate of return. If income from such trust accounts is insufficient to pay the guaranteed amount, such a deficiency is satisfied by using special reserves maintained in these trust accounts, offsetting trust fee payable to the Bank's accounts and receiving compensation contributions from the Bank's accounts. If the Company pays compensating contributions to the guaranteed return trusts to cover such deficiencies, these contributions are reflected as fee and commission expenses from trust accounts in the Company's consolidated statements of comprehensive income.

3.26 Accounting of leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Amounts due from lessees under finance leases are recognized as receivables at the amount of Company's net investment in the leases. Finance lease income is allocated to accounting period so as to reflect a constant periodic rate of return on the Company's net investment outstanding in respect of the leases.

3.27 Merchant banking account

As permitted by the *Restructuring of Financial Institutions Act*, the Bank may continue its merchant banking operations, including leasing business, until the existing contracts acquired from the Korea International Merchant Bank upon merger are terminated.

Significant accounting policies applied to the Bank's merchant banking operations are summarized as follows:

3.27.1 Revenue recognition on discounted notes

Interest income on discounted notes is accrued over the term of the notes. Income from the sale of discounted notes is recognized at the date of transaction based on the difference between the purchase prices and sales prices of the notes, adjusted for interest earned during the holding period.

3.27.2 Cash Management Accounts (CMA)

The Company recognizes interest income from CMA investments and interest expenses from CMA deposits as operating income and operating expenses, respectively.

3.28 Interest income and interest expense

Interest income and interest expenses are recognized over time using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expenses over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Company estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. Cash flows at the time of the calculation include all the fees and points paid to or received from parties to the contract that are an integral part of the effective interest rate, including transaction costs, and all other premiums or discounts.

3. Basis of preparation and significant accounting policies (cont'd)

3.28 Interest income and interest expense (cont'd)

If income recognition on an accrual basis is deemed inappropriate due to low possibility of realizing interest income, the interest income is recognized when interest is actually received.

3.29 Fees and commission income

The Company's revenue recognition standard varies depending on the type of service provided to customers. Fee income, which is an integral part of the effective interest rate (EIR) of financial instruments, is adjusted using the EIR and recognized as interest income.

Fee income is recognized using the five-stage revenue recognition model (Identification of a contract with a customer → Identification of performance obligations in the contract → Determination of the transaction price → Allocation of the transaction price to the separate performance obligations in the contract → Recognition of revenue upon satisfying the performance obligations) in accordance with KIFRS 1115.

3.30 Dividend income

Dividend income is recognized when the Company's right to receive the payment is established.

4. Significant judgments and accounting estimates

In the application of the Company's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily observable from objective sources. The estimation and assumption are based on other factors that are related to historical experience. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

In the process of applying the Company's accounting policies, management has made the following judgments that have a significant effect on the amounts recognized in the consolidated financial statements:

4.1 Fair value of financial instruments

The fair value of financial instruments is determined by referencing quoted market prices in active markets in the first place. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques including (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models.

4.2 Expected credit loss of financial assets

The Company recognizes impairment losses on debt instruments, lease receivables, contract assets, loan commitment, and financial guarantee contracts that were accounted for at amortized cost, or FVOCI, based on the expected credit loss (ECL) impairment model using a three-stage model for 12-month expected credit losses, or lifetime expected credit losses based on changes in credit risk since initial recognition of financial assets.

4. Significant judgments and accounting estimates (cont'd)

4.2 Expected credit loss of financial assets (cont'd)

Classification		Loss allowance
Stage 1	Credit risk on a financial instrument has not increased significantly since initial recognition.	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date
Stage 2	Credit risk on a financial instrument has increased significantly since initial recognition.	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument
Stage 3	Credit-impaired	

The cumulative changes in lifetime expected credit losses since initial recognition are recognised as loss allowance for a financial asset that is considered credit-impaired at initial recognition.

4.3 Provision for severance and retirement benefits

The cost of providing benefits under the defined benefit plans is determined using the actuarial valuation. Actuarial assumptions were made for the discount rate, and an increase in the future pay rate. Severance and retirement benefits include significant uncertainties in the estimates due to the long-term duration.

4.4 Impairment of non-financial assets

The Company assesses, at each reporting date, whether there is an indication that an asset may be impaired. Intangible asset with indefinite useful life is tested for impairment annually or tested whenever there is an indication that the intangible asset may be impaired. Other non-financial assets are tested for impairment whenever there is indication that the book value cannot be recovered. For the calculation of value in use, management estimates expected future cash flow incurred from the asset or cash generating unit (CGU). For the calculation of present value of the expected future cash flow, appropriate discount rate is selected.

4.5 Income taxes

Different taxation laws that the Company's foreign subsidiaries are exposed to require judgment in determining the amount of tax expenses that can be recognized. In addition, there has been various transactions and tax accounting methods which have made computing the final tax expenses for the period uncertain. The contingent liability from any future tax assessments is based on the estimates of the likelihood of additional taxes imposed and has been included in the Company's consolidated financial statements for the current period. When the finalized tax expenses assessments are different from the appropriated amounts, the differences, if any, are recognized in current deferred tax assets, liabilities, and expenses for the period.

5. Fair value measurement of financial assets and liabilities

The standards the Company applies when measuring fair values of financial assets and liabilities are described below:

A. Quoted market prices as at the settlement date in an active market are the best evidence of fair value and should be used when available.

B. If a market for a financial instrument is not active, the Company establishes fair value by using a valuation technique that makes maximum use of market inputs and includes (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models. An acceptable valuation technique incorporates all factors that market participants would consider in setting a price and is consistent with accepted economic methodologies for pricing financial instruments.

C. When determining fair value using the valuation techniques, comparison with the current market transaction of another instrument that is substantially the same as the financial instrument needed to be objectively substantiated or inclusion of variables in the marketable data must be performed. Not all of the significant market variables are observable and in relevant cases, the reasonable estimates or assumptions are required to determine the fair value.

5. Fair value measurement of financial assets and liabilities (cont'd)

D. For an investment in equity instruments which quoted market price is not available in an active market or derivative linked to such instruments which fair values are not measured reliably, fair values are measured at cost.

5.1 Fair value hierarchy of financial instruments

Fair value hierarchy of financial instruments as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (*) (unaudited)			
Classification	Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets measured at FVTPL (KIFRS 1109)				
Financial assets measured at FVTPL (KIFRS 1109)				
Equity securities	₩ 77,026	₩ —	₩ 5,484	₩ 82,510
Debt securities	1,566,333	2,911,953	296,424	4,774,710
Derivative assets held-for-trading	—	3,418,769	12,913	3,431,682
Convertible privately-placed bonds	—	—	334,640	334,640
	1,643,359	6,330,722	649,461	8,623,542
Financial assets measured at FVOCI				
Equity securities	446,913	—	634,192	1,081,105
Debt securities	21,490,641	14,414,984	4,539	35,910,164
	21,937,554	14,414,984	638,731	36,991,269
Derivative assets used for hedging	—	1,726	5	1,731
	₩23,580,913	₩20,747,432	₩1,288,197	₩45,616,542
Financial liabilities				
Financial liabilities measured at FVTPL (KIFRS 1109)				
Derivative liabilities Held-for-trading	₩ —	₩ 3,254,377	₩ 12,897	₩ 3,267,274
Financial liabilities designated as measured at FVTPL (KIFRS 1109)	—	430,139	—	430,139
	—	3,684,516	12,897	3,697,413
Derivative liabilities used for hedging	—	136,464	27,162	163,626
	₩ —	₩ 3,820,980	₩ 40,059	₩ 3,861,039

(*) The Company recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

	December 31, 2017 (*2)			
Classification	Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets at FVTPL (KIFRS 1039)				
Equity securities	₩ 50,932	₩ —	₩ —	₩ 50,932
Debt securities	1,728,000	1,107,194	—	2,835,194
Derivative assets held-for-trading	—	6,551,125	6,363	6,557,488
	1,778,932	7,658,319	6,363	9,443,614
Available-for-sale financial assets				
Equity securities (*1)	351,688	2,868,834	831,782	4,052,304
Debt securities	24,878,669	15,381,239	10,300	40,270,208
	25,230,357	18,250,073	842,082	44,322,512
Derivative assets used for hedging	—	11,760	—	11,760
	₩27,009,289	₩25,920,152	₩848,445	₩53,777,886
Financial liabilities				
Financial liabilities at FVTPL (KIFRS 1039)				
Derivative liabilities held-for-trading	₩ 15	₩ 6,408,881	₩ 5,036	₩ 6,413,932
Financial liabilities designated at FVTPL (KIFRS 1039)	—	425,627	—	425,627
	15	6,834,508	5,036	6,839,559
Derivative liabilities used for hedging	—	62,571	10,453	73,024
	₩ 15	₩ 6,897,079	₩ 15,489	₩ 6,912,583

(*1) As of December 31, 2017, equity securities, included in available-for-sale financial assets, not quoted in an active market and of which fair value cannot be measured reliably and thus are measured at cost, amount to ₩63,103 million, and are included in Level 3.
(*2) The Company recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation techniques:

- Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: Other techniques in which all significant inputs and significant value drivers are observable in active markets
- Level 3: Techniques, such as pricing models, discounted cash flow methodologies, or similar techniques based on significant unobservable inputs, as well as management judgments or estimates that are significant to valuation

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are measured at fair value as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	Fair value September 30, 2018(unaudited)	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets			
Financial assets measured at FVTPL (KIFRS 1109)			
Debt securities	₩ 2,911,953	Net asset value model	Underlying asset prices such as bond, stock, etc.
Derivative assets held-for-trading	3,418,769	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, Index, volatility, swap yield curve, swaption volatility, yield curve of each currency
	6,330,722		
Financial assets measured at FVOCI			
Debt securities	14,414,984	DCF model	Discount rate
Derivative assets used for hedging	1,726	Hull-White 1 factor model	Exchange rate swap yield curve, swaption volatility, yield curve of each currency
	₩20,747,432		
Financial liabilities			
Financial liabilities measured at FVTPL (KIFRS 1109)			
Derivative liabilities held-for-trading	3,254,377	Black-Scholes model, Black model, DCF model and Hull-White 1 factor model	Exchange rate, Index, volatility, swap yield curve, swaption volatility, yield curve of each currency
Financial liabilities designated as measured at FVTPL (KIFRS 1109)	430,139	Hull-white 1 factor model	Swap yield curve swaption volatility
	3,684,516		
Derivative liabilities used for hedging	136,464	Hull-white 1 factor model	Exchange rate swap yield curve, swaption volatility, yield curve of each currency
	₩ 3,820,980		

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2017	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets			
Financial assets at FVTPL (KIFRS 1039)			
Debt securities	₩ 1,107,194	DCF model	Discount rate
Derivative assets held-for-trading	6,551,125	Black-Scholes model, Black model and DCF model	exchange rate, interest rate for each currency, volatility, swap yield curve, swaption volatility, yield curve of each currency
	7,658,319		
Available-for-sale financial assets			
Equity securities	2,868,834	Net asset value model	Underlying asset prices such as bond, stock, etc.
Debt securities	15,381,239	DCF model	Discount rate
	18,250,073		
Derivative assets used for hedging	11,760	Hull-White 1 factor model Black model	Volatility, swap yield curve, swaption volatility, yield curve of each currency volatility of KRW cap/floor
	₩25,920,152		
Financial liabilities			
Financial liabilities at FVTPL (KIFRS 1039)			
Derivative liabilities held-for-trading	6,408,881	Black-Scholes model Black model and DCF model	Exchange rate, interest rate for each currency, volatility, swap yield curve, swaption volatility, yield curve of each currency
Financial liabilities designated at FVTPL (KIFRS 1039)	425,627	Hull-white short-rate model	KRW interest swap yield curve, KRW swaption volatility
	6,834,508		
Derivative liabilities used for hedging	62,571	Hull-White 1 factor model Black model	Volatility, swap yield curve, swaption volatility, yield curve of each currency volatility of KRW cap/floor
	₩ 6,897,079		

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Details of fair value, valuation technique, input to valuation, and significant unobservable inputs used to develop those measurements classified into level 3 assets and liabilities that are measured at fair value as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	Fair value September 30, 2018 (unaudited)	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Financial assets						
Financial assets measured at FVTPL (KIFRS 1109)						
Equity securities	₩ 5,484	DCF model	Growth rate, discount rate	Growth rate	0.00	Positive
				Discount rate	4.56 ~14.01	Negative
Debt securities	296,424	Net asset value model, Binomial model	Underlying asset price, volatility of underlying assets	Volatility of underlying assets	23.49 ~26.44	Positive
Derivative assets held-for-trading	12,913	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, yield curve of each currency, correlation within evaluation model	correlation within evaluation model	-94.39 ~-9437%	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Convertible privately-placed bonds	334,640	Binomial model	Underlying asset price, volatility of underlying assets	Volatility of underlying assets	16.99 ~42.60	Positive
	649,461					
Financial assets measured at FVOCI						
Equity securities	634,192	DCF model, comparison with similar business, net asset value model,	Growth rate, Liquidating value, discount rate	Growth rate Liquidating value Discount rate	0.00 0.00 8.02 ~18.71	Positive Positive Negative
Debt securities	4,539	DCF model.	Discount rate	Discount rate	8.03	Negative
	638,731					
Derivative assets used for hedging	5	Hull-White 2 factor model	Exchange rate, Swap yield curve, Swaption volatility, yield curve of each currency, correlation within evaluation model	correlation within evaluation model	-62.78	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩1,288,197					
Financial liabilities						
Financial liabilities measured at FVTPL (KIFRS 1109)						
Derivative liabilities held-for-trading	12,897	Hull-White 2 factor model	Exchange rate Swap yield curve Swaption volatility yield curve of each currency correlation within evaluation model	Correlation within evaluation model	-94.39 ~ -94.37	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
Derivative liabilities used for hedging	27,162	Hull-White 2 factor model	Exchange rate Swap yield curve Swaption volatility yield curve of each currency correlation within evaluation model	Correlation within evaluation model	-97.57 ~ -85.32	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 40,059					

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2017	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Financial assets						
Financial assets at FVTPL (KIFRS 1039)						
Derivative assets held-for-trading	6,363	Hull-White 2 factor model	KRW swap yield curve, Korean government bond yield curve, volatility of each yield, correlation of underlying assets	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
		Binomial model	Underlying asset price, Discount rate, volatility of underlying assets	Volatility of underlying assets	13.59 ~28.13	Positive
Available-for-sale financial asset						
Equity securities	831,782	DCF model, comparison with similar business, net asset value model, utilization of past transaction, risk-adjusted discount rate model, dividend discount model	Growth rate, discount rate	Growth rate	0.00 ~1.00	Positive
				Discount rate	5.43 ~17.26	Negative
Debt securities	10,300	DCF model.	Discount rate, etc.	Discount rate,	11.88	Negative
	842,082					

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value September 30, 2017 (unaudited)	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Derivative assets used for hedging	—	Hull-White 2 factor model	KRW swap yield curve, USD swap yield curve, volatility of each yield curve, correlation of each yield curve of underlying assets, correlation between USD interest rate and KRW/USD exchange rate	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩848,445					
Financial liabilities						
Financial liabilities at FVTPL (KIFRS 1039)						
Derivative liabilities held-for-trading	5,036	Hull-White 2 factor model	KRW swap yield curve, Korean government bond yield curve, volatility of each yield, correlation of underlying assets	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
		Binomial model	Underlying asset price, Discount rate, volatility of underlying assets	Volatility of underlying assets	13.59 ~28.13	Positive
Derivative liabilities used for hedging	10,453	Hull-White 2 factor model	KRW swap yield curve, USD swap yield curve, volatility of each yield curve, correlation of each yield curve of underlying assets, correlation between USD interest rate and KRW/USD exchange rate	Correlation of each yield curve of underlying assets	0.83 ~0.98	Fair value increase or decrease based on the changes in correlation by the effect of trading instruments and market status
	₩ 15,489					

5. Fair value measurement of financial assets and liabilities (cont'd)

5.2 Changes in the fair value of financial instruments categorised as Level 3

Changes in the fair value of financial instruments categorized as Level 3 of the fair value hierarchy of financial instruments that are measured at fair value in the statement of financial position for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)						
	Financial assets measured at FVTPL (KIFRS 1109)			Financial assets measured at FVOCI		Net derivative instruments	
Classification	Equity securities	Debt securities	Convertible privately-placed bonds	Equity securities	Debt securities	Held-for-trading	Used for hedging
January 1, 2018	₩5,300	₩256,807	₩164,718	₩573,670	₩ 7,738	₩ 170	₩(10,453)
Total profit or loss							
Profit or loss	792	23,515	(859)	—	1,239	(154)	2,789
Other comprehensive income	—	—	—	60,332	670	—	—
Buy / issue	—	28,954	231,547	190	—	—	(19,493)
Sell / settlement	(608)	(12,852)	(60,766)	—	(5,108)	—	—
September 30, 2018	₩5,434	₩296,424	₩334,640	₩634,192	₩ 4,539	₩ 16	₩(27,157)

	For the nine-month period ended September 30, 2017 (unaudited)			
	Available-for-sale financial assets		Net derivative instruments	
Classification	Equity securities	Debt securities	Held-for-trading	Used for hedging
January 1, 2017	₩913,568	₩ 7,850	₩2,551	₩ 1,164
Total profit or loss				
Profit or loss	(71,892)	1,581	(966)	(1,164)
Other comprehensive income	78,268	(1,601)	—	—
Buy / issue	18,942	1,350	843	(8,581)
Sell / settlement	(23,435)	—	—	—
September 30, 2017	₩915,451	₩ 9,180	₩2,428	₩(8,581)

5. Fair value measurement of financial assets and liabilities (cont'd)

5.3 Current gains or losses recognized from changes in Level 3 financial instruments measured at fair value.

Current gains or losses recognized from changes in Level 3 financial instruments measured at fair value for the nine-month periods ended September 30, 2018 and 2017 are recorded in the statement of comprehensive income as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)	
Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Gain (loss) on financial instruments measured at FVTPL (KIFRS 1109)	₩23,294	₩22,966
Gain (loss) related to derivative instruments used for hedging	2,789	2,789
Gain (loss) related to financial instruments measured at FVOCI (KIFRS 1109)	1,239	—
	₩27,322	₩25,755

	For the nine-month period ended September 30, 2017 (unaudited)	
Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Gain (loss) on financial instruments at FVTPL (KIFRS 1039)	₩ (966)	₩ (866)
Gain (loss) related to derivative instruments used for hedging	(1,164)	—
Other gain (loss) related to financial instruments	(7,782)	(12,360)
Impairment loss related to financial assets	(64,110)	(64,110)
Reversal of impairment loss related to financial assets	1,581	1,581
	₩(72,441)	₩(75,755)

5.4 Transfers between fair value hierarchy

There is no transfer into or out of Level 3 of the fair value hierarchy for the nine-month periods ended September 30, 2018 and 2017.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.5 Sensitivity analysis

Sensitivity of the fair value measurement for the each Level 3 financial instrument upon the changes in significant unobservable input, whose results are favorable and unfavorable changes in profit or loss or other comprehensive income as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): The sensitivity analysis of financial instruments classified as level 3 amounting to ₩431,691 million and ₩386,749 million as of September 30, 2018 and December 31, 2017, respectively, is impossible in practice and thus are excluded

	September 30, 2018 (unaudited)	
Classification	Favorable changes	Unfavorable changes
Financial assets		
Financial assets measured at FVTPL (KIFRS 1109)		
Equity securities (*2)	₩ 322	₩ (149)
Debt securities (*3)	120	(96)
Convertible privately-placed bonds (*4)	1,229	(827)
Derivative assets held-for-trading (*1)	238	(200)
	1,909	(1,272)
Financial assets measured at FVOCI		
Equity securities (*2)	110,633	(43,474)
Debt securities (*3)	105	(102)
	110,738	(43,576)
	₩112,647	₩(44,848)
Financial liabilities		
Derivative liabilities held-for-trading (*1)	200	(238)
Derivative liabilities used for hedging (*1)	670	(987)
	₩ 870	₩ (1,225)

(*1) Unfavorable and favorable changes in fair value are calculated by increasing/decreasing by 10% of 1) correlation between rates of interest rate swap of KRW, 2) correlation between rates of interest rate swap of KRW and USD, 3) correlation between rates of interest rate swap of USD and exchange rates of KRW/USD, 4) correlation between stock index and individual stock, and 5) correlation within evaluation model.

(*2) Changes in fair value of equity securities are calculated by increasing/decreasing growth rate (0.0~1.0%) and discount rate, which are main unobservable inputs.

(*3) Changes in fair value of debt securities are calculated by increasing/decreasing discount rate (-1.0~1.0%), which is the main unobservable input. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by increasing/decreasing discount rate of lease cash flow (-1.0~1.0%) and rate of increase in selling price of real estate (-1.0~1.0%), under limited circumstances when they are consisted of real estate. However it is impossible in practice to calculate sensitivity of beneficiary securities based on changes in inputs.

(*4) For convertible privately-placed bonds, favorable and unfavorable changes in fair value are calculated by increasing or decreasing the price (-10.0~10.0%) and variability (-10.0~10.0%) of underlying assets, which are the main unobservable inputs.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.5 Sensitivity analysis (cont'd)

	December 31, 2017	
Classification	Favorable changes	Unfavorable changes
Financial assets		
Derivative assets held-for-trading (*1)	₩ 376	₩ (166)
Available-for-sale financial assets		
Equity securities (*2)	107,552	(36,393)
Debt securities (*3)	226	(219)
	107,778	(36,612)
	₩108,154	₩(36,778)
Financial liabilities		
Derivative liabilities held-for-trading (*1)	32	(120)
Derivative liabilities used for hedging (*1)	287	(361)
	₩ 319	₩ (481)

(*1) Unfavorable and favorable changes in fair value are calculated by increasing/decreasing by 10% of 1) correlation between rates of interest rate swap of KRW, 2) correlation between rates of interest rate swap of KRW and USD, 3) correlation between rates of interest rate swap of USD and exchange rates of KRW/USD, 4) correlation between stock index and individual stock, and 5) correlation within evaluation model.

(*2) Changes in fair value of equity securities are calculated by increasing/decreasing growth rate (0.0~1.0%) and discount rate, which are main unobservable inputs. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by increasing/decreasing discount rate of lease cash flow (-1.0~1.0%) and rate of increase in selling price of real estate (-1.0~1.0%), under limited circumstances when they are consisted of real estate. However it is impossible in practice to calculate sensitivity of beneficiary securities based on changes in inputs.

(*3) Changes in fair value of debt securities are calculated by changing discount rate (-1.0~1.0%), which is the main unobservable input.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed

Fair value hierarchy of financial instruments measured at amortized cost as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)			
	Levels of the fair value hierarchy			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from banks	₩2,014,083	₩18,763,179	₩ —	₩ 20,777,262
Securities measured at amortized Cost	1,604,984	9,940,053	—	11,545,037
Loans	—	—	236,326,098	236,326,098
Others	—	—	16,726,146	16,726,146
Merchant banking account assets	—	—	2,927,304	2,927,304
	₩3,619,067	₩28,703,232	₩255,979,548	₩288,301,847
Financial liabilities:				
Deposits	₩ —	₩29,123,448	₩210,029,858	₩239,153,306
Borrowings	—	1,482,373	14,339,282	15,821,655
Debentures	—	25,462,275	—	25,462,275
Others	—	—	25,967,613	25,967,613
Merchant banking account liabilities	—	—	2,854,183	2,854,183
	₩ —	₩56,068,096	₩253,190,936	₩309,259,032

	December 31, 2017			
	Levels of the fair value hierarchy			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from banks	₩2,224,215	₩17,759,701	₩ —	₩ 19,983,916
Held-to-maturity investments	1,023,875	5,194,347	—	6,218,222
Loans	—	—	222,442,280	222,442,280
Others	—	—	9,585,105	9,585,105
Merchant banking account assets	—	—	2,966,019	2,966,019
	₩3,248,090	₩22,954,048	₩234,993,404	₩261,195,542
Financial liabilities:				
Deposits	₩ —	₩31,566,008	₩197,908,839	₩229,474,847
Borrowings	—	2,180,567	11,593,071	13,773,638
Debentures	—	22,361,068	—	22,361,068
Others	—	—	20,759,022	20,759,022
Merchant banking account liabilities	—	—	2,018,346	2,018,346
	₩ —	₩56,107,643	₩232,279,278	₩288,386,921

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are not measured at fair value as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)		
Classification	Fair value	Valuation technique	Inputs
Financial assets			
Cash and due from banks	₩18,763,179	DCF model	Discount rate
Securities measured at amortized cost	9,940,053	DCF model	Discount rate
	28,703,232		
Financial liabilities			
Deposits	29,123,448	DCF model	Discount rate
Borrowings	1,483,373	DCF model	Discount rate
Debentures	25,462,275	DCF model	Discount rate
	₩56,068,096		

	December 31, 2017		
Classification	Fair value	Valuation technique	Inputs
Financial assets			
Cash and due from banks	₩17,759,701	DCF model	Discount rate
Held-to-maturity financial assets	5,194,347	DCF model	Discount rate
	22,954,048		
Financial liabilities			
Deposits	31,566,008	DCF model	Discount rate
Borrowings	2,180,567	DCF model	Discount rate
Debentures	22,361,068	DCF model	Discount rate
	₩56,107,643		

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 3 assets and liabilities disclosed but not measured at fair value as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)		
Classification	Fair value	Valuation technique	Inputs
Financial assets			
Loans	₩236,326,098	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets	16,726,146	(*)	
Merchant banking account assets	2,927,304	(*)	
	₩255,979,548		
Financial liabilities			
Deposits	₩210,029,858	DCF model	Other spread, rate of advanced redemption
Borrowings	14,339,282	DCF model	Other spread
Other financial liabilities	25,967,613	(*)	
Merchant banking account liabilities	2,854,183	(*)	
	₩253,190,936		

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Classification	December 31, 2017 Fair value	Valuation technique	Inputs
Financial assets			
Loans	₩222,442,280	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets	9,585,105	(*)	
Merchant banking account assets	2,966,019	(*)	
	₩234,993,404		
Financial liabilities			
Deposits	₩197,908,839	DCF model	Other spread, rate of advanced redemption
Borrowings	11,593,071	DCF model	Other spread
Other financial liabilities	20,759,022	(*)	
Merchant banking account liabilities	2,018,346	(*)	
	₩232,279,278		

(*) Other financial assets and liabilities are temporary accounts derived from various transactions. The book value of these assets and liabilities are regarded as their fair value without applying DCF method because their maturities are not fixed or short.

5.7 Gain and loss on deferred Day 1

Changes in gain (loss) on deferred Day 1 for the nine-month periods ended September 30, 2018 and 2017 are summarized as follows (Korean won in millions)

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
January 1	₩(188)	₩ —
New accruals of gain or loss	—	(200)
Amounts recognized as current profit or loss	10	8
September 30	₩(178)	₩(192)

5.8 Transferred financial assets and related liabilities not eliminated as a whole as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited) Book value	Fair value
Transferred assets		
Financial assets measured at FVOCI (*)	₩346,351	₩346,351
Financial assets measured at amortized cost (*)	223,313	217,854
Related liabilities		
Bonds sold under repurchase agreements	169,946	169,757

(*) The financial assets measured at FVOCI-lent and the Securities measured at amortized cost-lent, of which related liabilities are not appropriated, amounting to ₩341,990 million and ₩28,601 million, respectively, as of September 30, 2018, are included.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.8 Transferred financial assets and related liabilities not eliminated as a whole as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2017	
	Book value	Fair value
Transferred assets		
Available-for-sale financial assets (*)	₩903,591	₩903,591
Held-to-maturity financial assets	31,682	33,942
Related liabilities		
Bonds sold under repurchase agreements	251,990	252,529

(*) Available-for-sale securities lent, of which related liabilities are not appropriated, amounting to ₩613,005 million as of December 31, 2017 are included.

6. Fair value of financial instruments

Fair values of financial instruments as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)		December 31, 2017	
	Book value	Fair value	Book value	Fair value
Financial assets				
Cash and due from banks	₩ 20,777,262	₩ 20,777,262	₩ 19,983,916	₩ 19,983,916
Financial assets at FVTPL (KIFRS 1039)	—	—	9,443,614	9,443,614
Financial assets measured at FVTPL (KIRS 1109)	8,623,542	8,623,542	—	—
Available-for-sale financial assets	—	—	44,322,512	44,322,512
Financial assets measured at FVOCI	36,991,269	36,991,269	—	—
Held-to-maturity financial assets	—	—	6,160,922	6,218,222
Securities measured at amortized cost	11,477,982	11,545,037	—	—
Loans	236,827,355	236,326,098	224,096,709	222,442,280
Derivative assets used for hedging	1,731	1,731	11,760	11,760
Other financial assets	16,726,340	16,726,146	9,585,105	9,585,105
Merchant banking account assets	2,927,304	2,927,304	2,966,019	2,966,019
	₩334,352,785	₩333,918,389	₩316,570,557	₩314,973,428
Financial liabilities				
Financial liabilities at FVTPL (KIFRS 1039)	₩ —	₩ —	₩ 6,839,559	₩ 6,839,559
Financial liabilities measured at FVTPL (KIFRS 1109)	3,697,413	3,697,413	—	—
Deposits	239,610,291	239,153,306	230,410,494	229,474,847
Borrowings	15,822,478	15,821,655	13,774,502	13,773,638
Debentures	25,263,512	25,462,275	22,311,737	22,361,068
Derivative liabilities used for hedging	163,626	163,626	73,024	73,024
Other financial liabilities	25,967,613	25,976,613	20,759,022	20,759,022
Merchant banking account liabilities	2,854,183	2,854,183	2,018,346	2,018,346
	₩313,379,116	₩313,120,071	₩296,186,684	₩295,299,504

6. Fair value of financial instruments (cont'd)

The following standards are applied in measuring the fair value of financial instruments.

A. Loans and receivable: Expected cash flows, current market interest rates and discount rates including borrowers' credit risks are factors to calculate the fair value of loans and receivables. For lines of credit and loans that have a short term maturity (less than three months), it is assumed that the carrying amounts approximate to their fair value.

B. Financial investment assets: The fair value of financial assets held-to-maturity are as stated by the market, broker, or by credible sources. If none of the information from these entities is usable, published market price of financial instruments with similar credit rating, maturity, and ROI is used to estimate the fair value.

C. Depository liabilities: For deposits without an explicit maturity period including deposits with no interests, deposits that have a short term maturity (less than three months), and deposits with a floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing deposits is based on discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

D. Borrowings: For borrowings that have a short term maturity (less than three months) and borrowings with floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing borrowings is based on and discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

E. Debentures: For quoted debt issued, the fair values are determined based on quoted market prices. For those notes issued where quoted market prices are not available, a discounted cash flow model is used based on a current interest rate yield curve appropriate for the remaining term to maturity and credit spreads.

7. Categories of financial assets and financial liabilities

7.1 The Company categorizes its financial assets as of September 30, 2018 and December 31, 2017 as follows (Korean won in millions):

	September 30, 2018 (unaudited)				
	Financial assets measured at FVTPL (KIFRS 1109)	Financial assets measured at FVOCI	Financial assets measured at amortized cost	Derivatives for hedging	Total
Cash and due from banks	₩ —	₩ —	₩ 20,777,262	₩ —	₩ 20,777,262
Financial assets measured at FVTPL (KIFRS 1109)	8,623,542	—	—	—	8,623,542
Financial assets measured at FVOCI	—	36,991,269	—	—	36,991,269
Securities measured at amortized cost	—	—	11,477,982	—	11,477,982
Loans	—	—	236,827,355	—	236,827,355
Derivative assets used for hedging	—	—	—	1,731	1,731
Others	—	—	16,726,340	—	16,726,340
Merchant banking account assets	—	—	2,927,304	—	2,927,304
	₩8,623,542	₩36,991,269	₩288,736,243	₩1,731	₩334,352,785

	December 31, 2017					
	Financial instruments at FVTPL (KIFRS 1039)	Available-for-sale financial assets	Held-to-maturity investments	Loans	Derivatives for hedging	Total
Cash and due from banks	₩ —	₩ —	₩ —	₩ 19,983,916	₩ —	₩ 19,983,916
Financial assets at FVTPL (KIFRS 1039)	9,443,614	—	—	—	—	9,443,614
Available-for-sale financial assets	—	44,322,512	—	—	—	44,322,512
Held-to-maturity investments	—	—	6,160,922	—	—	6,160,922
Loans	—	—	—	224,096,709	—	224,096,709
Derivative assets used for hedging	—	—	—	—	11,760	11,760
Others	—	—	—	9,585,105	—	9,585,105
Merchant banking account assets	—	—	—	2,966,019	—	2,966,019
	₩9,443,614	₩44,322,512	₩6,160,922	₩256,631,749	₩11,760	₩316,570,557

7. Categories of financial assets and financial liabilities (cont'd)

7.2 The Company categorizes its financial liabilities as of September 30, 2018 and December 31, 2017 as follows (Korean won in millions):

	September 30, 2018 (unaudited)				
Classification	Financial liabilities measured at FVTPL (KIFRS 1109)	Financial liabilities designated as measured at FVTPL (KIFRS 1109)	Financial liabilities measured at amortized cost	Derivatives for hedging	Total
Financial liabilities measured at FVPL (KIFRS 1109)	₩3,267,274	₩430,139	₩ —	₩ —	₩ 3,697,413
Deposits	—	—	239,610,291	—	239,610,291
Borrowings	—	—	15,822,478	—	15,822,478
Debentures	—	—	25,263,512	—	25,263,512
Derivative liabilities used for hedging	—	—	—	163,626	163,626
Others	—	—	25,967,613	—	25,967,613
Merchant banking account liabilities	—	—	2,854,183	—	2,854,183
	₩3,267,274	₩430,139	₩309,518,077	₩163,626	₩313,379,116

	December 31, 2017				
	Financial liability at FVTPL				
Classification	Held-for-trading	Designated at FVTPL (KIFRS 1039)	Amortized cost of financial liabilities	Derivatives for hedging	Total
Financial liabilities at FVTPL (KIFRS 1039)	₩6,413,932	₩425,627	₩ —	₩ —	₩ 6,839,559
Deposits	—	—	230,410,494	—	230,410,494
Borrowings	—	—	13,774,502	—	13,774,502
Debentures	—	—	22,311,737	—	22,311,737
Derivative liabilities used for hedging	—	—	—	73,024	73,024
Others	—	—	20,759,022	—	20,759,022
Merchant banking account liabilities	—	—	2,018,346	—	2,018,346
	₩6,413,932	₩425,627	₩289,274,101	₩73,024	₩296,186,684

8. Offsetting of financial assets and liabilities

8.1 Financial assets offset, the executable master netting arrangements and financial assets subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions):

	September 30, 2018 (unaudited)					
				Related amounts not offset		
Classification	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,433,413	₩ —	₩ 3,433,413	₩ (2,939,111)	₩ (84,618)	₩ 409,684
Securities lent	370,591	—	370,591	—	(370,591)	—
Bonds purchased under resale agreement	1,785,040	—	1,785,040	—	(1,785,040)	—
Unsettled spot exchanges	10,259,452	—	10,259,452	(10,253,437)	—	6,015
Domestic exchange settlement debit	20,289,191	17,733,026	2,556,165	—	—	2,556,165
Other accounts receivable	28,965	20,716	8,249	—	—	8,249
	₩36,166,652	₩17,753,742	₩18,412,910	₩(13,192,548)	₩(2,240,249)	₩2,980,113

	December 31, 2017					
				Related amounts not offset		
Classification	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 6,566,217	₩ —	₩ 6,566,217	₩ (4,703,240)	₩(1,069,429)	₩ 793,548
Securities lent	613,005	—	613,005	—	(613,005)	—
Bonds purchased under resale agreement	4,524,823	—	4,524,823	—	(4,524,823)	—
Unsettled spot exchanges	6,171,297	—	6,171,297	(6,126,005)	—	45,292
Domestic exchange settlement debit	25,118,671	23,618,667	1,500,004	—	—	1,500,004
Other accounts receivable	1,997	1,924	73	—	—	73
	₩42,996,010	₩23,620,591	₩19,375,419	₩(10,829,245)	₩(6,207,257)	₩2,338,917

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

8. Offsetting of financial assets and liabilities (cont'd)

8.2 Financial liabilities offset, the executable master netting arrangements and financial liabilities subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions):

	September 30, 2018 (unaudited)					
				Related amounts not offset		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 3,430,900	₩ —	₩ 3,430,900	₩ (2,989,933)	₩(174,918)	₩266,049
Bonds sold under repurchase agreements	169,946	—	169,946	(169,946)	—	—
Unsettled spot exchanges	10,266,911	—	10,266,911	(10,253,437)	—	13,474
Domestic exchange settlement credit	19,168,501	17,733,026	1,435,475	(1,435,475)	—	—
Other accounts payable	20,717	20,716	1	—	—	1
	₩33,056,975	₩17,753,742	₩15,303,233	₩(14,848,791)	₩(174,918)	₩279,524

	December 31, 2017					
				Related amounts not offset		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 6,470,157	₩ —	₩ 6,470,157	₩ (4,789,124)	₩(126,654)	₩1,554,379
Bonds sold under repurchase agreements	251,990	—	251,990	(251,990)	—	—
Unsettled spot exchanges	6,170,414	—	6,170,414	(6,126,005)	—	44,409
Domestic exchange settlement credit	27,925,844	23,618,667	4,307,177	(4,307,177)	—	—
Other accounts payable	6,880	1,924	4,956	—	—	4,956
	₩40,825,285	₩23,620,591	₩17,204,694	₩(15,474,296)	₩(126,654)	₩1,603,744

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

9. Risk management

The Company is exposed to credit risk, liquidity risk, market risk and various operating risks. The objectives of risk management are to pursue economic benefits by managing the associated risk in the changing financial environment and to utilize capital efficiently.

The basic principles of risk management are as follows:

- Minimize the rapid fluctuation in profit by balancing the risks and the income.
- Maximize long-term shareholder value.
- Comply with procedures to ensure operating activities are confined to allowable risk limits.
- Examine the type and size of risk in accordance with the changes in potential economic value of portfolios for the efficient use and distribution of assets and to establish risk management strategy.

The basic policies in order to realize the basic principles of risk management are as follows:

- Set and comply with allowable limits for each risk type.
- Establish an appropriate balance between income and associated risk.
- When a conflict between income and associated risk exists, the Company pursues income while complying with the allowable risk limits.
- Prioritize the distribution of risk in order to avoid risk concentration in certain areas.
- Analyse the effect of various market fluctuations on parts or the entire portfolio on a regular basis.
- Separate risk management segments, operational segments, and other segments which deal with trade confirmations and payments in order to maintain independence.

9.1. Strategy and procedure of risk management

(1) Operation of and setting risk limits: The Company established and operates a limit management system to maintain the appropriate level of risk relative to the equity capital held. The Risk Management Committee approves total risk limits and limits by types of risks, taking into account of capital, business plans, risk management regulations, and institutional changes within the risk level that the Bank can manage. The Risk Management Operation Committee sets up and allocates other operational limits (eg, by organization, product, investment, and loss) to comply with allowable limits for each type of risk, approved by the Risk Management Committee and periodically checks the status of limit management.

(2) Risk measurement and management: The Company prepares the appropriate risk measurement methods considering the nature of risks, and measures them by the types of risks. Risk measurement and evaluation results are regularly reviewed, and reported to the Risk Management Committee, Risk Management Operation Committee, and management. Risk measurement and evaluation results are also used for daily business management activities such as establishment of business plan and management strategy.

(3) Operation of risk management information system: In order to provide advanced risk management in a rapidly changing financial environment, the Company has established a company-wide risk management system that meets the new BIS standards. The Company operates credit risk internal grading (changes are approved in November 2008 and September 2016), advanced operational risk measurement method (changes are approved in November 2008 and September 2016) and market risk internal model (changes are approved in April 2008 and August 2016 [retrospective application in September 2016]).

(4) Operation of crisis management system: The Company operates a crisis management system that can respond effectively to the crisis caused by drastic changes in the internal and external management environment. The Company operates an early warning system in order to respond to the drastic changes in the financial market in a consistent and systematic manner. In the event of an anomaly, the holding company declares the level of crisis at the group level, and the Bank analyzes the impact on the portfolio in accordance with the step-by-step plan and carries out the countermeasures.

9. Risk management (cont'd)

9.2. Organization and structure of risk management

The risk management organization consists of the Risk Management Committee, Risk Management Operation Committee under the Risk Management Committee, the risk management officer, and the organization in charge of risk management, which are the top decision-making bodies for the risk management. The organization in charge of risk management, independent from operating segment, manages risk limits and risk management policies.

(1) Risk Management Committee: The Risk Management Committee regularly holds meeting once every quarter and resolves the establishment and management of allowable limits for risks, establishment and changes in risk management policies, and reviews the results of the management of allowable risk limits and suitability tests of risk management system.

(2) Risk Management Operation Committee: The Risk Management Operation Committee is responsible for setting and allocating specific operational limits for compliance with the allowable limits for each type of risk as resolved by the Risk Management Committee, adjusting the internal capital limit between business units within the same risk type, and carrying out risk management policies and strategies set by the Risk Management Committee, including preliminary deliberations on the agenda items.

(3) Organization in charge of risk management: The Risk Management Group is comprised of Comprehensive Risk Management Team, Credit Risk Management Team, and Credit Supervision Team. The Risk Management Group is independent of sales and investment sector and manages the execution of risk management policies. The Comprehensive Risk Management Team oversees the market, interest rate, liquidity, operational risk, and middle office, and supports the Risk Management Committee and Risk Management Operation Committee. The Credit Risk Management Team oversees credit risk and credit concentration risk. The Credit Supervision Team oversees the loans and early warning system.

9.3. Credit risk

Credit risk is a risk incurred when the Company faces a loss because its customers or counterparties fail to discharge their contractual obligations. Credit risk arises from on-balance and off-balance accounts including loans, derivatives, securities, financial guarantees, and acceptances and guarantees.

9.3.1 Management of Credit risk

9.3.1.1 Loans

9.3.1.1.1 Measurement of Credit risk

To determine the possibility of bankruptcy for its customers or counterparties, the Company uses various methods comprehensively. Risks pertaining to the retail sector compared to those pertaining to the corporate sector are relatively easy to predict but cyclical and seasonal factors may influence the outcomes. The frequency of impairment loss in the overall retail sector is relatively high but in terms of individual cases, the loss rate is lower than in the corporate sector. Based on these differences, the Company manages each segment differently in terms of credit rating, pricing and subsequent management.

As for the business customers, the branch managers and credit rating team carries out the credit risk assessment by using a detailed valuation model depending on the size and the nature of the industry. The corporate financial valuation model is further subdivided based on the characteristics of the loans and is a combination of statistical and expert valuation models. Also, the Loan Review team of the Credit Risk Management regularly performs the subsequent reviews in order to establish adequacy of the credit grading. As for the retail sector, a Credit Scoring System is used to compute the credit scores of the borrower. The system includes an Application Scoring Model which is used for the application of loans and a Behavioral Scoring Model which has been used after handling of the loans.

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.1 Management of Credit risk (cont'd)

9.3.1.1 Loans (cont'd)

9.3.1.1.1 Measurement of Credit risk (cont'd)

Expected loss is calculated using the expected default rate based upon the historical default rate and the estimated loss rate gives a rise to the default rate from a collection of historical information. A measured expected loss is reflected on the client's interest rate and allowances when applying or renewing a loan.

Unexpected loss takes into account the allowance for potential volatility in the actual loss. Unexpected loss is calculated using the inner Credit Metrics model with 99.9% of the confidence level and the measured figure is used as a credit risk reference value and is used as part of the unexpected loss when calculating interest rates.

9.3.1.1.2 Management of Credit risk

9.3.1.1.2.1 Management process

Both retail and corporate sectors are developing and operating a credit risk management system appropriately designed for each sector. The Credit Risk Management Committee and Credit Rating Team measure and manage credit risks for the corporate sector; Credit Risk Management Committee and Personal Loans Committee measure and manage credit risks for the retail sector. The Company manages as well as controls the credit risk by setting the limits on the amount of risk willing to accept for individual counterparties and for geographical and industry concentration, and by monitoring exposures relating to such limits. The Company reviews on a monthly basis in accordance with the economic conditions and industry characteristics and examines the adequacy of the limits on a semi-annual basis. The Company continuously manages credit rating models for retail and corporate sectors and examines the adequacy of LGD (loss given default) and EAD (exposure at default), and any related information.

9.3.1.1.2.2 Credit limits management and capital allocation

The Company annually performs a comprehensive analysis on economic conditions and changes in the economic environment in order to appropriately assess the credit quality of financial assets by setting credit limits on same entities, industries, countries, and financial instruments. In addition, for the unexpected loss management, the Company regularly sets, distributes and checks for the compliance maintenance of internal capital limits according to the corporate and household sectors and the size of clients through the risk management system.

9.3.1.1.2.3 Risk monitoring and early warning system

The Company measures and manages the risk indicators such as delinquency rate, roll-rate, and vintage rate of each operating segment. Also, in order to assess the credit quality of the assets, the Company operates an early warning system and regularly examines companies whose credit rating is likely to degrade.

9.3.1.1.2.4 Credit rating system

In order to separately evaluate the characteristics of clients in the corporate sector, the Company operates a detailed valuation model based on the external and non-external audit and is in the process of continuing the stability of the corporate credit rating system through the subsequent examinations and performance improvements. The Company operates a detailed valuation model based on the credit rating model and the activity rating model for the household sector in accordance with the client's characteristics. The Company improves the efficiency of the model through the subsequent examinations and performance improvements. Credit rating on new clients as well as an automatic renewal and adjustments to the credit limits are managed by the household and SOHO credit extension system.

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.1 Management of Credit risk (cont'd)

9.3.1.1 Loans (cont'd)

9.3.1.1.2 Management of Credit risk (cont'd)

9.3.1.1.2.5 Examination of credit

For a large amount of credit line, after the approval of credit extension, the Company regularly examines the borrower's credit status and the adequacy of the borrower's credit rating as in part of the subsequent management process. In addition, the Company significantly focuses on industries by increasing credit risks based on the analysis of the risk indicators and examines the sample for smaller credit extensions.

9.3.1.1.2.6 Risk mitigation policy

The Company obtains the collateral for the granted loans in order to reduce risks. The amount and type of the collateral required depends on an assessment of the credit risk of the counterparty. Guidelines are implemented regarding the acceptability of types of collateral and valuation parameters. The main types of the collateral obtained are as follows:

- For retail lending, mortgages over residential properties
- For commercial lending, charges over real estate properties, inventory and trade receivables
- For securities lending and reverse repurchase transactions, cash, or securities

9.3.1.2 Debt securities

The Company trades the debt securities above the Investment-Grade Status level in order to manage the credit risks and manage the exposure of credit ratings to maintain credit quality of the assets.

9.3.1.3 Derivative financial instruments

The credit risk arising from the derivative financial instruments is, at any time, limited to those with the positive fair values, as recorded on the statement of financial position. The Company manages the exposure as a part of the unused commitment of loans.

9.3.2 Significant increase in credit risk

The Company measures the expected credit loss for debt instruments measured at amortized cost or fair value through other comprehensive income in three stages as described below:

9.3.2.1 Stage 1: 12-month expected credit loss

For financial assets of which the credit risk has not increased significantly since initial recognition, expected credit losses that result from default events that are possible within 12 months after the reporting date are recognized.

9.3.2.2 Stage 2: Lifetime expected credit loss

For financial assets of which the credit risk has increased significantly since initial recognition, expected credit losses that result from all possible default events over the expected life of the financial instrument are recognized.

9.3.2.3 Stage 3: Lifetime expected credit loss

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Lifetime ECL is recognized for credit- impaired financial assets, and interest income is recognized using the EIR on amortized cost.

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.2 Significant increase in credit risk (cont'd)

9.3.2.3 Stage 3: Lifetime expected credit loss (cont'd)

The Company assesses at each reporting date whether the significant of the increase of the credit risk compared to that of initial recognition, using internal and external credit rating information, early warning system and number of days past due.

9.3.2.4 Default

The Company considers that a default has occurred for financial assets on following situations:

A) When receivables are sold despite of an economic loss

B) When receivables have decreased due to adjustments resulting in an exemption of principal, interest or related fees or delayed payments

C) When the borrower has been declared bankruptcy or has declared bankruptcy or has taken other similar measures to delay or avoid repayments

9.3.2.5 Methodology for determining whether a financial asset is credit-impaired

A financial item is deemed impaired if, and only if, there is objective evidence of impairment as a result of one or more events which have occurred after the initial recognition of the item (an incurred 'loss event') and that loss event (or events) has an impact on the estimated future cash flows, such as changes in arrears or economic conditions which correlate with defaults, delinquency in interest for more than 90 days, credit deterioration resulting in misleading information, damages incurred due to poor exposure and significant financial difficulty of the issuer or obligor.

9.3.3 Measurement of ECL

Expected credit losses are a probability-weighted estimate of credit losses (ie the present value of all cash shortfalls) over the expected life of the financial instrument. A cash shortfall is the difference between the cash flows that are due to an entity in accordance with the contract and the cash flows that the entity expects to receive.

Historical information is an important anchor or base from which to measure expected credit losses. However, the Company adjusts historical data, such as credit loss experience, on the basis of current observable data to reflect the effects of the current conditions and its forecasts of future conditions that did not affect the period on which the historical data is based, and to remove the effects of the conditions in the historical period that are not relevant to the future contractual cash flows. Also, the Company measures ECL using the macroeconomic factors such as the growth rate, interest rate and stock indices. The methodology for future economic forecasts is regularly reviewed.

If the credit risk on financial instruments, for which lifetime expected credit losses have been recognised, subsequently improves so that the requirement for recognising lifetime expected credit losses is no longer met, the loss allowance should be measured at an amount equal to 12-month expected credit losses.

9.3.4 Write-off

Financial assets are written off when an entity has no reasonable expectations of recovering the contractual cash flows on a financial asset in its entirety or a portion thereof. Generally, financial assets are written off when it is determined that the Company is not able to generate sufficient cash flows to make repayments. However, financial assets written off can be recovered by the Company.

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.5 The maximum exposure to credit risk

The maximum exposure to credit risk as of September 30, 2018 and December 31, 2017 are as follows. The following table shows the maximum exposure to credit risk for the components of the statement of financial position, including derivatives, by geography of counterparty and by industry before the effect of mitigation through the use of master netting and collateral agreements. Equity securities in financial assets at FVTPL, financial assets measured at FVTPL, financial assets available-for-sale and financial assets measured at FVOCI are excluded. (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
On-balance-sheet items		
Due from banks	₩ 18,763,179	₩ 17,759,701
Financial assets at FVTPL (KIFRS 1039)		
Debt securities	—	2,835,194
Derivative assets held for trading	—	6,557,488
	—	9,392,682
Financial assets measured at FVTPL (KIFRS 1109)		
Debt securities	2,709,673	—
Derivative assets held for trading	3,431,682	—
Convertible privately-placed bonds	334,640	—
	6,475,995	—
Available-for-sale financial assets	—	40,270,208
Financial assets measured at FVOCI	35,910,164	—
Held-to-maturity financial assets	—	6,160,922
Securities measured at amortized cost	11,477,982	—
Derivative assets used for hedging	1,731	11,760
Loans	236,827,355	224,096,709
Others	16,726,340	9,585,105
Merchant banking account assets	2,927,304	2,966,019
	₩329,110,050	₩310,243,106
Off-balance-sheet items		
Financial guarantees	₩ 580,657	₩ 684,944
Guarantee contracts	16,816,999	16,229,609
Commitment	78,443,035	63,918,791
Merchant banking account-commitment	1,201,000	1,021,000
	₩ 97,041,691	₩ 81,854,344

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.6 Details of collateral management and credit risk mitigation

Details of collateral management and credit risk mitigation as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)	
	Impaired loan	
Classification	Individual assessment	Collective assessment
Guarantees	₩ 80,911	₩107,705
Deposits	43,494	6,142
Real estate	415,559	201,661
Securities	6,885	15
Others	3,887	14,287
	₩550,736	₩329,810

	December 31, 2017				
	Impaired loan		Not impaired loan		
Classification	Individual assessment	Collective assessment	Past due	Non past due	Total
Guarantees	₩124,566	₩ 55,649	₩131,722	₩ 30,691,717	₩ 31,003,654
Deposits	74,038	9,466	11,918	2,449,164	2,544,586
Real estate	386,622	146,300	415,131	112,607,190	113,555,243
Securities	7,160	85	101	9,989,387	9,996,733
Others	62,938	34,780	508	6,830,186	6,928,412
	₩655,324	₩246,280	₩559,380	₩162,567,644	₩164,028,628

9.3.6.1 There is no change in the collateral policy of the Company.

9.3.7 Credit risk exposure

9.3.7.1 Loans

As of September 30, 2018, carrying amounts of loans by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

	September 30, 2018 (unaudited)				
		Life time expected credit loss			
Classification	12-month expected credit loss	Non credit-impaired loan	Credit-impaired loans	Subject to the application of credit-impaired approach	Total
Household loans					
Grade 1	₩ 74,961,396	₩ 8,601,412	₩ —	₩ —	₩ 83,562,808
Grade 2	2,683,764	18,915,960	—	—	21,599,724
Grade 3	232,816	551,723	225,625	—	1,010,164
	₩ 77,877,976	₩28,069,095	₩ 225,625	₩ —	₩106,172,696
Corporate loans					
Grade 1	77,441,414	6,421,234	—	—	83,862,648
Grade 2	33,665,709	9,375,679	—	—	43,041,388
Grade 3	95,404	2,240,131	1,695,412	667,602	4,698,549
	111,202,527	18,037,044	1,695,412	667,602	131,602,585
	189,080,503	46,106,139	1,921,037	667,602	237,775,281

Deferred loan fees, net of expenses are not reflected in the carrying amounts above.

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.7 Credit risk exposure (cont'd)

9.3.7.1 Loans (cont'd)

The Company classifies the grade of loan in accordance with the credit rating chart below, based on the credit worthiness of borrowers.

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.93% of PD	Less or equal to 0.60% of PD	Less or equal to 1.78% of PD
Grade 2	From 0.93% to 19.65% of PD	From 0.60% to 12.71% of PD	From 1.78% to 21.02% of PD
Grade 3	From 19.65% to 100% of PD	From 12.71% to 100% of PD	From 21.02% to 100% of PD

Details of delinquency rates on loans as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Neither past due nor impaired	₩ 99,604,043	₩32,636,604	₩76,791,215	₩13,275,872	₩222,307,734
Past due but not impaired	459,187	2,083	235,451	1,231	697,952
Impaired	199,835	1,276,310	713,065	3,149	2,192,359
	100,263,065	33,914,997	77,739,731	13,280,252	225,198,045
Plus (less)					
Deferred loan fees, net of expenses	203,878	(3,432)	60,302	737	261,485
Allowance for possible loan losses	(143,940)	(749,655)	(451,696)	(17,530)	(1,362,821)
	59,938	(753,087)	(391,394)	(16,793)	(1,101,336)
	₩100,323,003	₩33,161,910	₩77,348,337	₩13,263,459	₩224,096,709

Delinquency in interest occurs when the counterparty is unable to make a principal and interest payment as at the due date. A financial item is deemed impaired if, and only if, there is objective evidence of impairment as a result of one or more events which have occurred after the initial recognition of the item (an incurred 'loss event') and that loss event (or events) has an impact on the estimated future cash flows, such as changes in arrears or economic conditions which correlate with defaults, delinquency in interest for more than 90 days, credit deterioration resulting in misleading information, damages incurred due to poor exposure and significant financial difficulty of the issuer or obligor.

Loans that are neither impaired nor overdue

Details on loans that are neither impaired nor overdue as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Grade 1	₩95,948,208	₩25,582,127	₩38,855,870	₩11,575,156	₩171,961,361
Grade 2	3,270,154	6,620,580	34,866,679	1,134,761	45,892,174
Grade 3	129,371	433,897	970,099	955	1,534,322
Others	256,310	—	2,098,567	565,000	2,919,877
	₩99,604,043	₩32,636,604	₩76,791,215	₩13,275,872	₩222,307,734

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.7 Credit risk exposure (cont'd)

9.3.7.1 Loans (cont'd)

The Company classifies the grade of loan in accordance with the credit rating chart below, based on the credit worthiness of borrowers.

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 1.55% of PD	A1 ~ A7	Less or equal to 1.28% of PD
Grade 2	From 1.55% to 16.52% of PD	B1 ~ B6	From 1.28% to 14.30% of PD
Grade 3	From 16.52% to 100% of PD	C1 ~ C3	From 14.30% to 78.44% of PD

Loans overdue but unimpaired

The Company regards loans overdue for less than 90 days as unimpaired in case there is no credit information indicating its loss event. Analysis of overdue time period of loans overdue but unimpaired by type as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small- and medium-sized businesses	Public institution and others	Total
Less than 30 days	₩401,121	₩1,289	₩185,864	₩1,231	₩589,505
30 to 59 days	40,612	771	32,264	—	73,647
60 to 89 days	17,349	23	17,323	—	34,695
Others	105	—	—	—	105
	₩459,187	₩2,083	₩235,451	₩1,231	₩697,952

Impaired loans

Types of impaired loans as of December 31, 2017 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small- and medium-sized businesses	Public institution and others	Total
Individual impairment					
Credit balance	₩ 7,384	₩1,266,101	₩511,750	₩2,446	₩1,787,681
Deferred loan fees, net of expenses	(4,058)	—	(8,585)	(174)	(12,817)
Allowance for possible loan losses	1,190	(612,930)	(92,301)	(30)	(704,071)
	₩ 4,516	₩ 653,171	410,864	2,242	₩1,070,793
Collective impairment					
Credit balance	₩192,451	₩ 10,209	₩201,315	₩ 703	₩ 404,678
Deferred loan fees, net of expenses	118	—	51	1	170
Allowance for possible loan losses	(56,064)	(5,715)	(73,843)	(269)	(137,891)
	134,505	4,494	127,523	435	266,957
	₩139,021	₩ 657,665	₩538,387	₩2,677	₩1,337,750

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.7 Credit risk exposure (cont'd)

9.3.7.2 Off-balance-sheet items

As of September 30, 2018, exposures of off-balance-sheet items by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

	September 30, 2018 (unaudited)			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired loans	Credit-impaired loans	Total
Financial guarantees				
Grade 1	₩ 343,960	₩ 59,376	₩ —	₩ 403,336
Grade 2	78,717	98,375	—	177,092
Grade 3	—	229	—	229
	422,677	157,980	—	580,657
Guarantee contracts				
Grade 1	12,810,852	1,605,203	—	14,416,055
Grade 2	1,228,209	784,083	—	2,012,292
Grade 3	5,562	276,775	106,315	388,652
	14,044,623	2,666,061	106,315	16,816,999
Commitment				
Grade 1	61,119,501	4,162,841	—	65,282,342
Grade 2	5,408,570	7,036,862	—	12,445,432
Grade 3	1,815	615,077	98,369	715,261
	₩66,529,886	₩11,814,780	₩ 98,369	₩78,443,035

The credit rating classification of off-balance-sheet items of the Company based on internal rating used by the Bank and credit rating by external rating agencies is as follows

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 0.93% of PD	Less or equal to 0.60% of PD	Less or equal to 1.78% of PD
Grade 2	From 0.93% to 19.65% of PD	From 0.60% to 12.71% of PD	From 1.78% to 21.02% of PD
Grade 3	From 19.65% to 100% of PD	From 12.71% to 100% of PD	From 21.02% to 100% of PD

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.7 Credit risk exposure (cont'd)

9.3.7.3 Debt securities

As of September 30, 2018, carrying amounts of debt securities by internal credit rating in accordance with the loss allowance measurement method are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)			
		Lifetime expected credit losses		
	12 month expected credit loss	Non credit-impaired debt	Credit-impaired debt	Total
Loans and receivables at amortized cost				
Grade 1	₩11,480,577	₩—	₩—	₩11,480,577
Grade 2	—	—	—	—
Grade 3	—	—	—	—
	11,480,577	—	—	11,480,577
Financial assets at FVOCI				
Grade 1	35,910,164	—	—	35,910,164
Grade 2	—	—	—	—
Grade 3	—	—	—	—
	35,910,164	—	—	35,910,164
	₩47,390,741	₩—	₩—	₩47,390,741

Overdue payments on debt securities as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017			
	Financial assets at FVTPL (KIFRS 1039)	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Neither past due nor impaired	₩2,835,194	₩40,262,470	₩6,160,922	₩49,258,586
Impaired	—	7,738	—	7,738
	₩2,835,194	₩40,270,208	₩6,160,922	₩49,266,324

Internal credit ratings of debt securities as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017			
	Financial assets at FVTPL (KIFRS 1039)	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Grade 1	₩2,835,194	₩39,803,365	₩6,018,148	₩48,656,707
Grade 2	—	464,480	140,739	605,219
Others	—	2,363	2,035	4,398
	₩2,835,194	₩40,270,208	₩6,160,922	₩49,266,324

The credit ratings of debt securities based on the internal rating used by the Company and credit ratings by external credit rating agencies are as follows

Classification	Internal credit rating	Domestic rating agencies	Overseas rating agencies	
			Moody's	Fitch
Grade 1	A1 ~ A3	AAA ~ A–	Aaa ~ Baa2	AAA ~ BBB
Grade 2	B1+ ~ B3	BBB+ ~ BB	Baa3 ~ B3	BBB– ~ B–
Grade 3	C1 ~ C3	BB– ~ B–	Caa1 ~ Caa3	CCC+ ~ CCC–

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.8 Credit risk concentration

9.3.8.1 Credit risk concentration in each major industry as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

		September 30, 2018 (unaudited)	
Classification	Industry	Amounts	Ratio (%)
On balance sheet items			
Due from banks	Financial services	₩ 18,763,179	100.0
Financial assets measured at FVTPL (KIFRS 1109)	Financial services	1,097,707	36.1
	Manufacturing	505,567	16.6
	Public administration	1,405,406	46.2
	Wholesale & retail	19,963	0.7
	Others	15,670	0.4
		3,044,313	100.0
Financial assets measured at FVOCI	Financial services	18,986,802	52.9
	Manufacturing	126,286	0.3
	Public administration	15,198,390	42.3
	Construction	80,205	0.2
	Wholesale & retail	16,225	0.1
	Others	1,502,256	4.2
		35,910,164	100.0
Securities measured at amortized cost	Financial services	7,158,214	62.40
	Public administration	2,350,432	20.50
	Construction	524,219	4.60
	Others	1,447,712	12.50
		11,480,577	100
Loans	Household loans	106,172,696	44.6
	Corporate loans		
	Financial services	13,746,791	5.8
	Manufacturing	37,662,896	15.8
	Construction	3,517,839	1.5
	Wholesale & retail	16,112,193	6.8
	Real estate rental	31,122,988	13.1
	Others	29,439,878	12.3
	Deferred loan fees and expenses	300,255	0.1
		238,075,536	100.0
		₩307,273,769	
Off balance sheet items			
Financial guarantees	Manufacturing	₩ 234,558	40.4
	Construction	14,171	2.4
	Wholesale & retail	104,190	17.9
	Financial services	90,531	15.6
	Real estate rental	59,125	10.2
	Others	78,082	13.5
		580,657	100.0

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.8 Credit risk concentration (cont'd)

9.3.8.1 Credit risk concentration in each major industry as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

		September 30, 2018 (unaudited)	
Classification	Industry	Amounts	Ratio (%)
Guarantee contracts	Household	58,461	30.0
	Manufacturing	7,389,174	43.9
	Construction	2,689,699	16.0
	Wholesale & retail	2,297,142	13.7
	Financial services	1,300,731	7.7
	Real estate rental	215,443	1.3
	Others	2,866,349	17.1
		16,816,999	100.0
Commitment	Household	21,939,415	28.0
	Corporate Commitment		
	Manufacturing	24,548,934	31.3
	Construction	2,572,815	3.3
	Wholesale & retail	7,293,433	9.3
	Financial services	7,849,567	10.0
	Real estate rental	2,767,828	3.5
	Others	11,471,043	14.6
		78,443,035	100.0
		₩ 95,840,691	

		December 31, 2017			
				Total	
Classification	Industry	Korean won	Foreign currency	Amounts	Ratio (%)
On balance sheet items					
Due from banks	Financial services	11,168,327	6,591,374	17,759,701	100.0
Financial assets at FVTPL (KIFRS1039)	Financial services	1,085,453	—	1,085,453	38.3
	Manufacturing	230,740	—	230,740	8.1
	Public administration	1,488,649	—	1,488,649	52.5
	Wholesale & retail	19,807	—	19,807	0.7
	Others	—	10,545	10,545	0.4
		2,824,649	10,545	2,835,194	100.0
Available-for-sale financial assets	Financial services	18,246,690	4,877,184	23,123,874	57.4
	Manufacturing	78,651	564	79,215	0.2
	Public administration	14,696,828	985,501	15,682,329	38.9
	Construction	47,735	—	47,735	0.1
	Others	131,615	1,205,440	1,337,055	3.4
		33,201,519	7,068,689	40,270,208	100.0
Held-to-maturity financial assets	Financial services	2,707,621	989,662	3,697,283	60.0
	Public administration	1,264,509	352,507	1,617,016	26.2
	Construction	232,091	—	232,091	3.8
	Others	361,844	252,688	614,532	10.0
		4,566,065	1,594,857	6,160,922	100.0

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.8 Credit risk concentration (cont'd)

9.3.8.1 Credit risk concentration in each major industry as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

		December 31, 2017			
				Total	
Classification	Industry	Korean won	Foreign currency	Amounts	Ratio (%)
Loans	Household loans	99,138,604	1,124,461	100,263,065	44.7
	Corporate loans				
	Financial services	7,588,634	7,160,091	14,748,725	6.6
	Manufacturing	23,186,388	12,226,642	35,413,030	15.8
	Construction	2,873,170	628,395	3,501,565	1.6
	Wholesale & retail	11,347,952	3,417,653	14,765,605	6.6
	Real estate rental	26,573,941	1,222,497	27,796,438	12.4
	Others	22,402,411	6,307,206	28,709,617	12.8
	Deferred loan fees and expenses	275,795	(14,310)	261,485	0.1
	Allowance for possible loan losses	(1,074,031)	(288,790)	(1,362,821)	(0.6)
		192,312,864	31,783,845	224,096,709	100.0
		244,073,424	47,049,310	291,122,734	
Off balance sheet items					
Financial guarantees	Manufacturing	₩ 241,611	₩ 25,871	₩ 267,482	39.1
	Construction	16,814	—	16,814	2.5
	Wholesale & retail	102,839	29,303	132,142	19.3
	Financial services	52,018	17,907	69,925	10.2
	Real estate rental	60,000	524	60,524	8.8
	Others	115,221	22,836	138,057	20.1
		588,503	96,441	684,944	100.0
Guarantee contracts	Household	117,368	10,444	127,812	0.8
	Manufacturing	510,099	7,257,392	7,767,491	47.9
	Construction	77,143	2,200,587	2,277,730	14.0
	Wholesale & retail	493,873	1,823,853	2,317,726	14.3
	Financial services	45,040	990,144	1,035,184	6.4
	Real estate rental	25,270	139,496	164,766	1.0
	Others	427,958	2,110,942	2,538,900	15.6
		1,696,751	14,532,858	16,229,609	100.0
Commitment	Household	11,029,295	2,189	11,031,484	17.3
	Manufacturing	12,513,969	12,486,889	25,000,858	39.1
	Construction	2,348,274	856,477	3,204,751	4.9
	Wholesale & retail	3,483,306	3,711,937	7,195,243	11.3
	Financial services	7,074,312	422,113	7,496,425	11.7
	Real estate rental	1,373,852	3,513	1,377,365	2.2
	Others	6,516,038	2,096,627	8,612,665	13.5
		44,339,046	₩19,579,745	₩ 63,918,791	100.0
		₩ 46,624,300	34,209,044	80,833,344	

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.8 Credit risk concentration (cont'd)

9.3.8.2 Credit risk concentration in each major country as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions, ratio in %):

Classification	Country	September 30, 2018 (unaudited) Amounts	Ratio (%)
On balance sheet items			
Due from banks	Korea	₩ 10,166,887	54.20
	China	4,874,968	26.0
	U.S	350,894	1.90
	Japan	383,487	2.0
	Hong Kong	78,971	40.0
	Others	2,907,972	15.5
		18,763,179	100.0
Financial assets measured at FVTPL (KIFRS 1109)	Korea	3,038,643	99.8
	Others	5,670	0.2
		3,044,313	100.0
Financial assets measured at FVOCI	Korea	33,054,500	92.0
	China	667,183	1.9
	U.S	498,230	1.4
	Japan	97,868	0.3
	Others	1,592,383	4.4
		35,910,164	100.0
Securities measured at amortized cost	Korea	10,500,444	91.5
	China	481,541	4.2
	U.S	28,246	0.2
	Hong Kong	11,127	0.1
	Others	459,219	4.0
		11,480,577	100.0
Loans	Korea	218,890,106	91.9
	China	3,748,042	1.6
	U.S	2,199,054	0.9
	Japan	843,320	0.4
	Hong Kong	2,861,350	1.2
	Others	9,233,409	3.9
	Deferred loan fees and expenses	300,255	0.1
		238,075,536	100.0
		₩307,273,769	
Off balance sheet items			
Financial guarantees	Korea	580,657	100.0
Guarantee contracts	Korea	13,299,400	79.1
	China	1,842,363	11
	U.S	38,185	0.2
	Japan	38,954	0.2
	Others	1,598,097	9.5
		16,816,999	100.0
Commitment	Korea	76,153,965	97.1
	China	862,936	1.1
	U.S	280,882	0.4
	Japan	46,998	0.1
	Others	1,098,254	1.3
		78,443,035	100.0
		95,840,691	

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.8 Credit risk concentration (cont'd)

9.3.8.2 Credit risk concentration in each major country as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions, ratio in %) (cont'd):

		December 31, 2017			
				Total	
Classification	Country	Korean won	Foreign currency	Amounts	Ratio (%)
On balance sheet items					
Due from banks	Korea	₩ 11,168,327	₩ 634,113	₩ 11,802,440	66.5
	China	—	2,024,030	2,024,030	11.4
	U.S	—	1,551,104	1,551,104	8.7
	Japan	—	219,140	219,140	1.2
	Hong Kong	—	91,160	91,160	0.5
	Others	—	2,071,827	2,071,827	11.7
		11,168,327	6,591,374	17,759,701	100.0
Financial assets at FVTPL (KIFRS 1039)	Korea	2,824,649	—	2,824,649	99.6
	U.S	—	10,545	10,545	0.4
		2,824,649	10,545	2,835,194	100.0
Available-for-sale financial assets	Korea	33,201,519	4,190,032	37,391,551	92.9
	China	—	770,246	770,246	1.9
	U.S	—	691,674	691,674	1.7
	Japan	—	84,027	84,027	0.2
	Others	—	1,332,710	1,332,710	3.3
		33,201,519	7,068,689	40,270,208	100.0
Held-to-maturity financial assets	Korea	4,566,065	844,489	5,410,554	87.8
	China	—	333,392	333,392	5.4
	U.S	—	37,943	37,943	0.6
	Others	—	379,033	379,033	6.2
		4,566,065	1,594,857	6,160,922	100.0
Loans	Korea	191,676,053	12,710,954	204,387,007	91.2
	China	43,932	3,961,392	4,005,324	1.8
	U.S	161,162	1,146,824	1,307,986	0.6
	Japan	11,403	670,107	681,510	0.3
	Hong Kong	1,375	2,533,448	2,534,823	1.1
	Others	1,217,175	11,064,220	12,281,395	5.5
		193,111,100	32,086,945	225,198,045	100.5
	Deferred loan fees and expenses	275,795	(14,310)	261,485	0.1
	Allowance for possible loan losses	(1,074,031)	(288,790)	(1,362,821)	(0.6)
		192,312,864	31,783,845	224,096,709	100.0
		₩244,073,424	₩47,049,310	₩291,122,734	

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.8 Credit risk concentration (cont'd)

9.3.8.2 Credit risk concentration in each major country as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions, ratio in %): (cont'd)

			December 31, 2017		
				Total	
Classification	Country	Korean won	Foreign currency	Amounts	Ratio (%)
Off balance sheet items					
Financial guarantees	Korea	₩ 588,503	₩ 96,441	₩ 684,944	100.0
Guarantee contracts	Korea	1,696,751	11,756,393	13,453,144	82.9
	China	—	1,579,792	1,579,792	9.7
	U.S	—	56,908	56,908	0.4
	Japan	—	35,723	35,723	0.2
	Others	—	1,104,042	1,104,042	6.8
		1,696,751	14,532,858	16,229,609	100.0
Commitment	Korea	44,339,046	17,037,572	61,376,618	96
	China	—	1,067,339	1,067,339	1.7
	U.S	—	283,171	283,171	0.4
	Japan	—	62,294	62,294	0.1
	Others	—	1,129,369	1,129,369	1.8
		44,339,046	19,579,745	63,918,791	100.0
		₩46,624,300	₩34,209,044	₩80,833,344	

9.4 Liquidity risk

Liquidity risk is defined as the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. Liquidity risk arises because of the possibility that the Company might be unable to meet its payment obligations when they fall due under both normal and stress circumstances.

9.4.1 Measurement of liquidity risk

The Company maintains a limit management indicator to measure the liquidity coverage ratio, loan to deposit ratio in Korean won, the liquidity coverage ratio in foreign currency, net stable funding ratio and long-term access to financing ratio in foreign currency in accordance with the guidelines and standards of the Financial Supervisory Service. In addition, the Company maintains a monitoring indicator to measure unbalance of funding, etc. to manage the liquidity risk, and manages early warning indicators in order to identify worsening trends in early stage to respond in a timely manner.

9.4.2 Management of liquidity risk

At an early stage, the Company identifies factors affecting liquidity in order to manage liquidity risks and has achieved an adequate level of liquidity via performing a systematic management

The Company has the following basic principles for liquidity risk management:

- The Comply with limits and early warning indicators set for its liquidity risk.
- Regularly execute an analysis of stress tests and prepare an emergency procurement plan in case of illiquidity
- Focus on maintaining a diversified portfolio in order to avoid excessive concentrations of risks

9. Risk management (cont'd)

9.4 Liquidity risk (cont'd)

9.4.2 Management of liquidity risk (cont'd)

- Evaluate and manage the effect of a large amount of money which is loaned out, invested, or procured on liquidity risks

In order to manage the liquidity risks, the Company is building the internal control systems for each department. In order to comply with Liquidity ratios and the maturity mismatch ratio set by the Financial Supervisory Service, the Comprehensive Risk Management monitors the ratios based on the calculated univariate liquidity ratio and maturity mismatch ratios. Liquidity risk status is reported to the Risk Management Operation Committee on a monthly basis and to the Risk Management Committee on a quarterly basis.

In order to maintain the liquidity risk management indicators to stay within the acceptable limits, the Treasury Department and the International Finance Department recommends the necessary measures in relation to the procurement and operation of the assets and liabilities traded in the capital market. In addition, the emergency planning in stages has been established in order to respond to liquidity emergencies. Financial planning department has established a portfolio management strategy based on the internal and external liquidity risk management requirements, procurement, and an outlook on the operating markets.

9.4.3 Contractual maturities analysis of financial liabilities

9.4.3.1 Analysis criteria

The details of the remaining contractual maturities of financial liabilities are analyzed by the earliest maturity date when the Bank would be required to pay, based on the undiscounted cash outflows of the Bank's financial liabilities. In addition, financial liabilities at fair value through profit or loss and depository liabilities (payment on demand) are shown at fair value in the immediate payment column. All derivatives used for hedging purposes are interest rate swaps, and those are shown in net cash flows as all interest rate swaps are paid by the net amount.

9.4.3.2 The remaining contractual maturities of financial liabilities

The remaining contractual maturities of financial liabilities as of September 30, 2018 and December 31, 2017 are summarized as follows (Korean won in millions):

	September 30, 2018 (unaudited)						
Classification	On demand	Less than 1 month	1 – 3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities measured at FVTPL (KIFRS 1109)	₩ 3,267,275	₩ —	₩ —	₩ —	₩ —	₩ 634,200	₩ 3,901,475
Deposits	101,251,068	19,057,930	31,795,278	77,984,224	10,269,627	1,860,336	242,218,463
Borrowings	3,911,759	2,914,191	1,489,571	4,822,077	2,350,985	443,281	15,931,864
Debentures	91	1,190,000	1,480,000	7,618,441	13,025,588	2,751,724	26,065,844
Derivative liabilities used for hedging purposes	(1,352)	1,875	3,536	(972)	40,034	(122,072)	(78,951)
Other liabilities	6,590,883	17,516,494	4,885	47,639	18,381	—	24,178,282
Merchant banking account liabilities	976,734	1,876,809	—	—	—	—	2,853,543
	115,996,458	42,557,299	34,773,270	90,471,409	25,704,615	5,567,469	315,070,520
Off-balance sheet items							
Finance guarantee	580,657	—	—	—	—	—	580,657
Loan commitment	78,443,035	—	—	—	—	—	78,443,035
Merchant banking account-commitment	1,201,000	—	—	—	—	—	1,201,000
	₩ 80,224,692	—	—	—	—	—	₩ 80,224,692

9. Risk management (cont'd)

9.4 Liquidity risk (cont'd)

9.4.3 Contractual maturities analysis of financial liabilities (cont'd)

9.4.3.2 The remaining contractual maturities of financial liabilities (cont'd)

	December 31, 2017						
Classification	On demand	Less than 1 month	1 – 3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities at FVTPL (KIFRS 1039)	₩ 6,413,932	₩ —	₩ —	₩ —	₩ —	₩ 634,200	₩ 7,048,132
Deposits	104,793,932	18,454,436	26,312,299	71,459,046	10,003,237	1,510,202	232,533,152
Borrowings	2,710,703	3,470,389	2,615,800	2,747,401	1,876,800	409,067	13,830,160
Debentures	697	400,000	844,666	6,998,004	11,716,162	3,082,067	23,041,596
Derivative liabilities used for hedging purposes	—	506	706	932	19,320	(127,499)	(106,035)
Other liabilities	5,664,867	13,450,703	2,588	41,195	19,244	—	19,178,597
Merchant banking account liabilities	423,466	1,594,252	—	—	—	—	2,017,718
	120,007,597	37,370,286	29,776,059	81,246,578	23,634,763	5,508,037	297,543,320
Off-balance sheet items							
Finance guarantee	684,944	—	—	—	—	—	684,944
Loan commitment	63,918,791	—	—	—	—	—	63,918,791
Merchant banking account-commitment	1,021,000						1,021,000
	65,624,735	—	—	—	—	—	65,624,735

Assets available for use in carrying out unused loan commitments after redeeming all financial liabilities are cash and bank deposits, debt securities, equity securities, and loans. In addition, the Company is able to cope with unexpected cash flows through the sale of securities and the additional sources of funding, similar to the asset backed securitization.

9.5 Market risk

Market risk is risk incurred in assets and liabilities subject to management based on the changes in market prices such as interest rate, stocks and foreign exchange, etc.

9.5.1 Market risk management

The purpose of market risk management is to manage the loss of assets and liabilities incurred due to changes in market variables such as interest rates, foreign exchanges and equity prices to remain within the allowable limits in order to ensure the profitability and stability.

9.5.2 Market risk management targets

Market risk management targets include marketable securities, foreign currency net positions, derivatives and other assets and liabilities with embedded market risks. The Company classifies exposures to market risk into either trading or non-trading positions and manages each of those portfolios separately.

9.5.3 Management of market risk related to trading position

9.5.3.1 Trading position classification

The trading position includes interest rate positions, equity price positions, commodity positions, and all foreign exchange positions:

- Financial instruments for the purpose of acquiring the differences incurred due to short-term trading or price fluctuations.
- Financial instruments for the purpose of hedging risks

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.3 Management of market risk related to trading position (cont'd)

9.5.3.1 Trading position classification (cont'd)

- Financial instruments for the purpose of acquiring arbitrages
- Financial instruments for the purpose of acquisition, mediation and market creation
- Derivatives which are not applied to fair value hedge accounting under KIFRS
- All foreign exchange and gold positions in accordance with Regulations on Supervision of Banking Business Appendix 3-2

9.5.3.2 Management of the trading position limits

The Risk Management Committee divides capital, annual loss, exposure and VaR limit in relation to market risks of the trading position by business unit (division) annually. Within the given limit, the Risk Management Operation Committee further subdivides the limits by business units (divisions) and desks. The Risk Management Group provides information necessary for deliberation and review by the Committee, reports trading limits, and measures risks. The Middle Office performs the mark-to-market measures, monitors trade violations and compliance with the limits. The Middle Office has established regulations and policies of trading and comply with them. It measures market risks in relation to trading position and daily inspects for compliance of limits by risks. Moreover, it daily monitors changes in exposure subject to management, verifies for compliance of limits, performs expost facto verification and analyzes urgent situations and reports to the management.

The Company regularly measures the degree of market risks and complies with the allowable limits set for the various areas of the trading position. In addition, the Company reviews the adequacy of the risk-reward ratio by evaluating risks and related profits and losses on a regular basis and complies with the established trading policy regulations. The Company separately examines and analyses the change in exposures with checking its compliance of the limits and emergency situations, and reports to the management on a daily basis.

9.5.3.3 Value at Risk

Value at Risk (VaR) is a method that manages and measures the degree of market risks of the trading position subject to exposure. The Company calculates the VaR by applying Historical Simulation Method for 10 days in the 99% confidence level. Furthermore, the stress test is performed to measure the size of the loss in order to account for the method's limited use in extreme cases.

9.5.3.4 Back test

Back-testing is performed daily on trading units to verify the predictive power of the value-at risk calculations. When back-testing is performed, the Company compares the daily profits and losses with VaR of the previous day and reports the result of subsequent examinations separately to the director of the Risk Management Group. The Company analyses the result of subsequent examination and reports to the Financial Supervisory Service and management.

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.3 Management of market risk related to trading position (cont'd)

9.5.3.5 Details of market risk VaR

Details of market risk 10 Day VaR (including 10 Day Stressed VaR) by risk type as of September 30, 2018 and December 31, 2017 are summarized as follows (Korean won in millions):

	September 30, 2018 (unaudited)	Average	Min	Max	December 31, 2017
Interest rates risk	₩ 24,915	₩ 30,054	₩22,467	₩ 46,040	₩31,419
Foreign exchange rates risk	120,934	109,343	97,877	125,212	97,391
Stock price risk	28,143	29,909	18,092	51,655	13,523
Option risk	4,515	4,993	4,515	5,351	5,198
Total risk (*)	₩128,483	₩110,310	₩89,946	₩142,953	₩90,964

(*) The calculation of the total risk VaR takes into consideration the correlation and diversification effects between each risk factor and therefore, it is not the same as the total VaRs.

9.5.4 Management of market risk related to non-trading position

9.5.4.1 Interest rate risk

Interest rate risk of non-trading position is a risk of losses in financial assets and liabilities with interest rates due to adverse changes in interest rates and is incurred when maturity structure does not match interest rate setting cycle of the related assets and liabilities. The Company manages the interest rate risks of non-trading position in order to maintain the stability of net interest income and net asset value based on changes in interest rates. The following is subject to the Company's management of interest rate risk.

- Financial assets with interest rates such as bank deposits, debt securities, and loans
- Financial liabilities with interest rates such as depository liabilities, borrowings, and debentures
- Interest-related financial derivatives such as interest rate swaps

Interest rate risk is calculated using the interest rate gaps. The interest rate risks measure the interest rate gap ratio as a primary indicator, and the interest rate EaR, VaR and duration are used as secondary indicators. The Risk Committee establishes the interest risk limits on an annual basis; the Risk Committee as well as the Risk Management Committee measures the interest rate risk indicators on a monthly basis and reports the compliance with the limits to management.

The interest rate VaR is an estimated maximum loss of net asset due to the adverse changes of the interest rate. Details of the interest rate VaR as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)	Average	Min	Max	December 31, 2017
Interest rate VaR	₩508,457	₩596,863	₩480,025	₩758,196	₩872,797

The interest rate VaR is calculated by using the maturity bucket reprising gap, the interest maturity bucket on modified duration, and the expected gap due to the interest rate fluctuation in accordance with BIS standards. Assets below the substandard and amounts in checking accounts are excluded from the calculated amount.

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.4 Management of market risk related to non-trading position (cont'd)

9.5.4.2 Equity price risk

Equity price risk is a risk incurred when the fair value of equities results in changes in the level of related revenue and capital. Fluctuation in equity reflects the sensitivity of each equity. Effects on capital due to the fluctuation in equity price risk as of September 30, 2018 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)			
Classification	20% decline	10% decline	10% rise	20% rise
Equity price risk	₩(91,184)	₩(45,592)	₩45,592	₩91,184

9.5.5 Currency risk concentration

Currency risk is a risk incurred when the value of a financial instrument or future cash flows fluctuates due to the changes in foreign exchange rates. Currency risk arises from the financial instruments expressed in currencies other than the functional currency. Currency risk does not arise from the financial instruments expressed in the functional currency or in non-monetary items measured by using the historical foreign exchange rates. In order to establish the stop loss and limits, the Company manages the foreign exchange net exposure amount of the trading and non-trading positions by each currency.

Significant foreign currency assets and liabilities denominated in Korean won as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions and US dollar in thousands):

	September 30, 2018 (unaudited)						
Classification	USD	JPY	EUR	CNY	IDR	Others	Total
Assets							
Cash and due from bank	₩ 6,058,340	₩ 570,593	₩ 550,945	₩1,687,581	₩ 105,451	₩1,092,795	₩10,065,705
Financial assets measured at FVTPL (KIFRS 1109)	115,658	744	1,195	75,351	22	6,725	199,695
Financial assets measured at FVOCI	4,616,592	—	—	642,887	136,912	912,169	6,308,560
Securities measured at amortized cost	963,722	—	47,244	480,982	129,606	213,851	1,835,405
Loans	21,419,345	1,047,917	3,745,476	4,360,574	1,502,564	2,161,272	34,237,148
Others	4,742,164	220,677	537,792	570,219	42,652	252,251	6,365,755
	₩37,915,821	₩1,839,931	₩4,882,652	₩7,817,594	₩1,917,207	₩4,639,063	₩59,012,268
Liabilities							
Financial liabilities measured at FVTPL (KIFRS 1109)	87,279	10	194	404	5	169	88,061
Deposits	20,149,820	1,974,493	2,364,438	5,907,626	1,244,270	3,180,326	34,820,973
Borrowings	9,201,577	108,678	588,796	229,902	82,000	324,930	10,535,883
Debentures	4,567,678	—	57,424	204,381	75,542	525,589	5,430,614
Derivative liabilities used for hedging	133,204	—	—	—	—	—	133,204
Others	7,579,282	131,451	1,008,572	699,922	30,795	351,499	9,801,521
	₩41,718,840	₩2,214,632	4,019,424	₩7,042,235	₩1,432,612	₩4,382,513	₩60,810,256

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.5 Currency risk concentration (cont'd)

	December 31, 2017			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Assets				
Cash and due from bank	USD	2,549,683,244	$ 2,549,683	₩ 2,731,731
	JPY	43,740,515,835	387,480	415,146
	EUR	496,905,585	593,305	635,666
	CNY	12,164,510,396	1,858,057	1,990,722
	IDR	2,749,011,304,722	202,699	217,172
	Others		1,105,890	1,184,851
			6,697,114	7,175,288
Financial assets at FVTPL (KIFRS 1039)	USD	83,211,240	83,211	89,153
	JPY	49,660,630	440	471
	EUR	315,430	377	404
	CNY	1,419,365	217	232
	IDR	117,500,000	9	9
	Others		2,830	3,033
			87,084	93,302
Available-for-sale financial assets	USD	4,422,392,390	4,422,392	4,738,151
	JPY	503,620,000	4,461	4,780
	EUR	10,762,000	12,850	13,767
	CNY	4,457,287,531	680,824	729,435
	IDR	2,459,541,796,430	181,355	194,304
	Others		1,295,737	1,388,252
			6,597,619	7,068,689
Held-to-maturity financial assets	USD	836,904,497	836,904	896,659
	EUR	37,051,071	44,239	47,398
	CNY	2,037,223,770	311,174	333,392
	IDR	1,150,350,151,785	84,821	90,878
	Others		211,435	226,530
			1,488,573	1,594,857
Loans	USD	18,879,859,000	18,879,859	20,227,881
	JPY	104,605,425,082	926,658	992,821
	EUR	2,280,486,817	2,722,910	2,917,326
	CNY	26,333,773,089	4,022,328	4,309,522
	IDR	18,334,714,078,408	1,351,915	1,448,442
	Others		1,762,043	1,887,853
			29,665,713	31,783,845
Derivative assets used for hedging	USD	10,976,184	US$ 10,976	₩ 11,760
Others	USD	2,716,393,061	$ 2,716,393	₩ 2,910,344
	JPY	124,867,077,972	1,106,147	1,185,126
	EUR	127,975,829	152,803	163,713
	CNY	2,328,447,426	355,657	381,050
	IDR	208,552,760,530	15,378	16,476
	Others		232,826	249,450
			4,579,204	4,906,159
			$ 49,126,283	₩52,633,900

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.5 Currency risk concentration (cont'd)

	December 31, 2017			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Liabilities				
Financial liabilities at FVTPL (KIFRS 1039) . . .	USD	60,143,592	$ 60,144	₩ 64,438
	JPY	10,412,484	92	99
	CNY	18,986,370	2,900	3,107
	Others		972	1,042
			64,108	68,686
Deposits	USD	19,491,193,359	19,491,193	20,882,865
	JPY	207,791,610,616	1,840,742	1,972,171
	EUR	1,566,893,313	1,870,868	2,004,448
	CNY	35,321,132,069	5,395,094	5,780,303
	IDR	16,576,953,575,507	1,222,307	1,309,579
	Others		3,016,152	3,231,505
			32,836,356	35,180,871
Borrowings	USD	6,735,255,879	6,735,256	7,216,153
	JPY	13,761,716,433	121,909	130,614
	EUR	580,965,417	693,672	743,200
	CNY	2,280,450,812	348,325	373,196
	IDR	1,508,494,927,443	111,229	119,171
	Others		32,318	34,625
			8,042,709	8,616,959
Debentures	USD	3,524,483,923	3,524,484	3,776,132
	CNY	1,310,036,800	200,100	214,388
	IDR	242,603,324,492	17,888	19,166
	Others		118,813	127,295
			3,861,285	4,136,981
Derivative liabilities used for hedging	USD	41,391,510	41,392	44,347
Others	USD	4,169,027,163	$ 4,169,027	₩ 4,466,696
	JPY	35,680,952,234	316,083	338,651
	EUR	533,207,321	636,649	682,105
	CNY	3,359,418,826	513,131	549,769
	IDR	198,633,282,200	14,646	15,692
	Others		236,224	253,090
			5,885,760	6,306,003
			$50,731,610	₩54,353,847

(*) All foreign currencies other than USD are expressed in USD amounts at the reporting date.

9.6 Operating risk

Operational risk is the risk of loss arising from system failure, human error, fraud or other external events. Risks related to legal or regulatory implications are identified as operational risks but risks related to the strategy of damaging reputation are excluded from operational risks. Operational risk includes losses from internal operational problems and externalities, such as natural disasters, etc., and legal lawsuit, but excludes losses from policy decision errors or unmeasurable reputation damage, etc. Operational risk does not have a direct correlation with income and the Company needs to mitigate such risk through internal controls and insurance.

9. Risk management (cont'd)

9.6 Operating risk (cont'd)

The Company calculates the operational risk capital on a consolidation basis. The Company uses the Advanced Measurement Approach (AMA) and the subsidiary uses the basic indicator to manage total capital. Length of the period in which the AMA is in use is one year with a 99.9% confidence level. The Company uses the loss distribution approach to measure 9 different business units and 7 operational risk event types. In addition, the Company combines the loss distribution of the internal and external data on losses with results of the scenario analysis to calculate the amount of capital and takes into account business environment and changes in the controls in order to adjust the amount of capital. The Company uses the basic indicator by applying specific coefficient to the average profit of 3 years.

The Risk Management Committee determines the operational risk limits. In case the exhaustion ratio of capital exceeds 95% and thus, the excess limit is expected, the management plan for the excess of internal capital limits should be reported to the Risk Management Operation Committee, and if additional limits are given, an approval from the Risk Management Committee is needed beforehand. If under exceptional case where the limit is exceeded, an expost facto approval from the Risk Management Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

9.7 Capital management

The Company implements the BIS capital requirement system in order to secure the capital adequacy and comply with the supervisory regulations. By BIS (Bank for International Settlements) regulation, the Company keeps its BIS capital adequacy ratio (hereinafter BIS ratio) above the minimum BIS for risk-weighted assets. In addition, the Company performs a capital adequacy assessment in order to cope with an unexpected loss.

Risk-weighted assets which are calculated per each risk type when calculating BIS ratio are as follows:

- Risk-weighted assets of credit risk are calculated using the Basic Internal Ratings-Based Approach (IRB). The Company uses the Standardized Approach (SA) for governments, banks, public institutes, overseas exposure, other assets, and etc.
- Risk-weighted assets of market risk are calculated by adding higher of (1) the VaR measured on the previous business day and the average VaR measured in the last 60 business days times (3+multiplier) and (2) the sVaR measured on the previous business day under emergency and the average sVaR measured in the last 60 business days times (3+multiplier) under emergency, to the separate risk calculated by using a standardized model. The FSS provides multiplier to each bank based on the results of verification and the level of meeting the requirements.
- Risk-weighted assets of the operational risk are calculated by multiplying 12.5 to the amount of operational risk capital calculated by Advanced Measurement Approach (AMA) for the Bank and Basic Indicator Approach (BIA) for its subsidiaries.

Regulatory capital in accordance with the Regulations on the Supervision of Banking Business for calculating BIS ratio is as follows:

- Common equity: Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments, retained earnings, accumulated other comprehensive income and other capital surplus, capital adjustments, non-controlling interest on common shares issued by banks, affiliated subsidiaries, etc.
- Other basic capital: The capital securities to meet accreditation requirements of other basic capital, capital surplus associated with the issuance of the other basic capital, non-qualifying capital securities and the accredited amount as other basic capital of a non-controlling interest on equity securities issued by a subsidiary, etc.
- Supplementary capital: The capital securities to meet supplementary capital accreditation requirements, capital surplus associated with the issuance of supplementary capital, the accredited amount of supplementary capital of non-qualifying capital securities, the accredited amount as supplementary capital

9. Risk management (cont'd)

9.7 Capital management (cont'd)

of a non-controlling interest on equity securities issued by a subsidiary, eligible allowance for possible loan losses on "normal" or "precautionary" category assets, allowance for possible loan losses in excess of the total amount of expected losses, etc.

9.7.1 Internal capital adequacy assessment and management

Internal capital is the amount which allows for continuous operation of business while accounting for all risks. Internal capital is defined as the size of capital needed to cope with unexpected loss under a certain rate. The purpose of managing the internal capital is to compare the size of internal capital and available capital (Tier 1) and to serve as a measure of financial strength. Managing the internal capital also provides the amount of risk-adjusted capital and basic measurement. The indicators are composed of the risk appetite ratio as well as exhaustion ratio of foreign holding limits. The risk appetite ratio is an internal capital ratio established after taking into consideration a capital buffer in Tier 1 capital. The exhaustion ratio of foreign holding limits is a ratio used to measure the amount of internal capital used against the internal capital limits.

Internal capital limits are established after accounting for the size of current and subsequent Tier 1 capital as well as the components, quality, risk appetite, target credit rating, operational strategy and business plans. The Risk Committee determines risk types and the internal capital limits for the Company more than once a year. In the case where new operations or the expansion of operations result in the amount exceeding the internal capital limits, an approval from the Risk Committee is needed beforehand. If such a situation occurs in cases outlined as exceptions, an approval from the Risk Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

10. Operating segment information

10.1 General information

In order to set strategies to achieve goal and efficiently conduct performance assessment, the business sectors of the Bank are divided by the operations as follows.

A. Operating group segment: It consists of 4 groups (center, Chungcheong, Yeong-nam, and Ho-nam). It offers household loans and deposit, retirement pension benefit, company loans and deposit, etc.,

B. Capital market segment: This segmentation offers investment and operation of securities, purchasing and selling of public bonds, development and operation of derivatives.

C. Others segment: It consists of overseas business segment, headquarter supporting segment, trust segment, risk segment, audit segment and after-management segment.

In December 2017, the Company reorganized its central sales group and reorganized its existing sales support group to reinforce on-site sales.

10. Operating segment information (cont'd)

10.2 Profit or loss by operating segment

10.2.1 Details of net income by operating segments for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

For the nine-month period ended September 30, 2018 (unaudited)

	Regional Sector				Finance sector and other sector	Subtotal	Adjustments	Total
	Center	Chungcheong	Yeongnam	Honam				
Operating income								
Net interest income	₩ 2,428,479	₩ 313,300	₩ 426,875	₩138,471	₩ 632,090	₩ 3,939,215	₩ (14,053)	₩ 3,925,162
Net fee and commission income (loss)	437,074	42,296	64,404	20,791	123,490	688,055	(194,938)	493,117
Net other operating income (loss)	(1,273,697)	(179,610)	(245,031)	(77,136)	(1,276,064)	(3,051,538)	1,060,983	(1,990,555)
Net segment profit (loss)	1,591,856	175,986	246,248	82,126	(520,484)	1,575,732	851,991	2,427,723
Income tax expenses (income)	385,229	42,589	59,592	19,874	(126,042)	381,242	283,346	664,588
Net segment income (loss)	₩ 1,206,627	₩ 133,397	₩ 186,656	₩ 62,252	₩ (394,442)	₩ 1,194,490	₩ 568,645	₩ 1,763,135

For the nine-month period ended September 30, 2017 (unaudited)

	Regional Sector				Finance sector and other sector	Subtotal	Adjustments	Total
	Center	Chungcheong	Yeongnam	Honam				
Operating income								
Net interest income	₩ 2,145,007	₩ 265,035	₩ 382,163	₩115,044	₩ 624,881	₩ 3,532,130	₩ 6,137	₩ 3,538,267
Net fee and commission income (loss)	426,044	39,280	63,516	18,242	142,651	689,733	(203,922)	485,811
Net other operating income (loss)	(1,304,362)	(169,437)	(233,743)	(65,469)	(948,344)	(2,721,355)	668,428	(2,052,927)
Net segment profit (loss)	1,266,689	134,878	211,936	67,817	(180,812)	1,500,508	470,643	1,971,151
Income tax expenses (income)	306,539	32,640	51,288	16,412	(43,014)	363,865	88,098	451,963
Net segment income (loss)	₩ 960,150	₩ 102,238	₩ 160,648	₩ 51,405	₩(137,798)	₩ 1,136,643	₩ 382,545	₩ 1,519,188

10.2.2 External customers by operating sector and revenue from transactions in each sector for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

For the nine-month period ended September 30, 2018 (unaudited)

	Operating group segments				Finance sector and other sector	Subtotal	Adjustments	Total
Classification	Center	Chungcheong	Yeongnam	Honam				
Revenue from external customers	₩2,684,641	₩319,381	₩449,620	₩149,083	₩932,820	₩4,535,545	₩44,816	₩4,580,361

For the nine-month period ended September 30, 2017 (unaudited)

	Operating group segments				Finance sector and other sector	Subtotal	Adjustments	Total
Classification	Center	Chungcheong	Yeongnam	Honam				
Revenue from external customers	₩2,405,052	₩271,810	₩417,000	₩130,161	₩1,285,663	₩4,509,686	₩(35,050)	₩4,474,636

10. Operating segment information (cont'd)

10.2 Profit or loss by operating segment (cont'd)

10.2.3 Significant non-cash transactions included in income of operating segments for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)							
	Operating group segments							
Classification	Center	Chungcheong	Yeongnam	Honam	Finance sector and other sector	Subtotal	Adjustment	Total
Earnings from equity method investments	₩ —	₩ —	₩ —	₩ —	₩ 37,598	₩ 37,598	₩(78)	₩ 37,520
Depreciation and amortization	(20,154)	(8,956)	(2,550)	(1,335)	(114,732)	(147,727)	211	(147,516)
	₩(20,154)	₩(8,956)	₩(2,550)	₩(1,335)	₩ (77,134)	₩(110,129)	₩133	₩(109,996)

	For the nine-month period ended September 30, 2017 (unaudited)							
	Operating group segments							
Classification	Center	Chungcheong	Yeongnam	Honam	Finance sector and other sector	Subtotal	Adjustment	Total
Earnings from equity method investments	₩ —	₩ —	₩ —	₩ —	₩ 89,292	₩ 89,292	₩ —	₩ 89,292
Depreciation and amortization	(18,306)	(10,350)	(3,312)	(1,287)	(102,746)	(136,001)	(12,005)	(148,006)
	₩(18,306)	₩(10,350)	₩(3,312)	₩(1,287)	₩ (13,454)	₩ (46,709)	₩(12,005)	₩ (58,714)

10.3 Information about regions

Revenue by region from the external customers for the nine-month periods ended September 30, 2018 and 2017 and non-current assets by region as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	Revenue from external customers (*1)		Non-current assets (*2)	
Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)	September 30, 2018 (unaudited)	December 31, 2017
Domestic	₩4,050,528	₩4,074,279	₩2,570,501	₩2,600,583
Foreign				
Hong Kong	46,819	49,853	393	499
Singapore	25,425	18,216	792	865
U.S	29,089	31,601	5,981	5,168
Japan	13,321	12,713	2,731	2,765
China	144,149	101,607	24,558	26,405
Indonesia	98,915	104,085	9,678	9,359
U.K	13,028	14,547	2,001	2,889
Canada	23,065	21,580	6,942	6,774
Others	91,206	81,205	2,955	8,827
	485,017	435,407	56,031	63,551
Adjustments	44,816	(35,050)	6,084	49
	₩4,580,361	₩4,474,636	₩2,632,616	₩2,664,183

(*1) Income from external customers is divided into categories of domestic and overseas based on the locations of operating branches.

(*2) Non-current assets consist of property and equipment, investment property, and intangible asset and are divided into categories of domestic and overseas based on the location of assets.

11. Cash and due from banks

11.1 Cash and due from banks as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	Counterparty	September 30, 2018 (unaudited)	December 31, 2017
Cash		₩ 2,014,083	₩ 2,224,215
Due from banks in Korean won			
Reserve with central bank and others	Bank of Korea (“BOK”)	8,739,429	8,450,993
Monetary stabilization account	BOK	220,000	2,380,000
Time deposits and others	Bank of Communications	100,000	100,000
Other deposits	Other financial institutions	199,863	237,334
		9,259,292	11,168,327
Due from banks in foreign currencies			
Due from foreign banks	BOK and other banks	6,533,170	3,075,845
Time deposits	Bayern LB, etc.	1,436,265	1,495,382
Other due from banks	Other financial institutions	1,534,452	2,020,147
		9,503,887	6,591,374
		₩20,777,262	₩19,983,916

11.2 Restricted balances in due from banks as of September 30, 2018 and December 31, 2017 are summarized as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017	Restriction
Due from banks in Korean won			
Reserve deposits, etc.	₩ 8,739,429	₩ 8,450,993	Required under the *Banking Act* and other related regulations.
Monetary stabilization account	220,000	2,380,000	Required by the *Bank of Korea* for the purpose of liquidity management.
Investor’s deposits	93,191	153,473	Required under the *Financial Investment Services and Capital Markets Act.*
Other deposits	500	500	Pledge creation and etc.
	9,053,120	10,984,966	
Due from banks in foreign currencies			
Due from banks on demand	765,097	342,719	Reserve deposits required under the *Banking Act* and other related regulations
Due from others on demand	1,326,046	463,056	Deposits received for guarantees as margin for derivatives.
	2,091,143	805,775	
	₩11,144,263	₩11,790,741	

12. Financial assets at fair value through profit or loss (KIFRS 1039)

12.1 Financial assets at fair value through profit or loss as of December 31, 2017 are as follows (Korean won in millions):

Classification	book value December 31, 2017
Stocks	₩ 50,932
Government and public bonds	1,403,732
Financial bonds	990,686
Corporate bonds and others	430,231
Beneficiary certificates	10,545
Derivative assets held for trading	6,557,488
	₩9,443,614

12.2 There are no financial assets designated at FVTPL held by the Company as of December 31, 2017.

13. Financial assets measured at fair value through profit or loss (KIFRS 1109)

13.1 As of September 30, 2018, details of financial assets mandatorily measured at fair value through profit or loss are as follows (Korean won in millions):

Classification	book value September 30, 2018 (unaudited)
Stocks	₩ 141,461
Government and public bonds	1,335,302
Financial bonds	501,118
Corporate bonds	867,583
Beneficiary certificates	1,272,319
Securities denominated in foreign currencies	560,935
Derivative assets held for trading	3,431,682
Other securities (Investment, etc.)	178,502
Convertible privately-placed bonds	334,640
	₩8,623,542

13.2 As of September 30, 2018, the Company does not hold any financial assets designated as measured at fair value through profit or loss.

14. Available-for-sale financial assets

Available-for-sale financial assets as of December 31, 2017 are as follows (Korean won in millions):

Classification	Counterparty	Fair value (book value) December 31, 2017 (unaudited)
Stocks	Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	₩ 768,475
Investments in partnership	United PF 1ST Corporate Financial Stability Private Equity Fund, etc.	144,653
Government and public bonds	Treasury bonds	11,163,682
	Housing bonds	3,197,632
	Other local bonds	39,583
		14,400,897
Finance bonds	Monetary stabilization securities	13,063,071
	Deposit bank bonds	664,976
	Small and medium- sized business banking bonds	356,164
	Industrial financial bonds	913,823
		14,998,034
Corporate bonds and Others	State owned entity bonds	3,409,897
	Corporate bonds	390,128
	Others	2,563
		3,802,588
Beneficial securities	Samsung DaVinci Special Investment Type Private Investment Trust No. 1 _Ci, etc.	2,330,354
Securities denominated in foreign currencies	Equity securities in foreign currencies	212,910
	Bonds in foreign currencies	7,068,689
	Investment in foreign currencies	5,571
	Beneficiary certificates securities in foreign currencies	590,341
		7,877,511
		₩44,322,512

15. Financial assets measured at fair value through other comprehensive income

15.1 As of September 30, 2018, details of financial assets measured at fair value through other comprehensive income are as follows (Korean won in millions):

Classification	Counterparty	Fair value (book value) September 30, 2018 (unaudited)
Stocks	Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	₩ 842,506
Investments in partnership	Impact Finance Korea	190
Government and public bonds	Treasury bonds	10,916,318
	Housing bonds	3,231,981
	Other local bonds	19,822
		14,168,121
Finance bonds	Monetary stabilization securities	10,574,323
	Deposit bank bonds	347,991
	Small and medium-sized business banking bonds	388,234
	Industrial financial bonds	617,995
		11,928,543
Corporate bonds and others	State owned entity bonds	3,056,729
	Corporate bonds	448,211
		3,504,940
Securities denominated in foreign currencies	Equity securities in foreign currencies	238,409
	Bonds in foreign currencies	6,308,560
		6,546,969
		₩36,991,269

15. Financial assets measured at fair value through other comprehensive income (cont'd)

15.2 As of September 30, 2018, details of shares (including shares in foreign currencies) included in financial assets measured at FVOCI are as follows (Korean won in millions):

Counterparty	Book value (unaudited)	Fair value (unaudited)
Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.	₩ 312,389	₩ 312,389
CM International Financing Leasing Co., Ltd.	232,332	232,332
Consumer Credit Assistant Fund Co., Ltd.	121,313	121,313
UAMCO., Ltd.	120,406	120,406
The Korea Securities Finance Corporation	59,992	59,992
Taihan Electric Wire Co., Ltd.	53,177	53,177
Dongbu Steel Co., Ltd.	21,418	21,418
Hyundai Merchant Marine Co., Ltd.	19,644	19,644
Korea Asset Management Corporation.	15,737	15,737
Kumho Tire Co., Inc.	12,865	12,865
ChinHung International, Inc.	12,094	12,094
BC Card Co., Ltd.	11,806	11,806
Korea Enterprise Data Co., Ltd.	11,022	11,022
Koramco REITs Management and Trust Co., Ltd.	8,672	8,672
HJC Inc, etc.	8,314	8,314
Daiyang Metal Co., Ltd.	7,563	7,563
Korea Money Brokerage Corp.	7,029	7,029
Korea Development Corporation.	4,526	4,526
CLS Group Holdings AG	4,018	4,018
Mirae Credit Information Co., Ltd.	3,910	3,910
DB Asset Management Co., Ltd. etc.	32,878	32,878
	₩1,081,105	₩1,081,105

Equity instruments that are held for strategic alliances, converted from debt instruments and acquired for access rights of systems and facilities are designated as measured at FVOCI.

15.3 Details of equity instruments included in the financial assets measured at FVOCI derecognized for the nine-month period ended September 30, 2018, are as follows (Korean won in millions):

Counterparty	Book value (unaudited)	Cumulative valuation gain (loss)	Reason for disposal
STX Engine Co., Ltd.	₩15,349	₩(22,925)	Resolution of the council of shareholders
Taihan Electric Wire Co., Ltd.	2,425	(3,576)	Resolution of the Board of Directors
Shinwon Co.,Ltd	11	4	Receipt of dividends upon bankruptcy of business
Oriental Precision & Engineering Co., Ltd.	864	(8,571)	Resolution of the Board of Directors
JY Solutec Co., Ltd.	755	593	Sale of shares after the end of workout
Placidwave Korea Inc.	16	16	Capital reduction on stocks resulting from debt-equity swap based on the approval of changes in corporate rehabilitation plan
Microfinance & Badbank Harmony Co., Ltd.	871	871	Resolution of shareholders' meeting
Hanil Hyundai Cement Co., Ltd.	12,062	8,995	Resolution of the Board of Directors
	₩32,353	₩(24,593)	

15. Financial assets measured at fair value through other comprehensive income (cont'd)

15.4 There are no dividends recognized due to the equity instruments measured at FVOCI derecognized for the nine-month period ended September 30, 2018. Dividends recognized in relation to the equity instruments measured at FVOCI held as of September 30, 2018 amount to ₩5,785 million.

15.5 Changes in the loss allowance in relation to financial assets measured at FVOCI during the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩ 7,523	₩ 723	₩—	₩ 8,246
Transfer to 12 month expected credit loss	361	(361)	—	—
Transfer to non credit-impaired debt securities	—	—	—	—
Transfer to credit-impaired debt securities	—	—	—	—
Provision (reversal) for possible loan losses	348	—	—	348
New debt securities executed or purchased	—	—	—	—
Removed debt securities	(1,388)	(362)		(1,750)
Exchange rate fluctuation and others	279	—	—	279
Ending balance	₩ 7,123	₩ —	₩—	₩ 7,123

15.6. Changes in the total book value in relation to financial assets measured at FVOCI during the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired debt securities	Credit-impaired debt securities	Total
Beginning balance	₩40,246,086	₩ 7,738	₩—	₩40,253,824
Transfer to 12 month expected credit loss	3,869	(3,869)	—	—
Transfer to non credit-impaired debt securities	—	—	—	—
Transfer to credit-impaired debt securities	—	—	—	—
New financial assets executed or purchased	4,166,664	—	—	4,166,664
Removed debt securities	(9,556,511)	(3,869)	—	(9,560,380)
Effective interest rate amortization	(62,390)	—	—	(62,390)
Exchange rate fluctuation and others	1,112,446	—	—	1,112,446
Ending balance	₩35,910,164	₩ —	₩—	₩35,910,164

16. Held-to-maturity financial assets

Held-to-maturity financial assets as of December 31, 2017 consist of the following (Korean won in millions):

Classification	Category	Book value December 31, 2017
Government and public bonds	Treasury bonds	₩ 353,350
	Housing bonds	781,237
		1,134,587
Finance bonds	Deposit bank bonds	230,913
	Small and medium-sized business banking bonds	259,783
	Industrial financial debenture	249,957
		740,653
Corporate bonds and others	State owned entity bonds	2,610,761
	Corporate bonds	80,063
		2,690,824
Securities denominated in foreign currencies	Bonds in foreign currencies	1,594,858
		₩6,160,922

17. Securities measured at amortized cost

17.1 Details of securities measured at amortized cost as of September 30, 2018 are as follows (Korean won in millions):

Classification	Category	Book value September 30, 2018 (unaudited)
Government and public bonds	Treasury bonds	₩ 399,730
	Housing bonds	810,656
		1,210,386
Finance bonds	Monetary stabilization securities	19,952
	Deposit bank bonds	230,764
	Small and medium-sized business banking bonds	459,815
	Industrial financial Debenture	1,501,287
	Export-import credit bond	150,099
		2,361,917
Corporate bonds and others	State owned entity bonds	6,002,010
	Corporate bonds	70,044
		6,072,054
Securities denominated in foreign currencies	Bonds in foreign currencies	1,836,220
Allowance for possible loan losses		(2,595)
		₩11,477,982

17.2 There is no profit or loss from disposal of securities measured at amortized cost during the nine-month period ended September 30, 2018.

17. Securities measured at amortized cost (cont'd)

17.3 Changes in the loss allowance in relation to securities measured at amortized cost during the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

Classification (unaudited)	12 month expected credit loss	Lifetime expected credit losses: Non credit-impaired debt securities	Lifetime expected credit losses: Credit-impaired debt securities	Total
Beginning balance	₩1,523	₩—	₩—	₩1,523
Transfer to 12 month expected credit loss	—	—	—	—
Transfer to non credit-impaired debt securities	—	—	—	—
Transfer to credit-impaired debt securities	—	—	—	—
Provision for possible loan losses	1,913	—	—	1,913
Removed debt securities	(77)	—	—	(77)
Exchange rate fluctuation and others	(764)	—	—	(764)
Ending balance	₩2,595	₩—	₩—	₩2,595

17.4 Changes in the carrying amounts of securities measured at amortized cost during the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

Classification (unaudited)	12 month expected credit loss	Lifetime expected credit losses: Non credit-impaired debt securities	Lifetime expected credit losses: Credit-impaired debt securities	Total
Beginning balance	₩ 6,174,861	₩—	₩—	₩ 6,174,861
Transfer to 12 month expected credit loss	—	—	—	—
Transfer to non credit-impaired debt securities	—	—	—	—
Transfer to credit-impaired debt securities	—	—	—	—
New debt securities executed or purchased	5,820,399	—	—	5,820,399
Removed debt securities	(537,949)	—	—	(537,949)
Effective interest rate amortization	4,037	—	—	4,037
Exchange rate fluctuation and others	19,229	—	—	19,229
Ending balance	₩11,480,577	₩—	₩—	₩11,480,577

18. Pledged assets

18.1 Assets pledged as collateral as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	Category	Book value September 30, 2018 (unaudited)
Financial assets measured at FVTPL (KIFRS 1109)	Future	₩ 20,062
Financial assets measured at FVOCI	Intraday overdraft	599,129
	CSA	562,469
	Borrowings	1,307,905
	BOK payment	1,682,965
	Future	74,505
	Others	370,508
		4,597,481
Securities measured at amortized cost	Future	285,144
	BOK payment	1,058,378
	Intraday overdraft	45,633
	Borrowings	222,227
	Foreign currency borrowing	194,422
	Others	50,288
		1,856,092
		₩6,473,635

Classification	Category	Book value December 31, 2017
Available-for-sale financial assets	Intraday overdraft	₩ 566,317
	Foreign currency borrowing	290,586
	Securities lent	599,777
	Borrowings	1,467,404
	BOK payment	2,554,249
	Future	66,955
	Others	979,720
		6,525,008
Held-to-maturity financial assets	Future	257,233
	BOK payment	1,121,782
	Intraday overdraft	45,740
	Borrowings	275,370
	Foreign currency borrowing	31,364
	Others	69,815
		1,801,304
Loans	Borrowings	10,212
		₩8,336,524

18. Pledged assets (cont'd)

18.2 The fair value of collateral that is available for sale and re-pledge, irrespective of default, is as follows(Korean won in millions)

	September 30,2018 (unaudited)	
Classification	Fair value of collateral	Fair value of collateral sold or re-pledged
Securities	₩1,778,422	₩—

	December 31, 2017	
Classification	Fair value of collateral	Fair value of collateral sold or re-pledged
Securities	₩4,516,595	₩—

19. Loans and receivables

19.1 Loans and receivables as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Loans		
Loans in Korean won	₩200,345,153	₩187,647,345
Loans denominated in foreign currencies	21,653,625	19,878,908
Domestic import usance	4,014,113	3,450,088
Call loans	1,718,540	2,163,949
Bills purchased in Korean won	98,324	66,918
Bills purchased denominated in foreign currencies	6,113,165	5,663,420
Advance payments on acceptances and guarantees	20,555	17,816
Bonds purchased under resale agreement	1,785,040	4,524,823
Privately-placed corporate bonds	1,348,014	1,193,070
Others	678,752	591,708
	237,775,281	225,198,045
Plus (less)		
Deferred loan fees and expenses	300,255	261,485
Allowance for possible loan losses	(1,248,181)	(1,362,821)
	(947,926)	(1,101,336)
	₩236,827,355	₩224,096,709

19. Loans and receivables (cont'd)

19.2 Loans in Korean won by customer as of September 30, 2018 and December 31, 2017 are listed as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Corporate loans		
Large-sized businesses	₩ 33,559,086	₩ 33,914,997
Small and medium-sized businesses	85,586,750	77,739,731
Public sector and others	12,456,749	13,280,252
Household loans	106,172,696	100,263,065
	237,775,281	225,198,045
Plus (less)		
Deferred loan fees, net of expenses	300,255	261,485
Allowance for possible loan losses	(1,248,181)	(1,362,821)
	(947,926)	(1,101,336)
	₩236,827,355	₩224,096,709

19.3 Changes in allowance for possible loan losses for the nine-month periods ended September 30, 2018 and 2017 are summarized as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)				
		Lifetime expected credit losses			
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Credit impairment model	Total
As at January 1, 2018	₩234,188	₩360,578	₩ 841,261	₩12,081	₩1,448,108
Transfer to 12 month expected credit loss	25,672	(24,589)	(1,083)	—	—
Transfer to non credit-impaired loan	(13,413)	82,653	(69,240)	—	—
Transfer to credit-impaired loan	(5,203)	(34,123)	39,326	—	—
Provisions (reversal) of allowance of possible loan losses	19,159	21,873	(10,606)	2,484	32,910
Write-offs	—	—	(292,471)	(5,789)	(298,260)
Disposal of non-performing loans	—	—	(27,679)	—	(27,679)
Recovering of loans written-off	—	—	114,938	—	114,938
Exchange rate fluctuation and others	26,581	(27,513)	(20,904)	—	(21,836)
As of September 30, 2018	₩286,984	₩378,879	₩ 573,542	₩ 8,776	₩1,248,181

19. Loans and receivables (cont'd)

19.3 Changes in allowance for possible loan losses for the nine-month periods ended September 30, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	For the nine-month period ended September 30, 2017 (unaudited)					
Classification	Loans in Korean won	Loans denominated in foreign currencies	Advance payments on acceptances and guarantees	Bills purchased denominated in foreign currencies	Privately placed corporate bonds	Total
As at January 1, 2017	₩1,090,644	₩ 285,366	₩ 3,745	₩56,369	₩26,820	₩1,462,944
Disposal of non-performing loans	(27,454)	—	—	—	—	(27,454)
Write-offs	(275,318)	(26,179)	—	—	—	(301,497)
Collection of loans written-off in prior period	122,659	25,538	490	—	—	148,687
Debt-to-equity swap	(108,608)	(255,690)	—	—	—	(364,298)
Exchange rate fluctuation and others	401	(20,803)	—	(2,467)	(1)	(22,870)
Provision for possible loan losses	248,782	180,148	(1,373)	(1,118)	2,258	428,697
Interest income from impaired loans	(9,765)	(1,799)	(39)	(587)	(248)	(12,438)
As of September 30, 2017	₩1,041,341	₩ 186,581	₩ 2,823	₩52,197	₩28,829	₩1,311,771

19.4 Changes in the carrying amounts of loans for the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)				
		Lifetime expected credit losses			
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Subject to the application of credit impairment model	Total
As at January 1, 2018	₩158,375,212	₩ 63,960,067	₩2,191,301	₩ 498,900	₩225,025,480
Transfer to 12 month expected credit loss	7,093,858	(7,073,133)	(20,725)	—	—
Transfer to non credit-impaired loan	(4,149,047)	4,358,993	(209,946)	—	—
Transfer to credit-impaired loan	(327,137)	(345,633)	672,770	—	—
New loans executed or purchased	73,001,202	1,559,069	317,424	384,882	75,262,577
Write-offs	—	—	(292,471)	(5,789)	(298,260)
Removed loans	(39,058,844)	(13,834,890)	(312,522)	(210,391)	(53,416,647)
Disposal of non-performing loans	—	—	(102,924)	—	(102,924)
Exchange rate fluctuation and others	(5,854,741)	(2,518,334)	(321,870)	—	(8,694,945)
As of September 30, 2018	₩189,080,503	₩ 46,106,139	₩1,921,037	₩ 667,602	₩237,775,281

19.5 The contractual amount of loans written off, for which the Company continues to recover, is ₩ 286,901 million as of September 30, 2018.

19. Loans and receivables (cont'd)

19.6 Leases investments and net lease investments of the financial lease loans included in loans as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017 Short-term	Long-term	Total
Present value of minimum lease payments	₩—	₩1,613	₩1,613
Net lease investments	—	1,613	1,613
Total lease investments	₩—	₩1,613	₩1,613

19.7 Leases investments and net lease investments of the financial lease loans by lease period as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017 Total lease investment	Net lease investment
After 1 year but no later than 5 years	₩1,613	₩1,613
	₩1,613	₩1,613

20. Derivative instruments

20.1 Details of amounts of the unsettled derivative contract and fair value of derivatives held by the Company as of September 30, 2018 and December 31, 2017 are as follows:

	Amounts of unsettled contract		Accumulated valuation gain (loss)			
			September 30, 2018 (unaudited)		December 31, 2017	
Classification	September 30, 2018 (unaudited)	December 31, 2017	Assets	Liabilities	Assets	Liabilities
Currency						
Forward	₩219,633,289	₩200,080,489	₩2,061,988	₩2,051,752	₩4,388,876	₩4,508,586
Swap	66,812,560	61,630,029	981,358	809,096	1,809,223	1,477,573
Options purchased	228,167	79,069	3,609	—	1,298	—
Options sold	243,744	96,426	—	3,616	—	2,450
Futures	1,232,059	1,137,045	—	—	—	—
	288,149,819	263,023,058	3,046,955	2,864,464	6,199,397	5,988,609
Interest						
Forward	—	—	—	—	—	—
Swap	82,264,204	75,261,996	377,989	361,095	350,285	382,205
Options purchased	626,000	776,000	14,540	—	16,854	—
Options sold	2,598,680	3,262,567	—	41,703	—	43,050
Futures	807,031	118,339	—	—	—	—
	86,295,915	79,418,902	392,529	402,798	367,139	425,255
Stock						
Options purchased	69	819	195	—	170	—
Options sold	608	16,160	—	12	—	68
Futures	232	1,223	—	—	—	—
	909	18,202	195	12	170	68
Others						
Other derivatives	—	113,795	—	—	1,157	—
Credit spread adjustment, etc	—	—	(7,997)	—	(10,375)	—
	—	113,795	(7,997)	—	(9,218)	—
	₩374,446,643	₩342,573,957	₩3,431,682	₩3,267,274	₩6,557,488	₩6,413,932

20. Derivative instruments (cont'd)

20.2 Details of valuation gain (loss) of the derivatives for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the three-month periods ended September 30 (unaudited)				For the nine-month periods ended September 30 (unaudited)			
	2018		2017		2018		2017	
Classification	Gain	Loss	Gain	Loss	Gain	Loss	Gain	Loss
Currency:								
Forward	₩(1,692,728)	₩(1,758,155)	₩(113,814)	₩(218,352)	₩2,231,600	₩2,117,245	₩2,154,548	₩2,174,075
Swap	(255,519)	(284,158)	(137,467)	(77,636)	1,015,292	1,070,154	1,369,387	1,197,379
Options purchased	142	—	166	—	2,949	—	922	—
Options sold	—	228	—	(290)	—	1,271	—	1,925
	(1,948,105)	(2,042,085)	(251,115)	(296,278)	3,249,841	3,188,670	3,524,857	3,373,379
Interest:								
Forward	—	—	(17)	(68)	—	—	—	—
Swap	34,905	22,349	45,510	50,196	186,409	129,318	187,716	225,342
Options purchased	1,389	—	2,650	—	3,225	—	7,761	—
Options sold	—	1,645	—	853	—	2,456	—	2,746
	36,294	23,994	48,143	50,981	189,634	131,774	195,477	228,088
Stock:								
Options purchased	2	—	1	—	43	—	130	—
Options sold	—	(2)	—	(7)	—	—	—	17
	2	(2)	1	(7)	43	—	130	17
Others:								
Other derivatives	—	—	(2,963)	619	—	—	783	869
Credit risk adjustment	1,700	—	1,202	3	2,895	—	7,224	16
	1,700	—	(1,761)	622	2,895	—	8,007	885
	₩(1,910,109)	₩(2,018,093)	₩(204,732)	₩(244,682)	₩3,442,413	₩3,320,444	₩3,728,471	₩3,602,369

20. Derivative instruments (cont'd)

20.3 Fair value hedge

20.3.1 Details of items subject to fair value hedge as of September 30, 2018 are as follows (Korean won in millions):

		Book value		Accumulated fair value adjustments		Fair value fluctuation(unaudited)	
Classification	Hedged items	Assets	Liabilities	Assets	Liabilities	For the three-month period ended September 30, 2018	For the nine-month period ended September 30, 2018
Application of hedge accounting							
Interest	Depository liabilities in Korean won	₩ —	₩ 434,549	₩ —	₩ (15,451)	₩(2,261)	₩ 1,000
	Depository liabilities denominated in foreign currencies	—	512,525	—	(54,952)	6,514	42,694
	Finance debentures in Korean won	—	98,752	—	(1,248)	1,248	1,248
	Finance debentures denominated in foreign currencies	—	2,535,603	—	(79,242)	8,087	58,479
		—	3,581,429	—	(150,893)	13,588	103,421
Currency	Equity securities measured at FVOCI	222,540	—	3,540	—	(1,800)	8,260
Currency and interest	Finance debentures denominated in foreign currencies	—	663,722	—	3,766	2,280	3,000
		₩222,540	₩4,245,151	₩3,540	₩(147,127)	₩14,068	₩114,681

20. Derivative instruments (cont'd)

20.3 Fair value hedge (cont'd)

20.3.1 Details of items subject to fair value hedge as of September 30, 2018 are as follows (Korean won in millions): (cont'd)

Gain or loss on valuation of items subject to fair value hedge for the three-month and nine-month periods ended September 30, 2017 are as follows (Korean won in millions):

Classification	For the three-month period ended September 30, 2017 (unaudited) Valuation gain	Valuation loss	For the nine-month period ended September 30, 2017 (unaudited) Valuation gain	Valuation loss
Finance debentures	₩ 552	₩ (993)	₩ 1,939	₩23,475
Depository liabilities	4,948	778	15,488	7,107
Available-for-sale financial assets	—	(1,420)	—	12,360
	₩5,500	₩(1,635)	₩17,427	₩42,942

As of September 30, 2018, interest rate swap or currency swap is designated as hedging instrument and the fair value hedge accounting is applied in order to hedge fair value fluctuation risk incurred due to interest rate fluctuations and foreign exchange rate fluctuations in finance debentures issued and depository liabilities.

20.3.2 Derivative instruments used for hedging purposes edging and related assets and liabilities as of September 30, 2018 and December 31, 2017 are as follows. And valuation of fair value and gain and loss on valuation for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited) Unsettled contract amounts	Net valuation gain (loss) For the three-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2018 (unaudited)	September 30, 2018 (unaudited) Assets	Liabilities
Currency					
Currency swaps	₩ 659,956	₩ (3,492)	₩ (7,986)	₩1,632	₩ 13,623
Interest					
Interest rate swaps	3,732,322	(13,468)	(103,562)	99	150,003
	₩4,392,278	₩(16,960)	₩(111,548)	₩1,731	₩163,626

Classification	September 30, 2017 (unaudited) Unsettled contract amounts	For the three-month period ended September 30, 2017 (unaudited) Valuation Gain	Valuation loss	For the nine-month period ended September 30, 2017 (unaudited) Valuation gain	Valuation loss	September 30, 2017 (unaudited) Assets	Liabilities
Currency							
Currency swaps	₩ 279,922	₩ 6,445	₩ —	₩25,720	₩ —	₩ —	₩14,225
Interest							
Interest rate swaps	3,530,626	(1,085)	5,633	22,243	17,447	11,760	58,799
	₩3,810,548	₩ 5,360	₩5,633	₩47,963	₩17,447	₩11,760	₩73,024

Derivative transactions of which purchase and sale incur simultaneously like foreign exchange forward transaction, currency futures and currency swap, do not distinguish purchase contract amount from sale contract amount. For a derivative transaction involving both Korean won and foreign currencies, the contract amount based on foreign currencies is denominated using a fair exchange rate prevailing at the end of reporting period. For a derivative transaction involving only foreign currencies, the contract amount based on foreign currencies purchased are denominated using a fair exchange rate prevailing at the end of reporting period.

20. Derivative instruments (cont'd)

20.3 Fair value hedge (cont'd)

20.3.3 Fair values of non-derivative financial instruments designated as hedging instrument as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	Fair value: September 30, 2018 (unaudited)	Fair value: December 31, 2017
Debentures denominated in foreign currencies	₩222,540	₩214,280

20.3.4 Ineffective portion of gain or loss on derivatives designated as hedging instrument for the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

Classification	Ineffective portion of the hedge recognized as current profit or loss
Currency	₩(4,985)
Interest	(141)
	₩(5,126)

20.4 Hedges of net investment in foreign operations

20.4.1 Details of hedges of net investment in foreign operations as of September 30, 2018 are as follows (Korean won in millions):

Classification	Fair value fluctuation (unaudited): For the three-month period ended September 30, 2018	Fair value fluctuation (unaudited): For the nine-month period ended September 30, 2018	Comprehensive income of hedges of net investment in foreign operations
Currency (Exchange rate risk)	₩(2,395)	₩16,489	₩758

The effective portion of gains or losses arising from the hedges of net investment in foreign operations, which is recognized in other comprehensive income for three-month and the nine-month periods ended September 30, 2017 are as follows (Korean won in millions):

Classification	For the three-month period ended September 30, 2017 (unaudited)		For the nine-month period ended September 30, 2017 (unaudited)	
	Valuation gain	Valuation loss	Valuation gain	Valuation loss
Hedged items				
Exchange differences on translation of foreign operations (branches and subsidiaries)	₩—	₩(9,761)	₩—	₩9,417

20.4.2 Details of fair values of financial instruments designated as hedging instrument of net investment of foreign operations as of September 30, 2018 are as follows (Korean won in millions):

Classification	Book value		Fair value fluctuation (unaudited)		The effective portion of changes in fair value recognized in other comprehensive income	Ineffective portion of the hedge recognized as current profit or loss
	Assets	Liabilities	For the three-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2018 (unaudited)		
Debentures denominated in foreign currencies	₩—	₩635,385	₩2,395	₩(16,489)	₩(16,489)	₩—

20. Derivative instruments (cont'd)

20.4 Hedges of net investment in foreign operations (cont'd)

20.4.2 Details of fair values of financial instruments designated as hedging instrument of net investment of foreign operations as of September 30, 2018 are as follows (Korean won in millions): (cont'd)

The effective portion of gains or losses arising from the hedging instrument in relation to the hedge accounting for the net investment in foreign operations, which is recognized in other comprehensive income for the three-month and nine-month periods ended September 30, 2017 are as follows (Korean won in millions):

	For the three-month period ended September 30, 2017 (unaudited)		For the nine-month period ended September 30, 2017 (unaudited)	
Classification	Gain	Loss	Gain	Loss
Hedging instruments				
Debentures denominated in foreign currencies	₩(9,761)	₩—	₩9,417	₩—

20.5 Average hedging ratios of future nominal cash flows by the type of risk hedge as of September 30, 2018 are as follows (Korean won in millions):

Classification (unaudited)	1 year	2 years	3 years	4 years	5 years	More than 5 years	Total
Fair value hedge							
Nominal amounts of items subject to hedge	₩624,950	₩491,706	₩617,905	₩373,810	₩205,000	₩2,078,907	₩4,392,278
Nominal amounts of hedging instrument	624,950	491,706	617,905	373,810	205,000	2,078,907	4,392,278
Average hedging ratio	100.00%	100.00%	100.03%	100.00%	99.73%	100.00%	100.00%
Hedge of net investment in foreign operations							
Nominal amounts of items subject to hedge	—	—	—	—	—	₩ 635,385	₩ 635,385
Nominal amounts of hedging instrument	—	—	—	—	—	635,385	635,385
Average hedging ratio	—	—	—	—	—	100.00%	100.00%

21. Investments in associates

21.1 Details of investments in associates as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification (unaudited)	Country	Reporting date	Industry	Ownership (%) Sep 30, 2018	Ownership (%) Dec 31, 2017	Book value Sep 30, 2018	Book value Dec 31, 2017
Bank of Jilin (*1)	China	September 30	Bank	16.98	16.98	₩695,304	₩644,252
Hana First Private Equity Fund	Korea	September 30	Other financial services	29.97	29.97	5,038	16,586
Korea Credit Bureau (*1)	Korea	September 30	Credit investigation and Collection agency	9.00	9.00	6,347	5,601
Darby Hana Infrastructure Fund Management (*1)	Korea	September 30	Asset Management Company	9.90	9.90	1,383	1,242
CM International financing leases	China	September 30	Other financial services	25.00	25.00	203,071	201,064
Beijing Rangjia Asset Management	China	September 30	Credit finance business	25.00	25.00	46,764	45,113
Somesevit Corporation (*1) (*2)	Korea	September 30	Construction	1.92	1.92	—	—
Midan City Development Co., Ltd. (*1)(*2)(*3)	Korea	March 31	Construction	2.17	2.17	—	—
Masan Marine New Town Co., Ltd. (*1)	Korea	September 30	Construction	10.00	10.00	101	101
Company K startup winwin fund	Korea	September 30	Investment	23.81	23.81	7,637	9,643
Darby Latin American Private Debt Fund III (*3)	USA	June 30	Investment	25.52	24.99	14,615	6,770
Darby Latin American Private Debt Fund IIIA (*3)	USA	June 30	Investment	24.99	24.97	1,463	1,045
BSK-6 Patent Technology Investment Association	Korea	September 30	Investment	20.00	20.00	831	885
Fidelis Private Equity Fund No.2	Korea	September 30	Investment	29.70	—	3,018	—
Koramco Professional Investment Type Real Estate	Korea	September 30	Investment	25.76	—	1,700	—
KEB Hana-KVIC Unicorn Fund of Funds	Korea	September 30	Investment	90.90	—	955	—
KEB Mirae Asset First Securitization Specialty Co., Ltd. (*2)	Korea	September 30	Asset securitization	—	40.00	—	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd. (*2)	Korea	September 30	Asset securitization	—	45.00	—	—
PT Sinarmas Hana Finance	Indonesia	September 30	Financial services	30.00	30.00	3,065	3,253
						₩991,292	₩935,555

(*1) These entities are presented as investments in associates as the Company exercises a significant influence on the investee's Board of Directors.
(*2) The equity method is no longer appropriate because the current balances for the investments are below "0"

21. Investments in associates (cont'd)

21.1 Details of investments in associates as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

(*3) As the financial statements as of September 30, 2018 could not be obtained, the most recent financial statements available from the closing date were used. The effect of significant transactions or events incurred between the end of the reporting period of the associate and that of the Bank was reviewed and reflected.

(*4) As of September 30, 2018, the Company classified the investee as investment in associates as it is a limited partner and thus, cannot exercise control over the investee.

21.2 Condensed financial statements as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)						
Classification	Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income (loss)	Dividends income
Bank of Jilin	₩54,897,689	₩50,885,587	₩4,012,102	₩941,677	₩319,238	₩494,495	₩ —
Hana First Private Equity Fund	21,239	4,428	16,811	674	(16,354)	(16,354)	—
Korea Credit Bureau Co., Ltd.	86,617	22,155	64,462	55,849	8,354	8,354	113
Darby Hana Infrastructure Fund Management	16,736	2,768	13,968	3,946	1,534	1,534	79
CM International financing leases	4,713,205	3,900,920	812,285	240,157	17,757	17,757	—
Beijing Rangjia Asset Management	433,505	246,448	187,057	10,972	15,968	15,968	1,690
Somesevit Corporation	81,722	128,037	(46,315)	8,133	(471)	(471)	—
Midan City Development Co., Ltd.	662,631	686,733	(24,102)	—	(321)	(321)	—
Masan Marine New Town Co., Ltd.	134,448	133,440	1,008	200	1	1	—
Company K startup winwin fund	32,919	845	32,074	2,461	15	78	—
Darby Latin American Private Debt Fund III	26,551	1,200	25,351	—	(404)	(404)	—
Darby Latin American Private Debt Fund IIIA	3,563	185	3,378	—	17	17	—
BSK-6 Patent Technology Investment Association	4,253	94	4,159	17	(266)	(266)	—
Fidelis Private Equity Fund No.2	10,161	2	10,159	1,343	1,210	1,210	342
Koramco Professional Investment Type Real Estate	6,601	—	6,601	—	1	1	—
KEB Hana-KVIC Unicorn Fund of Funds	1,100	49	1,051	—	(49)	(49)	—
PT Sinarmas Hana Finance	50,902	41,463	9,439	6,355	85	85	—

21. Investments in associates (cont'd)

21.2 Condensed financial statements as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

	December 31, 2017						
Classification	Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income (loss)	Dividend income
Bank of Jilin	₩62,533,816	₩58,823,646	₩3,710,170	₩1,401,157	₩484,330	₩344,357	₩20,006
Hana Equity Partners I. L.P	71,568	16,224	55,344	1,102	7,553	(17,555)	—
Korea Credit Bureau Co., Ltd	75,504	19,323	56,181	68,750	3,580	3,580	149
Darby Hana Infrastructure Fund Management ("DHIF")	14,423	1,884	12,539	6,189	2,213	2,213	59
CM International financing leases	5,713,627	4,909,370	804,257	358,637	57,835	57,835	13,019
Beijing Langa Asset Management	416,310	235,856	180,454	23,843	16,884	16,884	—
Somesevit Corporation	82,400	128,244	(45,844)	10,498	(2,224)	(2,224)	—
Midan City Development Co., Ltd.	664,251	683,621	(19,370)	71,448	615	615	—
Masan Marine New Town Co., Ltd.	134,980	133,974	1,006	402	—	—	—
Company K Startup winwin fund	41,025	525	40,500	3,828	3,012	3,641	—
Darby Latin American Private Debt Fund III	14,258	1,934	12,324	—	(1,871)	(1,871)	—
Darby Latin American Private Debt Fund IIIA	2,508	333	2,175	—	(333)	(333)	—
BSK-6 Patent Technology Investment Association	4,505	79	4,426	6	(74)	(74)	—
KEB Mirae Asset First Securitization Specialty LC.	7,388	12,587	(5,199)	737	(4,082)	(4,082)	—
KEB Mirae Asset Second Securitization Specialty LC.	3,234	9,136	(5,902)	2,261	(405)	(405)	—
PT Sinarmas Hana Finance	39,420	29,511	9,909	6,249	(1,196)	(1,769)	—

21. Investments in associates (cont'd)

21.3 Changes in the investment in an associate for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)										
						Equity method valuation					
Classification	Ownership (%)	Beginning balance	Acquisition, and others	Dividend	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩644,252	₩ —	₩ —	₩644,252	₩33,391	₩—	₩17,661	₩ —	₩ —	₩695,304
Hana First Private Equity Fund	29.97	16,586	—	—	16,586	(4,901)	—	—	—	(6,647)	5,038
Korea Credit Bureau Co., Ltd.	9.00	5,601	—	(113)	5,488	859	—	—	—	—	6,347
Darby Hana Infrastructure Fund Management	9.90	1,242	—	(79)	1,163	220	—	—	—	—	1,383
CM International financing leases	25.00	201,064	—	—	201,064	4,439	—	(2,432)	—	—	203,071
Beijing Rangjia Asset Management	25.00	45,113	—	(1,690)	43,423	3,992	—	(651)	—	—	46,764
Somesevit Corporation	1.92	—	—	—	—	—	—	—	—	—	—
Midan City Development Co., Ltd.	2.17	—	—	—	—	—	—	—	—	—	—
Masan Marine New Town Co., Ltd.	10.00	101	—	—	101	—	—	—	—	—	101
Company K startup winwin fund	23.81	9,643	—	—	9,643	(721)	—	15	—	(1,300)	7,637
Darby Latin American Private Debt Fund III	25.52	6,770	7,688	—	14,458	(104)	—	261	—	—	14,615
Darby Latin American Private Debt Fund IIIA	24.99	1,045	623	—	1,688	4	—	36	—	(245)	1,463
BSK-6 Patent Technology Investment Association	20.00	885	—	—	885	(54)	—	—	—	—	831
Fidelis Private Equity Fund No.2	29.70	—	3,000	(342)	2,658	360	—	—	—	—	3,018
Koramco Professional Investment Type Real Estate	25.76	—	1,700	—	1,700	—	—	—	—	—	1,700
KEB Mirae Asset First Securitization Specialty LC.	—	—	—	—	—	—	—	—	—	—	—
KEB Mirae Asset Second Securitization Specialty LC	—	—	—	—	—	—	—	—	—	—	—
KEB Hana-KVIC Unicorn Fund of Funds	90.90	—	1,000	—	1,000	(45)	—	—	—	—	955
PT Sinarmas Hana Finance	30.00	3,253	—	—	3,253	79	—	—	(267)	—	3,065
		₩935,555	₩14,011	₩(2,224)	₩947,342	₩37,519	₩—	₩14,890	₩(267)	₩(8,192)	₩991,292

21. Investments in associates (cont'd)

21.3 Changes in the investment in an associate for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

	For the nine-month period ended September 30, 2017 (unaudited)										
						Equity method valuation					
Classification	Owner ship (%)	Beginning balance	Acquisition and others	Dividends	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩639,369	₩ —	₩(20,006)	₩619,363	₩74,692	₩ —	₩(1,542)	₩—	₩ —	₩692,513
Hana First Private Equity Fund	29.97	23,812	—	—	23,812	1,251	—	(3,012)	—	(1,965)	20,086
Korea Credit Bureau Co., Ltd.	9.00	5,398	—	(149)	5,249	403	—	—	—	—	5,652
Darby Hana Infrastructure Fund Management	9.90	1,084	—	(59)	1,025	104	—	—	—	—	1,129
CM International financing leases	25.00	211,928	—	(13,019)	198,909	12,227	—	(2,377)	—	—	208,759
Beijing Rangjia Asset Management	25.00	—	41,801	—	41,801	26	—	177	—	—	42,004
Somesevit Corporation	1.92	—	—	—	—	—	—	—	—	—	—
Midan City Development Co., Ltd.	2.17	226	—	—	226	—	(226)	—	—	—	—
Masan Marine New Town Co., Ltd.	10.00	100	—	—	100	—	—	—	—	—	100
Company KStartup winwin fund	23.81	9,585	—	—	9,585	733	—	(121)	—	(700)	9,497
Darby Latin American Private Debt Fund III	24.99	—	4,189	—	4,189	—	—	—	—	—	4,189
Darby Latin American Private Debt Fund IIIA	24.97	—	659	—	659	—	—	—	—	—	659
BSK-6 Patent Technology Investment Association	20.00	—	900	—	900	—	—	—	—	—	900
KEB Mirae Asset First Securitization Specialty LC.	40.00	—	—	—	—	—	—	—	—	—	—
KEB Mirae Asset Second Securitization Specialty LC.	45.00	—	—	—	—	—	—	—	—	—	—
PT Sinarmas Hana Finance	30.00	3,832	—	—	3,832	(144)	—	—	(80)	—	3,608
		₩895,334	₩47,549	₩(33,233)	₩909,650	₩65,110	₩(226)	₩(6,875)	₩ (80)	₩(2,665)	₩989,096

21. Investments in associates (cont'd)

21.3 Changes in the investment in an associate for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

The Company discontinued recognizing its losses in shares since the balance of investments in associates was "0" and the losses which are accumulated for the current year and before the current year are as follows (Korean won in millions):

	September 30, 2018 (unaudited)	
Company	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (9)	₩ (889)
Midan City Development Co., Ltd.	(103)	(523)
	₩(112)	₩(1,412)

	December 31, 2017	
Company	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (42)	₩ (880)
Midan City Development Co., Ltd.	(420)	(420)
KEB Mirae Asset First Securitization Specialty LC.	(1,630)	(2,080)
KEB Mirae Asset Second Securitization Specialty LC.	(453)	(2,656)
	₩(2,545)	₩(6,036)

22. Property and equipment

22.1 Property and equipment as of September 30, 2018 and December 31, 2017 consist of the following (Korean won in millions):

	September 30, 2018 (unaudited)			
	Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩ 917,220	₩ —	₩—	₩ 917,220
Buildings	877,160	(246,023)	—	631,137
Leasehold improvements	365,254	(294,599)	(6)	70,649
Equipment and vehicles	859,906	(733,272)	—	126,634
Construction in progress	27,481	—	—	27,481
Others	69,668	—	—	69,668
	₩3,116,689	₩(1,273,894)	₩ (6)	₩1,842,789

	December 31, 2017			
	Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩ 854,024	₩ —	₩—	₩ 854,024
Buildings	733,257	(256,415)	(34)	476,808
Leasehold improvements	386,973	(311,678)	(62)	75,233
Equipment and vehicles	901,859	(757,935)	—	143,924
Construction in progress	15,555	—	—	15,555
Others	69,808	—	—	69,808
	₩2,961,476	₩(1,326,028)	₩ (96)	₩1,635,352

22. Property and equipment (cont'd)

22.2 Changes in property and equipment for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)						
Classification	January 1, 2018	Additions	Disposal	Depreciation	Transfer out	Others	September 30, 2018
Land	₩ 854,024	₩ 840	₩(23,822)	₩ —	₩ 86,158	₩ 20	₩ 917,220
Buildings	476,808	13,174	(5,395)	(15,635)	160,135	2,050	631,137
Leasehold improvements	75,233	13,757	(2,083)	(18,133)	—	1,875	70,649
Equipment and vehicles	143,924	36,872	(4,168)	(50,438)	—	444	126,634
Construction in progress	15,555	11,504	—	—	(532)	954	27,481
Others	69,808	—	(141)	—	—	1	69,668
	₩1,635,351	₩76,147	₩(35,609)	₩(84,206)	₩245,761	₩5,344	₩1,842,789

	For the nine-month period ended September 30, 2017 (unaudited)						
Classification	January 1, 2017	Additions	Disposal	Depreciation	Transfer out	Others	September 30, 2017
Land	₩1,353,181	₩ —	₩(56,207)	₩ —	₩(357,413)	₩ (13)	₩ 939,548
Buildings	562,315	14,268	(17,085)	(13,868)	79,223	(3,467)	621,386
Leasehold improvements	74,649	16,690	(2,697)	(19,020)	1,922	4,903	76,447
Equipment and vehicles	147,667	54,054	(8,678)	(54,567)	98	9,217	147,791
Construction in progress	91,664	113,173	—	—	(159,318)	33	45,552
Others	71,796	—	(1,988)	—	—	—	69,808
	₩2,301,272	₩198,185	₩(86,655)	₩(87,455)	₩(435,488)	₩10,673	₩1,900,532

23. Investment properties

23.1 Details of investment property as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)			
Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩369,545	₩ —	₩ (2)	₩369,543
Buildings	265,816	(102,387)	(645)	162,784
	₩635,361	₩(102,387)	₩(647)	₩532,327

	December 31, 2017			
Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩455,703	₩ —	₩ (2)	₩455,701
Buildings	404,516	(73,418)	(645)	330,453
	₩860,219	₩(73,418)	₩(647)	₩786,154

23. Investment properties (cont'd)

23.2 Changes in investment property for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)			
Classification	January 1, 2018	Depreciation	Transfer (*)	September 30, 2018
Land	₩455,701	₩ —	₩ (86,158)	₩369,543
Buildings	330,453	(8,066)	(159,603)	162,784
	₩786,154	₩(8,066)	₩(245,761)	₩532,327

	For the nine-month period ended September 30, 2017 (unaudited)				
Classification	January 1, 2017	Depreciation	Transfer (*)	Others	September 30, 2017
Land	₩415,342	₩ —	₩(29,647)	₩ —	₩385,695
Buildings	139,891	(7,237)	(904)	(1,606)	130,144
	₩555,233	₩(7,237)	₩(30,551)	₩(1,606)	₩515,839

(*) The amount represents the change in the carrying amount of investment properties held by the Company due to the change in the ratio of lease occupancy.

23.3 Rental income and operating expenses arising from the Company's investment properties for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
Classification	2018	2017	2018	2017
Rental income	₩4,093	₩2,876	₩12,620	₩8,678
Operating cost directly related to investment property that generate rental income	151	143	459	465

24. Intangible assets

24.1 Intangible assets as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)			
Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ —	₩ —	₩ 892
Industrial proprietary rights	1,451	(763)	—	688
Core deposits	4,980	(1,545)	—	3,435
Software	177,520	(129,282)	—	48,238
Systems development costs	741,083	(642,467)	—	98,616
Memberships	21,763	—	(3,196)	18,567
Others	183,046	(95,953)	(29)	87,064
	₩1,130,735	₩(870,010)	₩(3,225)	₩257,500

24. Intangible assets (cont'd)

24.1 Intangible assets as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2017 Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ —	₩ —	₩ 892
Industrial proprietary rights	1,260	(593)	—	667
Core deposits	4,980	(1,545)	—	3,435
Software	168,382	(116,596)	—	51,786
Systems development costs	733,581	(612,399)	—	121,182
Memberships	20,642	—	(1,725)	18,917
Others	135,669	(89,842)	(29)	45,798
	₩1,065,406	₩(820,975)	₩(1,754)	₩242,677

24.2 Changes in the carrying amount of intangible assets for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited) January 1, 2018	Acquisition	Disposal	Amortization	Others	September 30, 2018
Goodwill	₩ 892	₩ —	₩ —	₩ —	₩ —	₩ 892
Industrial proprietary rights	667	190	—	(169)	—	688
Core deposits	3,435	—	—	—	—	3,435
Software	51,786	9,296	(177)	(12,638)	(29)	48,238
Systems development costs	121,182	8,017	(178)	(30,344)	(61)	98,616
Memberships	18,917	—	(304)	—	(46)	18,567
Others	45,798	54,385	—	(12,093)	(1,026)	87,064
	₩242,677	₩71,888	₩(659)	₩(55,244)	₩(1,162)	₩257,500

Classification	For the nine-month period ended September 30, 2017 (unaudited) January 1, 2017	Acquisition	Disposal	Amortization	Others	September 30, 2017
Goodwill	₩ 892	₩ —	₩ —	₩ —	₩ —	₩ 892
Industrial proprietary rights	616	224	—	(140)	—	700
Core deposits	3,753	—	—	—	—	3,753
Software	45,646	10,230	—	(11,463)	319	44,732
Systems development costs	122,130	20,179	(566)	(30,710)	(97)	110,936
Memberships	22,868	359	(2,280)	—	(299)	20,648
Others	38,745	25,392	(16)	(11,001)	(3,770)	49,350
	₩234,650	₩56,384	₩(2,862)	₩(53,314)	₩(3,847)	₩231,011

25. Non-current assets held for sale

Details of non-current assets held-for-sale as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Acquisition cost (*)	₩462,409	₩457,699
Accumulated impairment loss	—	—
Book value	₩462,409	₩457,699
Net fair value	₩683,056	₩679,468

(*) Acquisition cost is presented as net of accumulated depreciation before classification as non-current assets held-for-sale.

Non-current assets held-for-sale are composed of 21 collaterals acquired for the purpose of repayment of loans and one office building located in Myeong dong, which the Bank uses as its head office. These are classified as a non-current assets held-for-sale based on the management's decision to sell them, and the sale is in progress.

26. Other assets and merchant banking account assets

26.1 Details of other assets as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Guarantee deposits paid	₩ 854,146	₩ 942,744
Accounts receivable	12,305,024	6,264,124
Accrued income	977,542	875,835
Prepaid expenses	148,502	100,268
Suspense payments	41,051	22,945
Expenditures	1,730	846
Deposit money to court	9,420	8,196
Domestic exchange settlement debit	2,556,165	1,500,004
Other miscellaneous assets	51,936	29,697
Allowance for possible loan losses for other assets	(10,230)	(10,713)
	₩16,935,286	₩9,733,946

26.2 Changes in the allowance for possible losses for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Beginning balance	₩10,883	₩14,193
Write-offs	(1,390)	(3,258)
Provision of allowance of possible losses	851	1,417
Disposal of non-performing loans	(104)	—
Interest income on impaired assets	(7)	(737)
Collection of loans written-off in prior period	642	446
Exchange rate fluctuation and others	(645)	(36)
Ending balance	₩10,230	₩12,025

26. Other assets and merchant banking account assets (cont'd)

26.3 Details of merchant banking account assets as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)
On-balance-sheet items:	
Merchant banking account-loans measured at FVTPL (KIFRS 1109)	₩ 3,995
Merchant banking account-debt securities measured at FVTPL (KIFRS 1109)	2,008,505
CMA assets:	
Loans measured at FVTPL (KIFRS 1109)	—
Debt securities measured at FVTPL (KIFRS 1109)	914,804
	914,804
Allowance for possible loan losses	—
	₩2,927,304
Off-balance-sheet items:	
Commitment	₩1,201,000

Classification	December 31, 2017
On-balance-sheet items:	
Merchant banking account loans	₩ 4,000
Merchant banking account trading bonds	2,602,903
CMA assets:	
Loans	—
Trading bonds	359,121
	359,121
Allowance for possible loan losses	(5)
	₩2,966,019
Off-balance-sheet items:	
Commitment	₩1,021,000

27. Deposits

Deposit liabilities as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Demand deposits		
Demand deposits in Korean won	₩ 9,234,475	₩ 9,163,654
Demand deposits in foreign currency	19,888,973	22,402,354
	29,123,448	31,566,008
Time and savings deposits		
Time and savings deposits in Korean won	192,761,001	182,682,083
Time and savings deposits in foreign currency	14,932,000	12,778,517
	207,693,001	195,460,600
Certificate of deposits	2,793,842	3,383,886
	₩239,610,291	₩230,410,494

28. Financial liabilities at FVTPL (KIFRS 1039)

28.1 Details of financial liabilities held-for-trading as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017
Derivative liabilities held-for-trading	₩6,413,932

28.2 In order to eliminate or significantly reduce the inconsistencies between the recognized and measured amounts, the financial liabilities designated at FVTPL has been categorized accordingly. Details of financial liabilities at FVTPL as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017
Deposits	₩425,627

Differences between the book value and maturity amount of the financial liabilities designated at FVTPL as of December 31, 2017 are as follows (Korean won in millions):

Classification	December 31, 2017
Book value	425,627
Maturity amount	450,000
Difference	₩ (24,373)

29. Financial liabilities at fair value through profit or loss (KIFRS 1109)

29.1 As of September 30, 2018, details of financial liabilities measured at FVTPL are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)
Derivative liabilities held-for-trading	₩3,267,274

29.2 As of September 30, 2018, details of financial liabilities designated as measured at FVTPL are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)
Deposits	₩430,139

Financial liabilities are measured at FVTPL in order to eliminate or significantly reduce a measurement or recognition inconsistency.

29.3 Difference between the book value and maturity amount of the financial liabilities designated as measured at fair value through profit or loss as of September 30, 2018 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)
Book value	430,139
Maturity amount	450,000
Difference	₩ (19,861)

30. Borrowings

Borrowings as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	Lender	Annual interest rate (%)	September 30, 2018 (unaudited)	December 31, 2017
Borrowings in Korean won				
BOK borrowings	BOK	0.50~0.75	₩ 1,430,402	₩ 1,606,722
Government borrowings	Korea Finance Corporation (KoFC), etc.	0.50~2.50	1,449,859	1,456,174
Other borrowings	Korea Energy Management Corporation, etc.	0.00~3.70	2,353,224	1,865,685
			5,233,485	4,928,581
Borrowings denominated in foreign currencies				
Bank overdrafts	Foreign banks, etc.	1.10~7.25	1,094,581	586,941
Other borrowings	JP Morgan bank, etc.	-0.15~12.00	7,789,203	5,771,681
			8,883,784	6,358,622
Call money				
Call money in Korean won	MUFG Bank.	—	—	174,000
Call money in foreign currencies	The Export-Import Bank of Korea, etc.	0.01~6.95	1,482,373	2,006,567
			1,482,373	2,180,567
Bonds sold under repurchase agreements				
Bonds sold under repurchase agreements in Korean won	SUGAYAYOSHIKO, etc	—	220	220
Bonds sold under repurchase agreements in foreign currencies	ING Bank	2.85~3.05	169,726	251,770
			169,946	251,990
Others				
Bills sold	General customers	0.00~2.15	52,890	54,742
			₩15,822,478	₩13,774,502

31. Debentures

Debentures as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	Lenders	Annual interest rate (%)	September 30, 2018 (unaudited)	December 31, 2017
Debentures in Korean won				
Debentures	Institutions	1.33~3.15	₩15,080,000	₩13,730,000
Subordinated debentures	Institutions and general customers	2.45~8.00	4,780,510	4,480,697
Net gain (loss) on fair value hedges (current period)			(1,248)	—
Less present value discount			(26,364)	(35,941)
			19,832,898	18,174,756
Debentures in foreign currencies				
Debentures	Institutions	1.75~4.75	4,533,975	3,281,291
Subordinated debentures	Institutions	4.25~9.95	984,947	884,215
Net gain (loss) on fair value hedges (current period)			(61,479)	624
Net gain (loss) on fair value hedges (previous periods)			(13,997)	(15,331)
Less present value discount			(12,832)	(13,818)
			5,430,614	4,136,981
			₩25,263,512	₩22,311,737

32. Net defined benefit liability (Assets)

32.1 Details of net defined benefit liability (Assets)

Details of net defined benefit liability as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Present value of defined benefit obligation deposited to plan assets	₩ 1,407,801	₩ 1,358,685
Fair value of plan assets	(1,404,565)	(1,398,060)
Net defined benefit liability	5,465	5,170
Net defined benefit asset	(2,229)	(44,545)

32.2 Defined benefit obligations

32.2.1 Changes in present value of defined benefit obligation

Changes in present value of defined benefit obligation for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Beginning balance	₩1,358,685	₩1,305,234
Current service cost	87,967	98,009
Interest cost	27,070	23,459
Benefits paid	(64,895)	(30,827)
Changes due to transference between affiliates	(273)	2,544
Others	(753)	115
Ending Balance	₩1,407,801	₩1,398,534

32. Net defined benefit liability (Assets) (cont'd)

32.2 Defined benefit obligations (cont'd)

32.2.2 Total costs recognized in accordance to defined benefit plans

Total costs incurred in relation to defined benefit pension plans for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Current service cost	₩25,891	₩32,675	₩ 87,967	₩ 98,009
Interest cost	8,906	7,820	27,070	23,459
Interest income on plan assets	(9,664)	(7,045)	(26,559)	(21,398)
	₩25,133	₩33,450	₩ 88,478	₩100,070

32.3 Plan assets

Changes in the fair value of plan assets for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Beginning balance	₩1,398,060	₩1,261,246
Employer contributions	50,021	75,101
Interest income on plan assets	26,559	21,398
Remeasurements of the net defined benefit liability	(8,924)	(5,554)
Benefit provided	(60,824)	(28,132)
Changes due to transference between affiliates	(273)	2,405
Others	(54)	4
Ending Balance	₩1,404,565	₩1,326,468

33. Contingent liabilities, agreements, and provisions

33.1 Details of provisions as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Allowance for possible losses on acceptances and guarantees:		
Financial acceptances and guarantees (*)	₩ 401	₩ 765
Non-financial acceptances and guarantees	69,345	84,294
Bills endorsed	58	165
	69,804	85,224
Allowances for unused commitments	52,124	58,995
Other allowance:		
Allowances for asset retirement obligation	54,798	55,071
Allowance for lawsuits	6,294	69,110
Others	19,820	18,559
	80,912	142,740
	₩202,840	₩286,959

33. Contingent liabilities, agreements, and provisions (cont'd)

33.1 Details of provisions as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

(*) The Company recognizes the amount exceeding the unamortized amount of the initial fair value at subsequent measurement of the financial guarantee contract as provisions for guarantees. The Company recognizes the unamortized amount as financial guarantee contract liabilities in the amount of ₩19,027 million and ₩13,867 million as of September 30, 2018 and December 31, 2017, respectively.

33.2 Changes in unused commitments for the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)			
	Unused commitments			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Total
January 1, 2018	₩29,398	₩19,485	₩15,703	₩ 64,586
Transfer to 12-month expected credit loss	1,261	(1,248)	(13)	—
Transfer to non credit-impaired loan	(915)	5,276	(4,361)	—
Transfer to credit-impaired loan	(6)	(10)	16	—
Provision (reversal)	(5,171)	(6,627)	(656)	(12,454)
Exchange rate fluctuation	(25)	17	—	(8)
September 30, 2018	₩24,542	₩16,893	₩10,689	₩ 52,124

33.3 Changes in financial acceptances and guarantees for the nine-month period ended September 30, 2018 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)			
	Financial acceptances and guarantees			
		Lifetime expected credit losses		
Classification	12 month expected credit loss	Non credit-impaired loan	Credit-impaired loan	Total
January 1, 2018	₩ 408	₩ 69	₩—	₩ 477
Transfer to 12-month expected credit loss	6	(6)	—	—
Transfer to non credit-impaired loan	(7)	7	—	—
Transfer to credit-impaired loan	—	—	—	—
Provision (reversal)	(132)	31	—	(101)
Exchange rate fluctuation	22	3	—	25
September 30, 2018	₩ 297	₩104	₩—	₩ 401

33. Contingent liabilities, agreements, and provisions (cont'd)

33.4 Changes in other provisions for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)				
Classification	January 1, 2018	Provision (reversal)	Use	Other	September 30, 2018
Non-financial acceptances and guarantees	₩ 79,595	₩(12,268)	₩ —	₩2,076	₩ 69,403
Other allowance:					
Allowances for asset retirement obligation	55,071	667	(940)	—	54,798
Allowance for lawsuits	69,110	(62,827)	—	11	6,294
Others	18,559	1,169	(1,071)	1,163	19,820
	142,740	(60,991)	(2,011)	1,174	80,912
	₩222,335	₩(73,259)	₩(2,011)	₩3,250	₩150,315

	For the nine-month period ended September 30, 2017 (unaudited)				
Classification	January 1, 2017	Provision (reversal)	Use	Other	September 30, 2017
Allowance for possible losses on acceptances and guarantees	₩ 82,922	₩ (2,160)	₩ —	₩(2,695)	₩ 78,067
Allowances for unused commitments	70,429	(13,469)	—	(169)	56,791
Other allowance:					
Allowances for asset retirement obligation	52,619	677	(3,770)	(256)	49,270
Allowance for lawsuits	95,446	(6,476)	(2,712)	(52)	86,206
Others	8,233	6,844	(3,478)	(292)	11,307
	156,298	1,045	(9,960)	(600)	146,783
	₩309,649	₩(14,584)	₩(9,960)	₩(3,464)	₩281,641

33.5 Details of guarantees as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Financial guarantees in Korean won:		
Collateral for loans	₩ 93,023	₩ 99,940
Purchasing loans	411,712	488,563
	504,735	588,503
Financial guarantees in foreign currencies:		
Local financial acceptances and guarantees	75,922	96,441
Confirmed acceptance and guarantees in Korean won	1,607,713	1,634,495
Confirmed acceptance and guarantees in foreign currencies:		
Acceptance on letter of credit	482,329	835,516
Acceptance on letter of guarantees	114,239	119,910
Others	10,453,546	9,928,841
	11,050,114	10,884,267
Contingent acceptance and guarantees:		
Letters of credit	3,481,837	3,281,199
Others	650,699	382,479
	4,132,536	3,663,678
Bills endorsed	26,636	47,169
	₩17,397,656	₩16,914,553

33. Contingent liabilities, agreements, and provisions (cont'd)

33.6 Commitments

Details of unused commitments as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Commitments on loans in Korean won	₩55,811,831	₩41,949,132
Commitments on loans in foreign currencies	19,898,977	19,242,684
Commitments on credit lines on asset-backed securities	936,711	1,395,428
Commitments on purchase of securities	1,795,516	1,331,547
	₩78,443,035	₩63,918,791

33.7 Lawsuits

As of September 30, 2018, the Company is involved in 351 lawsuits as a plaintiff and 151 lawsuits as a defendant. The aggregate amounts of claims as plaintiff and defendant are ₩411,578 million and ₩177,337 million, respectively. The Company's major lawsuits in progress as a defendant are summarized as follows (Korean won in millions):

Plaintiff	Amount	Status of lawsuit		Content
		First trial	On appeal	
F******** Bankruptcy administrator	₩37,379	In-progress	—	Return of an illicit gain
**** Securities Co., Ltd.,	37,136	In-progress	—	Compensation for damages
**** Investments Co., Ltd.	16,798	In-progress	—	Compensation for damages

34. Other liabilities and merchant banking account liabilities

34.1 Details of other liabilities as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Borrowing from trust accounts	₩ 5,893,221	₩ 4,690,383
Foreign exchanges settlement credits	774,455	303,576
Domestic exchange settlement credits	1,435,475	4,307,177
Accounts payables	12,576,165	6,791,099
Accrued expenses payables	1,933,859	1,417,404
Income in advance	79,357	57,095
Deferred income	403	627
Deposits for letter of guarantees and others	272,458	1,037,823
Suspense receipt	291,434	320,643
Withholding taxes	54,861	103,250
Security deposits received	554,855	123,108
Accounts for agency businesses	598,514	158,583
Liability incurred by agency relationship	1,904,655	1,918,483
Financial acceptance and guarantees	19,027	13,867
Other liabilities	15,181	19,957
	₩26,403,920	₩21,263,075

34. Other liabilities and merchant banking account liabilities (cont'd)

34.2 Details of merchant banking account liabilities as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Merchant banking account deposits	₩2,853,544	₩2,017,718
Others		
Provision for unused commitments	—	99
Other liabilities (*)	639	529
	639	628
	₩2,854,183	₩2,018,346

(*) Including accrued expenses, unearned income and others.

35. Capital stock and other paid-in capital

35.1 Issued capital as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Number of shares authorized	2,000,000,000	2,000,000,000
Par value per share (Korean won)	₩ 5,000	₩ 5,000
Number of shares issued	1,071,915,717	1,071,915,717
Common stock	₩ 5,359,578	₩ 5,359,578

35.2 Other paid-in capital as of September 30, 2018 and December 31, 2017 are as follows (Korea won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Capital surplus (*1)	₩9,670,357	₩9,668,863
Hybrid securities (*2)	179,737	179,737
Capital adjustments		
Stock option	(11,385)	(10,367)
Others	(32,257)	(32,257)
	(43,642)	(42,624)
	₩9,806,452	₩9,805,976

(*1) The amount recognized as other capital surplus as of September 30, 2018 consists of the amount recognized for business combinations under common control and stock options that are not exercised and recognized as capital adjustments.

(*2) There is expiry date of hybrid securities but the Company has the right to continuously extend the maturity and accordingly, the requirements for capital are fulfilled.

36. Accumulated other comprehensive income

Changes in accumulated other comprehensive income for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)					
Classification	January 1, 2018	Increase and decrease	Transfer of retained earnings	Reclassification (*)	Tax effects	September 30, 2018
Gain (loss) on valuation of Financial assets measured at FVOCI	₩ (474,274)	₩382,662	₩24,592	₩(844)	₩(113,786)	₩(181,650)
Exchange differences on translation of foreign operations	(81,977)	14,890	—	—	(4,095)	(71,182)
Changes in equities of investments in associates	12,712	(16,489)	—	—	4,534	757
Gain (loss) on valuation of net investment hedges of foreign operations	(341,805)	(27,241)	—	—	(3,154)	(372,200)
Gain on valuation of fair value hedges	—	(8,260)	—	—	2,272	(5,988)
Remeasurement of the net defined benefit plan	(237,291)	(8,924)	—	—	2,454	(243,761)
	₩(1,122,635)	₩336,638	₩24,592	₩(844)	₩(111,775)	₩(874,024)

(*) Gain (loss) on valuation of financial assets measured at FVOCI recognized as accumulated other comprehensive income is reclassified due to disposal of financial assets measured at FVOCI

	For the nine-month period ended September 30, 2017 (unaudited)				
Classification	January 1, 2017	Increase and decrease	Reclassification (*)	Tax effects	September 30, 2017
Gain (loss) on valuation of available-for-sale financial assets	₩ 81,004	₩231,501	₩(61,580)	₩(41,121)	₩ 209,804
Exchange differences on translation of foreign operations	(147,442)	(56,034)	—	13,561	(189,915)
Changes in equities of investments in associates	(30,709)	(6,875)	—	1,664	(35,920)
Gain (loss) on valuation of net investment hedges of foreign operations	(29,715)	12,424	—	(3,007)	(20,298)
Remeasurement of the net defined benefit plan	(268,461)	(5,554)	—	1,343	(272,672)
	₩(395,323)	₩175,462	₩(61,580)	₩(27,560)	₩(309,001)

(*) Gain (loss) on valuation of available-for-sale financial assets recognized as accumulated other comprehensive income is reclassified due to disposal or recognition of impairment of available-for-sale financial assets.

37. Retained earnings

37.1 Details of retained earnings as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Legal reserve		
Earned surplus reserve (*1)	₩1,223,000	₩1,027,500
Voluntary reserve		
Revaluation reserves on tangible assets (*2)	411,081	414,616
Other reserves (*3)	176,543	152,502
Regulatory reserve for bad debts (*4)	1,843,898	1,915,033
Other voluntary reserves	3,586,982	2,819,822
	6,018,504	5,301,973
Unappropriated retained earnings	2,555,911	2,406,286
	₩9,797,415	₩8,735,759

(*1) The *Banking Law* of the Republic of Korea requires the Company to appropriate at least 10% of net income after income tax to legal reserve, until such reserve equals 100% of its paid-in capital. This reserve is restricted to the payment of cash dividends; however, it can be used to reduce deficit or be transferred to capital.
(*2) The Company records gains from revaluation of property and equipment previously recognized as other comprehensive income to the voluntary reserve, as it applies the revaluation amount as deemed cost at the first-time adoption of KIFRS. The reserve is recognized in distributable retained earnings when the relevant property and equipment are disposed.
(*3) Relevant Japanese regulations require the Company's overseas branches located in Japan to appropriate a minimum of 10% of net income for the period as a legal reserve, until such reserve equals ¥2,000 million. This reserve is restricted to be used upon liquidation of the Japanese branches. Singapore, Hong Kong and Hanoi branches' statutory reserves are included in other reserves in accordance with the relevant regulations.
(*4) The Company has provided allowances for possible loan losses in accordance with KIFRS. The difference in this amount and the provision of allowance accumulated in accordance with the minimum accumulation ratio required by FSS has been accounted for as regulatory reserve for bad debts.

37.2 Changes in appropriated retained earnings for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Beginning balance	₩8,735,759	₩7,242,262
Effect of changes in accounting standards	301,831	—
Net income for the nine-month periods	1,757,614	1,513,250
Dividends	(972,600)	(600,200)
Dividends on hybrid securities	(7,360)	(7,360)
Reclassification of valuation gain or loss on equity securities measured at FVOCI upon derecognition	(17,829)	—
Ending balance	₩9,797,415	₩8,147,952

38. Regulatory reserve for bad debts

Regulatory reserve for bad debt is calculated and disclosed in accordance with Article 29, Section 1 and 2 of supervision of Banking Business of the Republic of Korea.

38.1 Details of regulatory reserve for bad debts as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Beginning balance	₩1,934,322	₩1,915,033
Planned provision for bad debts	206,817	19,289
Ending balance	₩2,141,139	₩1,934,322

38.2 Provisions for bad debt reserve and income adjusted for deductions of provisions for bad debt for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Net income attributable to equity holders of the parent before deducting provisions for bad debt	₩1,757,614	₩1,513,250
Reversal of bad debt reserve	(197,895)	(13,458)
Adjusted income after deducting provisions for bad debt	1,559,719	1,499,792
Basic earnings per share adjusted after reflecting reserve for bad debt (*1) (Korean won)	₩ 1,455	₩ 1,392
Diluted earnings per share adjusted after reflecting reserve for bad debt (*2) (Korean won)	₩ 1,455	₩ 1,392

(*1) The dividend on hybrid equity securities in the amount of ₩7,360 million and ₩7,360 million for the nine-month periods ended September 30, 2018 and 2017 were deducted from the adjusted income after reflecting the bad debt reserve for the calculation of earnings per share after reflecting reserve for bad debt for each period.

(*2) Because it does not have dilutive potential ordinary stock, basic earnings per share is the same as diluted earnings per share.

39. Operating income and operating expenses

39.1 Operating income for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Interest income	₩2,412,792	₩2,055,240	₩ 6,889,423	₩ 5,969,953
Fees and commission Income	205,444	217,391	626,700	634,076
Gains on financial instruments at FVTPL (KIFRS 1039)	—	2,401,144	—	12,075,208
Gains on financial instruments measured at FVTPL (KIFRS 1109)	1,076,274	—	9,403,839	—
Gains on fair value hedging derivative instruments	26,391	11,625	125,450	71,275
Gains on financial instruments available for-sale	—	63,452	—	181,288
Gains on financial instruments measured at FVOCI	1,999	—	8,843	—
Changes in credit risk loss for financial instruments	(213)	—	1,402	—
Other operating income	1,001,120	1,059,823	3,200,643	3,644,374
	₩4,723,807	₩5,808,675	₩20,256,300	₩22,576,174

39.2 Operating expenses for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Interest expenses	₩1,070,131	₩ 824,539	₩ 2,964,261	₩ 2,431,686
Fees and commission expenses	44,893	51,401	133,583	148,265
Losses on financial instruments at FVTPL (KIFRS 1039)	—	2,419,770	—	12,243,876
Losses on financial instruments measured at FVTPL (KIFRS 1109)	1,024,781	—	9,267,090	—
Losses on fair value hedging derivative instruments	35,953	5,691	134,566	53,414
Losses on financial instruments available-for-sale	—	3,934	—	8,222
Losses on financial instruments measured at FVOCI	1,736	—	3,126	—
Impairment loss of financial Instruments	—	58,031	—	509,627
Changes in credit risk loss for financial instruments	(4,644)	—	35,597	—
General and administrative expenses	805,617	759,826	2,154,274	2,100,197
Other operating expenses	973,677	1,030,123	3,171,913	3,216,077
	₩3,952,144	₩5,153,315	₩17,864,410	₩20,711,364

40. Net interest income

40.1 Interest income for the three-month and nine-month periods ended September 30, 2018 and 2017 is as follows (Korean won in millions):

Classification	2018 For the three-month period ended September 30 (unaudited)	2018 For the nine-month period ended September 30 (unaudited)
Interest income on due from banks	37,555	105,251
Interest income on financial assets at FVTPL (KIFRS 1109)	15,596	44,934
Interest income on financial assets measured at FVOCI	175,781	532,366
Interest income on securities measured at amortized cost	69,812	179,906
Interest income on loans	2,114,048	6,026,966
	₩2,412,792	₩6,889,423

Classification	2017 For the three-month period ended September 30 (unaudited)	2017 For the nine-month period ended September 30 (unaudited)
Interest income on due from banks	₩ 33,244	₩ 107,909
Interest income on financial assets at FVTPL (KIFRS 1039)	11,429	33,468
Interest income on available-for-sale financial assets	168,825	471,194
Interest income on held-to-maturity financial assets	40,294	111,799
Interest income on loans	1,801,448	5,245,583
	₩2,055,240	₩5,969,953

40.2 Interest expenses for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
Classification	2018	2017	2018	2017
Interest expense on deposit liabilities	₩ 799,529	₩614,995	₩2,231,290	₩1,808,805
Interest expense on borrowings	73,241	52,708	189,933	153,290
Interest expense on financial liabilities at FVTPL (KIFRS 1039)	—	2,982	—	8,740
Interest expenses on financial liabilities measured at FVTPL (KIFRS 1109)	2,895	—	8,590	—
Interest expense of debentures	166,039	129,668	451,770	387,089
Others	28,427	24,186	82,678	73,762
	₩1,070,131	₩824,539	₩2,964,261	₩2,431,686

41. Net fees and commission income

41.1 Fees and commission income for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
Classification	2018	2017	2018	2017
Commissions received from loans and others	₩131,036	₩141,931	₩405,659	₩413,761
Commissions received on guarantee	17,868	18,127	53,273	52,762
Commissions related to foreign exchange	56,540	57,333	167,768	167,553
	₩205,444	₩217,391	₩626,700	₩634,076

41.2 Fees and commission expenses for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
Classification	2018	2017	2018	2017
Commissions paid	₩33,867	₩40,586	₩102,549	₩117,415
Commissions related to foreign exchange	11,026	10,815	31,034	30,850
	₩44,893	₩51,401	₩133,583	₩148,265

42. Net gain (loss) from financial instruments at FVTPL (KIFRS 1039)

42.1 Details of gain (loss) on financial assets and liabilities at FVTPL for the three-month and nine-month periods ended September 30, 2017 are as follows (Korean won in millions):

Classification	2017 For the three-month period ended September 30 (unaudited)	2017 For the nine-month period ended September 30 (unaudited)
Gains from financial instruments at FVTPL	₩	₩
Gains from financial assets and liabilities held-for-trading		
Gain on valuation	(3,618)	4,897
Gain on disposal	8,682	22,759
	5,064	27,656
Derivatives instruments held-for-trading		
Gain on valuation of derivatives		
Currency related derivatives	(251,115)	3,524,857
Interest related derivatives	48,143	195,477
Stock related derivatives	1	130
Others	(1,761)	8,007
	(204,732)	3,728,471
Gain on transaction of derivatives		
Currency related derivatives	2,309,570	7,668,021
Interest related derivatives	282,740	637,446
Stock related derivatives	1,539	4,409
Others	252	277
	2,594,101	8,310,153
Gain on securities sold		
Gain on disposal	474	730
	₩2,394,907	₩12,067,010
Loss from financial instruments at FVTPL		
Financial instruments held-for-trading		
Loss on valuation	₩ 4,692	₩ 5,926
Loss on disposal	5,693	13,661
	10,385	19,587
Derivatives instruments held-for-trading		
Loss on valuation of derivatives		
Currency related derivatives	(296,278)	3,373,379
Interest related derivatives	50,981	228,088
Stock related derivatives	(7)	17
Others	622	885
	(244,682)	3,602,369
Loss on transaction of derivatives		
Currency related derivatives	2,373,192	7,994,511
Interest related derivatives	278,754	620,730
Stock related derivatives	1,144	4,185
Others	481	541
	2,653,571	8,619,967
Loss on securities sold		
Loss on disposal	388	1,755
	2,419,662	12,243,678
	₩ (24,755)	₩ (176,668)

42. Net gain (loss) from financial instruments at FVTPL (KIFRS 1039) (cont'd)

42.2 Details of gain (loss) on financial assets and liabilities designated at FVTPL for the three-month and nine-month periods ended September 30, 2017 are as follows (Korean won in millions):

Classification	2017 For the three-month period ended September 30 (unaudited)	2017 For the nine-month period ended September 30 (unaudited)
Gain on financial assets and liabilities designated at FVTPL		
Deposits		
Gain on valuation	₩6,237	₩8,198
	₩6,237	₩8,198
Loss on financial assets and liabilities designated at FVTPL		
Deposits		
Loss on valuation	25	115
Loss on disposal	83	83
	₩ 108	₩ 198
	₩6,129	₩8,000

43. Net gain (loss) from financial instruments at FVTPL (KIFRS 1109)

43.1 Details of gain (loss) on financial assets and liabilities measured at FVTPL for the three-month and nine-month periods ended September 30, 2018 are as follows (Korean won in millions):

Classification	2018 For the three-month period ended September 30 (unaudited)	2018 For the nine-month period ended September 30 (unaudited)
Gains from financial instruments at FVTPL		
financial assets and liabilities measured at FVTPL		
Gain on valuation	₩ 12,678	₩ 71,329
Gain on disposal	14,160	44,947
	26,838	116,276
Derivatives instruments held-for-trading		
Gain on valuation of derivatives		
Currency related derivatives	₩(1,948,105)	₩3,249,841
Interest related derivatives	36,294	189,634
Stock related derivatives	2	43
Others	1,700	2,895
	(1,910,109)	3,442,413
Gain on transaction of derivatives		
Currency related derivatives	2,642,572	4,965,937
Interest related derivatives	315,812	874,944
Stock related derivatives	1,254	4,092
	2,959,638	5,844,973
Gain on securities sold	—	30
	₩ 1,076,367	₩9,403,692
Loss from financial instruments measured at FVTPL		
Financial instruments measured at FVTPL		
Loss on valuation	₩ 1,542	₩ 35,579
Loss on disposal	17,654	81,734
Others	55	652
	19,251	117,965

43. Net gain (loss) from financial instruments at FVTPL (KIFRS 1109) (cont'd)

43.1 Details of gain (loss) on financial assets and liabilities measured at FVTPL for the three-month and nine-month periods ended September 30, 2018 are as follows (Korean won in millions): (cont'd)

Classification	2018 For the three-month period ended September 30 (unaudited)	2018 For the nine-month period ended September 30 (unaudited)
Derivatives instruments held-for-trading		
Loss on valuation of derivatives		
Currency related derivatives	(2,042,085)	3,188,670
Interest related derivatives	23,994	131,774
Stock related derivatives	(2)	—
	(2,018,093)	3,320,444
Loss on transaction of derivatives		
Currency related derivatives	2,695,113	4,926,868
Interest related derivatives	322,710	892,614
Stock related derivatives	1,271	4,382
	3,019,094	5,823,864
Loss on securities sold	95	168
	1,020,347	9,262,441
	₩ 56,020	₩ 141,251

43.2 Details of gain (loss) on financial assets and liabilities designated as measured at FVTPL for the three-month and nine-month periods ended September 30, 2018 are as follows (Korean won in millions):

Classification	2018 For the three-month period ended September 30 (unaudited)	2018 For the nine-month period ended September 30 (unaudited)
Gain on financial assets and liabilities designated as measured at FVTPL		
Deposits		
Gain on valuation	₩ (93)	₩ 147
	₩ (93)	₩ 147
Loss on financial assets and liabilities designated at FVTPL		
Deposits	₩ 4,434	₩ 4,649
Loss on valuation	4,434	4,649
	₩(4,527)	₩(4,502)

44. Gain (loss) from derivative financial instruments used for hedging

Gain (loss) from derivative instruments used for hedging for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods Ended September 30 (unaudited) 2018	2017	For the nine-month periods ended September 30 (unaudited) 2018	2017
Gain from derivative instruments used for hedging				
Hedged item				
Gain on valuation				
Gain on valuation of debentures	₩14,029	₩ 552	₩ 65,456	₩ 1,939
Gain on valuation of deposits	6,504	4,948	47,436	15,488
	20,533	5,500	112,892	17,427
Gain on transaction				
Gain on transaction of debentures	—	—	464	908
Gain on transaction of deposits	—	272	—	2,658
	—	272	464	3,566
Derivative instruments used for hedging				
Gain on valuation of derivatives				
Gain on valuation of currency related derivatives	2,080	6,445	2,086	25,720
Gain on valuation of interest related derivatives	2,250	(1,085)	3,741	22,243
	4,330	5,360	5,827	47,963
Gain on transaction of derivatives:				
Gain on transaction of currency related derivatives	1,527	493	5,570	493
Gain on transaction of interest related derivatives	1	—	697	1,826
	1,528	493	6,267	2,319
	₩26,391	₩11,625	₩125,450	₩71,275
Loss from derivative instruments used for hedging				
Hedged item				
Loss on valuation				
Loss on valuation of debentures	₩ 2,414	₩ (993)	₩ 2,729	₩23,475
Loss on valuation of deposits	2,251	778	3,742	7,107
	4,665	(215)	6,471	30,582
Loss on transaction				
Loss on transaction of debentures	453	—	1,174	1,833
Derivative instruments used for hedging				
Loss on valuation of derivatives				
Loss on valuation of currency related derivatives	5,572	—	10,072	—
Loss on valuation of interest related derivatives	15,718	5,633	107,303	17,447
	21,290	5,633	117,375	17,447
Loss on transaction of derivatives				
Loss on transaction of currency related derivatives	9,545	—	9,546	—
Loss on transaction of interest related derivatives	—	273	—	3,552
	9,545	273	9,546	3,552
	35,953	5,691	134,566	53,414
	₩ (9,562)	₩ 5,934	₩ (9,116)	₩17,861

45. Gain (loss) on available-for-sale financial assets and liabilities

Net income on other financial instruments for the three-month and nine-month periods ended September 30, 2017 are as follows (Korean won in millions):

Classification	2017 For the three-month period ended September 30 (unaudited)	2017 For the nine-month period ended September 30 (unaudited)
Gain on disposal of available-for-sale financial assets	₩63,452	₩181,288
Loss on disposal of available-for-sale financial assets	3,934	8,222
	₩59,518	₩173,066

46. Gain (loss) from financial instruments measured at FVOCI

Details of gain (loss) on financial assets and liabilities designated as measured at FVOCI for the three-month and nine-month periods ended September 30, 2018 are as follows (Korean won in millions):

Classification	2018 For the three-month period ended September 30 (unaudited)	2018 For the nine-month period ended September 30 (unaudited)
Gain on disposal of financial instruments measured at FVOCI	₩1,999	₩8,843
Loss on disposal of financial instruments measured at FVOCI	1,736	3,126
	₩ 263	₩5,717

47. Impairment loss on financial assets

Impairment loss on financial assets for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited) 2018	2017	For the nine-month periods ended September 30 (unaudited) 2018	2017
Impairment loss of available-for-sale financial assets	₩ —	₩ 7,208	₩ —	₩ 79,513
Reversal of credit loss of debt securities measured at FVOCI	(240)	—	(1,402)	—
Provision for possible loan loss for debt securities measured at amortized cost	638	—	1,836	—
Provision for (Reversal of) possible loan losses	(6,133)	50,487	32,910	428,697
Provision for possible other asset losses	1,304	336	851	1,417
	₩(4,431)	₩58,031	₩34,195	₩509,627

48. General and administrative expenses

General and administrative expenses for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Salaries	₩381,739	₩397,966	₩1,101,696	₩1,104,540
Retirement benefits – Defined benefits plans	25,133	33,450	88,478	100,070
Retirement benefits – Defined contribution plans	44	38	133	135
Termination benefits	102,541	15,505	107,124	33,725
Employee welfare benefits	23,210	25,337	58,633	60,401
Depreciation on property and equipment	32,045	33,707	92,272	94,692
Amortization	18,155	17,677	55,244	53,314
Rental expense	57,424	70,362	175,383	215,747
Entertainment expenses	4,339	4,545	12,546	13,198
Taxes and dues	21,864	21,713	85,133	82,138
Advertising expense	28,392	17,811	69,761	44,915
Others	110,731	121,715	307,871	297,322
	₩805,617	₩759,826	₩2,154,274	₩2,100,197

49. Other operating income

Other operating income for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Gain on disposal of loans	₩ 3,034	₩ 9,233	₩ 29,973	₩ 52,068
Reversal of acceptance and guarantees	5,249	2,160	12,369	2,160
Reversal of allowances for unused commitments	2,280	5,802	12,454	13,469
Reversal of other provisions	2,234	—	60,991	—
Trust commissions	44,353	44,374	149,944	120,517
Gain on foreign exchange transaction	919,786	972,540	2,850,648	3,356,548
Gain on merchant banking accounts (*)	15,251	13,145	45,124	40,251
Dividends	2,345	12,363	11,911	51,585
Others	6,588	206	27,229	7,776
	₩1,001,120	₩1,059,823	₩3,200,643	₩3,644,374

49. Other operating income (cont'd)

(*) Details of gain on merchant banking accounts for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Interest income	₩10,802	₩ 8,896	₩31,550	₩26,069
Fee and commission income	113	77	309	294
Gain on disposal of trading bonds	—	181	—	829
Gain on valuation of trading bonds	—	238	—	492
Gain on disposal of debt securities measured at FVTPL (KIFRS 1109)	246	—	670	—
Gain on valuation of debt securities measured at FVTPL (KIFRS 1109)	(244)	—	127	—
Gain on valuation of CMA securities	(14)	97	1	139
Gain on disposal of bills	4,348	3,562	12,467	12,206
Reversal of possible loan losses	—	34	—	74
Reversal of unused commitments	—	60	—	148
	₩15,251	₩13,145	₩45,124	₩40,251

50. Other operating expenses

Other operating expenses for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Loss on sales of loans	₩ 17	₩ 779	₩ 53	₩ 780
Provision of allowances for acceptance and guarantees transferred	—	(3,293)	—	—
Provision of allowances for unused commitments	—	—	—	—
Other provisions transferred	—	(939)	—	1,045
Contribution to Korea Credit Guarantee Fund	69,135	66,368	195,197	202,147
Insurance fee on deposit	83,425	78,300	245,942	228,911
Loss on foreign exchange transaction	810,414	880,877	2,698,438	2,758,717
Loss on merchant banking accounts (*)	10,122	7,943	29,684	23,172
Others	564	88	2,599	1,305
	₩973,677	₩1,030,123	₩3,171,913	₩3,216,077

(*) Details of loss on merchant banking accounts for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Interest expense	₩ 9,963	₩7,943	₩29,525	₩23,172
Others	159	—	159	—
	₩10,122	₩7,943	₩29,684	₩23,172

51. Other non-operating income

Other non-operating income for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Rental fee income	₩ 4,093	₩ 2,867	₩12,620	₩ 8,678
Gain on disposal of property and equipment	121	2,939	12,496	14,735
Gain on disposal of intangible asset	—	147	59	410
Gain on equity method	4,801	24,182	42,474	89,292
Others	7,946	3,210	15,707	34,065
	₩16,961	₩33,345	₩83,356	₩147,180

52. Other non-operating expenses

Other non-operating expenses for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Loss on disposal of property and equipment	₩ 332	₩ 1,990	₩ 1,627	₩ 2,771
Loss on disposal of intangible asset	(1)	24	4	31
Loss on equity method	641	—	4,954	—
Collection expenses for written-off claims	381	423	1,402	1,322
Collection commissions for written-off claims	1,012	1,026	2,968	3,048
Loss on disposal of investment stock of associates	—	—	6	—
Impairment loss on investment in associates	—	226	—	226
Donations	2,134	3,236	22,708	9,357
Others	4,117	6,241	13,854	24,084
	₩8,616	₩13,166	₩47,523	₩40,839

53. Income tax expenses

53.1 The components of income tax expenses for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Current income taxes		
Income taxes	₩592,707	₩602,303
Prior year's income tax adjustments recognized in the current year	56,863	(17,762)
Changes in deferred income tax assets (liabilities)	144,509	(82,697)
Current and deferred income taxes recognized directly to equity	(98,449)	(24,120)
Tax effect of consolidated tax returns	(31,042)	(25,761)
Income tax expenses	₩664,588	₩451,963

53. Income tax expenses (cont'd)

53.2 Temporary differences and deferred income tax assets (liabilities) as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)	
Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 309,674	₩ 85,160
Valuation of investment in associates	(466,570)	(128,307)
Gain on valuation of derivatives	(205,550)	(56,526)
Deemed dividends	156,718	43,097
Deferred loan fees, net of expenses	(313,037)	(86,085)
Accrued interest income	(270,546)	(74,400)
Accrued expenses	63,111	17,353
Provisions on acceptance and guarantees	67,474	18,555
Severance and retirement insurance	(1,287,657)	(354,066)
Severance and retirement benefit liabilities	1,287,957	354,132
Other provisions	82,291	22,630
Loans written-off	671,418	184,020
Depreciation	(10,792)	(2,968)
Fair value valuation resulting from merger	32	9
Dormant deposits	32,092	8,825
Allowance for advanced depreciation	(180,315)	(49,587)
Deemed cost for property and equipment	(916,530)	(252,046)
Gain on valuation of financial instruments measured at FVOCI	249,836	68,740
Net loss carried over	74,819	16,460
Investment in kind	18,479	5,082
Financial guarantee contract	7,491	2,060
Deferred reward points income	403	111
Others	287,180	77,682
	₩ (342,022)	₩(100,069)
Domestic deferred income tax liabilities		(100,069)
Foreign deferred tax assets (*)		52,423
Foreign deferred tax liabilities (*)		(87,076)
		₩(134,722)

53. Income tax expenses (cont'd)

53.2 Temporary differences and deferred income tax assets (liabilities) as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

	December 31, 2017	
Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 823,772	₩ 226,551
Impairment loss on securities	2,581	568
Valuation of investment in associates	(464,687)	(127,789)
Gain on valuation of derivatives	(191,033)	(52,534)
Deemed dividends	158,343	43,544
Deferred loan fees, net of expenses	(273,888)	(75,319)
Accrued interest income	(261,706)	(71,969)
Accrued expenses	147,704	40,556
Provisions on acceptance and guarantees	83,187	22,877
Severance and retirement insurance	(1,232,842)	(339,026)
Severance and retirement benefit liabilities	1,232,895	339,037
Other provisions	150,859	41,486
Loans written-off	601,930	164,682
Depreciation	(25,569)	(7,032)
Fair value valuation resulting from merger	32	9
Dormant deposits	15,441	4,246
Allowance for advanced depreciation	(180,315)	(49,587)
Deemed cost for property and equipment	(931,110)	(256,055)
Available-for-sale securities	149,859	41,211
Net loss carried over	87,016	19,144
Investment in kind at KEB China	18,479	5,082
Financial guarantee contract	1,975	543
Deferred reward points income	627	172
Others	233,486	63,484
	₩ 147,036	₩ 33,881
Domestic deferred income tax assets		33,881
Foreign deferred income tax assets (*)		28,758
Foreign deferred income tax liabilities (*)		(52,852)
		₩ 9,787

(*) Deferred tax assets of foreign branches are not offset against the deferred tax liabilities due to the differences in tax jurisdictions.

The effective income tax rate of 27.5% as of September 30, 2018, is applied when calculating deferred tax assets or liabilities. Also, deferred income tax assets are recognized when it is foreseeable that future taxable income will be incurred and that future tax credits will be realized.

53. Income tax expenses (cont'd)

53.3 Details of deferred income taxes charged (credited) directly to equity as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited) Before tax amounts	Deferred income tax assets (liabilities)
Gain (loss) on valuation of financial assets measured at FVOCI	₩(253,158)	₩ 69,619
Changes in equity in equity method	(98,182)	27,000
Exchange differences on translation of foreign operations	(54,246)	14,918
	₩(405,586)	₩111,537

Classification	December 31, 2017 Before tax amounts	Deferred income tax assets (liabilities)
Gain (loss) on valuation of available-for-sale financial assets	₩(149,859)	₩41,211
Changes in equity in equity method	(118,830)	32,678
Exchange differences on translation of foreign operations	(65,714)	18,071
	₩(334,403)	₩91,960

54. Earnings per share

54.1 Weighted-average number of ordinary shares for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (shares in units):

Classification (unaudited)	Periods	Number of shares	Weights	Weighted-average number of ordinary shares
September 30, 2018	2018.01.01~2018.9.30	1,071,915,717	273/273	1,071,915,717
September 30, 2017	2017.01.01~2017.9.30	1,071,915,717	273/273	1,071,915,717

Since the Company does not have potentially dilutive ordinary stock, the weighted average number of shares of ordinary stock outstanding per basic share is the same as the weighted average number of shares of ordinary stock outstanding per diluted share.

54. Earnings per share (cont'd)

54.2 The Company's basic earnings per share for the three-month and nine-month periods ended September 30, 2018 and 2017 are calculated as follows (Korean won in millions except per share amounts):

Classification	For the three-month periods ended September 30 (unaudited)		For the six-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Net income attributable to equity holders of the parent for the period	₩ 565,493	₩ 514,437	₩ 1,757,614	₩ 1,513,250
Dividends on hybrid equity securities	(2,460)	(2,460)	(7,360)	(7,360)
Net income attributable to common stock	₩ 563,033	₩ 511,977	₩ 1,750,254	₩ 1,505,890
Weighted-average number of shares of ordinary stocks outstanding	1,071,915,717	1,071,915,717	1,071,915,717	1,071,915,717
Basic earnings per share (Korean won)	₩ 525	₩ 478	₩ 1,633	₩ 1,405

(*) Basic earnings per share (EPS) are the same as diluted EPSs for the nine-month periods ended September 30, 2018 and 2017.

55. Share-based payment

When the stock options are exercised, the Company has the option to settle either through issuance of new shares or treasury stock or through payment of cash equivalents to the difference between the market price and the exercise price. The number of exercisable stock option is determined in accordance with management performance and the calculation criteria for the number of exercisable shares. Also, the Company granted the equity-linked special incentive (Rose Bonus and/or Rose Share) to employees for the purpose of motivation to improve long-term performance. The equity-linked special incentive is settled in cash. It can be exercised from 1 to 3 years after the grant date for the following 3 to 4 years.

Details of liabilities related to share-based payment and total intrinsic value of rights accounted for as accounts payable in case that option holders achieve rights to receive cash or other assets as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Book value of liabilities related to share-based payment		
Stock options	₩ 202	₩ 329
Equity-linked special incentives (granted by the Bank)	11,765	200
Equity-linked special incentives (granted by HFG)	35,797	48,547
	₩47,765	₩49,076

55. Share-based payment (cont'd)

The compensation costs for the three-month and nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
	2018	2017	2018	2017
Costs recognized due to share-based payment				
Stock options	₩ (83)	₩ 182	₩ (126)	₩ 416
Equity-linked special incentive (granted by the Bank)	1,965	1,805	6,139	4,065
Equity-linked special incentive (granted by HFG)	574	1,895	1,702	6,251
	₩2,456	₩3,882	₩7,715	₩10,732

55.1 Stock options

Details of the share-based payment as of September 30, 2018 are as follows. Stock options are measured at fair value based on Black-Scholes model (in Korean won and share in units):

Grant date (unaudited)	Exercise period	Risk-free rate	Expected service period	Volatility of the underlying stock price	Expected dividends	Stock price at grant date	Fair value
2011-08-10	2015-08-11 ~ 2019-08-10	1.59%	8.01	28.93%	₩1,550	₩8,060	₩492
2011-08-26	2015-08-27 ~ 2019-08-26	1.67%	8.01	28.93%	1,550	7,720	708
2011-09-02	2015-09-03 ~ 2019-09-02	1.71%	8.01	28.62%	1,550	7,930	745

The company used the volatility of the past stock price in the expected exercise period as the expected volatility, and used the stock price as of September 30, 2018 as the stock price of the underlying asset, and calculated the fair value by using the average dividend rate for the past three years as the expected dividend rate.

Changes in shares of stock options for the nine-month period ended September 30, 2018 are as follows (Korean won and share):

Grant date	Shares at the beginning	Exercise	Divesture	Extinction at maturity	Shares at the end	Stock option outstanding	Exercise price
2011-08-10	333,000	—	—	—	333,000	333,000	₩9,100
2011-08-26	42,290	—	—	—	42,290	42,290	8,500
2011-09-02	11,250	—	—	—	11,250	11,250	8,400
	386,540	—	—	—	386,540	386,540	

There is no exercise of the stock options for the nine-month period ended September 30, 2018.

Weighted average residual expiration of exercisable stock options is 0.87 years as of September 30, 2018.

55.2 Equity-linked special incentives

Equity-linked special incentives are measured at fair value based on the binomial model and become exercisable from 1 to 3 years after the grant date for the following 3 to 4 years. There is no equity-linked special incentive provided by the Bank to the employees as of September 30, 2018.

55. Share-based payment (cont'd)

55.2 Equity-linked special incentives (cont'd)

Changes in shares of equity linked special incentives for the nine-month periods ended September 30, 2018 and 2017 are as follows (shares in units):

	Number of shares	
Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Beginning	₩—	₩ 25,430
Number of shares exercised	—	(25,430)
Ending	₩—	₩ —

55.3 Performance-linked share-based compensation

Hana Financial Group (HFG) and the Bank operate performance share plan, granting the executives and department head of the Bank with performance-linked stocks. Details of performance-linked stocks granted to the executives and department head of the Bank as of September 30, 2018 are as follows:

Classification	5th	6th	7th	8th
Granted by	Hana Financial Group	Hana Financial Group	Hana Bank	Hana Bank
Grant date	2015-01-01	2016-01-01	2017-01-01	2018-01-01
Payment date	2017-12-31	2018-12-31	2019-12-31	2020-12-31
Grant period	2015-01-01~ 2017-12-31	2016-01-01~ 2018-12-31	2017-01-01~ 2019-12-31	2018-01-01~ 2020-12-31
Grace period	2018-01-01~ 2018-12-31	2019-01-01~ 2019-12-31	2020-01-01~ 2020-12-31	2021-01-01~ 2021-12-31
Payment period	Within 2019-04-30	Within 2020-04-30	Within 2021-04-30	Within 2022-04-30
Grant method	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price	Payment of cash equivalents to the difference between the market price and the exercise price
Shares at settlement date (*)	346,715	436,977	216,010	54,690

(*) Hana Financial Group (HFG) and the Bank provide the executives and department head of the Bank with the right to receive stocks. The amount of stocks paid is adjusted based on the performance. The amounts of 5th and 6th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income) is 60%. The amounts of 7th and 8th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income, soundness) is 60%.

56. Cash flow information

56.1 Details of cash and cash equivalents as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

Classification	September 30, 2018 (unaudited)	December 31, 2017
Cash	₩ 2,014,083	₩ 2,224,215
Due from banks in Korean won	9,259,292	11,168,327
Due from banks In foreign currencies	9,503,887	6,591,374
	20,777,262	19,983,916
Less: Restricted balances	11,144,263	11,790,742
Deposits which have a maturity period of three months or above	991,846	754,133
	₩ 8,641,153	₩ 7,439,041

56.2 Significant non-cash transactions for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)	For the nine-month period ended September 30, 2017 (unaudited)
Unrealized gain on valuation of available-for-sale financial assets	₩ —	₩169,921
Gain on valuation of financial assets measured at FVOCI	125,416	—
Transfer from property and equipment to investment properties	245,761	11,108
Transfer from property and equipment to non-current assets held-for-sale	—	435,488
Transfer from investment properties to non-current assets held-for-sale	—	30,551
Transfer from loans to financial assets measured at FVOCI resulting from debt-to-equity swap	20,122	—
Transfer from loans to available-for-sale financial assets resulting from debt-to-equity swap	—	11,014

56.3 Changes in liabilities arising from financing activities are as follows (Korean won in millions):

	September 30, 2018 (unaudited)					
Classification	January 1, 2018	Financing activities	Exchange rate fluctuation	Fair value hedging	Other	September 30, 2018
Borrowings	₩13,774,502	₩2,014,345	₩33,631	₩ —	₩ —	₩15,822,478
Debentures	22,311,737	2,897,760	49,220	(37,978)	42,773	25,263,512
	₩36,086,239	₩4,912,105	₩82,851	₩(37,978)	₩42,773	₩41,085,990

57. Related parties

57.1 Transactions with related parties for the nine-month periods ended September 30, 2018 and 2017 are summarized as follows (Korean won in millions):

	For the nine-month period ended September 30, 2018 (unaudited)						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company							
HFG	₩ —	₩ 2,063	₩ 1,731	₩—	₩ 33	₩ —	₩ —
Investment in associates							
Bank of Jilin	31	—	26	(12)	—	—	36
CM International financing leases	5,022	—	—	10	—	—	—
Beijing Langa Asset Management Co., Ltd	687	211	6	72	—	—	—
PT Sinarmas Hana Finance	1,229	2	—	10	42	—	1
Hana First Private Equity Fund	—	6	—	—	7	—	—
Korea Credit Bureau	—	—	—	—	87	—	—
Darby Hana Infrastructure Fund Management	—	—	1	—	151	—	—
Masan Marine New Town Co., Ltd	62	—	—	6	2	—	—
Company K startup winwin fund	—	—	—	—	32	—	—
Fidelis Private Equity Fund No.2	—	—	342	—	—	—	—
KEB Hana-KVIC Unicorn Fund of Funds	—	—	—	—	1		—
	₩7,031	₩ 219	₩ 375	₩ 86	₩ 322	₩ —	₩ 37
Entities under common control							
Hana Financial Investment Co., Ltd.	₩ 78	₩ 1,283	₩ 7,605	₩—	₩ 857	₩ —	₩ 4,030
Hana Card Co., Ltd.	5	58,418	3,212	—	1,542	847	—
Hana Capital Co., Ltd.	—	282	141	—	112	—	328
Hana Asset Trust Co., Ltd.	—	31	—	—	1,365	—	—
Hana Alternative Asset Management Co., Ltd	—	23	519	—	218	—	—
Hana TI Co., Ltd.	—	3	—	—	2	6,022	46,464
Hana Life Insurance Co., Ltd	—	12,412	873	—	32	—	—
Hana Savings Bank	—	11	24	—	1	—	—
Hana Investors Services Company	—	10	744	—	181	—	—
	₩ 83	₩72,473	₩13,118	₩—	₩4,310	₩6,869	₩50,822

57. Related parties (cont'd)

57.1 Transactions with related parties for the nine-month periods ended September 30, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	For the nine-month period ended September 30, 2018 (unaudited)						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties							
Odin2 LC	₩1,794	₩ 1	₩ —	₩—	₩ —	₩ —	₩ —
Warden 1 SPC LC	—	—	—	—	8	—	—
Gunsan BIO Energy Co., Ltd.	—	—	—	—	11	—	—
Finnq Co., Ltd.	—	169	—	—	4	—	—
Mirae Credit Information Services Corp.	108	10	—	(2)	44	708	—
UBS Hana Asset Management Co., Ltd.	—	1	7	—	—	—	—
F&U Credit Information Co., Ltd.	—	—	—	—	3	—	—
BNP Asset Development Co., Ltd.	158	—	—	22	—	—	—
Thehue Company Ltd.	—	—	—	(22)	—	—	—
Smartscore Co., Ltd.	2	—	—	—	1	—	—
Lotte Accelerator Corporation	—	—	—	—	41	—	—
GMHB Co., Ltd.	—	1	—	—	—	—	—
PT. Next Transformtech Indonesia	—	—	—	—	138	—	4
Baratheon First Co., Ltd.	—	—	—	—	2	—	—
Dduksim Co., Ltd.	—	—	—	—	3	—	—
	2,062	182	7	(2)	255	708	4
Key Management	182	—	—	—	84	—	—
	₩9,358	₩74,937	₩14,871	₩ 84	₩5,004	₩7,577	₩50,863

	For the nine-month period ended September 30, 2017 (unaudited)						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company							
HFG	₩ —	₩ 757	₩1,428	₩ —	₩ 7	₩ —	₩ 9
Investment in associates							
Korea Credit Bureau Co., Ltd.	—	—	—	—	32	—	—
Darby Hana Infrastructure Fund Management	—	—	403	—	119	—	—
Hana First Private Equity Fund	—	5	—	—	5	—	—
Masan Marine New Town Co., Ltd.	54	—	—	—	2	—	—
Midan City Development Co., Ltd.	—	—	—	—	33	—	—
Company K startup winwin fund	—	—	—	—	21	—	—
KEB Mirae Asset Second Securitization Specialty LC (*)	—	2	—	—	2	—	—
Bank of Jilin (*)	273	—	—	—	—	—	—
CM International financing leases (*)	4,955	—	20	—	14	—	—
Beijing Langa Asset Management LC (*)	225	48	157	99	264	—	—
PT Sinarmas Hana Finance (*)	768	1	—	18	133	—	4
	₩6,275	₩ 56	₩ 580	₩ 117	₩ 625	₩ —	₩ 4

57. Related parties (cont'd)

57.1 Transactions with related parties for the nine-month periods ended September 30, 2018 and 2017 are summarized as follows (Korean won in millions): (cont'd)

	For the nine-month period ended September 30, 2017 (unaudited)						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Entities under common control							
Hana Financial Investment Co., Ltd.	₩ 21	₩ 1,062	₩4,598	₩ —	₩1,429	₩ —	₩31,744
Hana Card Co., Ltd.	1	60,684	475	—	1,001	1,812	337
Hana Capital Co., Ltd	—	265	103	—	69	—	24
Hana Asset Trust Co., Ltd.	—	20	—	—	417	—	—
Hana Alternative Asset Management Co., Ltd	—	2	—	—	98	—	—
Hana TI Co., Ltd	—	—	9	—	3	45,379	120
Hana Institute of Finance Co., Ltd.	—	—	—	—	8	3,272	—
Hana Saving Bank Co., Ltd.	—	3	21	—	—	—	—
Hana Life Insurance Co., Ltd.	—	9,575	784	—	28	—	22
Hana Investors Services Co., Ltd.	—	—	53	—	78	—	31
	₩ 22	₩71,611	₩6,043	₩ —	₩3,131	₩50,463	₩32,278
Other related parties							
Odin2 LC	₩ —	₩ —	₩ —	₩2,125	₩ —	₩ —	₩ —
Gunsan BIO Energy Co., Ltd (*)	—	—	—	—	12	—	—
Advanced & Different Credit Information Co., Ltd.	—	—	—	—	3	—	—
Mirae Credit Information Services Corp.	37	—	—	5	39	147	—
UBS Hana Asset Management Corp.	—	2	—	—	—	1	—
Hana AIM investment Management	—	—	—	—	4	—	—
HN housing Co., Ltd.	51	—	—	26	—	—	—
Thehue Company Ltd.	236	3	4	(11)	—	—	—
PT. Next Transformtech Indonesia (*)	—	—	—	—	78	—	3
	₩ 324	₩ 5	₩ 4	₩2,145	₩ 136	₩ 148	₩ 3
	₩6,621	₩72,429	₩8,055	₩2,262	₩3,899	₩50,611	₩32,294

(*) Significant transactions with related parties for the nine-month period ended September 30, 2017, were restated by reflecting the partial errors in the transactions of the Company and overseas affiliated companies. Due to such restatement to the notes to the financial statements, revenue, transfer (reversal) of allowance for doubtful accounts, and expenses increased by ₩6,453 million, ₩117 million, and ₩500 million, respectively.

57. Related parties (cont'd)

57.2 Details of fund transactions for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions):

Classification	For the nine-month period ended September 30, 2018 (unaudited)		
	Increase and decrease in financial transaction	Increase and decrease in deposits and borrowings	Investment in cash
Controlling company:			
Hana Financial Group (HFG)	₩ —	₩ (1,658)	₩ —
Associates:			
Bank of Jilin	(191,636)	24	—
CM International financing leases	(7,555)	(4)	—
Beijing Langa Asset Management Co.,	(1,865)	—	—
PT Sinarmas Hana Finance	1,974	(209)	—
Hana First Private Equity Fund	—	569	—
Korea Credit Bureau Co., Ltd	—	106	—
Darby Hana Infrastructure Fund Management	—	1,877	—
Midan City Development Co., Ltd	—	(322)	—
Masan Marine New Town Co., Ltd	—	6	—
Company KStartup winwin fund	—	(1,116)	—
Darby Latin American Private Debt Fund III	—	—	7,687
Darby Latin American Private Debt Fund IIIA	—	—	622
Fidelis Private Equity Fund No.2	—	35	3,000
Koramco Professional Investment Type Real Estate	—	—	1,700
KEB Mirae Asset First Securitizaton Specialty LC	—	(469)	—
KEB Mirae Asset Second Securitizaton Specialty LC	—	(713)	—
KEB Hana-KVIC Unicorn Fund of Funds	—	1,101	1,000
	₩(199,082)	₩ 885	₩14,009
Entities under common control:			
Hana Financial Investment Co., Ltd.	₩ —	₩ 52,595	₩ —
Hana Card Co., Ltd.	—	114,383	—
Hana Capital Co., Ltd.	—	(15,207)	—
Hana Asset Trust Co., Ltd.	—	52,105	—
Hana Alternative Asset Management Co., Ltd	—	4,533	—
Hana TI Co., Ltd.	—	(3,109)	—
Hana Institute of Finance Co., Ltd	—	(11)	—
Hana Investors Services Company Ltd	—	2,879	—
	—	208,168	—

57. Related parties (cont'd)

57.2 Details of fund transactions for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

Classification	For the nine-month period ended September 30, 2018 (unaudited) Increase and decrease in financial transaction	Increase and decrease in deposits and borrowings	Investment in cash
Other related parties:			
Warden 1 SPC LC	₩ —	₩ 7	₩ —
Radian 1 SPC Co., Ltd	—	(2)	—
Gunsan bio-energy Corp	—	(1,064)	—
Finnq Co., Ltd	—	(3,423)	—
Mirae Credit Information Services Corp	(7,000)	(7,081)	—
UBS Hana Asset Management Co., Ltd	—	(68)	—
F&U Credit Information Co. Ltd	—	530	—
Hana AIM Investment Management Inc	—	(2,117)	—
BNP Asset Development Co., Ltd	—	(93)	—
Hana Lantern Energy Factory Private Equity Fund	—	(70)	—
Thehue Company Ltd	(160)	(53)	—
Smartscore Co., Ltd.	—	180	—
Lotte Accelerator Corporation	—	3,022	—
GMHB Co., Ltd.	—	(858)	—
Hana Global(Beijing) Finance Limited Co., Ltd.	—	63	—
Baratheon First Co., Ltd.	—	56	—
Hana North American Midwest Office Co., Ltd.	—	17	—
Dduksim Co., Ltd.	—	142	—
PT.NEXT Transformtech Indonesia	—	1,704	—
Hana MIK Co., Ltd.	—	48	—
	(7,160)	(9,060)	—
Key management	2,553	418	—
	(203,689)	198,753	14,009

57. Related parties (cont'd)

57.2 Details of fund transactions for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

Classification	For the nine-month period ended September 30, 2017 (unaudited)		
	Increase and decrease in financial transaction	Increase and decrease in deposits and borrowings	Investment in cash
Controlling company:			
Hana Financial Group (HFG)	₩ —	₩ (16,883)	₩ —
Associates:			
Korea Credit Bureau Co., Ltd.	—	3,888	—
Darby Hana Infrastructure Fund Management	—	1,623	—
Hana First Private Equity Fund	—	(1,168)	—
Masan Marine New Town Co., Ltd.	—	52	—
Midan City Development Co., Ltd.	—	(19,320)	—
Company KStartup winwin fund	—	1,341	—
Darby Latin American Private Debt Fund III	—	—	4,189
Darby Latin American Private Debt Fund IIIA	—	—	659
BSK-6 Patent Technology Investment Association	—	—	900
KEB Mirae Asset First Securitization Specialty LC (*)	—	(582)	—
KEB Mirae Asset Second Securitization LC (*)	—	(911)	—
Bank of Jilin (*)	—	94	—
CM International financing leases LC (*)	(61,282)	(8)	—
Beijing Langa Asset Management Co., Ltd. (*)	17,207	1	41,801
PT Sinarmas Hana Finance (*)	2,298	702	—
	₩(41,777)	₩ (14,288)	₩47,549
Entities under common control:			
Hana Financial Investment Co., Ltd.	₩ —	₩ (29,366)	₩ —
Hana Card Co., Ltd.	—	44,983	—
Hana Capital Co., Ltd.	—	23,426	—
Hana Asset Trust	—	82,054	—
Hana Alternative Asset Management Co., Ltd.	—	(2,856)	—
Hana TI Co., Ltd.	—	(15,139)	—
Hana Institute of Finance	—	1,399	—
Hana Investors Services Company	—	(979)	—
	₩ —	₩103,522	₩ —

57. Related parties (cont'd)

57.2 Details of fund transactions for the nine-month periods ended September 30, 2018 and 2017 are as follows (Korean won in millions): (cont'd)

	For the nine-month period ended September 30, 2017 (unaudited)		
Classification	Increase and decrease in financial transaction	Increase and decrease in deposits and borrowings	Investment in cash
Other related parties:			
Warden 1 SPC LC	₩ —	₩ 6	₩ —
Radian 1 SPC Co., Ltd.	—	(181)	—
Gunsan bio-energy Corp.	—	(1,115)	—
Advanced&Different Credit Information Co., Ltd.	—	(1,000)	—
Finnq Co., Ltd.	—	3,255	—
Mirae Credit Information Services Corp.	7,000	(6,036)	—
UBS Hana Asset Management Co., Ltd.	—	694	—
F&U Credit Information Co. Ltd	—	40	—
Hana Lantern Energy Factory Private Equity Fund.	—	(74)	—
Hana AIM Investment Management Inc.	—	2,000	—
HN Housing Co., Ltd.	3,200	(639)	—
Thehue Company Ltd.	(334)	80	—
Hana Global(Beijing) Finance Limited (*)	—	256	—
PT.NEXT Transformtech Indonesia (*)	—	2,134	—
	₩ 9,866	₩ (580)	₩ —
Key management	1,261	(1,275)	—
	₩(30,650)	₩ 70,496	₩47,549

(*) Significant transactions with related parties for the nine-month period ended September 30, 2017, were restated by reflecting the partial errors in the transactions of the Group and overseas affiliated companies. Due to such restatement to the notes to the financial statements, loans decreased by ₩34,777 million, and deposits/borrowings and cash contribution increased by ₩1,686 million and ₩16,666 million, respectively.

57. Related parties (cont'd)

57.3 Outstanding balances with related parties arising from the above transactions as of September 30, 2018 and December 31, 2017 are summarized as follows (Korean won in millions):

	September 30, 2018 (unaudited)				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company:					
Hana Financial Group (HFG)	₩ —	₩ 205	₩—	₩ 9,086	₩285,163
Associates:		—			—
Bank of Jilin	2,697	—	—	24	—
CM International financing leases	129,650	—	344	17	—
Beijing Langa Asset Management LC	14,534	—	209	1	—
PT Sinarmas Hana Finance	18,169	27	62	792	—
Hana First Private Equity Fund	—	2	—	602	—
Korea Credit Bureau Co., Ltd.	—	—	—	6,115	—
Darby Hana Infrastructure Fund Management	—	—	—	13,998	—
Midan City Development Co., Ltd.	—	—	—	5	—
Masan Marine New Town Co., Ltd.	1,513	—	6	793	—
Company KStartup winwin fund	—	—	—	2,904	—
Fidelis Private Equity Fund No.2	—	—	—	35	—
KEB Hana-KVIC Unicorn Fund of Funds	—	—	—	1,101	—
	₩166,563	₩ 29	₩621	₩ 26,387	₩ —
Entities under common control:					
Hana Financial Investment Co., Ltd.	—	12,155	—	256,188	10,432
Hana Card Co., Ltd.	—	8	137	383,590	62,000
Hana Capital Co., Ltd.	—	2	91	28,484	4,951
Hana Asset Trust	—	—	—	132,669	498
Hana Alternative Asset Management Co., Ltd	—	—	—	19,835	673
Hana TI Co., Ltd.	—	—	—	3,752	689
Hana Life Insurance Co., Ltd.	—	1,236	—	—	2,492
Hana Saving Bank Co., Ltd.		—	—	—	53
Hana Investors Services Company	—	—	—	16,070	811
	₩ —	₩13,401	₩228	₩840,588	₩ 82,599

57. Related parties (cont'd)

57.3 Outstanding balances with related parties arising from the above transactions as of September 30, 2018 and December 31, 2017 are summarized as follows (Korean won in millions): (cont'd)

	September 30, 2018 (unaudited)				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Other related parties					
Odin2. LC	₩ 2,237	₩ —	₩2,237	₩ —	₩ —
Warden 1 SPC LC	—	—	—	17	6
Gunsan bio-energy Corp.	—	—	—	4,130	—
Finnq Co., Ltd.	—	—	—	1,174	—
Mirae Credit Information Services Corp	—	—	—	3,653	—
UBS Hana Asset Management Co., Ltd	—	—	—	340	—
F&U Credit Information Co., Ltd.	—	—	—	531	—
BNP Asset Development Co., Ltd.	4,900	—	40	14	—
Hana Lantern Energy Factory Private Equity Fund	—	—	—	4	—
Smartscore Co., Ltd.	—	—	—	180	—
Lotte Accelerator Corporation	—	—	—	3,022	—
Hana Global(Beijing) Finance Limited	—	—	—	63	—
Baratheon First Co., Ltd.	—	—	—	56	—
Hana North American Midwest Office Co., Ltd.	—	—	—	17	—
Dduksim Co., Ltd.	—	—	—	142	—
PT.NEXT Transformtech Indonesia (*)	—	—	—	1,704	—
Hana MIK Co., Ltd.	—	—	—	48	—
Myoungshin Co., Ltd.	384	—	1	5	—
	7,521	—	2,278	15,100	6
Key management	8,268	—	—	10,153	—
	203,383	13,635	3,127	901,314	368,130

57. Related parties (cont'd)

57.3 Outstanding balances with related parties arising from the above transactions as of September 30, 2018 and December 31, 2017 are summarized as follows (Korean won in millions): (cont'd)

	December 31, 2017				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company:					
Hana Financial Group (HFG)	₩ —	₩ 5,405	₩ —	₩ 10,744	₩640,494
Associates:	₩ —	₩ —	₩ —	₩ 6,009	₩ —
Korea Credit Bureau Co., Ltd.					
Darby Hana Infrastructure Fund Management	—	11,734	—	12,121	—
Hana First Private Equity Fund	—	—	—	33	—
Masan Marine New Town Co., Ltd.	1,513	—	—	787	—
Midan City Development Co., Ltd.	—	—	—	327	—
Company KStartup winwin fund	—	—	—	4,020	—
KEB Mirae Asset First Securitization Specialty Co., Ltd.	—	—	—	620	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	—	—	—	744	—
Bank of Jilin (*)	194,333	273	12	—	—
CM International financing leases (*)	137,205	413	135	21	5
Beijing Langa Asset Management Co., Ltd. (*)	16,399	—	94	1	—
PT Sinarmas Hana Finance (*)	16,195	—	81	1,001	—
	₩365,645	₩12,420	₩ 322	₩ 25,684	₩ 5
Entities under common control:					
Hana Financial Investment Co., Ltd.	₩ —	₩ 8,246	₩ —	₩203,593	₩ 10,688
Hana Card Co., Ltd.	—	88	—	269,207	65,776
Hana Capital Co., Ltd.	—	—	—	43,691	5,041
Hana Asset Trust	—	—	—	80,564	63
Hana Alternative Asset Management Co., Ltd	—	—	—	15,302	605
Hana TI Co., Ltd.	—	—	—	6,861	20
Hana Saving Bank	—	1	—	—	52
Hana Life Insurance Co., Ltd.	—	1,082	—	11	2,372
Hana Investors Services Company	—	—	—	13,191	811
	₩ —	₩ 9,417	₩ —	₩632,420	₩ 85,428
Other related parties:					
GMHB Co., Ltd.(*)	₩ —	₩ —	₩ —	₩ 858	₩ —
Odin2.LLC	2,237	—	2,237	—	—
Warden 1 SPC Ltd.	—	—	—	10	—
Radian 1 SPC Co., Ltd.	—	—	—	2	—
Gunsan bio-energy Corp.	—	—	—	5,194	—
Finnq Co., Ltd.	—	—	—	4,597	—
Mirae Credit Information Services Corp. (*)	7,000	—	5	10,734	20
UBS Hana Asset Management Co., Ltd.	—	—	—	408	—
F&U Credit Information Co., Ltd.	—	—	—	1	—
Hana AIM Investment Management Inc.	—	—	—	2,117	—
HN Housing Co., Ltd.	4,900	—	33	107	—
Hana Lantern Energy Factory Private Equity Fund	—	—	—	74	—
Thehue Company Ltd.(*)	5,250	—	1,397	74	—
	₩ 19,387	₩ —	₩3,672	₩ 24,176	₩ 20
Key management	5,715	—	—	9,735	—
	₩390,747	₩27,242	₩3,994	₩702,759	₩725,947

57. Related parties (cont'd)

57.3 Outstanding balances with related parties arising from the above transactions as of September 30, 2018 and December 31, 2017 are summarized as follows (Korean won in millions): (cont'd)

(*) Receivables and payables from significant transactions with related parties for the year ended December 31, 2017, were restated by reflecting the partial errors in the transactions of the Company and overseas affiliated companies. Due to such restatement to the notes to the financial statements, receivables, allowance for doubtful accounts, and payables increased by ₩364,818 million, ₩1,633 million and ₩1,906 million, respectively.

57.4 Guarantees and acceptances and collateral provided between controlling company and subsidiaries as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions):

	September 30, 2018 (unaudited)		
Company	Classification	Limit	Counterparty
The Bank	Unused limit related to loan commitments in Korean won	₩500,000	Hana Card Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies	2,225	
	Unused limit related to loan commitments in Korean won	260,000	Hana Capital Co., Ltd.
	Commitment to purchase securities	13,263	Hana Financial Investment Co., Ltd.
	Unused limit related to loan commitments in Korean won	130,000	
	Unused limit related to loan commitments in Korean won	327	Masan Marine New Town Co., Ltd.
	Unused limit related to loan commitments in Korean won	2,100	BSK-6 Patent Technology Investment Association
	Guarantees and acceptances denominated in foreign currencies	21,016	Beijing Langa Asset Management LC
	Unused limit related to loan commitments in foreign currencies	16	
	Unused limit related to loan commitments in Korean won	265	Hana Indonesia Green Forest Co., Ltd.
PT Bank KEB Hana	Unused limit related to loan commitments in foreign currencies	2,711	PT Sinarmas Hana Finance
Hana Card Co., Ltd.	Collateral provided	3,000	
	Unused limit related to loan commitments in Korean won	136,269	The Bank
Hana Capital Co., Ltd	Collateral provided	392,152	
Hana Financial Investment Co., Ltd.	Unsettled arrangements (Currency forward)	14,115	
	Unsettled arrangements (Interest rate swaps)	95,635	

57. Related parties (cont'd)

57.4 Guarantees and acceptances and collateral provided between controlling company and subsidiaries as of September 30, 2018 and December 31, 2017 are as follows (Korean won in millions): (cont'd)

	December 31, 2017		
Company	Classification	Limit	Counterparty
The Bank	Unused limit related to loan commitments in Korean won	₩500,000	Hana Card Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies	2,143	
	Unused limit related to loan commitments in Korean won	260,000	Hana Capital Co., Ltd.
	Unused limit related to loan commitments in Korean won (*)	130,000	Hana Financial Investment Co., Ltd.
	Unused limit related to loan commitments in Korean won	100	HN Housing Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies (*)	21,319	Beijing Langa Asset Management Co., Ltd.
	Unused limit related to loan commitments in Korean won (*)	5,000	Masan Marine New Town Co., Ltd.
	Unused limit related to loan commitments in Korean won (*)	2,100	BSK-6 Patent Technology Investment Association
PT Bank KEB Hana	Unused limit related to loan commitments in foreign currencies (*)	5,925	PT Sinarmas Hana Finance
Hana Card Co., Ltd.	Collateral provided	3,000	
	Unused limit (*)	140,675	
Hana Capital Co., Ltd	Collateral provided	389,719	The Bank
Hana Financial Investment Co., Ltd.	Unsettled arrangements (Currency forward) (*)	28,973	
	Unsettled arrangements (Interest rate swaps) (*)	130,391	

Significant payment guarantees and collateral with related parties for the year ended December 31, 2017, were restated by reflecting the partial errors in the unused limit (including credit card) and payment guarantee, etc. Due to such restatement to the notes to the financial statements, unused limit, payment guarantee and unsettled arrangements increased by ₩283,700 million, ₩21,319 million and ₩159,364 million, respectively.

57.5 Details of compensation for standing directors and executive officers for the three-month and nine-month periods ended September 30, 2018 and 2017 are summarized as follows (Korean won in millions of people in units):

	For the three-month periods ended September 30 (unaudited)		For the nine-month periods ended September 30 (unaudited)	
Classification	2018	2017	2018	2017
Short-term employee payment	₩1,704	₩1,249	₩4,764	₩3,649
Severance payment	114	104	442	661
Stock options	1,221	779	3,217	1,764

KEB Hana Bank and its subsidiaries

Consolidated financial statements for the years ended December 31, 2017 and 2016 with the independent auditors' report

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Independent auditors' report

The Shareholders and Board of Directors
KEB Hana Bank and its subsidiaries

We have audited the accompanying consolidated financial statements of KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Company"), which comprise the consolidated statements of financial position as at December 31, 2017 and 2016, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's responsibility for the consolidated financial statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2017 and 2016, and its financial performance and cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Ernst & Young Han Young

March 5, 2018

This audit report is effective as at March 5, 2018, the independent auditors' report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditors' report to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

KEB Hana Bank and its subsidiaries
Consolidated statements of financial position
as at December 31, 2017 and 2016

(Korean won in millions)

	Notes	December 31, 2017	December 31, 2016
Assets			
Cash and due from banks	5,6,7,9,11 and 50	₩ 19,983,916	₩ 27,551,570
Financial assets at FVTPL	5,6,7,8,9,12 and 17	9,443,614	8,665,549
Derivative assets used for hedging	5,6,7,8,9 and 17	11,760	25,825
Available-for-sale financial assets	5,6,7,8,9,13 and 15	44,322,512	37,423,628
Held-to-maturity financial assets	5,6,7,9,14 and 15	6,160,922	4,129,630
Loans	5,6,7,8,9,15 and 16	224,096,709	215,100,733
Investments in associates	18	935,555	895,335
Property and equipment	10 and 19	1,635,352	2,301,272
Investment property	10 and 20	786,154	555,233
Intangible assets	10 and 21	242,677	234,650
Net defined benefit assets	28	44,545	—
Current income tax assets		10,390	5,132
Deferred income tax assets	47	62,639	62,065
Other assets	5,6,7,8,9 and 23	9,733,946	11,215,319
Merchant banking account assets	5,6,7,9 and 23	2,966,019	2,596,959
Non-current assets held for sale	22	457,699	21,326
Total assets		₩320,894,409	₩310,784,226
Liabilities and equity			
Liabilities			
Deposits	5,6,7,9 and 24	₩230,410,494	₩220,613,406
Financial liabilities at FVTPL	5,6,7,8,9 and 25	6,839,559	6,415,145
Derivative liabilities used for hedging	5,6,7,8,9 and 17	73,024	98,974
Borrowings	5,6,7,9 and 26	13,774,502	15,310,635
Debentures	5,6,7,9 and 27	22,311,737	19,310,873
Net defined benefit liability	28	5,170	43,988
Provisions	29	286,959	309,649
Current income tax liabilities		619,535	111,351
Deferred income tax liabilities	47	52,852	288,568
Other liabilities	5,6,7,8,9 and 30	21,263,075	23,762,752
Merchant banking account liabilities	5,6,7,9 and 30	2,018,346	2,406,269
Total liabilities		297,655,253	288,671,610
Equity			
Issued capital	31	5,359,578	5,359,578
Capital surplus	31	9,668,863	9,668,897
Hybrid equity securities	31	179,737	179,737
Capital adjustments	31	(42,624)	(30,785)
Retained earnings	33	8,735,759	7,242,262
(Regulatory reserve for bad debts of ₩1,915,033 and ₩1,881,607 as at December 31, 2017 and 2016, respectively)			
(Required provision for (reversal of) bad debts of ₩ 19,289 and ₩ 33,426) as at December 31, 2017 and 2016, respectively)	34		
Accumulated other comprehensive income	32	(751,704)	(395,323)
Equity attributable to equity holder of the parent		23,149,609	22,024,366
Non-controlling shareholders' equity		89,547	88,250
Total equity		23,239,156	22,112,616
Total liabilities and equity		₩320,894,409	₩310,784,226

The accompanying notes are an integral part of the consolidated financial statements

KEB Hana Bank and its subsidiaries
Consolidated statements of comprehensive income
for the years ended December 31, 2017 and 2016

(Korean won in millions)

	Notes	2017	2016
Net interest income	10,35 and 36		
Interest income		₩ 8,111,335	₩ 7,582,570
Interest expenses		(3,297,163)	(3,253,881)
		4,814,172	4,328,689
Net fee and commission income	10,35 and 37		
Fee and commission income		835,420	801,964
Fee and commission expenses		(199,107)	(193,311)
		636,313	608,653
Net gain (loss) on financial instruments at FVTPL	35 and 38	(135,199)	515,064
Net gain (loss) on derivative financial instruments used for hedging purposes	35 and 39	23,550	(16,087)
Net gain on available-for-sale financial assets	35 and 40	533,795	382,599
Impairment loss	35 and 41	(669,129)	(599,774)
General and administrative expenses	10,35 and 42	(3,091,795)	(3,161,220)
Net other operating expenses			
Other operating income	35 and 43	4,512,008	3,859,133
Other operating expenses	35 and 44	(3,948,138)	(4,371,088)
		563,870	(511,955)
Operating income		2,675,577	1,545,969
Net non-operating income			
Non-operating income	45	209,115	325,966
Non-operating expenses	46	(131,674)	(108,824)
		77,441	217,142
Net income before income tax expense		2,753,018	1,763,111
Income tax expenses	10 and 47	(640,779)	(382,940)
Net income		2,112,239	1,380,171
Net income			
Equity holder of the parent		2,103,510	1,372,737
(Adjusted income after deducting regulatory reserve for bad debt of ₩2,084,221 and ₩1,339,311 for the years ended December 31, 2017 and 2016, respectively)	34		
Non-controlling interests		8,729	7,434
		2,112,239	1,380,171
Other comprehensive loss	32		
Items to be reclassified subsequently to profit or loss:			
Gain (loss) on valuation of available-for-sale financial assets		(259,664)	(460,030)
Exchange differences on translation of foreign operations		(217,820)	57,183
Changes in capital from valuation of equity method for investments in associates		(78,315)	(59,660)
Gain (loss) on valuation of net investment hedges of foreign operations		55,972	(18,957)
Tax effect		105,146	116,514
		(394,681)	(364,950)
Items not to be reclassified subsequently to profit or loss:			
Remeasurements of the defined benefit plan		41,121	(61,289)
Tax effect		(9,951)	14,832
		31,170	(46,457)
Total comprehensive income		₩ 1,748,728	₩ 968,764
Equity holder of the parent		1,747,129	958,445
Non-controlling interests		1,599	10,319
Earnings per share	48		
Basic earnings per share		₩ 1,953	₩ 1,271
Diluted earnings per share		₩ 1,953	₩ 1,271

The accompanying notes are an integral part of the consolidated financial statements

KEB Hana Bank and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2017 and 2016

(Korean won in millions)

	Issued capital	Capital surplus	Hybrid equity securities	Capital adjustments	Retained earnings	Accumulated other comprehensive income	Equity attributable to equity holder of the parent	Non-controlling shareholders' equity	Total
As at January 1, 2016	₩5,359,578	₩9,667,965	₩179,737	₩(25,134)	₩6,299,338	₩ 18,969	₩21,500,453	₩43,425	₩21,543,878
Dividends	—	—	—	—	(420,000)	—	(420,000)	—	(420,000)
Dividends on hybrid equity securities	—	—	—	—	(9,813)	—	(9,813)	(1,761)	(11,574)
Share-based payment transactions	—	932	—	(2,572)	—	—	(1,640)	—	(1,640)
Other capital adjustments	—	—	—	33	—	—	33	—	33
Issuance of hybrid equity securities of subsidiaries	—	—	—	—	—	—	—	29,835	29,835
Acquisition of subsidiary	—	—	—	(3,112)	—	—	(3,112)	6,432	3,320
	5,359,578	9,668,897	179,737	(30,785)	5,869,525	18,969	21,065,921	77,931	21,143,852
Net income for the year	—	—	—	—	1,372,737	—	1,372,737	7,434	1,380,171
Loss on valuation of available-for-sale financial assets	—	—	—	—	—	(348,407)	(348,407)	(296)	(348,703)
Exchange differences on translation of foreign operations	—	—	—	—	—	40,163	40,163	3,181	43,344
Changes in equity on investments in associates	—	—	—	—	—	(45,222)	(45,222)	—	(45,222)
Loss on valuation of net investment hedges of foreign operations	—	—	—	—	—	(14,369)	(14,369)	—	(14,369)
Remeasurements of the defined benefit plan	—	—	—	—	—	(46,457)	(46,457)	—	(46,457)
Total comprehensive income for the year	—	—	—	—	1,372,737	(414,292)	958,445	10,319	968,764
As at December 31, 2016	₩5,359,578	₩9,668,897	₩179,737	₩(30,785)	₩7,242,262	₩(395,323)	₩22,024,366	₩88,250	₩22,112,616
As at January 1, 2017	₩5,359,578	₩9,668,897	₩179,737	₩(30,785)	₩7,242,262	₩(395,323)	₩22,024,366	₩88,250	₩22,112,616
Dividends	—	—	—	—	(600,200)	—	(600,200)	—	(600,200)
Dividends on hybrid equity securities	—	—	—	—	(9,813)	—	(9,813)	(2,010)	(11,823)
Share-based payment transactions	—	—	—	(9,972)	—	—	(9,972)	—	(9,972)
Acquisition of subsidiary	—	—	—	(1,710)	—	—	(1,710)	1,710	—
Other	—	(34)	—	(157)	—	—	(191)	(2)	(193)
	5,359,578	9,668,863	179,737	(42,624)	6,632,249	(395,323)	21,402,480	87,948	21,490,428
Net income for the year	—	—	—	—	2,103,510	—	2,103,510	8,729	2,112,239
Loss on valuation of available-for-sale financial assets	—	—	—	—	—	(180,173)	(180,173)	1,162	(179,011)
Exchange differences on translation of foreign operations	—	—	—	—	—	(194,363)	(194,363)	(8,292)	(202,655)
Changes in equity on investments in associates	—	—	—	—	—	(55,442)	(55,442)	—	(55,442)
Loss on valuation of net investment hedges of foreign operations	—	—	—	—	—	42,427	42,427	—	42,427
Remeasurements of the defined benefit plan	—	—	—	—	—	31,170	31,170	—	31,170
Total comprehensive income for the year	—	—	—	—	2,103,510	(356,381)	1,747,129	1,599	1,748,728
As at December 31, 2017	₩5,359,578	₩9,668,863	₩179,737	₩(42,624)	₩8,735,759	₩(751,704)	₩23,149,609	₩89,547	₩23,239,156

The accompanying notes are an integral part of the consolidated financial statements

KEB Hana Bank and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2017 and 2016

(Korean won in millions)

	2017	2016
Operating activities		
Net income before income tax expenses	₩ 2,753,018	₩ 1,763,111
Net gain adjustments		
Interest expenses	3,297,163	3,253,881
Interest income	(8,111,335)	(7,582,570)
Dividend income	(58,223)	(54,544)
	(4,872,395)	(4,383,233)
Adjustments to non-cash items:		
Net gain on valuation of financial instruments at fair value through profit or loss	(104,673)	(278,257)
Net loss on valuation of derivative financial instruments used for hedging	(23,530)	17,524
Net gain on disposal of available-for-sale financial assets	(533,795)	(382,599)
Impairment loss on available-for-sale financial assets	140,663	37,110
Provision of allowance	528,466	562,664
Gain on disposal of investments in associates	—	(42,470)
Reversal of impairment loss on investments in associates	226	(26,494)
Net gain on valuation of equity method investments	(103,465)	(42,172)
Depreciation and amortization	203,686	200,121
Net gain on disposal of property, equipment and intangible assets	(18,881)	(82,060)
Impairment loss on tangible and intangible assets	1,810	—
Retirement benefits	137,103	134,579
Share based payment expenses	8,665	14,541
Net provisions transferred	(5,003)	71,677
Net loss (gain) on foreign exchange transactions	(431,758)	218,411
Others	(81,431)	(60,362)
	(281,917)	342,213
Changes in operating assets and liabilities:		
Financial assets at fair value through profit or loss	(739,951)	(1,558,131)
Derivative assets used for hedging	15,294	11,680
Loans	(13,886,539)	(4,290,881)
Other assets	1,210,577	1,114,856
Merchant banking account assets	(368,945)	(31,721)
Deposits	13,631,620	14,565,588
Financial liabilities at fair value through profit or loss	490,447	1,246,393
Derivative liabilities used for hedging	(11,882)	49,491
Net defined benefit liability	(178,431)	(286,608)
Provisions	(16,734)	(15,532)
Other liabilities	(1,748,066)	1,235,815
Merchant banking account liabilities	(387,923)	72,968
	(1,990,533)	12,113,918
Cash received from operating activities:		
Interest receipts	7,923,578	7,420,453
Dividend receipts	91,456	54,544
	8,015,034	7,474,997
Cash payment for operating activities:		
Interest payments	3,250,818	3,659,240
Payment of income tax	258,077	246,435
	(3,508,895)	(3,905,675)
Net cash flows provided by operating activities	114,312	13,405,331

(Continued)

KEB Hana Bank and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2017 and 2016

(Korean won in millions) (Continued)

	2017	2016
Investing activities		
Increase (decrease) in restricted due from banks, net	₩ 6,392,899	₩ (8,784,503)
Increase in available-for-sale financial assets	(31,446,596)	(27,084,812)
Decrease in available-for-sale financial assets	24,096,349	24,963,796
Increase in held-to-maturity financial assets	(3,101,936)	(612,353)
Decrease in held-to-maturity financial assets	856,011	1,675,147
Increase in investments in associates	(51,512)	(137,603)
Decrease in investments in associates	2,665	84,293
Acquisition of property and equipment	(265,045)	(141,530)
Proceeds from disposal of property and equipment	131,134	194,209
Acquisition of intangible assets	(88,918)	(126,555)
Proceeds from disposal of intangible assets	7,762	6,460
Acquisition of non-current assets held for sale	(37,535)	—
Disposal of non-current assets held for sale	97,380	3,192
Cash inflow related to lease, net	11,582	9,812
Decrease in guarantee deposits paid, net	111,507	130,067
Net cash flows used in investing activities	(3,284,253)	(9,820,380)
Financing activities		
Increase (decrease) in borrowings, net	(243,485)	(2,110,893)
Issuance of debentures	11,066,707	6,122,968
Redemption of debentures	(7,817,939)	(5,572,353)
Dividends paid	(600,200)	(420,000)
Dividends on hybrid equity securities	(11,823)	(9,813)
Net cash flows provided by (used in) financing activities	2,393,260	(1,990,091)
Net increase in cash and cash equivalents	(776,681)	1,594,860
Cash and cash equivalents at the beginning of the year	8,613,796	6,871,236
Effect of exchange rate changes on cash and cash equivalents	(398,074)	147,700
Cash and cash equivalents at the end of the year (Note 50)	₩ 7,439,041	₩ 8,613,796

The accompanying notes are an integral part of the consolidated financial statements

1. Company information

General information on KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Company") in accordance with KIFRS 1110 is as follows.

1.1 The Bank

The Bank was established on January 30, 1967, as a government-controlled bank to engage in foreign exchange and trade finance business under the *Korea Exchange Bank Act* enacted on July 28, 1966. On December 30, 1989, the *Korea Exchange Bank Act* was repealed, and the Bank was reorganized as a corporation under the Commercial Code of the Republic of Korea. On April 4, 1994, the Bank was listed on the Korea Exchange (formerly, Korea Stock Exchange). On February 28, 2004, the Bank merged its subsidiary, Korea Exchange Bank Credit Service Co., Ltd. On August 31, 2014, the Bank spun off its credit card division.

On February 9, 2012, Hana Financial Group Inc. ("HFG") acquired 52.27% equity interest in the Bank, and later on April 5, 2013, the Bank became a wholly owned subsidiary of HFG after HFG acquired the remaining interest in the Bank through the mutual exchange of the shares.

The Bank changed to its current name on September 1, 2015 following the merger of Korea Exchange Bank ("KEB Bank") and Hana Bank.

The Bank provides commercial banking service, trust banking service, merchant banking service, foreign exchange and other related services as permitted under the *Banking Act* of the Republic of Korea. As at December 31, 2017, the Bank's headquarters is located in Seoul, with its 775 domestic branches (including 79 satellite offices) and 24 overseas branches. (including 2 satellite offices and 5 other offices)

The Bank is authorized to issue 2,000 million shares of common stock, and as at September 30, 2017, after a number of capital increases and decreases, stock splits and conversion of preferred shares to common shares, the Bank has 1,071,915,717 shares of common stock issued and outstanding with the total paid-in capital of ₩5,359,578 million. The 2017 consolidated financial statements of the Company were approved by the Board of Directors on February 1, 2018.

1.2 Scope and overview of consolidation

The Company's ownership percentages in its consolidated subsidiaries as at December 31, 2017 are summarized as follows (ownership in %):

Investee	Country	Major business	Share ratio (%)	Reporting date
Subsidiaries of KEB Hana Bank				
Hana Bank (China) Co., Ltd.	China	Bank	100.00	December 31, 2017
Hana Micro Finance Ltd.	Myanmar	Other financial business	99.99	December 31, 2017
DGB Leading Solution PEF Invest Trust 143 (*)	Korea	Asset management company	100.00	December 31, 2017,
Hana UBS Power PEF Invest Trust 21 (*)	Korea	Asset management company	100.00	December 31, 2017,
Hyundai Trust PEF Invest 16 (*)	Korea	Asset management company	100.00	December 31, 2017,
Kyobo AXA Tomorrow PEF Invest Trust KH-1 (*)	Korea	Asset management company	100.00	December 31, 2017,
Sevenstar Co., Ltd. (*)	Korea	Other financial business	—	December 31, 2017,
Marine Solution Co., Ltd. (*)	Korea	Other financial business	—	December 31, 2017,
Joong-ang star Co., Ltd. (*)	Korea	Other financial business	—	December 31, 2017,

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
Okea Co., Ltd. (*)	Korea	Other financial business	—	December 31, 2017,
HS First Securitization Specialty Co., Ltd. (*)	Korea	Other financial business	—	December 31, 2017,
Antakya Co., Ltd. (*)	Korea	Other financial business	—	December 31, 2017,
Cosmosolution Co., Ltd. (*)	Korea	Other financial business	—	December 31, 2017,
Trust accounts guaranteeing the repayment of principal (*)	Korea	Trust account	—	December 31, 2017,
Hana F&I Inc.	Korea	Other financial business	99.58	December 31, 2017
KEB Hana Bank of Canada	Canada	Financial business	100.00	December 31, 2017
KEB Hana Bank (Deutschland) A.G. (KEBDAG)	Germany	Financial business	100.00	December 31, 2017
PT Bank KEB Hana	Indonesia	Financial business	89.01	December 31, 2017
Banco KEB Hana Do Brasil S.A. (KEBB)	Brazil	Financial business	100.0	December 31, 2017
KEB Hana NY Financial Corp (NYFinCo)	USA	Financial business	100.0	December 31, 2017
KEB Hana LA Financial Corp (LAFinCo)	USA	Financial business	100.0	December 31, 2017
KEB Hana Global Finance Limited (KAF)	Hong Kong	Financial business	100.0	December 31, 2017
KEB RUS LLC.	Russia	Financial business	99.99	December 31, 2017
Hana Bancorp., Inc.	USA	Financial business	90.56	December 31, 2017
KEB Hana Bank Mexico	Mexico	Financial business	99.99	December 31, 2017
Subsidiaries of Hana F&I Inc.				
KEBW First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2017
KEB Veritas Second Securitization Co., Ltd. (*)	Korea	Asset securitization	—	December 31, 2017
KEB Pepper First Securitization Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2017
KEBI First Securitization Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2017
KEBS Third Securitization Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2017
KEBT First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2017
KEB The Loft Co., Ltd. (*)	Korea	Asset securitization	—	December 31, 2017
HFS First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2017
Shinseung Building Co., Ltd. (*)	Korea	Asset securitization	—	December 31, 2017
Hana Stone First Co., Ltd. (*)	Korea	Asset securitization	—	December 31, 2017
Hana Stone Second Co., Ltd. (*)	Korea	Asset securitization	—	December 31, 2017
HFT Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	5.00	December 31, 2017
Hana Sinji First, Inc. (*)	Korea	Asset securitization	—	December 31, 2017
Hana Stone Fifth Co., Ltd. (*)	Korea	Asset securitization	—	December 31, 2017

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
Hana SH First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2017
HFS Second Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2017
Hana K First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2017
HFD First Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2017
HFDG Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	14.00	December 31, 2017
HFS 73A Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2017
HFS 73B Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2017
HFW 73 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2017
HFK 74 Securitization Specialty Co., Ltd. (*)	Korea	Asset securitization	9.00	December 31, 2017
Hyundai Veritas First Co., Ltd. (*)	Korea	Asset securitization	—	December 31, 2017
Subsidiaries of Hana Bancorp., Inc.				
KEB Hana Bank USA	USA	Banking services	100.00	December 31, 2017
BNB Statutory trust I	USA	Special Purpose Entities	—	December 31, 2017
Subsidiaries of KEB Hana Bank USA				
BNB Funding Corp.	USA	Special Purpose Entities	—	December 31, 2017

(*) Although the entities are structured SPCs, the Company recognized them as subsidiaries considering the company's exposure to the variable returns and ability to influence their operations.

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Condensed financial statements as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017					
Classification	Assets	Liabilities	Equity	Operation income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩8,297,563	₩7,389,211	₩908,352	₩330,758	₩37,326	₩(18,903)
Hana Micro Finance., Ltd.	17,282	1,595	15,687	4,256	1,178	(1,623)
Hana F&I Inc. (*)	601,718	488,792	112,926	38,785	8,216	7,534
KEB Hana Bank Canada	1,241,767	1,056,800	184,967	54,739	4,857	(4,148)
KEB Hana Bank (Deutschland) A.G.	852,509	760,518	91,991	49,976	4,202	5,013
PT Bank KEB Hana	3,089,878	2,596,898	492,980	266,775	63,395	5,109
Banco KEB Hana Do Brasil S.A.	197,873	155,446	42,427	19,520	3,207	(2,916)
KEB Hana NY Financial Corp.	304,127	247,602	56,525	13,874	4,906	(1,991)
KEB Hana LA Financial Corp.	321,583	264,057	57,526	12,268	3,503	(3,618)
KEB Hana Global Finance Limited.	190,609	130,183	60,426	7,952	806	(7,130)
KEB Hana Bank Russia.	216,159	196,870	19,289	67,743	352	10
Hana Bancorp., Inc. (*)	223,459	173,751	49,708	10,988	(3,335)	(8,437)
KEB Hana Bank Mexico	33,966	—	33,966	—	—	(1,206)
Trust accounts guaranteeing the repayment of principal	1,785,563	1,745,071	40,492	48,629	3,765	3,618

Condensed financial statements as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2016					
Classification	Assets	Liabilities	Equity	Operation income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩7,983,872	₩7,056,615	₩927,257	₩324,324	₩28,667	₩ (9,613)
Hana Micro Finance., Ltd.	12,361	733	11,628	2,113	1,019	1,648
Hana F&I Inc. (*)	553,514	475,718	77,796	37,257	359	105
KEB Hana Bank Canada	1,428,509	1,239,409	189,100	59,974	(2,302)	8,409
KEB Hana Bank (Deutschland) A.G.	835,177	748,196	86,981	73,365	3,801	2,438
PT Bank KEB Hana	3,118,265	2,650,333	467,932	220,408	57,105	81,456
Banco KEB Hana DoBrasil S.A.	173,083	127,740	45,343	16,202	4,177	12,911
KEB Hana NY Financial Corp.	457,930	399,413	58,517	14,552	4,335	5,189
KEB Hana LA Financial Corp.	309,733	248,589	61,144	13,014	2,587	4,461
KEB Hana Global Finance Limited.	206,279	138,705	67,574	8,954	2,003	4,227
KEB Hana Bank Russia.	183,851	163,349	20,502	75,579	882	4,939
Hana Bancorp., Inc. (*)	284,656	226,531	58,125	10,522	(8,580)	(7,656)
Trust accounts guaranteeing the repayment of principal	1,585,188	1,548,461	36,727	41,617	(307)	(307)

(*) The amounts presented are based on the consolidated of the controlling companies of these entities.

There is no entity excluded from the Company's scope of consolidation as at December 31, 2017 and 2016 even though the Company holds a majority of voting rights.

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Subsidiaries included in consolidation scope during the year ended December 31, 2017 are as follows:

Company	Reasons
Included in scope of consolidation:	
Subsidiaries of KEB Hana Bank.	
KEB Hana Bank Mexico	Newly invested
Subsidiaries of Hana F&I Inc.	
HFDG Securitization Specialty Co., Ltd.	Newly invested
HFS 73A Securitization Specialty Co., Ltd.	Newly invested
HFS 73B Securitization Specialty Co., Ltd.	Newly invested
HFW 73 Securitization Specialty Co., Ltd.	Newly invested
HFK 74 Securitization Specialty Co., Ltd.	Newly invested
Hyundai Veritas First Co., Ltd.	Newly invested
Excluded from the scope of consolidation:	
Subsidiaries of Hana F&I Inc.	
Hana Stone Third Co., Ltd.	Excluded due to the disposal
KEBS First Securitization Specialty Co., Ltd.	Excluded due to the disposal
Hongdae Picasso Co., Ltd.	Excluded due to the disposal
Hana Miraeasset Third Securitization Specialty Co., Ltd.	Excluded due to the disposal
Hana Hanmi First Co., Ltd.	Excluded due to the disposal
Hana Stone Sixth Co., Ltd.	Excluded due to the disposal
HFHB Securitization Specialty Co., Ltd.	Excluded due to the disposal
Hana Veritas First Co., Ltd	Excluded due to the disposal

1.2.1 Hana Bank (China) Co., Ltd. (Hana Bank China)

Hana Bank China was incorporated to engage in commercial banking, foreign currency exchanges and other related operations in China on December 14, 2007. The Bank contributed the assets and liabilities of the branches in Shanghai and Shenyang and its interests in the International Bank of Qingdao, which is the subsidiary of the Bank, to the Hana Bank China in the form of equity contributions on December 24, 2007. Hana Bank (China) Co., Ltd., one of subsidiaries in China, acquired and merged with KEB China, one of affiliates in the Hana Financial Group, on December 15, 2014. (Before the merger, equity interests in Hana Bank China were 59.7% for Hana Bank, 40.3% for Korea Exchange Bank). Its paid-in capital is 3.35 billion yuan as at December 31, 2017.

1.2.2 Hana Micro Finance, Ltd.

Hana Micro Finance Ltd., a subsidiary established in Yangon, Myanmar on August 7, 2014, is doing a small-loan finance service. The objective of the service is to satisfy low incomers' demand for small-loan finance and at the same time to lay the foundation for a retail market with excellent growth potential. As at December 31, 2017, its paid-in capital is 17.5 billion kyat and it owns a head office in Yangon.

1.2.3 Hana F&I Inc.

Hana F&I Inc. (former, KEB F&I) was established on September 11, 1989, to engage in equipment rental and other relevant businesses under the Specialized Credit Financial Business Act (formerly, Equipment Rental Business Act) and was listed on the Korea Securities Dealers Automated Quotation ("KOSDAQ") on January 15, 1995. KEB F&I has changed its name to KEB F&I Inc. KEB is restricted to control a company which runs the specialized credit financial business in accordance with the Financial Holding Companies Act Article 19 as on and after January 31, 2014. On October 17, 2013, KEB F&I's Board of Directors approved to change business field to investment in asset backed securities and asset management business in Asset-Backed Securitization Act. It changed its name from KEB F&I to Hana F&I Co. Ltd. on September 1, 2015. Its paid-in capital is 125,400 million won as at December 31, 2017.

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

1.2.4 KEB Hana Bank Canada

KEBOC was established in Toronto, Canada on October 6, 1981 to provide financial services to Korean companies and residents in Toronto and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2017. KEB Hana Bank Canada has gone through numerous capital increases after the establishment. Its paid-in capital is 83,400 thousand Canadian dollars as at December 31, 2017.

1.2.5 KEB Hana Bank (Deutschland) AG

KEBDAG was established in Frankfurt, Germany on December 29, 1992 to provide financial services to Korean companies and residents in Frankfurt and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2017. Its paid-in capital is 23,008 thousand euro as at December 31, 2017.

1.2.6 PT Bank KEB Hana

PT Bank KEB Hana was established in Jakarta, Indonesia on November 5, 1990 to provide financial services to Korean companies and residents in Jakarta. In accordance with the regulations of the Bank Indonesia, 2 or more local banks with the same ultimate parent company are prohibited to operate as an independent entity in Indonesia. Accordingly, PT Bank KEB Indonesia (KEBI), a subsidiary of the Bank, and PT Bank Hana, a subsidiary of Hana Bank, have completed a merger process on February 20, 2014 and changed the name to PT Bank KEB Hana. PT. Bank KEB Hana incorporated into a subsidiary of KEB on February 28, 2014 since KEB owned the major shares of PT. Bank KEB Hana after the acquisition. The Bank holds 89.01% stake of the company as at December 31, 2017.

1.2.7 Banco KEB Hana Do Brazil S.A.

KEBB was incorporated on May 21, 1999 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as at December 31, 2017. By increasing capital in 2012, its paid-in capital is 69,726 thousand Real as at December 31, 2017.

1.2.8 KEB Hana NY Financial Corp. (NYFinCo)

NYFinCo was established in New York, USA on April 8, 2004 to provide financial services to Korean companies and residents in New York and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2017. Its paid-in capital is 1 dollar as at December 31, 2017.

1.2.9 KEB Hana LA Financial Corp. (LAFinCo)

LAFinCo was established in Los Angeles, USA on July 2, 2009 to provide financial services to Korean companies and residents in Los Angeles and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2017. Its paid-in capital is 1 dollar as at December 31, 2017.

1.2.10 KEB Hana Global Finance Limited (KAF)

KAF was established on July 2, 2009 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as at December 31, 2017. Its paid-in capital is 50,000 thousand dollars as at December 31, 2017.

1.2.11 KEB RUS LLC

KEB launched a Moscow representative office in 2008 to provide financial information and consulting services for Korean and local companies in Russia. KEB RUS LLC was established on August 15, 2014 after obtaining

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

1.2.11 KEB RUS LLC (cont'd)

permission to operate corporation from Russian supervisory authorities in order to expand business area. The Bank holds 99.99% stake of the company as at December 31, 2017. Its paid-in capital is 1 billion roubles as at December 31, 2017.

1.2.12 Hana Bancorp., Inc.

Hana Bancorp, Inc. (formerly, BNB Financial Service Corporation) was incorporated on April 8, 1988 to engage in the bank business. HFG acquired ownership of BNB Financial Service Corporation and incorporated Hana Bancorp, Inc. as its subsidiary on August 30, 2013 and changed the name to Hana Bancorp, Inc. The Bank purchased the securities from HFG on March 28, 2016, and issued capital. The Bank holds 90.56% stake of the company as at December 31, 2017. Its paid-in capital is 16,571 thousand dollars as at December 31, 2017.

1.2.13 KEB Hana Bank Mexico

KEB Hana Bank Mexico was established in Mexico City on November 3, 2017 to engage in provision of financial services to Korean companies and local corporations. At the end of the reporting period, the Bank holds 99.99% interest in the entity. At the end of the reporting period, the local regulatory authority has not given permission to start the operations of KEB Hana Bank Mexico yet.

1.3 Structured entities

1.3.1 Consolidated structured entities

1.3.1.1 DGB Leading Solution PEF Investment Trust 143 and a set of 3 other private equity investment vehicles

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 4 private equity investment vehicles were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.2 Sevenstar Co., Ltd. and 6 other special purpose entities

In accordance with KIFRS 1110 *Consolidated Financial Statements*, 7 special purpose companies were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.3 Trust accounts

In accordance with KIFRS 1110 *Consolidated Financial Statements*, trust accounts are included in consolidation scope because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1. Company information (cont'd)

1.3 Structured entities

1.3.1 Consolidated structured entities

1.3.1.4 Contractual commitments to consolidated structured entities

Characteristics and intentions of contractual commitments offered by the Company to the consolidated structured entities are as follows:

Entity	The Characteristics and Purposes	Intention
Trust accounts guaranteeing the repayment of principal	The Company offers principal conservation commitment to trust accounts. The Company is required to conserve the deficit amount in case the trust account stands below the principal as a result of the operation	Credit risk mitigation on financial management of trust account
Joong-ang Star Co., Ltd.	The Company provides a ₩12,300 million loan to Joong-ang star Co., Ltd.	Operating activities
HS First Securitization Specialty Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩17,600 million) from HS First Securitization Specialty Co., Ltd.	Operating activities
Antakya Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩50,000 million) from Antakya Co., Ltd.	Operating activities
Cosmosolution co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩18,600 million) from Cosmosolution Co., Ltd.	Operating activities
KEBW First Securitization Specialty Co., Ltd.	Hana F&I Inc. purchased the unsubordinated securities and subordinated securities issued by KEBW First Securitization Specialty Co., Ltd. in the amount of ₩34,700 million.	Operating activities
KEB Veritas Second Co., Ltd	Hana F&I Inc. purchased the securities issued by KEB VERITAS Second Co., Ltd in the amount of ₩14,600 million.	Operating activities
KEB Pepper First Securitization Co., Ltd.	Hana F&I Inc. underwrote ₩4,900 million of senior bonds and ₩3,300 million of subordinated bonds issued by KEB Pepper First Securitization Co., Ltd.	Operating activities
KEBI First Securitization Co., Ltd.	Hana F&I Inc. underwrote ₩40,700 million of senior bonds and ₩40,700 million of subordinated bonds issued by KEBI First Securitization Co., Ltd.	Operating activities
KEBS Third Securitization Co., Ltd.	Hana F&I Inc. underwrote ₩21,600 million of subordinated bonds issued by KEBS Third Securitization Co., Ltd.	Operating activities
KEBT First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩14,200 million of bonds issued by KEBT First Securitization Specialty Co., Ltd.	Operating activities
KEB The Loft Co., Ltd.	Hana F&I Inc. underwrote ₩18,000 million of bonds issued by KEB The Loft Co., Ltd.	Operating activities
HFS First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩38,300 million of bonds issued by HFS First Securitization Specialty Co., Ltd.	Operating activities
Shinseung Building Co., Ltd.	Hana F&I Inc. underwrote ₩6,700 million of bonds issued by Shinseung Building Co., Ltd.	Operating activities
Hana Stone First Co., Ltd.	Hana F&I Inc. underwrote ₩17,500 million of bonds issued by Hana Stone First Co., Ltd.	Operating activities

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.1 Consolidated structured entities (cont'd)

1.3.1.4 Contractual commitments to consolidated structured entities (cont'd)

Entity	The Characteristics and Purposes	Intention
Hana Stone Second Co., Ltd.	Hana F&I Inc. underwrote ₩6,800 million of bonds issued by Hana Stone Second Co., Ltd.	Operating activities
HFT Second Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩36,300 million of bonds issued by HFT Second Securitization Specialty Co., Ltd.	Operating activities
Hana Sinji First Co., Ltd.	Hana F&I Inc. underwrote ₩5,000 million of bonds issued by Hana Sinji First Co., Ltd.	Operating activities
Hana Stone Fifth Co., Ltd.	Hana F&I Inc. underwrote ₩13,100 million of bonds issued by Hana Stone Fifth Co., Ltd.	Operating activities
Hana SH First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩21,000 million of bonds issued by Hana SH First Securitization Specialty Co., Ltd.	Operating activities
HFS Second Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩48,100 million of bonds issued by HFS Second Securitization Specialty Co., Ltd.	Operating activities
Hana K First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩85,600 million of bonds issued by Hana K First Securitization Specialty Co., Ltd.	Operating activities
HFD First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩26,500 million of bonds issued by HFD First Securitization Specialty Co., Ltd.	Operating activities
HFDG Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩16,300 million of bonds issued by HFDG Securitization Specialty Co., Ltd.	Operating activities
HFS 73A Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩84,100 million of bonds issued by HFS 73A Securitization Specialty Co., Ltd.	Operating activities
HFS 73B Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩60,900 million of bonds issued by HFS 73A Securitization Specialty Co., Ltd.	Operating activities
HFW 73 Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩81,700 million of bonds issued by HFW 73 Securitization Specialty Co., Ltd.	Operating activities
HFK 74 Securitization Specialty Co., Ltd	Hana F&I Inc. underwrote ₩53,875 million of bonds issued by HFK 74 Securitization Specialty Co., Ltd.	Operating activities
Hyundai Veritas First Co., Ltd	Hana F&I Inc. underwrote ₩8,900 million of bonds issued by Hyudai VERITAS First Co., Ltd.	Operating activities

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.2 Unconsolidated structured entities

1.3.2.1 The nature of the Company's interests in unconsolidated structured entities

Details of the nature of the Company's Interests in unconsolidated structured entities as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Type	Characteristics and purposes	Financing arrangement	Total assets December 31, 2017,	Total assets December 31, 2016
Special purpose company	Securitization of backed asset	Issuing ABL/ ABCP and others	₩14,197,661	₩11,793,436
Real estate finance	Operation for real estate (including SOC) development	Investment and borrowing	21,989,657	24,874,074
Shipping finance and primary market finance	Building or purchasing ships and NPL purchase, M&A	Investment and borrowing	10,003,122	12,095,352
Investment fund and trust	Managing investment property	Issuing beneficiary certificates	70,517,729	62,498,962

1.3.2.2 Maximum exposure to loss from interests in unconsolidated structured entities

Classification	December 31, 2017 Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund and trust
Assets				
Loans (A)	₩1,120,816	₩1,301,989	₩553,848	₩ 716,512
Securities (B)	744	66,595	—	6,114,844
Derivatives (C)	469	13,475	12,600	4,572
Others (D)	3,450	2,463	2,103	415
Liabilities				
Derivative liabilities	6,901	7,494	18,174	35,619
Provision	1,381	37	271	2
Others	3	24	168	20
Net asset	₩1,117,194	₩1,376,967	₩549,938	₩6,800,702
Maximum exposure to loss	3,124,189	1,470,701	790,318	6,841,445
Financial assets (A+B+C+D)	1,125,479	1,384,522	568,551	6,836,343
Credit and other commitment	1,998,710	86,179	221,767	5,102

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.2 Unconsolidated structured entities (cont'd)

1.3.2.2 Maximum exposure to loss from interests in unconsolidated structured entities (cont'd)

	December 31, 2016			
Classification	Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund and trust
Assets				
Loans (A)	₩1,768,805	₩1,614,679	₩ 913,886	₩1,148,752
Securities (B)	643	76,553	—	5,182,914
Derivatives (C)	39,182	8,936	47,165	111,598
Others (D)	3,874	3,119	3,019	409
Liabilities				
Derivative liabilities	1,278	30	570	1
Provision	746	4,374	14,322	5,001
Others	110	20	206	454
Net asset	₩1,810,370	₩1,698,863	₩ 948,972	₩6,438,217
Maximum exposure to loss	3,489,396	1,786,436	1,245,993	6,458,803
Financial assets (A+B+C+D)	1,812,504	1,703,287	964,070	6,443,673
Credit and other commitment	1,676,892	83,149	281,923	15,130

2. Scope and principles of consolidation

The Company prepares statutory consolidated financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Act on External Audit of Stock Companies*.

2.1 Subsidiaries

The Bank has the ability to determine the financial and operating policies of subsidiaries. Generally the Bank classified the entity as subsidiary in case the Bank has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee. Subsidiaries are fully consolidated from the date on which the control is transferred to the Company.

2.2 Offset of the investment accounts of the Company and the corresponding equity accounts

The investment accounts of the Company and the corresponding equity accounts of the subsidiaries are eliminated in consolidation.

2.3 Process of difference between the cost of investment

The consolidated financial statements reflect on only the share of the consolidated subsidiaries post-application of purchase accounting method. The difference between the cost of investment and the Company's share of the fair value of identifiable net assets and liabilities of the subsidiaries at the date of purchase accounting method application is presented as goodwill or negative goodwill. A review of impairment is performed at the end of each reporting date.

If the controlling company additionally acquires the subsidiaries' share, the elimination of subsidiaries' equity account is based on the acquisition date of shares. The difference between the investment accounts of the Company and the corresponding equity accounts of the subsidiaries is amounted to the consolidated capital surplus (or capital adjustment).

2. Scope and principles of consolidation (cont'd)

2.4 Elimination of intercompany transactions and the unrealized gain or loss, etc.

All significant intercompany transactions and the account balances among the consolidated companies are eliminated on consolidation. Unrealized gains or losses included in loans and borrowings arising from transactions between consolidated companies are eliminated on consolidation. The related accounts receivable and payable are also eliminated on consolidation.

2.5 Investments in associates

Investments in entities over which the Company has control or significant influence are accounted for using the equity method. Under the equity method of accounting, the Company's initial investment in an investee is recorded at acquisition cost. Subsequently, the carrying amount of the investment is adjusted to reflect the Company's share of income or loss of the investee in the statement of comprehensive income and share of changes in equity that have been recognized directly in the equity of the investee in the related equity account of the Company on the statement of financial position. If the Company's share of losses of the investee equals or exceeds its interest in the investee, it suspends recognizing its share of further losses. However, if the Company has other long-term interests in the investee, it continues recognizing its share of further losses to the extent of the carrying amount of such long-term interests. The Company resumes the application of the equity method if the Company's share of income or change in equity of an investee exceeds the Company's share of losses accumulated during the period of suspension of the equity method of accounting.

At the date of acquisition, the excess of the cost of the investment over the Company's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as goodwill or negative goodwill. The amortization expenses is included as a part of valuation gain or loss on the equity method investments in the statement of comprehensive income. The difference related to goodwill is recorded as the carrying amount. Goodwill is reviewed for the impairment when signs of damage arise and is not amortized over its useful life. Further, the Company's share of any difference between the net fair value of the investee's identifiable assets and liabilities, and the net book value of such assets and liabilities are amortized based on the investee's accounting treatments on the related assets and liabilities and charged or credited to the valuation gain or loss on the equity method investments in the statement of comprehensive income.

The Company's share in the investee's unrealized profits and losses resulting from transactions between the Company and its investee are eliminated to the extent of the interest in the investee.

2.6 Special reserve on trust accounts

A special reserve provided for the possible future losses on certain trust accounts under the arrangement of guaranteed fixed rate of return and repayment of the principal and guaranteed repayment of the principal is included under the retained earnings in the consolidated financial statements.

2.7 Non-controlling interests

Subsidiaries' equity which is not attributable to the Company's equity holders is accounted for as non-controlling interests. In case subsidiaries' non-controlling interests is below "0", minus non-controlling interests is presented as deduction of equity.

3. Basis of preparation and significant accounting policies

3.1 Basis of preparation

The Company prepares statutory consolidated financial statements in the Korean language in accordance with KIFRS enacted by the *Act on External Audit of Stock Companies*. The accompanying consolidated financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors' review report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Company's annual financial statements for the year ended December 31, 2016, except for the adoption of new standards and interpretation as at January 1, 2017. The nature and the impact of each new standard or amendment are described below:

3.2.1 Amendments to KIFRS 1007 *Statement of Cash Flows: Disclosure Initiative*

The amendments to KIFRS 1007 *Statement of Cash Flows* are part of the IASB's Disclosure Initiative and require an entity to provide disclosures that enable users of financial statements to evaluate changes in liabilities arising from financing activities, including both changes arising from cash flows and non-cash changes. On initial application of the amendment, entities are not required to provide comparative information for preceding periods. The Group has disclosed the information in Note 50-3.

3.2 Changes in accounting policies and disclosures

3.2.2 Amendments to KIFRS 1012 *Recognition of Deferred Tax Assets for Unrealized Losses*

The amendments clarify that an entity needs to consider whether tax law restricts the sources of taxable profits against which it may make deductions on the reversal of that deductible temporary difference. Furthermore, the amendments provide guidance on how an entity should determine future taxable profits and explain the circumstances in which taxable profit may include the recovery of some assets for more than their carrying amount. Entities are required to apply the amendments retrospectively. However, on initial application of the amendments, the change in the opening equity of the earliest comparative period may be recognized in the opening retained earnings (or in another component of equity, as appropriate), without allocating the change between opening retained earnings and other components of equity. Entities applying this relief must disclose that fact. These amendments are not expected to have any impact on the Company.

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's consolidated financial statements are disclosed below.

3.2.3 Amendments to KIFRS 1109: *Financial Instruments*

KIFRS 1109, enacted on September 25, 2015, is effective for annual periods beginning on or after January 1, 2018, with early application permitted. KIFRS 1109 will replace KIFRS 1039 *Financial Instruments: Recognition and Measurement.* The Company plans to apply KIFRS 1109 for annual periods beginning on or after January 1, 2018.

The new KIFRS 1109 is retrospectively applied in principle, but there are some exceptions such as exemption of restatement of comparative information for classification, measurement, impairment of financial instruments. For hedge accounting, the requirements are generally applied prospectively, with some exceptions such as accounting for time value of options.

Major characteristics of KIFRS 1109 are financial assets being classified and measured on the basis of the holder's business model and instrument's contractual cash flow characteristics, impairment model of financial instruments based on expected credit losses (ECL), broader range of hedged items and hedging instruments that qualify for the application of hedge accounting or changes in evaluation of hedging effectiveness etc.

For smooth adoption of KIFRS 1109, financial impact analysis, accounting policies establishment, accounting system establishment and stabilization need to take place. The impact of the standards on the financial statements in the period they are initially adopted may differ depending on the Company's decisions and judgments of accounting policies as well as economic environment and its financial instruments.

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.3 Amendments to KIFRS 1109: *Financial Instruments* (cont'd)

In connection with the adoption of KIFRS 1109, the Company completed the process of undertaking any update on its internal control processes or a change in the accounting system related to the reporting of financial instruments. Based on the result of analysis on the financial impact of the new standard on the financial statements based on the information available on December 31, 2017, the general impacts on the financial statements are as follows:

The result of a preliminary impact assessment may be subject to change due to additional information available to the Company and related decision making.

3.2.3.1 Financial asset classification and measurement

The new KIFRS 1109 requires a financial instrument to be classified and measured subsequently at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL), on the basis of the holder's business model and instrument's contractual cash flow characteristics as shown below. The requirements should be applied to an entire financial asset, even if it contains an embedded derivative.

	Contractual cash flow characteristics	
Business model	Composed solely of principal and interest	Other
Purpose of collecting contractual cash flows	Measured at amortized cost (*1)	
Purpose of collecting and selling contractual cash flows	Measured at FVOCI (*1)	Measured at FVTPL (*2)
Purpose of selling, others	Measured at FVTPL	

(*1) can be irrevocably designated at FVTPL in order to get rid of or reduce accounting mismatch.
(*2) can be irrevocably designated at FVOCI in case of equity securities not for held-for-trading purpose.

The requirements in KIFRS 1109 to classify financial assets measured at amortized costs or at FVOCI are stricter than KIFRS 1039, and thus, the proportion of financial assets measured at FVTPL may increase, which may lead to a rise in profit or loss volatility at the adoption of KIFRS 1109.

As at December 31, 2017, the Group has loans and receivables of ₩256,631,749 million, financial assets at fair value through profit or loss of ₩9,443,614 million, available-for-sale financial assets of ₩44,322,512 million and held-to-maturity investments of ₩6,160,922 million.

In accordance to KIFRS 1109, a debt security that meets the following two conditions must be measured at FVTPL: 1) the contractual terms of the financial asset give rise to cash flows which are not solely payments of principal and interest on the principal amount outstanding, and 2) the objective of the entity's business model is to sell and purchase the financial asset. Also, equity security not designated as measured at FVOCI must be measured at FVTPL. The Company holds ₩2,835,194 million and ₩50,932 million of debt securities and equity securities, respectively, classified as financial assets at FVTPL as at December 31, 2017.

In accordance with KIFRS 1109, a debt security that meets the following two conditions must be measured at FVOCI: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the financial asset is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets.

As at December 31, 2017, the Group has debt securities classified as available-for-sale financial assets of ₩40,270,208 million. Of these, ₩2,563 million is included in financial instruments for which the host contract is a debt instrument after separating embedded derivatives from a hybrid contract.

In accordance with KIFRS 1109, an equity security is classified as FVTPL in principle but an entity can make an irrevocable election at initial recognition to measure it at FVOCI, and subsequent recycling from comprehensive income to profit or loss is not permitted. The Company's equity securities classified as available-for-sale financial assets as at December 31, 2017 are ₩4,052,304 million.

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.3 Amendments to KIFRS 1109: *Financial Instruments* (cont'd)

3.2.3.1 Financial asset classification and measurement (cont'd)

In accordance to KIFRS 1109, a debt security that meets the following two conditions must be measured at amortized cost: 1) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding, and 2) the objective of the entity's business model is to hold the financial asset to collect the contractual cash flows. As at December 31, 2017, the Company has recorded loans and receivables of ₩256,631,749 million and held-to-maturity financial assets of ₩6,160,922 million as amortized cost.

As at December 31, 2017, the following table summarizes the impacts on the classification and measurement of financial assets (excluding derivatives) held by the Company. The results of preliminary impact assessment may change due to additional information available and related decision making (Korean won in millions):

Classification based on KIFRS 1039	Classification based on KIFRS 1109	Amounts based on KIFRS 1039	Amounts based on KIFRS 1109
Loans and receivables			
Cash and due from banks	Measured at amortized cost	₩ 19,983,916	₩ 19,983,916
Loan receivables	Measured at FVTPL	224,096,709	164,718
	Measured at amortized cost		223,842,854
Other financial assets	Measured at amortized cost	12,551,124	12,550,723
		256,631,749	256,542,211
Financial assets at fair value through profit or loss	Measured at FVTPL	9,443,614	9,441,939
Available-for-sale financial assets	Measured at FVTPL		3,214,215
	Measured at FVOCI	44,322,512	41,093,293
	Measured at amortized cost		13,939
		44,322,512	44,321,447
Held-to-maturity financial assets	Measured at amortized cost	6,160,922	6,159,501
		₩316,558,797	₩316,465,098

In accordance with KIFRS 1109, ₩164,718 million of loans and receivables and held-to-maturity financial assets measured at amortized cost as at December 31, 2017 and ₩3,214,215 million of available-for-sale financial assets will be classified as financial assets at FVTPL. The proportion of financial assets at FVTPL in the financial assets (excluding derivatives for hedging) will increase from 3.0% to 4.1%, resulting in a slight increase in the volatility of profit or loss due to changes in the fair value of financial assets.

3.2.3.2 Financial liabilities classification and measurement

In KIFRS 1109, fair value changes of financial liabilities designated at FVTPL attributable to changes in credit risk of the financial liability shall be presented in other comprehensive income, not in profit or loss. Amounts presented in other comprehensive income shall not be subsequently recycled to profit or loss. However, the new standard allows the recognition of the full amount of change in the fair value in profit or loss only if the presentation of the changes in the financial liability's credit risk in other comprehensive income would create or enlarge an accounting mismatch in profit or loss.

The fair value changes of financial liabilities designated at FVTPL that were previously recognized as profit or loss in KIFRS 1039 will partially be recorded as other comprehensive income and thus profit or loss related to the evaluation of financial liabilities may decrease.

Based on the results of preliminary impact assessment, if KIFRS 1109 is applied to the financial liabilities as at December 31, 2017, changes in credit risk of the financial liabilities are insignificant and thus, these financial liabilities are not expected to have impact on the financial statements.

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.3 Amendments to KIFRS 1109: *Financial Instruments* (cont'd)

3.2.3.3 Impairment: financial assets and contract assets

In KIFRS 1039, impairment is recognized only when there is objective evidence of impairment based on incurred loss model. In the new KIFRS 1109, impairment of debt instruments, lease bonds, contract assets, loan commitments and financial guarantee contracts that are measured at amortized costs or at FVOCI is recognized based on the expected credit loss (ECL) impairment model.

KIFRS 1109 outlines a 'three-stage' model for impairment based on changes in credit risk since initial recognition. Loss allowance is measured based on the 12-month ECL or life-time ECL which allows early recognition of credit loss compared to the incurred loss model of KIFRS 1039.

	Classification	Loss allowance
Stage 1	Assets with no significant increase in credit risk since initial recognition	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date.
Stage 2	Assets with significant increase in credit risk since initial recognition	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument.
Stage 3	Credit-impaired assets	

In KIFRS 1109, accumulated changes in the life-time ECL after initial recognition are taken into account as loss allowance in case credit is impaired at initial recognition of financial assets.

The following table summarizes the estimated impact on the loss allowance and provisions as at December 31, 2017 (Korean won in millions):

Classification		Book value	Loss allowance based on KIFRS 1109
Loans	Stage 1	₩149,693,124	₩ 249,326
	Stage 2 (*)	63,223,205	369,381
	Stage 3	2,383,401	832,025
	Subtotal	215,299,730	1,450,732
Debt securities		45,552,961	9,896
	Total	₩260,852,691	₩1,460,628

Classification		Loss allowance based on KIFRS 1109
Off-balance Account	Stage 1	₩ 34,416
	Stage 2 (*)	42,495
	Stage 3	66,516
	Total	₩143,427

(*) After the merger of Hana Bank and KEB Bank on September 1, 2015, the new credit rating model was applied to the system integration on June 7, 2016. However, since the loans handled before the system integration do not have the past performance level of the integrated model, the Company plans to recognize the loss allowance at an amount equal to the life-time ECL (stage 2) at the adoption of KIFRS 1109 based on the related regulations.

Based on the preliminary impact assessment results, the ratio of total equity based in Basel III as at December 31, 2017 is estimated to be 15.67%, which has decreased by 0.31% from the current 15.98%.

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.3 Amendments to KIFRS 1109: *Financial Instruments* (cont'd)

3.2.3.3 Impairment: financial assets and contract assets (cont'd)

The result of a preliminary impact assessment may be subject to change due to additional information available to the Company and related decision making.

3.2.3.4 Hedge accounting

The new KIFRS 1109 maintains mechanics of hedge accounting (fair value hedge, cash flow hedge and a hedge of a net investment in a foreign operation) as set forth in KIFRS 1039. However, unlike requirements in KIFRS 1039 that are too complex and strict, KIFRS 1109 is more practical, principle based and less strict and focuses on the entity's risk management activities. Also, KIFRS 1109 allows broader range of hedged items and hedging instruments. Under KIFRS 1039, a hedge is assessed to be highly effective only if the offset is in the range of 80-125 percentage by performing numerical test of effectiveness. In KIFRS 1109, such requirements are alleviated.

Transactions not qualifying for hedge accounting requirements of KIFRS 1039 may now qualify for hedge accounting under KIFRS 1109, resulting in less volatility in profit or loss.

The sum of assets and liabilities to which the Company applies hedge accounting as at December 31, 2017 is ₩4,643,723 million (including ₩618,896 million of hedged item of net investment risk in a foreign operation). Based on the application of hedge accounting, ₩(-)17,348 million of fair value changes in hedged items of fair value risk are recognized as current profit or loss during 2017. ₩42,427 million in exchange rate changes of hedging instrument of net investment risk in a foreign operation recognized as current profit or loss transferred to other comprehensive income. As at December 31, 2017, the exchange rate changes of hedging instrument of net investment risk in a foreign operation accumulated as other comprehensive income are ₩12,712 million.

Pursuant to transitional provisions of hedge accounting, the Company may choose to continue hedge accounting under KIFRS 1039 at first-time adoption of KIFRS 1109

3.2.4 Amendments to KIFRS 1115: *Revenue from contract with customers*

KIFRS 1115 establishes a five-step model to account for revenue arising from contracts with customers. Under KIFRS 1115, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The new revenue standard will supersede all current revenue recognition requirements under KIFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018. Early adoption is permitted. The Company does not expect that the amendments will have significant impact on its financial statements.

3.2.5 Amendments to KIFRS 1116 *Leases*

KIFRS 1116 replaces KIFRS 1017 *Leases*, KIFRS 2104 *Determines whether an Arrangement contains a Lease*, KIFRS 2015 *Operating Leases-Incentives* and KIFRS 2027 *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*. KIFRS 1116 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases under a single on-balance sheet model similar to the accounting for finance leases under KIFRS 1017. The standard includes two recognition exemptions for lessees – leases of 'low-value' assets (e.g., personal computers) and short-term leases (i.e., leases with a lease term of 12 months or less). At the commencement date of a lease, a lessee will recognise a liability to make lease payments (i.e., the lease liability) and an asset representing the right to use the underlying asset during the lease term (i.e., the right-of-use asset). Lessees will be required to separately recognise the interest expense on the lease liability and the depreciation expense on the right-of-use asset.

Lessees will be also required to remeasure the lease liability upon the occurrence of certain events (e.g., a change in the lease term, a change in future lease payments resulting from a change in an index or rate used to determine

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.5 Amendments to KIFRS 1116 *Leases* (cont'd)

those payments). The lessee will generally recognise the amount of the remeasurement of the lease liability as an adjustment to the right-of-use asset.

Lessor accounting under KIFRS 1116 is substantially unchanged from today's accounting under KIFRS 1017. Lessors will continue to classify all leases using the same classification principle as in KIFRS 1017 and distinguish between two types of leases: operating and finance leases.

KIFRS 1116 also requires lessees and lessors to make more extensive disclosures than under KIFRS 1017.

KIFRS 1116 is effective for annual periods beginning on or after January 1, 2019. Early application is permitted, but not before an entity applies KIFRS 1115. A lessee can choose to apply the standard using either a full retrospective or a modified retrospective approach. The standard's transition provisions permit certain reliefs.

The Company is assessing the potential effect of the amendments on its consolidated financial statements. The Company will apply these amendments on the required effective date.

3.2.6 Amendments to KIFRS 1102: *Share-based payment transactions*

It is clarified that a fair value measurement method of a cash-settled transaction and an accounting basis of amending terms are the same as those of an equity-settled transaction. These amendments can be applied for annual periods beginning on or after January 1, 2018. Early adoption of these amendments is permitted. These amendments are not expected to have any impact on the Company.

3.2.7 Amendments to KIFRS 1110 and KIFRS 1028 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture.*

The amendments address the conflict between KIFRS 1110 and KIFRS 1028 in dealing with the loss of control of a subsidiary that is sold or contributed to an associate or joint venture. The amendments clarify that the gain or loss resulting from the sale or contribution of assets that constitute a business, as defined in KIFRS 1103, between an investor and its associate or joint venture, is recognized in full. Any gain or loss resulting from the sale or contribution of assets that do not constitute a business, however, is recognized only to the extent of unrelated investors' interests in the associate or joint venture. The IASB has deferred the effective date of these amendments indefinitely, but an entity that early adopts the amendments must apply them prospectively. The amendments are not expected to have any impact on the Company's financial statements.

3.3 Foreign currency transaction

3.3.1 Functional currency

When preparing for the consolidated financial statements, the Company measures and recognizes all items and transactions according to the functional currency. The term, functional currency, is defined as the monetary unit of account of the principal economic environment in which the entity operates, and trades between entities using its own functional currency and other currencies which are converted to the Company's functional currency to be measured and recognized.

3.3.2 Transactions and balances at the end of the reporting period

Transactions in foreign currencies are initially recorded at the spot rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the spot rate of exchange at the reporting date. Non-monetary items measured at fair value in a foreign currency are translated at the exchange rates at the end of reporting date. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange

3. Basis of preparation and significant accounting policies (cont'd)

3.3 Foreign currency transaction (cont'd)

3.3.2 Transactions and balances at the end of the reporting period (cont'd)

component of that gain or loss is recognized in profit or loss. Non-monetary items not measured at fair value in a foreign currency are translated using the exchange rates as at the dates of the initial transactions and thus there are no exchange differences.

The Company may have a monetary item that is receivable from or payable to a foreign operation. An item for which settlement is neither planned nor likely to occur in the foreseeable future is, in substance, a part of the entity's net investment in that foreign operation. Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment

3.3.3 Translation of the presentation currency

As at the reporting date, the assets and liabilities of overseas branches are translated into the Company's presentation currency, Korean won (KRW), at the rate of exchange as at the reporting date, and their statement of comprehensive income and equity are translated using the exchange rates at transaction date or the average exchange rates for the period. Exchange differences arising on translation are taken directly to a separate component of equity. On disposal of a foreign entity, the deferred cumulative amount recognized in equity related to that particular foreign operation is recognized in 'Other operating expenses' or 'Other operating income' in the statement of comprehensive income.

3.4 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position comprise of cash at Banks and on hand and short-term deposits with an original maturity of three months or less. The purpose of cash and cash equivalents is to make short-term investments and to meet short-term cash demands. Cash and cash equivalents are highly liquidable, easily convertible and subject to changes in value.

3.5 Financial assets – classification and subsequent measurement

All financial assets are classified as financial assets at FVTPL, available-for-sale financial assets, held-to-maturity financial assets, and loans and receivables. The Company determines the classification of its financial assets at initial recognition.

All financial assets are initially recognized on the trade date, i.e., the date that the Company becomes a party to the contractual provisions of the instrument. This includes 'Regular way trades': purchases or sales of financial assets that require delivery of assets within the time frame generally established by regulation or convention in the market place.

The classification of financial assets at initial recognition depends on their purpose and characteristics and the management's intention in acquiring them. All financial assets are measured initially at their fair value plus transaction costs, except in the case of financial assets recorded at FVTPL.

3.5 Financial assets – classification and subsequent measurement

3.5.1 Financial assets at FVTPL

Financial assets at fair value through profit or loss include financial assets held-for-trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held-for-trading if they are acquired for the purpose of selling or repurchasing in the short-term. This category includes derivative financial instruments entered into by the Company that are not designated as hedging instruments as defined by KIFRS 1039 *Financial Instruments: Recognition and Measurement*. Derivatives, including separate embedded derivatives are also classified as held-for-trading unless they are designated as effective hedging instruments.

3. Basis of preparation and significant accounting policies (cont'd)

3.5 Financial assets – classification and subsequent measurement (cont'd)

3.5.1 Financial assets at FVTPL (cont'd)

Financial assets at FVTPL are carried in the statement of financial position at fair value with changes in fair value recognized in finance income or finance cost in the statement of comprehensive income.

3.5.2 Available-for-sale financial assets

Available-for-sale financial assets are defined as financial assets that are neither classified as held-to-maturity financial assets nor loans and financial assets held-for-trading, and that are also not financial assets designated at FVTPL. Available-for-sale financial assets are non-derivative financial assets that are designated upon initial recognition as available-for-sale financial assets. Available-for-sale financial assets are subsequently measured at fair value with gain or loss arising from a change in the fair value as other comprehensive income, except for foreign exchange or translation gain (loss) for monetary assets directly recognized as interest income, gain or loss based on EIR and impairment loss. However, equity instruments whose market price is not quoted from an active market and fair value cannot be reliably measured are stated at cost. Accumulated other comprehensive income previously recognized in equity is recognized in the statement of comprehensive income when the investment is disposed of or impairment loss for the investment is recognized. Dividends earned whilst holding available-for-sale financial assets are recognized in the statement of comprehensive income when the right of the payment has been established.

3.5.3 Held-to-maturity financial assets

Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held-to-maturity when the Company has the positive intention and ability to hold them to maturity. From initial measurement, held-to-maturity financial assets are measured at amortized cost using the EIR, less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of comprehensive income. The losses arising from impairment are recognized in finance costs in the statement of comprehensive income.

3.5.4 Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, such financial assets are subsequently measured at amortized cost using the EIR, less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of comprehensive income except for short-term loans and receivables which the recognition of interest income is deemed immaterial.

The Company defers LOF/LOCs associated with originating loans and LOCs that have future economic benefits. Loan balances are reported net of these LOF/LOCs. The deferred LOF/LOCs are amortized based on the effective interest rate method with the amortization recognized as adjustments to interest income.

3.6 Derivative financial instruments and hedge accounting

Derivative financial instruments are classified as trading derivatives or hedging derivatives depending on whether hedge accounting is applied or not, and are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Any gains or losses arising from changes in fair value on derivatives are taken directly to the statement of comprehensive income, except for the effective portion of cash flow hedges or hedges of net investment in a foreign operation, which is recognized in other comprehensive income.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment (except for foreign currency risk)

3. Basis of preparation and significant accounting policies (cont'd)

3.6 Derivative financial instruments and hedge accounting (cont'd)

- Cash flow hedges when hedging exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or also the foreign currency risk in an unrecognized firm commitment

At the inception of a hedge relationship, the Company formally designates and documents the hedge relationship to which the Company wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the entity will assess the effectiveness of changes in the hedging instrument's fair value in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

Hedges which meet the strict criteria for hedge accounting are accounted for as follows:

3.6.1 Fair value hedges

When fair value hedge accounting is applied, the unrealized gain or loss on hedged items that are attributable to a hedged risk and hedging instruments is symmetrically recognized in the consolidated statement of comprehensive income for the same reporting period to ensure that changes in the fair value of the hedged items are offset by changes in the fair value of the hedging instruments. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively. Any adjustment to the carrying amount of hedged items is amortized to profit or loss in the consolidated statement of comprehensive income over the remaining maturity using the effective interest rate method.

3.6.2 Cash flow hedges

When cash flow hedge accounting is applied, the effective portion of the unrealized gain or loss on the hedging instrument is directly recognized in other comprehensive income (loss) in the consolidated statement of financial position to ensure that changes in the cash flows of the hedged items are offset by changes in the cash flows of the hedging instruments while any ineffective portion is recognized immediately in the consolidated statement of comprehensive income. Amounts recognized as other comprehensive income are transferred to the consolidated statement of comprehensive income when the hedged transaction affects profit or loss. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively and the cumulative gain or loss on the hedging instrument previously recognized in other comprehensive income are transferred to profit or loss in the consolidated statement of comprehensive income.

3.6.3 Hedge accounting of net investment in a foreign operation

When applying hedge accounting of net investment in a foreign operation, the effective portion of changes in fair value of the hedging instrument is recognized in other comprehensive income, and the ineffective portion of the hedge is recognized as current profit or loss in order to offset changes in the fair value of the hedged item caused by the hedging with changes in the fair value of the hedging instrument. The effective portion of hedge recognized in other comprehensive income will be re- classified from other comprehensive income to current profit or loss in accordance with KIFRS 1021 'The Effects of Changes in Foreign Exchange Rates' at the time of disposal of a foreign operation or disposal of a portion of its foreign operations in the future

3.6.4 Embedded derivatives

Derivatives embedded in other financial instruments or other host contracts are accounted for as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVPTL.

3. Basis of preparation and significant accounting policies (cont'd)

3.6 Derivative financial instruments and hedge accounting (cont'd)

3.6.5 'Day 1' profit or loss

In case of derivatives in level 3 (see Note 5), whose fair value is determined using data which is not observable from markets, the difference between the transaction price and fair value at initial recognition (a 'Day 1' profit or loss) is deferred and amortized over the life of the associated instrument using the straight-line method and the amortization is recognized in the statement of comprehensive income.

3.6.6 Credit risk valuation adjustment

When assessing derivatives at fair value, expected loss from credit risk is measured and deducted from derivative assets to reflect credit risk of counterparties.

3.7 Impairment of financial assets

The Company assesses at each reporting date whether there is any objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred loss event) and if that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization and where observable data indicates that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

3.7.1 Available-for-sale financial assets

For available-for-sale financial assets, the Company assesses at each reporting date whether there is objective evidence that an asset is impaired. When there is evidence of impairment, the cumulative loss measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that investment previously recognized in the statement of comprehensive income, is removed from other comprehensive income and recognized in the statement of comprehensive income.

In the case of equity investments classified as available-for-sale, objective evidence would include a 'significant' or 'prolonged' decline in the fair value of the investment below its cost. Impairment loss on equity investments is not reversed through the statement of comprehensive income; increases in their fair value after impairment are recognized directly in other comprehensive income. In the case of debt investments classified as available-for-sale, if, in a subsequent year, increases in the fair value because of an event occurring after the impairment were recognized, the previously recognized impairment is reversed.

3.7.2 Held-to-maturity financial assets

When objective evidence exists for the impairment of a particular held-to-maturity financial asset, the Company calculates the difference between the carrying amount and the present value of the estimated future cash flows using the EIR. If, in subsequent years, the amount of the estimated impairment loss decreases because of an event occurring after the impairment was recognized, the previously recognized impairment is reversed and reduced by adjusting the allowance account. If the carrying amount does not reflect the impairment at the initial recognition after the reversal, the amount cannot exceed the amortized cost at the date of the reversal recognition.

3.7.3 Loans and receivables

The Company first assesses individually whether objective evidence of impairment exists for financial assets that are individually significant or collectively for financial assets that are not individually significant. If the Company determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk

3. Basis of preparation and significant accounting policies (cont'd)

3.7 Impairment of financial assets (cont'd)

3.7.3 Loans and receivables (cont'd)

characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has been incurred, the amount of the individual impairment loss is measured as the difference between the assets' carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The carrying amount of the asset is reduced through the use of an allowance account and the amount of the individual impairment loss is recognized in the statement of comprehensive income. Interest income continues to be accrued on the reduced carrying amount and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the amount of the individual impairment loss.

The present value of the estimated future cash flows is discounted at the financial assets original EIR. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current EIR. The calculation of the present value of the estimated future cash flows of a collateralized financial asset reflects the cash flows that may result from foreclosure less costs for obtaining and selling the collateral, whether or not foreclosure is probable.

For the purpose of a collective evaluation of impairment, financial assets are grouped on the basis of the Company's internal credit grading system, that considers credit risk characteristics such as asset type, industry, geographical location, collateral type, past-due status and other relevant factors.

A collective evaluation of impairment is based on incurred loss model. The ratio of allowance for possible loan losses on credit by collective assessment is the incurred but not reported possibility of default (IBNR PD) times loss given default (LGD). IBNR PD is estimated by applying Loss Emergence Period (LEP) to Probability of default (PD) regulated by Basel II on the basis of historical loss experience for a group of loan receivables with similar credit risk characteristics. LGD is estimated by applying EIR of a group of loan receivables and reflecting types of products and collaterals.

3.8 Reclassification of financial assets

The Company may reclassify in rare circumstances, financial assets out of the 'held-for-trading' category and into the 'available-for-sale', 'loans and receivables', or 'held-to-maturity' categories. However, in non-rare cases the Company may reclassify financial assets at FVTPL out of the 'held-for-trading' category and into the 'loans and receivables' category if it meets the definition of loans and receivables and the Company has the intention and ability to hold the financial assets for the foreseeable future or until maturity.

The Company may reclassify financial assets out of the 'available-for-sale' category arising from being designated as available-for-sale financial assets and into the 'loans and receivables' category if it meets the definition of loans and receivables and the Company has the intention and ability to hold the financial assets for the foreseeable future or until maturity.

The Company may reclassify financial assets out of the 'held-to-maturity' category and into the 'available-for-sale' category if the Company's intention or ability to hold the financial assets until maturity changes and it becomes no longer proper to classify the financial assets as 'held-to-maturity. However, all held-to-maturity financial assets the Company holds at the time of reclassification are reclassified into available-for-sale financial assets if the amounts of the reclassified financial assets are not insignificant.

3.9 Derecognition of financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired.

3. Basis of preparation and significant accounting policies (cont'd)

3.9 Derecognition of financial assets (cont'd)

- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'Pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Company has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all the risks and rewards of the asset, nor transferred control of the asset, the asset is recognized to the extent of the Company's continuing involvement in the asset. In that case, the Company also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Company has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Company could be required to repay.

3.10 Recognition and measurement of financial liabilities

All financial liabilities are classified as financial liabilities at FVTPL, borrowings or others and measured initially at their fair value plus transaction costs, except in the case of financial liabilities recorded at FVTPL.

3.10.1 Financial liabilities at FVTPL

Financial liabilities at fair value through profit or loss include financial liabilities held-for-trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held-for-trading if they are acquired for the purpose of selling in the near term. All financial liabilities including an embedded derivative separated from the host contract are reclassified as financial liabilities at fair value through profit or loss except for financial liabilities designated as effective hedging instruments or financial guarantee contracts. After initial recognition, the changes in the fair value of the financial liabilities at fair value through profit or loss and the related interest expenses are recognized as profit or loss.

The Company performs securities lending and borrowing classified to held-for-trading financial liabilities. When the Company borrows securities from Korea Securities Depository, securities borrowed are managed as memorandum value and when selling them, they are recorded as securities sold. At closing, the difference in the price securities are sold and the market price prevailing on the closing date is taken into account as valuation gain or loss on securities sold, and at the time of selling the securities, the difference in book value and the price securities are purchased is recorded as trading gain or loss on securities sold.

3.10.2 Deposits, borrowings, and debentures

After initial recognition, interest bearing deposits, borrowings and debentures are subsequently measured at amortized cost using the EIR. Gains and losses are recognized in the statement of comprehensive income when the liabilities are derecognized as well as through the EIR amortization process.

3.11 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the statement of comprehensive income.

3. Basis of preparation and significant accounting policies (cont'd)

3.12 Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.

3.13 Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The provision is used only for expenditures for which the provision was originally recognized. If the effect of the time value of money is material, provisions are stated at present value.

Confirmed acceptances and guarantees, unconfirmed acceptances and guarantees and bills endorsed are not recognized on the statement of financial position, but are disclosed as off-statement financial position items in the notes to the financial statements. The Company provides a provision for such off-statement financial position items, applying a Cash Conversion Factor (Cash CF) and provision rates, and records the provision as a reserve for possible losses on acceptances and guarantees. The Company provides an allowance for possible losses on a certain portion of unused credit line. The Company records the provision for such unused balances as an allowance for possible losses on unused commitments which are calculated by applying a Credit Conversion Factor (CCF) and provision rates.

3.14 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument and is measured at fair value on date of initial recognition. After initial recognition, the Company, as an issuer of such a contract, measures it at the higher of (i) the amount determined in accordance with KIFRS 1109 and (ii) the amount initially recognized less, when appropriate, cumulative amortization recognized in accordance with KIFRS 1115.

3.15 Bonds purchased under resale agreements and bonds sold under repurchase agreements

Bonds purchased under resale agreements and bonds sold under repurchase agreements are included in loans and borrowings, respectively, in the accompanying statement of financial position. Interest income and expenses from purchase or sale are recognized as interest income on loan receivables and interest expenses on borrowings.

3.16 Property and equipment

Property and equipment are stated at historical cost, less accumulated depreciation. Such cost includes an expenditure which has directly occurred for the acquisition of the asset.

The initial and subsequent costs are recognized as an asset when it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. The other maintenances and repairs are expensed in the year in which they are incurred and the carrying amount of certain parts that are replaced is derecognized.

Land is not depreciated. For depreciation of other assets, amount of acquisition cost less residual value is calculated on a straight-line and declining balance basis over the following estimated useful life of the asset.

Classification	Depreciation method	Years
Buildings	Straight-line method	5 to 55
Leasehold improvements	Straight-line method	3 to 10
Equipment and vehicles	Declining balance method	3 to 20

3. Basis of preparation and significant accounting policies (cont'd)

3.16 Property and equipment (cont'd)

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is immediately reduced to its recoverable amount. The residual value and economic useful life are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for if necessary. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognized in 'other operating income' in the statement of comprehensive income in the year the asset is derecognized.

3.17 Investment properties

Investment properties are measured initially at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met; and excludes the costs of day-to-day servicing of an investment property. Subsequent to initial recognition, investment properties are stated using the cost model.

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of comprehensive income in the period of derecognition, and transfers are made to or from investment property only when there is a change in use. Depreciation method to measure buildings which are classified as investment properties is the straight-line method with useful lives ranging from 5 to 55 years.

3.18 Intangible assets

An intangible asset which comprises industrial property right, software, development costs and others is recognized as an asset only if it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. Intangible assets acquired individually are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as at the date of acquisition in accordance to KIFRS 1103 "*Business Combination*." Amortization of intangible assets with definite useful lives is calculated on the following amortization method over the estimated useful life of the assets.

Classification	Depreciation method	Years
Industrial property right, software, system development costs	Straight-line method	5
Other intangible assets	Straight-line method	1 to 27

Intangible assets with indefinite useful lives are not amortized but are annually tested for impairment or whenever there is an indication that the intangible asset may be impaired. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable.

3.19 Impairment of non-financial assets

The Company assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Company estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs to sell and its value in use. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

3.20 Net defined benefit liabilities

The Company calculates defined benefit liabilities and pension benefit expenses based on defined benefit plan and defined contribution plan when an employee retires in accordance to pension related regulations. For defined benefit plans, the cost of retirement benefits is measured by an actuary services company, using the projected unit credit method. The present value of defined benefit obligation is computed by discounting expected future

3. Basis of preparation and significant accounting policies (cont'd)

3.20 Net defined benefit liabilities (cont'd)

cash outflows with market rate of return measured against the yield of high-graded corporate bond whose date of payment and maturity is similar to that of a defined benefit obligation. Actuarial gains and losses, incurred from the change in actuarial assumptions and the difference between the assumptions and the actual results, are recognized in other comprehensive income for the period. Past service cost is recognized immediately to the extent that the benefits are already vested and otherwise is amortized on a straight-line basis over the period until the benefits become vested.

The Company has entered into retirement trust fund and retirement pension plan agreements to pay retirement benefits to its employees. The retirement benefit obligation represents the present value of the defined benefit obligation as adjusted for unrecognized past service cost and as reduced by the fair value of plan assets. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

3.21 Share-based payment transactions

Employees (including senior executives) of the Company receive remuneration in the form of share-based payment transactions, whereby employees render services as consideration for equity instruments, or they are granted share appreciation rights, which can only be settled in cash. If the goods or services provided cannot be reliably measured, the endowed equity is indirectly estimated at fair value and the Company accounts for compensation costs and equity.

The cost of cash-settled transactions is measured initially at fair value at the grant date, taking into account the terms and conditions upon which the instruments were granted. This fair value is expensed over the period until vesting with recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to and including the settlement date, which changes in fair value recognized in the statement of comprehensive income. Also, in the case of a selectable share-based payment transaction in which the employees have a choice between a cash-settled transaction and an equity-settled transaction, the Company records the amount depending on its materiality.

3.22 Employee benefits

3.22.1 Short-term employee benefits

When employees have rendered services to the Company during an accounting period, the Company recognizes the undiscounted amount of Short-term employee benefits. This amount is expected to be settled in whole before twelve months after the end of the reporting period, in exchange for those services.

3.22.2 Termination benefits

The Company recognizes expenses for termination benefits when an employee accepts the offer or when a restriction on the Company's ability to withdraw the offer takes effect.

3.23 Income tax expenses and deferred tax assets and liabilities

Income taxes comprise of current and deferred taxes. All items related to taxes, other than those recognized directly in equity, are accounted for in the statement of comprehensive income. Accordingly, items recognized directly in equity and the related taxes are accounted for as other comprehensive income in the consolidated statements of comprehensive income. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Company operates and generates taxable income. If the applied tax laws require an interpretation, the Company calculates income tax payable expected to be paid to the taxation authorities based on the opinion made when the taxes were reported.

3. Basis of preparation and significant accounting policies (cont'd)

3.23 Income tax expenses and deferred tax assets and liabilities (cont'd)

Deferred tax is provided on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit loss.
- In respect of taxable temporary differences associated with investments in subsidiaries and associates, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences to the extent that taxable profit will be available against which the deductible temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the years when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and taxation authority.

The Company offsets deferred assets and liabilities if, and only if (a) the Company has a legally enforceable right to set off current tax assets against current tax liabilities and, (b) the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either on (i) the same taxable entity or (ii) different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3.24. Equity

3.24.1 Classification of equity

The Company classifies financial instruments at initial recognition as either financial liabilities or financial equity depending on the contractual materiality. In the case where it is possible to avoid the related contractual obligations, the financial item is classified as a financial equity. An equity is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities.

3.24.2 Stock issuance costs

New stock issuance costs or incremental costs related to the stock issuance for business combinations are recorded as a deduction from paid-in capital net of tax effects.

3.25 Earning per share

Basic and diluted earnings per share are computed by dividing net income by the weighted average number of shares of common stock outstanding during the year.

3.26 Accounting basis for trust accounts

The Company separately maintains the books of accounts and financial statements in connection with the trust operations (the "trust accounts") from those of the Bank's accounts in accordance with the *Financial Investment Services and Capital Markets Act* ("FSCMA"). When surplus funds are generated through the management of trust assets, such funds are deposited with the Bank and are recorded as due to trust accounts of the Bank's accounts. Also, the borrowings from the Bank's accounts are recorded as due from trust accounts of the Bank's accounts. The Company receives fees for operation and management of the trust business and accounts for them as fee and commission income from trust accounts.

3. Basis of preparation and significant accounting policies (cont'd)

3.26 Accounting basis for trust accounts (cont'd)

With respect to certain trust account products, the Company guarantees the repayment of principal and interest of these trust accounts, in certain cases, with a fixed rate of return. If income from such trust accounts is insufficient to pay the guaranteed amount, such a deficiency is satisfied by using special reserves maintained in these trust accounts, offsetting trust fee payable to the Bank's accounts and receiving compensation contributions from the Bank's accounts. If the Company pays compensating contributions to the guaranteed return trusts to cover such deficiencies, these contributions are reflected as fee and commission expenses from trust accounts in the Company's consolidated statements of comprehensive income.

3.27 Accounting of leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Amounts due from lessees under finance leases are recognized as receivables at the amount of Company's net investment in the leases. Finance lease income is allocated to accounting period so as to reflect a constant periodic rate of return on the Company's net investment outstanding in respect of the leases.

3.28 Merchant banking account

As permitted by the *Restructuring of Financial Institutions Act*, the Bank may continue its merchant banking operations, including leasing business, until the existing contracts acquired from the Korea International Merchant Bank upon merger are terminated.

Significant accounting policies applied to the Bank's merchant banking operations are summarized as follows:

3.28.1 Revenue recognition on discounted notes

Interest income on discounted notes is accrued over the term of the notes. Income from the sale of discounted notes is recognized at the date of transaction based on the difference between the purchase prices and sales prices of the notes, adjusted for interest earned during the holding period.

3.28.2 Cash Management Accounts (CMA)

The Company recognizes interest income from CMA investments and interest expenses from CMA deposits as operating income and operating expenses, respectively.

3.29 Interest income and interest expense

Interest income and interest expenses are recognized over time using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expenses over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Company estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. Cash flows at the time of the calculation include all the fees and points paid to or received from parties to the contract that are an integral part of the effective interest rate, including transaction costs, and all other premiums or discounts.

If income recognition on an accrual basis is deemed inappropriate due to low possibility of realizing interest income, the interest income is recognized when interest is actually received. In case of individually impaired loans, recoverable amount as time passes are recognized as interest income.

3. Basis of preparation and significant accounting policies (cont'd)

3.30 Fees and commission income

The Company earns fee and commission income from a diverse range of services it provides to its customers. Fee income related to financial services is treated differently depending on the objective imposed by the related financial item. Fee income can be divided into the following categories:

- Fees and commission income are recognized using EIR in case they are main components of EIR of financial asset.
- Fees earned for the provision of services over a period of time are accrued over that period.
- Fees arising from negotiating or participating in the negotiation of a transaction for a third party are recognized upon completion of the underlying transaction.

3.31 Dividend income

Dividend income is recognized when the Company's right to receive the payment is established.

4. Significant judgments and accounting estimates

In the application of the Company's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily observable from objective sources. The estimation and assumption are based on other factors that are related to historical experience. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

In the process of applying the Company's accounting policies, management has made the following judgments that have a significant effect on the amounts recognized in the consolidated financial statements:

4.1 Fair value of financial instruments

The fair value of financial instruments is determined by referencing quoted market prices in active markets in the first place. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques including (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models.

4.2 Impairment loss on equity securities classified as available-for-sale financial assets

The Company assesses its equity securities classified as available-for-sale assets at the end of each reporting period whether there is any indication that an asset may be impaired in accordance to KIFRS 1039 *Financial Instruments: Recognition and Measurement*. The Company also records impairment charges on available-for-sale equity investments when there has been a significant or prolonged decline in the fair value below their cost. The determination of what is 'significant' or 'prolonged' requires judgment. In making this judgment, the Company evaluates the prospect and soundness of the investees' business, including duration and extent to which the fair value of an investment is less than its cost, sales performance, changes in techniques and cash flows of sales and investment.

When the fair value below the cost of available-for-sale equity instruments is significant (more than 30%) or prolonged (longer than 6 months), the Company recognizes additional impairment by replacing the evaluated amount of accumulated fair value of available-for-sale equity instruments previously recognized as equity with current gain or loss.

4. Significant judgments and accounting estimates (cont'd)

4.3 Impairment loss on loans

For a measurement of impairment loss of loans, the Company assesses individually and collectively whether loans are impaired. Recoverable amount for the allowance for individual impairment loss is measured by estimating future cash flows for which the Company considers its customers' business outlook and secured assets for loans. Probability of default, loss emergence period and loss given default for the allowance for collective impairment loss are measured based on the impairment loss experience in the past periods.

4.4 Provision for severance and retirement benefits

The cost of providing benefits under the defined benefit plans is determined using the actuarial valuation. Actuarial assumptions were made for the discount rate, and an increase in the future pay rate. Severance and retirement benefits include significant uncertainties in the estimates due to the long-term duration.

4.5 Impairment of non-financial assets

The Company assesses, at each reporting date, whether there is an indication that an asset may be impaired. Intangible asset with indefinite useful life is tested for impairment annually or tested whenever there is an indication that the intangible asset may be impaired. Other non-financial assets are tested for impairment whenever there is indication that the book value cannot be recovered. For the calculation of value in use, management estimates expected future cash flow incurred from the asset or cash generating unit (CGU). For the calculation of present value of the expected future cash flow, appropriate discount rate is selected.

4.6 Income taxes

Different taxation laws that the Company's foreign subsidiaries are exposed to require judgment in determining the amount of tax expenses that can be recognized. In addition, there has been various transactions and tax accounting methods which have made computing the final tax expenses for the period uncertain. The contingent liability from any future tax assessments is based on the estimates of the likelihood of additional taxes imposed and has been included in the Company's consolidated financial statements for the current period. When the finalized tax expenses assessments are different from the appropriated amounts, the differences, if any, are recognized in current deferred tax assets, liabilities, and expenses for the period.

5. Fair value measurement of financial assets and liabilities

The standards the Company applies when measuring fair values of financial assets and liabilities are described below:

A. Quoted market prices as at the settlement date in an active market are the best evidence of fair value and should be used when available.

B. If a market for a financial instrument is not active, the Company establishes fair value by using a valuation technique that makes maximum use of market inputs and includes (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models. An acceptable valuation technique incorporates all factors that market participants would consider in setting a price and is consistent with accepted economic methodologies for pricing financial instruments.

C. When determining fair value using the valuation techniques, comparison with the current market transaction of another instrument that is substantially the same as the financial instrument needed to be objectively substantiated or inclusion of variables in the marketable data must be performed. Not all of the significant market variables are observable and in relevant cases, the reasonable estimates or assumptions are required to determine the fair value.

D. For an investment in equity instruments which quoted market price is not available in an active market or derivative linked to such instruments which fair values are not measured reliably, fair values are measured at cost.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments

Fair value hierarchy of financial instruments as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017			
	Levels of the fair value hierarchy (*2)			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL:				
Equity securities	₩ 50,932	₩ —	₩ —	₩ 50,932
Debt securities	1,728,000	1,107,194	—	2,835,194
Derivative assets held-for-trading	—	6,551,125	6,363	6,557,488
	1,778,932	7,658,319	6,363	9,443,614
Available-for-sale financial assets:				
Equity securities (*1)	351,688	2,868,834	831,782	4,052,304
Debt securities	24,878,669	15,381,239	10,300	40,270,208
	25,230,357	18,250,073	842,082	44,322,512
Derivative assets used for hedging	—	11,760	—	11,760
	₩27,009,289	₩25,920,152	₩848,445	₩53,777,886
Financial liabilities:				
Financial liabilities at FVTPL:				
Derivative liabilities Held-for-trading	₩ 15	₩ 6,408,881	₩ 5,036	₩ 6,413,932
Financial liabilities designated at FVTPL	—	425,627	—	425,627
	15	6,834,508	5,036	6,839,559
Derivative liabilities used for hedging	—	62,571	10,453	73,024
	₩ 15	₩ 6,897,079	₩ 15,489	₩ 6,912,583

	December 31, 2016			
	Levels of the fair value hierarchy (*2)			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL:				
Equity securities	₩ 45,728	₩ —	₩ —	₩ 45,728
Debt securities	1,151,715	1,128,164	—	2,279,879
Derivative assets held-for-trading	3	6,336,523	3,416	6,339,942
	1,197,446	7,464,687	3,416	8,665,549
Available-for-sale financial assets:				
Equity securities (*1)	557,744	1,524,222	913,568	2,995,534
Debt securities	17,566,216	16,854,028	7,850	34,428,094
	18,123,960	18,378,250	921,418	37,423,628
Derivative assets used for hedging	—	24,661	1,164	25,825
	₩19,321,406	₩25,867,598	₩925,998	₩46,115,002
Financial liabilities:				
Financial liabilities at FVTPL:				
Derivative liabilities held-for-trading	₩ 10	₩ 6,035,675	₩ 865	₩ 6,036,550
Financial liabilities designated at FVTPL	—	378,595	—	378,595
	10	6,414,270	865	6,415,145
Derivative liabilities used for hedging	—	98,974	—	98,974
	₩ 10	₩ 6,513,244	₩ 865	₩ 6,514,119

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

(*1) In the available-for-sale financial assets, the equity securities amounting to ₩63,103 million and ₩55,153 million were valued at cost as at December 31, 2017 and 2016, respectively, since they don't have quoted market prices disclosed in active market and their fair values could not be reasonably estimated and they are included in Level 3 in the fair value hierarchy.
(*2) The Company recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation techniques:

- Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: Other techniques in which all significant inputs and significant value drivers are observable in active markets
- Level 3: Techniques, such as pricing models, discounted cash flow methodologies, or similar techniques based on significant unobservable inputs, as well as management judgments or estimates that are significant to valuation

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are measured at fair value as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	Fair value			
Classification	December 31, 2017	December 31, 2016	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets				
Financial assets at FVTPL				
Debt securities	₩ 1,107,194	₩ 1,128,164	DCF model	Discount rate
Derivative assets held-for-trading	6,551,125	6,336,523	Black-Scholes model, Black model, DCF model	Exchange rate, interest rate for each currency, volatility, swap yield curve, swaption volatility, yield curve of each currency
	7,658,319	7,464,687		
Available-for-sale financial assets				
Equity securities	2,868,834	1,524,222	Net asset value model	Underlying asset prices such as bond, stock, etc.
Debt securities	15,381,239	16,854,028	DCF model	Discount rate
	18,250,073	18,378,250		
Derivative assets used for hedging	11,760	24,661	Hull-White 1 factor model, Black model	Volatility, swap yield curve, swaption volatility, yield curve of each currency volatility of KRW cap/floor
	₩25,920,152	₩25,867,598		
Financial liabilities				
Financial liabilities at FVTPL				

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2017	Fair value December 31, 2016	Description of the valuation technique	Inputs used in the fair value measurement
Derivative liabilities held-for-trading	6,408,881	6,035,675	Black-Scholes model, Black model, DCF model	Exchange rate, interest rate for each currency, volatility, swap yield curve, swaption volatility, yield curve of each currency
Financial liabilities designated at FVTPL	425,627	378,595	Hull-white short-rate model	KRW interest swap yield curve, KRW swaption volatility
	6,834,508	6,414,270		
Derivative liabilities used for hedging	62,571	98,974	Hull-White 1 factor model Black model	Volatility, swap yield curve, swaption volatility, yield curve of each currency volatility of KRW cap/floor
	₩ 6,897,079	₩ 6,513,244		

Details of fair value, valuation technique, input to valuation, and significant unobservable inputs used to develop those measurements classified into level 3 assets and liabilities that are measured at fair value as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Fair value December 31, 2017	Fair value December 31, 2016	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Financial assets							
Financial assets at FVTPL							
Derivative assets held-for-trading	₩ 6,363	₩ 3,416	Hull-White 2 factor model	KRW swap yield curve, Korean government bond yield curve, volatility of each yield, correlation of underlying assets	Correlation of each yield curve of underlying assets	0.83 ~0.98	Negative
			Binomial model	Underlying asset price, Discount rate, volatility of underlying assets	Volatility of underlying assets	13.59 ~28.13	Positive
Available-for-sale financial assets							
Equity securities	831,782	913,568	DCF model, comparison with similar business, net asset value model, utilization of past transaction, risk-adjusted discount rate model, dividend discount model	Growth rate, discount rate	Growth rate Discount rate	0.00 ~1.00 5.43 ~17.26	Positive Negative

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	Fair value December 31, 2017	Fair value December 31, 2016	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Debt securities	10,300	7,850	DCF model, etc.	Discount rate, etc.	Discount rate, etc.	11.88	Negative
	842,082	921,418					
Derivative assets used for hedging	—	1,164	Hull-White 2 factor model	KRW swap yield curve, USD swap yield curve, volatility of each yield curve, correlation of each yield curve of underlying assets, correlation between USD interest rate and KRW/USD exchange rate	Correlation of each yield curve of underlying assets	0.83 ~0.98	Positive
	₩848,445	₩925,998					
Financial liabilities							
Financial liabilities at FVTPL							
Derivative liabilities held-for-trading	5,036	865	Hull-White 2 factor model	KRW swap yield curve, Korean government bond yield curve, volatility of each yield, correlation of underlying assets	Correlation of each yield curve of underlying assets	0.83 ~0.98	Negative
			Binomial model	Underlying asset price, Discount rate, volatility of underlying assets	Volatility of underlying assets	13.59 ~28.13	Positive
Derivative liabilities used for hedging	10,453	—	Hull-White 2 factor model	KRW swap yield curve, USD swap yield curve, volatility of each yield curve, correlation of each yield curve of underlying assets, correlation between USD interest rate and KRW/USD exchange rate	Correlation of each yield curve of underlying assets	0.83 ~0.98	Positive
	₩ 15,489	₩ 865					

5. Fair value measurement of financial assets and liabilities (cont'd)

5.2 Changes in fair value of financial instruments categorised as Level 3

Changes in the fair value of financial instruments categorized as Level 3 of the fair value hierarchy of financial instruments that are measured at fair value in the statement of financial position for the nine-month periods ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017			
	Available-for-sale financial assets		Net derivative instruments	
Classification	Equity securities	Debt securities	Held-for-trading	Used for hedging
January 1, 2017	₩ 913,568	₩ 7,850	₩ 2,551	₩ 1,164
Total profit or loss				
Profit or loss	(140,341)	1,581	(2,292)	(1,164)
Other comprehensive income	74,073	(1,480)	—	—
Buy / issue	24,990	2,349	1,068	(10,453)
Sell / settlement	(40,508)	—	—	—
December 31, 2017	₩ 831,782	₩10,300	₩ 1,327	₩(10,453)

	2016				
	Available-for-sale financial assets		Financial liabilities at FVTPL	Net derivative instruments	
Classification	Equity securities	Debt securities		Held-for-trading	Used for hedging
January 1, 2016	₩550,937	₩7,662	₩(30,626)	₩1,865	₩ 4,320
From others to Level 3	4,947	—	—	—	—
From Level 3 to Others	(26,345)	—	—	—	—
Total profit or loss					
Profit or loss	16,174	—	626	(257)	(3,156)
Other comprehensive income	(8,975)	(12)	—	—	—
Buy / issue	366,277	200	—	943	—
Sell / settlement	(92,221)	—	30,000	—	—
Classification from investments in associates	102,774	—	—	—	—
December 31, 2016	₩913,568	₩7,850	₩ —	₩2,551	₩ 1,164

5.3 Current gains or losses recognized from changes in level 3 financial instruments measured at fair value.

Current gains or losses recognized from changes in level 3 financial instruments measured at fair value for the years ended December 31, 2017 and 2016 are recorded in the statement of comprehensive income as follows (Korean won in millions):

	2017		2016	
Classification	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized	Total gains or losses recognized in profit or loss	The line item in profit or loss in which those gains or losses are recognized
Gain (loss) on financial instruments at FVTPL	₩ (2,292)	₩ (1,585)	₩ 369	₩ (257)
Gain (loss) related to derivative instruments held for hedging	(1,164)	—	(3,156)	(1,399)
Other gain (loss) on financial instruments	(22,688)	(27,420)	24,374	22,700
Impairment loss on financial instruments	(117,653)	(117,653)	(8,200)	(8,200)
Reversal of Impairment loss on financial instruments	1,581	1,581	—	—
	₩(142,216)	₩(145,077)	₩13,387	₩12,844

5. Fair value measurement of financial assets and liabilities (cont'd)

5.4 Transfers between fair value hierarchy

The amount of transfers into or out of level 3 of the fair value hierarchy for the years ended December 31, 2017 and 2016 is as follows (Korean won in millions):

Classification	2017	2016
Transfers out of level 3 into level 1	₩—	₩26,345
Transfers out of level 1 into level 3	—	4,947

5.5 Sensitivity analysis

Sensitivity of the fair value measurement for the each level 3 financial instrument upon the changes in significant unobservable input, whose results are favorable and unfavorable changes in profit or loss or other comprehensive income as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017	
Classification	Favorable changes	Unfavorable changes
Financial assets		
Derivative assets held-for-trading (*1)	₩ 376	₩ (166)
Available-for-sale financial assets:		
Equity securities (*2)	107,552	(36,393)
Debt securities (*3)	226	(219)
	107,778	(36,612)
	₩108,154	₩(36,778)
Financial liabilities		
Derivative liabilities held-for-trading (*1)	32	(120)
Derivative liabilities used for hedging (*1)	287	(361)
	₩ 319	₩ (481)

	December 31, 2016	
Classification	Favorable changes	Unfavorable changes
Financial assets		
Derivative assets held-for-trading (*1)	₩ 203	₩ (192)
Available-for-sale financial assets:		
Equity securities (*2)	13,580	(7,316)
Debt securities (*3)	200	(12)
	13,780	(7,328)
Derivative assets used for hedging (*1)	77	(208)
	₩14,060	₩(7,728)
Financial liabilities		
Derivative liabilities held-for-trading (*1)	27	(31)
	₩ 27	₩ (31)

(*1) 1) Correlation between rates of interest rate swap of KRW, 2) Correlation between interest rates of treasury, 3) Correlation between interest rate swap and interest rate of treasury, 4) Correlation between KRW-USD interest rate swap, 5) Favorable and unfavorable changes are calculated by taking 10% fluctuation of correlation between KRW/USD exchange rate and rate of USD interest rate swap.

(*2) Changes in fair value of equity securities are calculated by changing growth rate (0.0~1.0%) and discount rate, which are main unobservable inputs. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by changing discount rate of lease cash flow (-1.0~1.0%) and growth rate of selling price of real estate (-1.0~1.0%), under limited circumstances when it is consisted of real estate. However it is impossible to calculate sensitivity of beneficiary securities based on changes in inputs.

(*3) Changes in fair value of debt securities are calculated by changing discount rate (-1.0~1.0%), which is the main unobservable input.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed

Fair value hierarchy of financial instruments measured at amortized cost as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017			
	Levels of the fair value hierarchy			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from banks	₩2,224,215	₩17,759,701	₩ —	₩ 19,983,916
Held-to-maturity investments	1,023,875	5,194,347	—	6,218,222
Loans	—	—	222,442,280	222,442,280
Others	—	—	9,585,105	9,585,105
Merchant banking account assets	—	—	2,966,019	2,966,019
	₩3,248,090	₩22,954,048	₩234,993,404	₩261,195,542
Financial liabilities:				
Deposits	₩ —	₩31,566,008	₩197,908,839	₩229,474,847
Borrowings	—	2,180,567	11,593,071	13,773,638
Debentures	—	22,361,068	—	22,361,068
Others	—	—	20,759,022	20,759,022
Merchant banking account liabilities	—	—	2,018,346	2,018,346
	₩ —	₩56,107,643	₩232,279,278	₩288,386,921

	December 31, 2016			
	Levels of the fair value hierarchy			
Classification	Level 1	Level 2	Level 3	Total
Financial assets:				
Cash and due from banks	₩2,129,539	₩25,422,031	₩ —	₩ 27,551,570
Held-to-maturity investments	382,155	3,888,039	—	4,270,194
Loans	—	—	208,525,871	208,525,871
Others	—	—	11,206,921	11,206,921
Merchant banking account assets	—	—	2,596,959	2,596,959
	₩2,511,694	₩29,310,070	₩222,329,751	₩254,151,515
Financial liabilities:				
Deposits	₩ —	₩31,139,418	₩190,375,607	₩221,515,025
Borrowings	—	3,131,458	12,179,639	15,311,097
Debentures	—	19,348,493	—	19,348,493
Others	—	—	23,338,503	23,338,503
Merchant banking account liabilities	—	—	2,406,269	2,406,269
	₩ —	₩53,619,369	₩228,300,018	₩281,919,387

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are not measured at fair value as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017		
Classification	Fair value	Valuation technique	Inputs
Financial assets:			
Cash and due from banks	₩17,759,701	DCF model	Discount rate
Held-to-maturity investments	5,194,347	DCF model	Discount rate
	22,954,048		
Financial liabilities:			
Deposits	31,566,008	DCF model	Discount rate
Borrowings	2,180,567	DCF model	Discount rate
Debentures	22,361,068	DCF model	Discount rate
	₩56,107,643		

	December 31, 2016		
Classification	Fair value	Valuation technique	Inputs
Financial assets:			
Cash and due from banks	₩25,422,031	DCF model	Discount rate
Held-to-maturity investments	3,888,039	DCF model	Discount rate
	29,310,070		
Financial liabilities:			
Deposits	31,139,418	DCF model	Discount rate
Borrowings	3,131,458	DCF model	Discount rate
Debentures	19,348,493	DCF model	Discount rate
	₩53,619,369		

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 3 assets and liabilities disclosed but not measured at fair value as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017		
Classification	Fair value	Valuation technique	Inputs
Financial assets			
Loans	₩222,442,280	DCF model	Credit and other spreads, rate of advanced redemption, etc.
Others	9,585,105	(*)	
Merchant banking account assets	2,966,019	(*)	
	₩234,993,404		
Financial liabilities			
Deposits	₩197,908,839	DCF model	Other spread, rate of advanced redemption
Borrowings	11,593,071	DCF model	Other spread
Others	20,759,022	(*)	
Merchant banking account liabilities	2,018,346	(*)	
	₩232,279,278		

	December 31, 2016		
Classification	Fair value	Valuation technique	Inputs
Financial assets			
Loans	₩208,525,871	DCF model	Credit and other spreads, rate of advanced redemption, etc.
Others	11,206,921	(*)	
Merchant banking account assets	2,596,959	(*)	
	₩222,329,751		
Financial liabilities			
Deposits	₩190,375,607	DCF model	Other spreads, rate of advanced redemption
Borrowings	12,179,639	DCF model	Other spread
Others	23,338,503	(*)	
Merchant banking account liabilities	2,406,269	(*)	
	₩228,300,018		

(*) Other financial assets and liabilities are temporary accounts derived from various transactions. The book values of these assets and liabilities are regarded as their fair value without applying the DCF method as their maturities are not fixed or short-term in nature.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.7 Gain and loss on deferred Day 1

Changes in gain (loss) on deferred Day 1 for years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions)

Classification	December 31, 2017	December 31, 2016
January 1	₩ —	₩(750)
New accruals of gain or loss	(200)	—
Amounts recognized in profit or loss	12	750
December 31	(188)	—

5.8 Transferred financial assets and related liabilities not eliminated as a whole as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017		2016	
Classification	Book value	Fair value	Book value	Fair value
Transferred assets				
Available-for-sale financial assets (*1)	₩903,591	₩903,591	₩1,501,563	₩1,501,563
Held-to-maturity financial assets	31,682	33,942	42,574	47,686
Related liabilities				
Bonds sold under repurchase agreements	251,990	252,529	676,663	677,257

(*1) Included are available-for-sale securities lent, of which related liabilities are not appropriated, amounting to ₩613,005 million and ₩786,135 million as at December 31, 2017 and 2016, respectively.

6. Fair value of financial instruments

Fair values of financial instruments as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017		December 31, 2016	
Classification	Book value	Fair value	Book value	Fair value
Financial assets				
Cash and due from banks	₩ 19,983,916	₩ 19,983,916	₩ 27,551,570	₩ 27,551,570
Financial assets at FVTPL	9,443,614	9,443,614	8,665,549	8,665,549
Available-for-sale financial assets	44,322,512	44,322,512	37,423,628	37,423,628
Held-to-maturity financial assets	6,160,922	6,218,222	4,129,630	4,270,194
Loans	224,096,709	222,442,280	215,100,733	208,525,871
Derivative assets used for hedging	11,760	11,760	25,825	25,825
Other financial assets	9,585,105	9,585,105	11,207,541	11,206,921
Merchant banking account assets	2,966,019	2,966,019	2,596,959	2,596,959
	₩316,570,557	₩314,973,428	₩306,701,435	₩300,266,517
Financial liabilities				
Financial liabilities at FVTPL	₩ 6,839,559	₩ 6,839,559	₩ 6,415,145	₩ 6,415,145
Deposits	230,410,494	229,474,847	220,613,406	221,515,025
Borrowings	13,774,502	13,773,638	15,310,635	15,311,097
Debentures	22,311,737	22,361,068	19,310,873	19,348,493
Derivative liabilities used for hedging	73,024	73,024	98,974	98,974
Other financial liabilities	20,759,022	20,759,022	23,338,504	23,338,503
Merchant banking account liabilities	2,018,346	2,018,346	2,406,269	2,406,269
	₩296,186,684	₩295,299,504	₩287,493,806	₩288,433,506

The following standards are applied in measuring the fair value of financial instruments.

A. Loans and receivable: Expected cash flows, current market interest rates and discount rates including borrowers' credit risks are factors to calculate the fair value of loans and receivables. For lines of credit

6. Fair value of financial instruments (cont'd)

and loans that have a short term maturity (less than three months), it is assumed that the carrying amounts approximate to their fair value.

B. Financial investment assets: The fair value of financial assets held-to-maturity are as stated by the market, broker, or by credible sources. If none of the information from these entities is usable, published market price of financial instruments with similar credit rating, maturity, and ROI is used to estimate the fair value.

C. Depository liabilities: For deposits without an explicit maturity period including deposits with no interests, deposits that have a short term maturity (less than three months), and deposits with a floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing deposits is based on discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

D. Borrowings: For borrowings that have a short term maturity (less than three months) and borrowings with floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing borrowings is based on and discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

E. Debentures: For quoted debt issued, the fair values are determined based on quoted market prices. For those notes issued where quoted market prices are not available, a discounted cash flow model is used based on a current interest rate yield curve appropriate for the remaining term to maturity and credit spreads.

7. Categories of financial assets and financial liabilities

7.1 The Company categorizes its financial assets as at December 31, 2017 and 2016 as follows (Korean won in millions):

	December 31, 2017					
	Financial instruments at FVTPL	Available-for-sale financial assets	Held-to-maturity investments	Loans	Derivatives for hedging	Total
Cash and due from banks	₩ —	₩ —	₩ —	₩ 19,983,916	₩ —	₩ 19,983,916
Financial assets at FVTPL	9,443,614	—	—	—	—	9,443,614
Available-for-sale financial assets	—	44,322,512	—	—	—	44,322,512
Held-to-maturity investments	—	—	6,160,922	—	—	6,160,922
Loans	—	—	—	224,096,709	—	224,096,709
Derivative assets used for hedging	—	—	—	—	11,760	11,760
Others	—	—	—	9,585,105	—	9,585,105
Merchant banking account assets	—	—	—	2,966,019	—	2,966,019
	₩9,443,614	₩44,322,512	₩6,160,922	₩256,631,749	₩11,760	₩316,570,557

7. Categories of financial assets and financial liabilities (cont'd)

7.1 The Company categorizes its financial assets as at December 31, 2017 and 2016 as follows (Korean won in millions): (cont'd)

	December 31, 2016					
	Financial instruments at FVTPL	Available-for-sale financial assets	Held-to-maturity investments	Loans	Derivatives for hedging	Total
Cash and due from banks	₩ —	₩ —	₩ —	₩ 27,551,570	₩ —	₩ 27,551,570
Financial assets at FVTPL	8,665,549	—	—	—	—	8,665,549
Available-for-sale financial assets	—	37,423,628	—	—	—	37,423,628
Held-to-maturity investments	—	—	4,129,630	—	—	4,129,630
Loans	—	—	—	215,100,733	—	215,100,733
Derivative assets used for hedging	—	—	—	—	25,825	25,825
Others	—	—	—	11,207,541	—	11,207,541
Merchant banking account assets	—	—	—	2,596,959	—	2,596,959
	₩8,665,549	₩37,423,628	₩4,129,630	₩256,456,803	₩25,825	₩306,701,435

7.2 The Company categorizes its financial liabilities as at December 31, 2017 and 2016 as follows (Korean won in millions):

	December 31, 2017				
	Financial liability at FVTPL				
Classification	Held-for-trading	Designated at FVTPL	Amortized cost or financial liabilities	Derivatives for hedging	Total
Financial liabilities at FVTPL	₩6,413,932	₩425,627	₩ —	₩ —	₩ 6,839,559
Deposits	—	—	230,410,494	—	230,410,494
Borrowings	—	—	13,774,502	—	13,774,502
Debentures	—	—	22,311,737	—	22,311,737
Derivative liabilities used for hedging	—	—	—	73,024	73,024
Others	—	—	20,759,022	—	20,759,022
Merchant banking account liabilities	—	—	2,018,346	—	2,018,346
	₩6,413,932	₩425,627	₩289,274,101	₩73,024	₩296,186,684

7. Categories of financial assets and financial liabilities (cont'd)

7.2 The Company categorizes its financial liabilities as at December 31, 2017 and 2016 as follows (Korean won in millions): (cont'd)

	December 31, 2016				
	Financial liability at FVTPL				
Classification	Held-for-trading	Designated at FVTPL	Amortized cost or financial liabilities	Derivatives for hedging	Total
Financial liabilities at FVTPL	₩6,035,550	₩378,595	₩ —	₩ —	₩ 6,415,145
Deposits	—	—	220,613,406	—	220,613,406
Borrowings	—	—	15,310,635	—	15,310,635
Debentures	—	—	19,310,873	—	19,310,873
Derivative liabilities used for hedging	—	—	—	98,974	98,974
Others	—	—	23,338,504	—	23,338,504
Merchant banking account liabilities	—	—	2,406,269	—	2,406,269
	₩6,036,550	₩378,595	₩280,979,687	₩98,974	₩287,493,806

8. Offsetting of financial assets and liabilities

8.1 Financial assets offset, the executable master netting arrangements and financial assets subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions):

	December 31, 2017					
				Related amounts not offset		
Classification	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 6,566,217	₩ —	₩ 6,566,217	₩ (4,703,240)	₩(1,069,429)	₩ 793,548
Securities lent	613,005	—	613,005	—	(613,005)	—
Bonds purchased under resale agreement	4,524,823	—	4,524,823	—	(4,524,823)	—
Unsettled spot exchanges	6,171,297	—	6,171,297	(6,126,005)	—	45,292
Domestic exchange settlement debit	25,118,671	23,618,667	1,500,004	—	—	1,500,004
Other accounts receivable	1,997	1,924	73	—	—	73
	₩42,996,010	₩23,620,591	₩19,375,419	₩(10,829,245)	₩(6,207,257)	₩2,338,917

8. Offsetting of financial assets and liabilities (cont'd)

8.1 Financial assets offset, the executable master netting arrangements and financial assets subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016					
	Gross amounts of recognized financial assets	Gross amounts of financial liabilities offset	Net amounts of financial assets presented in the financial statements	Related amounts not offset: Financial instruments recognized in the financial statements (*)	Related amounts not offset: Financial collateral, etc.	Net amount
Derivatives	₩ 6,201,300	₩ —	₩ 6,201,300	₩ (3,945,066)	₩ (63,957)	₩2,192,277
Securities lent	786,135	—	786,135	—	(786,135)	—
Bonds purchased under resale agreement	2,958,941	—	2,958,941	—	(2,958,941)	—
Unsettled spot exchanges	8,221,207	—	8,221,207	(8,216,813)	—	4,394
Domestic exchange settlement debit	22,438,496	21,464,016	974,480	—	—	974,480
Other accounts receivable	4,902	4,660	242	—	—	242
	₩40,610,981	₩21,468,676	₩19,142,305	₩(12,161,879)	₩(3,809,033)	₩3,171,393

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not set off in the statement of financial position as they do not meet the criteria for offsetting.

8.2 Financial liabilities offset, the executable master netting arrangements and financial liabilities subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions):

Classification	December 31, 2017					
	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Related amounts not offset: Financial instruments recognized in the financial statements (*)	Related amounts not offset: Financial collateral, etc.	Net amount
Derivatives	₩ 6,470,157	₩ —	₩ 6,470,157	₩ (4,789,124)	₩(126,654)	₩1,554,379
Bonds sold under repurchase agreements	251,990	—	251,990	(251,990)	—	—
Unsettled spot exchanges	6,170,414	—	6,170,414	(6,126,005)	—	44,409
Domestic exchange settlement credit	27,925,844	23,618,667	4,307,177	(4,307,177)	—	—
Other accounts payable	6,880	1,924	4,956	—	—	4,956
	₩40,825,285	₩23,620,591	₩17,204,694	₩(15,474,296)	₩(126,654)	₩1,603,744

8. Offsetting of financial assets and liabilities (cont'd)

8.2 Financial liabilities offset, the executable master netting arrangements and financial liabilities subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions): (cont'd)

	December 31, 2016					
				Related amounts not offset		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of financial assets offset	Net amounts of financial liabilities presented in the financial statements	Financial instruments recognized in the financial statements (*)	Financial collateral, etc.	Net amount
Derivatives	₩ 5,725,604	₩ —	₩ 5,725,604	₩ (4,173,434)	₩(838,365)	₩713,805
Bonds sold under repurchase agreements	676,663	—	676,663	(676,663)	—	—
Unsettled spot exchanges	8,222,136	—	8,222,136	(8,216,813)	—	5,323
Domestic exchange settlement credit	26,584,073	21,464,016	5,120,057	(5,120,057)	—	—
Other accounts payable	4,660	4,660	—	—	—	—
	₩41,213,136	₩21,468,676	₩19,744,460	₩(18,186,967)	₩(838,365)	₩719,128

(*) The rights to set off exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

9. Risk management

The Company is exposed to credit risk, liquidity risk, market risk and various operating risks. The objectives of risk management are to pursue economic benefits by managing the associated risk in the changing financial environment and to utilize capital efficiently.

The basic principles of risk management are as follows:

- Minimize the rapid fluctuation in profit by balancing the risks and the income.
- Maximize long-term shareholder value.
- Comply with procedures to ensure operating activities are confined to allowable risk limits.
- Examine the type and size of risk in accordance with the changes in potential economic value of portfolios for the efficient use and distribution of assets and to establish risk management strategy.

The basic policies in order to realize the basic principles of risk management are as follows:

- Set and comply with allowable limits for each risk type.
- Establish an appropriate balance between income and associated risk.
- When a conflict between income and associated risk exists, the Company pursues income while complying with the allowable risk limits.
- Prioritize the distribution of risk in order to avoid risk concentration in certain areas.
- Analyse the effect of various market fluctuations on parts or the entire portfolio on a regular basis.
- Separate risk management segments, operational segments, and other segments which deal with trade confirmations and payments in order to maintain independence.

9.1. Strategy and procedure of risk management

The Company has built an organization-wide risk management system attributable to the new BIS standards in order to manage risks with advanced methodologies in the rapidly changing financial environment. The

9. Risk management (cont'd)

9.1. Strategy and procedure of risk management (cont'd)

Company has used the Foundation Internal Ratings-Based Credit Risk Approach since November 2008 (revised in June 2016), Operational Risk Advanced Internal Ratings-Based Approach since November 2008 (revised in June 2016), and the Market Risk Internal Model since April 2008 (revised in August 2016 [retrospectively applied from June 2016]) upon the Financial Supervisory Board's approval.

The Company manages risk assets which is appropriate for the developed system and puts emphasis on the management of potential risk arising from changes in the business environment and risk management capacity strength of all personnel. For proactive and pre-emptive risk management, the Company applies Hana Financial Company's FLS ('Forward Looking Statements') based upon the outlook on economic and financial markets and experience on financial losses to risk management policies.

9.2. Organization and structure of risk management

The Risk Management Committee is responsible for setting the allowable limits for each risk type, and the Risk Management Operation Committee is responsible for the compliance to the limit and monitoring risk levels on a monthly basis. The Company has also established the Comprehensive Risk Management Committee, Credit Risk Management Committee, and Credit Rating Team composed of the risk office and each of these groups' reports to the middle office on a daily basis.

The Risk Management Committee is the top decision-making body within the Board of Directors for risk management. The committee examines credit risk, market risk, and various operating risks, in respect of the risk limits and other controls more than once half-year.

The Risk Management Operation Committee is the secondary decision-making body that manages the actual conditions of risk on a monthly basis. The Risk Management Committee has the overall responsibility of implementation of risk strategy.

The Risk Management Office consists of the Comprehensive Risk Management Department which manages the market risk, interest rate and liquidity risks, operational risk, and internal capital; the Credit Risk Management Department which manages the credit risk and the Credit Rating Team that deals with the corporate credit ratings and industry analysis. The Risk Management Office deals with monitoring of risks, measuring of risks and assets exposed to risks, and forecasting the changes of risks. It also mainly assists the complementary system which enables the middle office of each group to function as a member of the Risk Management Organization. The Risk Management Office is responsible for reporting the contents of middle office's works including the conditions related to the risks and management status to the Risk Management Committee, the Risk Management Operation Committee, as well as the management.

9.3. Credit risk

Credit risk is a risk incurred when the Company faces a loss because its customers or counterparties fail to discharge their contractual obligations. Credit risk arises from on-balance and off-balance accounts including loans, derivatives, securities, financial guarantees, and acceptances and guarantees.

9.3.1 Management of credit risk

9.3.1.1 Loans

9.3.1.1.1 Measurement of credit risk

To determine the possibility of bankruptcy for its customers or counterparties, the Company uses various methods comprehensively. Risks pertaining to the retail sector compared to those pertaining to the corporate sector are relatively easy to predict but cyclical and seasonal factors may influence the outcomes. The frequency of impairment loss in the overall retail sector is relatively high but in terms of individual cases, the loss rate is lower than in the corporate sector. Based on these differences, the Company manages each segment differently in terms of credit rating, pricing and subsequent management.

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.1 Management of credit risk (cont'd)

9.3.1.1 Loans (cont'd)

9.3.1.1.1 Measurement of credit risk (cont'd)

As for the business customers, the branch managers and credit rating team carries out the credit risk assessment by using a detailed valuation model depending on the size and the nature of the industry. The corporate financial valuation model is further subdivided based on the characteristics of the loans and is a combination of statistical and expert valuation models. Also, the Loan Review team of the Credit Risk Management regularly performs the subsequent reviews in order to establish adequacy of the credit grading. As for the retail sector, a Credit Scoring System is used to compute the credit scores of the borrower. The system includes an Application Scoring Model which is used for the application of loans and a Behavioral Scoring Model which has been used after handling of the loans.

Expected loss is calculated using the expected default rate based upon the historical default rate and the estimated loss rate gives a rise to the default rate from a collection of historical information. A measured expected loss is reflected on the client's interest rate and allowances when applying or renewing a loan.

Unexpected loss takes into account the allowance for potential volatility in the actual loss. Unexpected loss is calculated using the inner Credit Metrics model with 99.9% of the confidence level and the measured figure is used as a credit risk reference value and is used as part of the unexpected loss when calculating interest rates.

9.3.1.1.2.1 Management process

Both retail and corporate sectors are developing and operating a credit risk management system appropriately designed for each sector. The Credit Risk Management Committee and Credit Rating Team measure and manage credit risks for the corporate sector; Credit Risk Management Committee and Personal Loans Committee measure and manage credit risks for the retail sector. The Company manages as well as controls the credit risk by setting the limits on the amount of risk willing to accept for individual counterparties and for geographical and industry concentration, and by monitoring exposures relating to such limits. The Company reviews on a monthly basis in accordance with the economic conditions and industry characteristics and examines the adequacy of the limits on a semi-annual basis. The Company continuously manages credit rating models for retail and corporate sectors and examines the adequacy of LGD (loss given default) and EAD (exposure at default), and any related information.

9.3.1.1.2.2 Credit limits management and capital allocation

The Company annually performs a comprehensive analysis on economic conditions and changes in the economic environment in order to appropriately assess the credit quality of financial assets by setting credit limits on same entities, industries, countries, and financial instruments. In addition, for the unexpected loss management, the Company regularly sets, distributes and checks for the compliance maintenance of internal capital limits according to the corporate and household sectors and the size of clients through the risk management system.

9.3.1.1.2.3 Risk monitoring and early warning system

The Company measures and manages the risk indicators such as delinquency rate, roll-rate, and vintage rate of each operating segment. Also, in order to assess the credit quality of the assets, the Company operates an early warning system and regularly examines companies whose credit rating is likely to degrade.

9.3.1.1.2.4 Credit rating system

In order to separately evaluate the characteristics of clients in the corporate sector, the Company operates a detailed valuation model based on the external and non-external audit and is in the process of continuing the stability of the corporate credit rating system through the subsequent examinations and performance

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.1 Management of credit risk (cont'd)

9.3.1.1 Loans (cont'd)

9.3.1.1.1 Measurement of credit risk (cont'd)

9.3.1.1.2.4 Credit rating system (cont'd)

improvements. The Company operates a detailed valuation model based on the credit rating model and the activity rating model for the household sector in accordance with the client's characteristics. The Company improves the efficiency of the model through the subsequent examinations and performance improvements. Credit rating on new clients as well as an automatic renewal and adjustments to the credit limits are managed by the household and SOHO credit extension system.

9.3.1.1.2.5 Examination of credit

For a large amount of credit line, after the approval of credit extension, the Company regularly examines the borrower's credit status and the adequacy of the borrower's credit rating as in part of the subsequent management process. In addition, the Company significantly focuses on industries by increasing credit risks based on the analysis of the risk indicators and examines the sample for smaller credit extensions.

9.3.1.1.2.6 Risk mitigation policy

The Company obtains the collateral for the granted loans in order to reduce risks. The amount and type of the collateral required depends on an assessment of the credit risk of the counterparty. Guidelines are implemented regarding the acceptability of types of collateral and valuation parameters. The main types of the collateral obtained are as follows:

- For retail lending, mortgages over residential properties
- For commercial lending, charges over real estate properties, inventory and trade receivables
- For securities lending and reverse repurchase transactions, cash, or securities

9.3.1.2 Debt securities

The Company trades the debt securities above the Investment-Grade Status level in order to manage the credit risks and manage the exposure of credit ratings to maintain credit quality of the assets.

9.3.1.3 Derivative financial instruments

The credit risk arising from the derivative financial instruments is, at any time, limited to those with the positive fair values, as recorded on the statement of financial position. The Company manages the exposure as a part of the unused commitment of loans.

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.2 Maximum exposure to credit risk

The maximum exposure to credit risk as at December 31, 2017 and 2016 are as follows. The following table shows the maximum exposure to credit risk for the components of the statement of financial position, including derivatives, by geography of counterparty and by industry before the effect of mitigation through the use of master netting and collateral agreements. Equity securities in financial assets at FVTPL and financial assets available-for-sale are excluded (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
On-balance-sheet items		
Due from banks	₩ 17,759,701	₩ 25,422,031
Financial assets at FVTPL		
Debt securities	2,835,194	2,279,879
Derivative assets held for trading	6,557,488	6,339,942
Available-for-sale financial assets	40,270,208	8,619,821
Held-to-maturity financial assets	6,160,922	34,428,094
Derivative assets used for hedging	11,760	4,129,630
Loans		25,825
Household loans	100,323,003	96,314,345
Corporate loans		
Large-sized businesses	33,161,910	33,682,345
Small and medium-sized businesses	77,348,337	73,206,954
Public sector and others	13,263,459	11,896,795
	224,096,709	215,100,733
Others	9,585,105	11,207,541
Merchant banking account assets	2,966,019	2,596,959
	₩310,243,106	₩301,530,634
Off-balance-sheet items		
Financial guarantees	₩ 684,944	₩ 874,714
Guarantee contracts	16,229,609	17,647,612
Commitment	64,939,791	73,472,800
	₩ 81,854,344	₩ 91,995,126

9.3.3 Details of collateral management and credit risk mitigation

Details of collateral management and credit risk mitigation as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
	Impaired loan		Not impaired loan		
Classification	Individual assessment	Collective assessment	Past due	Non past due	Total
Guarantees	₩124,566	₩ 55,649	₩131,722	₩ 30,691,717	₩ 31,003,654
Deposits	74,038	9,466	11,918	2,449,164	2,544,586
Real estate	386,622	146,300	415,131	112,607,190	113,555,243
Securities	7,160	85	101	9,989,387	9,996,733
Others	62,938	34,780	508	6,830,186	6,928,412
	₩655,324	₩246,280	₩559,380	₩162,567,644	₩164,028,628

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.3 Details of collateral management and credit risk mitigation (cont'd)

	December 31, 2016				
	Impaired loan		Not impaired loan		
Classification	Individual assessment	Collective assessment	Past due	Non past due	Total
Guarantees	₩211,244	₩ 58,707	₩ 98,170	₩ 27,156,045	₩ 27,524,166
Deposits	38,709	5,226	15,097	2,476,438	2,535,470
Real estate	499,729	172,143	328,880	103,777,682	104,778,434
Securities	295	651	53	3,097,641	3,098,640
Others	79,528	5,316	27,248	9,830,029	9,942,121
	₩829,505	₩242,043	₩469,448	₩146,337,835	₩147,878,831

9.3.4 Details of delinquency rates on loans

Details of delinquency rates on loans as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institutions and others	Total
Neither past due nor impaired	₩ 99,604,043	₩32,636,604	₩76,791,215	₩13,275,872	₩222,307,734
Past due but not impaired	459,187	2,083	235,451	1,231	697,952
Impaired	199,835	1,276,310	713,065	3,149	2,192,359
	100,263,065	33,914,997	77,739,731	13,280,252	225,198,045
Plus (less)					
Deferred loan fees, net of expenses	203,878	(3,432)	60,302	737	261,485
Allowance for possible loan losses	(143,940)	(749,655)	(451,696)	(17,530)	(1,362,821)
	59,938	(753,087)	(391,394)	(16,793)	(1,101,336)
	₩100,323,003	₩33,161,910	₩77,348,337	₩13,263,459	₩224,096,709

	December 31, 2016				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institutions and others	Total
Neither past due nor impaired	₩95,672,202	₩33,343,971	₩72,609,032	₩11,899,277	₩213,524,482
Past due but not impaired	375,315	21,093	171,144	280	567,832
Impaired	179,926	1,021,906	1,013,108	10	2,214,950
	96,227,443	34,386,970	73,793,284	11,899,567	216,307,264
Plus (less)					
Deferred loan fees, net of expenses	213,903	(8,273)	48,918	1,865	256,413
Allowance for possible loan losses	(126,707)	(696,352)	(635,248)	(4,637)	(1,462,944)
	87,196	(704,625)	(586,330)	(2,772)	(1,206,531)
	₩96,314,639	₩33,682,345	₩73,206,954	₩11,896,795	₩215,100,733

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.4 Details of delinquency rates on loans (cont'd)

Delinquency in interest occurs when the counterparty is unable to make a principal and interest payment as at the due date. A financial item is deemed impaired if, and only if, there is objective evidence of impairment as a result of one or more events which have occurred after the initial recognition of the item (an incurred 'loss event') and that loss event (or events) has an impact on the estimated future cash flows, such as changes in arrears or economic conditions which correlate with defaults, delinquency in interest for more than 90 days, credit deterioration resulting in misleading information, damages incurred due to poor exposure and significant financial difficulty of the issuer or obligor

9.3.4.1 Loans that are neither impaired nor overdue

Details on loans that are neither impaired nor overdue as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Grade 1	₩95,948,208	₩25,582,127	₩38,855,870	₩11,575,156	₩171,961,361
Grade 2	3,270,154	6,620,580	34,866,679	1,134,761	45,892,174
Grade 3	129,371	433,897	970,099	955	1,534,322
Others	256,310	—	2,098,567	565,000	2,919,877
	₩99,604,043	₩32,636,604	₩76,791,215	₩13,275,872	₩222,307,734

	December 31, 2016				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Grade 1	₩92,075,340	₩25,215,630	₩33,681,213	₩ 8,826,488	₩159,798,671
Grade 2	3,133,507	7,128,712	35,304,093	2,738,784	48,305,096
Grade 3	177,849	999,629	943,822	300,714	2,422,014
Others	285,506	—	2,679,904	33,291	2,998,701
	₩95,672,202	₩33,343,971	₩72,609,032	₩11,899,277	₩213,524,482

The Company classifies the grade of loan in accordance with the credit rating chart below, based on the credit worthiness of borrowers.

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 1.55% of PD	A1 ~ A7	Less or equal to 1.28% of PD
Grade 2	From 1.55% to 16.52% of PD	B1 ~ B6	From 1.28% to 14.30% of PD
Grade 3	From 16.52% to 100% of PD	C1 ~ C3	From 14.30% to 78.44% of PD

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.4 Details of delinquency rates on loans (cont'd)

9.3.4.2 Loans overdue but unimpaired

The Company regards loans overdue for less than 90 days as unimpaired when there is no credit information indicating the loss event. An analysis of overdue time period of loans overdue but unimpaired by type as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small-and medium-sized businesses	Public institutions and others	Total
Less than 30 days	₩401,121	₩1,289	₩185,864	₩1,231	₩589,505
30 to 59 days	40,612	771	32,264	—	73,647
60 to 89 days	17,349	23	17,323	—	34,695
Others	105	—	—	—	105
	₩459,187	₩2,083	₩235,451	₩1,231	₩697,952

	December 31, 2016				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small-and medium-sized businesses	Public institutions and others	Total
Less than 30 days	₩314,538	₩ 9,921	₩ 6,882	₩—	₩331,341
30 to 59 days	41,839	—	137,163	—	179,002
60 to 89 days	18,833	11,172	26,715	280	57,000
Others	105	—	384	—	489
	₩375,315	₩21,093	₩171,144	₩280	₩567,832

9.3.4.3 Impaired loans

9.3.4.3.1 Types of impaired loans as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small-and medium-sized businesses	Public institutions and others	Total
Individual impairment					
Credit balance	₩ 7,384	₩1,266,101	₩511,750	₩2,446	₩1,787,681
Deferred loan fees, net of expenses	(4,058)	—	(8,585)	(174)	(12,817)
Allowance for possible loan losses	1,190	(612,930)	(92,301)	(30)	(704,071)
	₩ 4,516	₩ 653,171	410,864	2,242	₩1,070,793
Collective impairment					
Credit balance	₩192,451	₩ 10,209	₩201,315	₩ 703	₩ 404,678
Deferred loan fees, net of expenses	118	—	51	1	170
Allowance for possible loan losses	(56,064)	(5,715)	(73,843)	(269)	(137,891)
	134,505	4,494	127,523	435	266,957
	₩139,021	₩ 657,665	₩538,387	₩2,677	₩1,337,750

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.4 Details of delinquency rates on loans (cont'd)

9.3.4.3 Impaired loans (cont'd)

9.3.4.3.1 Types of impaired loans as at December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

	December 31, 2016				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small-and medium-sized businesses	Public institutions and others	Total
Individual impairment					
Credit balance	₩ 9,106	₩ 983,852	₩ 751,719	₩—	₩1,744,677
Deferred loan fees, net of expenses	—	—	(364)	—	(364)
Allowance for possible loan losses	(2,598)	(486,362)	(235,430)	—	(724,390)
	₩ 6,508	₩ 497,490	515,925	—	₩1,019,923
Collective impairment					
Credit balance	₩170,820	₩ 38,054	₩ 261,389	₩ 10	₩ 470,273
Deferred loan fees, net of expenses	(2,170)	—	(6,804)	2	(8,972)
Allowance for possible loan losses	(44,552)	(5,713)	(83,019)	(8)	(133,292)
	124,098	32,341	171,566	4	328,009
	₩130,606	₩ 529,831	₩ 687,491	₩ 4	₩1,347,932

9.3.4.3.2 Interest income on impaired loans for the nine-month periods ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
		Corporate loans			
	Household Loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Individual impairment	₩ 816	₩15,724	₩14,084	₩5,599	₩36,223
Collective impairment	7,033	214	5,318	1,949	14,514
	₩7,849	₩15,938	₩19,402	₩7,548	₩50,737

	December 31, 2016				
		Corporate loans			
	Household Loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Individual impairment	₩ 636	₩16,029	₩14,375	₩6,257	₩37,297
Collective impairment	6,630	684	5,819	1,818	14,951
	₩7,266	₩16,713	₩20,194	₩8,075	₩52,248

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.5 Overdue payments on debt securities and credit ratings

9.3.5.1 Overdue payments on debt securities as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017			
Classification	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Neither past due nor impaired	₩2,835,194	₩40,262,470	₩6,160,922	₩49,258,586
Impaired	—	7,738	—	7,738
	₩2,835,194	₩40,270,208	₩6,160,922	₩49,266,324

	December 31, 2016			
Classification	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Neither past due nor impaired	₩2,279,879	₩34,420,444	₩4,129,630	₩40,829,953
Impaired	—	7,650	—	7,650
	₩2,279,879	₩34,428,094	₩4,129,630	₩40,837,603

9.3.5.2 Internal credit ratings of debt securities as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017			
Classification	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Grade 1	₩2,835,194	₩39,803,365	₩6,018,148	₩48,656,707
Grade 2	—	464,480	140,739	605,219
Others	—	2,363	2,035	4,398
	₩2,835,194	₩40,270,208	₩6,160,922	₩49,266,324

	December 31, 2016			
Classification	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Grade 1	₩2,279,879	₩34,271,078	₩4,039,367	₩40,590,324
Grade 2	—	149,366	90,263	239,629
Others	—	7,650	—	7,650
	₩2,279,879	₩34,428,094	₩4,129,630	₩40,837,603

The credit ratings of debt securities based on the internal rating used by the Company and credit ratings by external credit rating agencies are as follows

			Overseas rating agencies	
Classification	Internal credit rating	Domestic rating agencies	Moody's	Fitch
Grade 1	A1 ~ A7	AAA ~ A–	Aaa ~ Baa2	AAA ~ BBB
Grade 2	B1 ~ B6	BBB+ ~ BB	Baa3 ~ B3	BBB– ~ B–
Grade 3	C1 ~ C3	BB– ~ B–	Caa1 ~ Caa3	CCC+ ~ CCC–

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.6 Credit risk concentration

9.3.6.1 Credit risk concentration in each major industry as at December 31, 2017 and 2016 are as follows (Korean won in millions):

		December 31, 2017			
				Total	
Classification	Industry	Korean won	Foreign currency	Amount	Ratio (%)
On balance sheet items					
Due from banks	Financial services	₩ 11,168,327	₩ 6,591,374	₩ 17,759,701	100.0
Financial assets at FVTPL	Financial services	1,085,453	—	1,085,453	38.3
	Manufacturing	230,740	—	230,740	8.1
	Public administration	1,488,649	—	1,488,649	52.5
	Wholesale & retail	19,807	—	19,807	0.7
	Others	—	10,545	10,545	0.4
		2,824,649	10,545	2,835,194	100.0
Available-for-sale financial assets	Financial services	18,246,690	4,877,184	23,123,874	57.4
	Manufacturing	78,651	564	79,215	0.2
	Public administration	14,696,828	985,501	15,682,329	38.9
	Construction	47,735	—	47,735	0.1
	Others	131,615	1,205,440	1,337,055	3.4
		33,201,519	7,068,689	40,270,208	100.0
Held-to-maturity financial assets	Financial services	2,707,621	989,662	3,697,283	60.0
	Public administration	1,264,509	352,507	1,617,016	26.2
	Construction	232,091	—	232,091	3.8
	Others	361,844	252,688	614,532	10.0
		4,566,065	1,594,857	6,160,922	100.0
Loans	Household loans	99,138,604	1,124,461	100,263,065	44.7
	Corporate loans				
	Financial services	7,588,634	7,160,091	14,748,725	6.6
	Manufacturing	23,186,388	12,226,642	35,413,030	15.8
	Construction	2,873,170	628,395	3,501,565	1.6
	Wholesale & retail	11,347,952	3,417,653	14,765,605	6.6
	Real estate rental	26,573,941	1,222,497	27,796,438	12.4
	Others	22,402,411	6,307,206	28,709,617	12.8
	Deferred loan fees and expenses	275,795	(14,310)	261,485	0.1
	Allowance for possible loan losses	(1,074,031)	(288,790)	(1,362,821)	(0.6)
		192,312,864	31,783,845	224,096,709	100.0
		₩244,073,424	₩47,049,310	₩291,122,734	

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.6 Credit risk concentration (cont'd)

9.3.6.1 Credit risk concentration in each major industry as at December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

		December 31, 2017			
				Total	
Classification	Industry	Korean won	Foreign currency	Amount	Ratio (%)
Off balance sheet items					
Financial guarantees	Manufacturing	₩ 241,611	₩ 25,871	₩ 267,482	39.1
	Construction	16,814	—	16,814	2.5
	Wholesale & retail	102,839	29,303	132,142	19.3
	Financial services	52,018	17,907	69,925	10.2
	Real estate rental	60,000	524	60,524	8.8
	Others	115,221	22,836	138,057	20.1
		588,503	96,441	684,944	100.0
Guarantee contracts	Household	117,368	10,444	127,812	0.8
	Manufacturing	510,099	7,257,392	7,767,491	47.9
	Construction	77,143	2,200,587	2,277,730	14.0
	Wholesale & retail	493,873	1,823,853	2,317,726	14.3
	Financial services	45,040	990,144	1,035,184	6.4
	Real estate rental	25,270	139,496	164,766	1.0
	Others	427,958	2,110,942	2,538,900	15.6
		1,696,751	14,532,858	16,229,609	100.0
Commitment	Household	11,029,295	2,189	11,031,484	17.0
	Manufacturing	12,513,969	12,486,889	25,000,858	38.5
	Construction	2,348,274	856,477	3,204,751	4.9
	Wholesale & retail	3,483,306	3,711,937	7,195,243	11.1
	Financial services	7,074,312	422,113	7,496,425	11.5
	Real estate rental	1,373,852	3,513	1,377,365	2.1
	Others	7,537,038	2,096,627	9,633,665	14.9
		45,360,046	19,579,745	64,939,791	100.0
		₩47,645,300	₩34,209,044	₩81,854,344	

		December 31, 2016			
				Total	
Classification	Industry	Korean won	Foreign currency	Amount	Ratio (%)
On balance sheet items					
Due from banks	Financial services	₩ 16,184,880	₩ 9,237,151	₩ 25,422,031	100.0
Financial assets at FVTPL	Financial services	847,581	—	847,581	37.2
	Manufacturing	171,575	—	171,575	7.5
	Public administration	1,240,595	—	1,240,595	54.4
	Wholesale & retail	20,128	—	20,128	0.9
		2,279,879	—	2,279,879	100.0
Available-for-sale financial assets	Financial services	13,404,823	4,783,740	18,188,563	52.8
	Manufacturing	109,368	36,937	146,305	0.4
	Public administration	14,170,700	717,594	14,888,294	43.2
	Construction	78,482	24,667	103,149	0.3
	Others	257,695	844,088	1,101,783	3.3
		28,021,068	6,407,026	34,428,094	100.0

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.6 Credit risk concentration (cont'd)

9.3.6.1 Credit risk concentration in each major industry as at December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

		December 31, 2016			
				Total	
Classification	Industry	Korean won	Foreign currency	Amount	Ratio (%)
Held-to-maturity financial assets	Financial services	1,832,374	598,714	2,431,088	58.9
	Public administration	866,401	275,701	1,142,102	27.7
	Construction	223,833	—	223,833	5.4
	Others	380,947	(48,340)	332,607	8.0
		3,303,555	826,075	4,129,630	100.0
Loans	Household loans	95,111,602	1,115,841	96,227,443	44.7
	Corporate loans				
	Financial services	3,786,861	7,534,995	11,321,856	5.3
	Manufacturing	22,759,281	13,564,826	36,324,107	16.9
	Construction	2,673,596	570,008	3,243,604	1.5
	Wholesale & retail	11,086,124	3,392,796	14,478,920	6.7
	Real estate rental	23,014,230	1,876,763	24,890,993	11.6
	Others	23,501,757	6,318,584	29,820,341	13.9
	Deferred loan fees and expenses	269,908	(13,495)	256,413	0.1
	Allowance for possible loan losses	(1,120,377)	(342,567)	(1,462,944)	(0.7)
		181,082,982	34,017,751	215,100,733	100.0
		₩230,872,364	₩50,488,003	₩281,360,367	
Off balance sheet items					
Financial guarantees	Manufacturing	₩ 271,598	₩ 77,371	₩ 348,969	39.9
	Construction	12,661	—	12,661	1.4
	Wholesale & retail	149,232	51,178	200,410	22.9
	Real estate rental	60,068	554	60,622	6.9
	Others	164,024	88,028	252,052	28.9
		657,583	217,131	874,714	100.0
Guarantee contracts	Household	17,032	9,133	26,165	0.1
	Manufacturing	571,348	7,318,611	7,889,959	44.8
	Construction	89,820	2,960,188	3,050,008	17.3
	Wholesale & retail	571,542	2,031,060	2,602,602	14.7
	Financial services	184,506	777,703	962,209	5.5
	Real estate rental	84,089	116,022	200,111	1.1
	Others	358,278	2,558,280	2,916,558	16.5
		1,876,615	15,770,997	17,647,612	100.0
Commitment	Household	11,678,458	2,605	11,681,063	16.0
	Manufacturing	14,450,729	15,746,447	30,197,176	41.1
	Construction	2,364,916	1,154,920	3,519,836	4.8
	Wholesale & retail	3,777,037	3,732,203	7,509,240	10.2
	Financial services	8,285,038	550,665	8,835,703	12.0
	Real estate rental	1,334,365	7,239	1,341,604	1.8
	Others	6,524,407	3,863,771	10,388,178	14.1
		48,414,950	25,057,850	73,472,800	100.0
		₩ 50,949,148	₩41,045,978	₩ 91,995,126	

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.6 Credit risk concentration (cont'd)

9.3.6.2 Credit risk concentration by country as at December 31, 2017 and 2016 are as follows (Korean won in millions, ratio in %):

		December 31, 2017			
				Total	
Classification	Country	Korean won	Foreign currency	Amount	Ratio (%)
On balance sheet items					
Due from banks	Korea	₩ 11,168,327	₩ 634,113	₩ 11,802,440	66.5
	China	—	2,024,030	2,024,030	11.4
	U.S.	—	1,551,104	1,551,104	8.7
	Japan	—	219,140	219,140	1.2
	Hong Kong	—	91,160	91,160	0.5
	Others	—	2,071,827	2,071,827	11.7
		11,168,327	6,591,374	17,759,701	100.0
Financial assets at FVTPL	Korea	2,824,649	—	2,824,649	99.6
	U.S.	—	10,545	10,545	0.4
		2,824,649	10,545	2,835,194	100.0
Available-for-sale financial assets	Korea	33,201,519	4,190,032	37,391,551	92.9
	China	—	770,246	770,246	1.9
	U.S.	—	691,674	691,674	1.7
	Japan	—	84,027	84,027	0.2
	Others	—	1,332,710	1,332,710	3.3
		33,201,519	7,068,689	40,270,208	100.0
Held-to-maturity financial assets	Korea	4,566,065	844,489	5,410,554	87.8
	China	—	333,392	333,392	5.4
	U.S.	—	37,943	37,943	0.6
	Others	—	379,033	379,033	6.2
		4,566,065	1,594,857	6,160,922	100.0
Loans	Korea	191,676,053	12,710,954	204,387,007	91.2
	China	43,932	3,961,392	4,005,324	1.8
	U.S.	161,162	1,146,824	1,307,986	0.6
	Japan	11,403	670,107	681,510	0.3
	Hong Kong	1,375	2,533,448	2,534,823	1.1
	Others	1,217,175	11,064,220	12,281,395	5.5
		193,111,100	32,086,945	225,198,045	100.5
	Deferred loan fees and expenses	275,795	(14,310)	261,485	0.1
	Allowance for possible loan losses	(1,074,031)	(288,790)	(1,362,821)	(0.6)
		192,312,864	31,783,845	224,096,709	100.0
		₩244,073,424	₩47,049,310	₩291,122,734	
Off balance sheet items					
Financial guarantees	Korea	₩ 588,503	₩ 96,441	₩ 684,944	100.0
Guarantee contracts	Korea	1,696,751	11,756,393	13,453,144	82.9

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.6 Credit risk concentration (cont'd)

9.3.6.2 Credit risk concentration by country as at December 31, 2017 and 2016 are as follows (Korean won in millions, ratio in %): (cont'd)

		December 31, 2017			
				Total	
Classification	Country	Korean won	Foreign currency	Amount	Ratio (%)
	China	—	1,579,792	1,579,792	9.7
	U.S.	—	56,908	56,908	0.4
	Japan	—	35,723	35,723	0.2
	Others	—	1,104,042	1,104,042	6.8
		1,696,751	14,532,858	16,229,609	100.0
Commitments	Korea	45,360,046	17,037,572	62,397,618	96.1
	China	—	1,067,339	1,067,339	1.6
	U.S.	—	283,171	283,171	0.4
	Japan	—	62,294	62,294	0.1
	Others	—	1,129,369	1,129,369	1.8
		45,360,046	19,579,745	64,939,791	100.0
		₩ 47,645,300	₩34,209,044	₩ 81,854,344	

		December 31, 2016			
				Total	
Classification	Country	Korean won	Foreign currency	Amount	Ratio (%)
On balance sheet items					
Due from banks	Korea	₩ 16,184,880	₩ 1,801,353	₩ 17,986,233	70.8
	China	—	2,511,884	2,511,884	9.9
	U.S.	—	504,292	504,292	2.0
	Japan	—	1,236,798	1,236,798	4.9
	Hong Kong	—	6,265	6,265	—
	Others	—	3,176,559	3,176,559	12.4
		16,184,880	9,237,151	25,422,031	100.0
Financial assets at FVTPL	Korea	2,279,879	—	2,279,879	100.0
Available-for-sale financial assets	Korea	28,021,068	3,626,805	31,647,873	91.9
	China	—	722,156	722,156	2.1
	U.S.	—	560,544	560,544	1.6
	Japan	—	119,481	119,481	0.3
	Hong Kong	—	6,140	6,140	—
	Singapore	—	154,151	154,151	0.4
	Others	—	1,217,749	1,217,749	3.7
		28,021,068	6,407,026	34,428,094	100.0
Held-to-maturity financial assets	Korea	3,303,555	22,081	3,325,636	80.5
	China	—	547,936	547,936	13.3
	U.S.	—	30,302	30,302	0.7
	Others	—	225,756	225,756	5.5
		3,303,555	826,075	4,129,630	100.0

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

9.3.6 Credit risk concentration (cont'd)

9.3.6.2 Credit risk concentration by country as at December 31, 2017 and 2016 are as follows (Korean won in millions, ratio in %): (cont'd)

		December 31, 2016			
				Total	
Classification	Country	Korean won	Foreign currency	Amount	Ratio (%)
Loans	Korea	181,481,047	16,086,975	197,568,022	91.8
	China	350,800	3,055,917	3,406,717	1.6
	U.S.	516	1,756,655	1,757,171	0.8
	Japan	—	747,125	747,125	0.3
	Hong Kong	—	2,366,624	2,366,624	1.1
	Others	101,088	10,360,517	10,461,605	4.9
		181,933,451	34,373,813	216,307,264	100.5
	Deferred loan fees and expenses	269,908	(13,495)	256,413	0.2
	Allowance for possible loan losses	(1,120,377)	(342,567)	(1,462,944)	(0.7)
		181,082,982	34,017,751	215,100,733	100.0
		₩230,872,364	₩50,488,003	₩281,360,367	
Off balance sheet items					
Financial guarantees	Korea	₩ 657,583	₩ 217,131	₩ 874,714	100.0
Guarantee contracts	Korea	1,872,744	12,761,741	14,634,485	82.9
	China	—	1,593,756	1,593,756	9.0
	U.S.	350	60,476	60,826	0.3
	Japan	—	49,320	49,320	0.3
	Others	3,521	1,305,704	1,309,225	7.5
		1,876,615	15,770,997	17,647,612	100.0
Commitments	Korea	48,409,778	22,045,060	70,454,838	95.9
	China	196	1,220,363	1,220,559	1.7
	U.S.	2,585	153,220	155,805	0.2
	Japan	20	81,988	82,008	0.1
	Others	2,371	1,557,219	1,559,590	2.1
		48,414,950	25,057,850	73,472,800	100.0
		₩ 50,949,148	₩41,045,978	₩ 91,995,126	

9.4 Liquidity risk

Liquidity risk is defined as the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. Liquidity risk arises because of the possibility that the Company might be unable to meet its payment obligations when they fall due under both normal and stress circumstances.

9.4.1 Measurement of liquidity risk

The Company maintains a limit management indicator to measure the liquidity coverage ratio, loan to deposit ratio in Korean won, the liquidity coverage ratio in foreign currency and long-term access to financing ratio in foreign currency in accordance with the guidelines and standards of the Financial Supervisory Service. In addition, the Company maintains a monitoring indicator to measure unbalance of funding, etc. to manage the

9. Risk management (cont'd)

9.4 Liquidity risk (cont'd)

9.4.1 Measurement of liquidity risk (cont'd)

liquidity risk, and manages early warning indicators in order to identify worsening trends in early stage to respond in a timely manner.

9.4.2 Management of liquidity risk

At an early stage, the Company identifies factors affecting liquidity in order to manage liquidity risks and has achieved an adequate level of liquidity via performing a systematic management

The Company has the following basic principles for liquidity risk management:

- Set and comply an acceptable limit and early warning indicators for liquidity risks
- Regularly execute an analysis of stress tests and prepare an emergency procurement plan in case of illiquidity
- Focus on maintaining a diversified portfolio in order to avoid excessive concentrations of risks
- Evaluate and manage the effect of a large amount of money which is loaned out, invested, or procured on liquidity risks

In order to manage the liquidity risks, the Company is building the internal control systems for each department. In order to comply with Liquidity ratios and the maturity mismatch ratio set by the Financial Supervisory Service, the Comprehensive Risk Management monitors the ratios based on the calculated univariate liquidity ratio and maturity mismatch ratios. Liquidity risk status is reported to the Risk Management Operation Committee on a monthly basis and to the Risk Management Committee on a quarterly basis.

In order to maintain the liquidity risk management indicators to stay within the acceptable limits, the Treasury Department and the International Finance Department recommends the necessary measures in relation to the procurement and operation of the assets and liabilities traded in the capital market. In addition, the emergency planning in stages has been established in order to respond to liquidity emergencies. Financial planning department has established a portfolio management strategy based on the internal and external liquidity risk management requirements, procurement, and an outlook on the operating markets.

9.4.3 Contractual maturities analysis of financial liabilities

9.4.3.1 Analysis criteria

The details of the remaining contractual maturities of financial liabilities are analyzed by the earliest maturity date when the Bank would be required to pay, based on the undiscounted cash outflows of the Bank's financial liabilities. In addition, financial liabilities at FVTPL and depository liabilities (payment on demand) are shown at fair value in the immediate payment column. All derivatives used for hedging purposes are interest rate swaps, and those are shown in net cash flows as all interest rate swaps are paid by the net amount.

9. Risk management (cont'd)

9.4 Liquidity risk (cont'd)

9.4.3 Contractual maturities analysis of financial liabilities (cont'd)

9.4.3.2 The remaining contractual maturities of financial liabilities

The remaining contractual maturities of financial liabilities as at December 31, 2017 and 2016 are summarized as follows (Korean won in millions):

	December 31, 2017						
Classification	On demand	Less than 1 month	1~3 months	3 months ~1 year	1 year ~5 years	More than 5 years	Total
On-balance items:							
Financial liabilities at FVTPL	₩ 6,413,932	₩ —	₩ —	₩ —	₩ —	₩ 634,200	₩ 7,048,132
Deposits	104,793,932	18,454,436	26,312,299	71,459,046	10,003,237	1,510,202	232,533,152
Borrowings	2,710,703	3,470,389	2,615,800	2,747,401	1,876,800	409,067	13,830,160
Debentures	697	400,000	844,666	6,998,004	11,716,162	3,082,067	23,041,596
Derivative liabilities used for hedging	—	506	706	932	19,320	(127,499)	(106,035)
Other financial liabilities	5,664,867	13,450,703	2,588	41,195	19,244	—	19,178,597
Merchant banking account liabilities	423,466	1,594,252	—	—	—	—	2,017,718
	120,007,597	37,370,286	29,776,059	81,246,578	23,634,763	5,508,037	297,543,320
Off-balance items:							
Financial guarantees	684,944	—	—	—	—	—	684,944
Commitments	64,939,791	—	—	—	—	—	64,939,791
	65,624,735	—	—	—	—	—	65,624,735
	₩185,632,332	₩37,370,286	₩29,776,059	₩81,246,578	₩23,634,763	₩5,508,037	₩363,168,055

	December 31, 2016						
Classification	On demand	Less than 1 month	1~3 months	3 months ~1 year	1 year ~5 years	More than 5 years	Total
On-balance items							
Financial liabilities at FVTPL	₩ 6,036,550	₩ —	₩ —	₩ —	₩ —	₩ 542,625	₩ 6,579,175
Deposits	98,925,695	14,833,140	21,857,096	74,354,696	9,680,984	2,124,782	221,776,393
Borrowings	2,967,583	4,720,071	1,818,395	2,494,241	3,043,420	371,538	15,415,248
Debentures	52,657	200,000	650,233	5,958,596	8,681,695	4,693,871	20,237,052
Derivative liabilities used for hedging purposes	—	(1,017)	(974)	1,325	15,482	(79,248)	(64,432)
Other financial liabilities	5,313,074	16,321,882	3,599	63,740	8,231	—	21,710,526
Merchant banking account liabilities	750,812	1,654,674	—	—	—	—	2,405,486
	114,046,371	37,728,750	24,328,349	82,872,598	21,429,812	7,653,568	288,059,448
Off-balance items							
Financial guarantees	874,714	—	—	—	—	—	874,714
Commitments	73,472,800	—	—	—	—	—	73,472,800
	74,347,514	—	—	—	—	—	74,347,514
	₩188,393,885	₩37,728,750	₩24,328,349	₩82,872,598	₩21,429,812	₩7,653,568	₩362,406,962

9. Risk management (cont'd)

9.4 Liquidity risk (cont'd)

9.4.3 Contractual maturities analysis of financial liabilities (cont'd)

9.4.3.2 The remaining contractual maturities of financial liabilities (cont'd)

Assets available for use in carrying out unused loan commitments after redeeming all financial liabilities are cash and bank deposits, debt securities, equity securities, and loans. In addition, the Company is able to cope with unexpected cash flows through the sale of securities and the additional sources of funding, similar to the asset backed securitization.

9.5 Market risk

Market risk is risk incurred in assets and liabilities subject to management based on the changes in market prices such as interest rate, stocks and foreign exchange, etc.

9.5.1 Market risk management

The purpose of market risk management is to manage the loss of assets and liabilities incurred due to changes in market variables such as interest rates, foreign exchanges and equity prices to remain within the allowable limits in order to ensure the profitability and stability.

9.5.2 Market risk management targets

Market risk management targets include marketable securities, foreign currency net positions, derivatives and other assets and liabilities with embedded market risks. The Company classifies exposures to market risk into either trading or non-trading positions and manages each of those portfolios separately.

9.5.3 Management of market risk related to trading position

9.5.3.1 Trading position classification

The trading position includes interest rate positions, equity price positions, commodity positions, and all foreign exchange positions:

- Financial instruments for the purpose of acquiring the differences incurred due to short-term trading or price fluctuations.
- Financial instruments for the purpose of hedging risks
- Financial instruments for the purpose of acquiring arbitrages
- Financial instruments for the purpose of acquisition, mediation and market creation
- Derivatives which are not applied to fair value hedge accounting under KIFRS
- All foreign exchange and gold positions in accordance with Regulations on Supervision of Banking Business Appendix 3-2

9.5.3.2 Management of the trading position limits

The Risk Management Committee divides capital, annual loss, exposure and VaR limit in relation to market risks of the trading position by business unit (division) annually. Within the given limit, the Risk Management Operation Committee further subdivides the limits by business units (divisions) and desks. The Risk Management Group provides information necessary for deliberation and review by the Committee, reports trading limits, and measures risks. The Middle Office performs the mark-to-market measures, monitors trade violations and compliance with the limits. The Middle Office has established regulations and policies of trading and comply with them. It measures market risks in relation to trading position and daily inspects for compliance of limits by risks. Moreover, it daily monitors changes in exposure subject to management, verifies for compliance of limits, performs expost facto verification and analyzes urgent situations and reports to the management

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.3 Management of market risk related to trading position (cont'd)

9.5.3.2 Management of the trading position limits (cont'd)

The Company regularly measures the degree of market risks and complies with the allowable limits set for the various areas of the trading position. In addition, the Company reviews the adequacy of the risk-reward ratio by evaluating risks and related profits and losses on a regular basis and complies with the established trading policy regulations. The Company separately examines and analyses the change in exposures with checking its compliance of the limits and emergency situations, and reports to the management on a daily basis.

9.5.3.3 Value at Risk

Value at Risk (VaR) is a method that manages and measures the degree of market risks of the trading position subject to exposure. The Company calculates the VaR by applying Historical Simulation Method for 10 days in the 99% confidence level. Furthermore, the stress test is performed to measure the size of the loss in order to account for the method's limited use in extreme cases.

9.5.3.4 Back test

Back-testing is performed daily on trading units to verify the predictive power of the value-at risk calculations. When back-testing is performed, the Company compares the daily profits and losses with VaR of the previous day and reports the result of subsequent examinations separately to the director of the Risk Management Group. The Company analyses the result of subsequent examination and reports to the Financial Supervisory Service and management.

9.5.3.5 Details of market risk VaR

Details of market risk 10 Day VaR (including 10 Day Stressed VaR) by risk type as at December 31, 2017 and 2016 are summarized as follows (Korean won in millions):

	December 31, 2017	Average	Min	Max	December 31, 2016
Interest rates risk	₩31,419	₩ 37,089	₩28,089	₩ 50,471	₩30,900
Foreign exchange rates risk	97,391	99,176	80,884	117,790	89,684
Stock price risk	13,523	18,812	5,638	32,927	15,727
Option risk	5,198	5,853	3,010	7,062	3,340
Total risk (*)	₩90,964	₩107,986	₩89,131	₩145,341	₩98,678

(*) The calculation of the total risk VaR takes into consideration the correlation and diversification effects between each risk factor and therefore, it is not the same as the total VaRs.

9.5.4 Management of market risk related to non-trading position

9.5.4.1 Interest rate risk

Interest rate risk of non-trading position is a risk of losses in financial assets and liabilities with interest rates due to adverse changes in interest rates and is incurred when maturity structure does not match interest rate setting cycle of the related assets and liabilities. The Company manages the interest rate risks of non-trading position in order to maintain the stability of net interest income and net asset value based on changes in interest rates. The following is subject to the Company's management of interest rate risk.

- Financial assets with interest rates such as bank deposits, debt securities, and loans
- Financial liabilities with interest rates such as depository liabilities, borrowings, and debentures
- Interest-related financial derivatives such as interest rate swaps

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.4 Management of market risk related to non-trading position (cont'd)

9.5.4.1 Interest rate risk (cont'd)

Interest rate risk is calculated using the interest rate gaps. The interest rate risks measure the interest rate gap ratio as a primary indicator, and the interest rate EaR, VaR and duration are used as secondary indicators. The Risk Committee establishes the interest risk limits on an annual basis; the Risk Committee as well as the Risk Management Committee measures the interest rate risk indicators on a monthly basis and reports the compliance with the limits to management.

The interest rate VaR is an estimated maximum loss of net asset due to the adverse changes of the interest rate. Details of the interest rate VaR as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017	Average	Min	Max	December 31, 2016
Interest rate VaR	₩872,797	₩1,099,675	₩872,797	₩1,239,700	₩1,347,473

The interest rate VaR is calculated by using the maturity bucket reprising gap, the interest maturity bucket on modified duration, and the expected gap due to the interest rate fluctuation in accordance with BIS standards. Assets below the substandard and amounts in checking accounts are excluded from the calculated amount.

9.5.4.2 Equity price risk

Equity price risk is a risk incurred when the fair value of equities results in changes in the level of related revenue and capital. Fluctuation in equity reflects the sensitivity of each equity. Effects on capital due to the fluctuation in equity price risk as at December 31, 2017 is as follows (Korean won in millions):

	December 31, 2017			
Classification	20% decline	10% decline	10% rise	20% rise
Equity price risk	₩(72,812)	₩(36,406)	₩36,406	₩72,812

9.5.5 Currency risk concentration

Currency risk is a risk incurred when the value of a financial instrument or future cash flows fluctuates due to the changes in foreign exchange rates. Currency risk arises from the financial instruments expressed in currencies other than the functional currency. Currency risk does not arise from the financial instruments expressed in the functional currency or in non-monetary items measured by using the historical foreign exchange rates. In order to establish the stop loss and limits, the Company manages the foreign exchange net exposure amount of the trading and non-trading positions by each currency.

Significant assets and liabilities denominated in foreign currencies as at December 31, 2017 and 2016 are as follows (Korean won in millions or U.S. dollar in thousands):

	December 31, 2017			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Assets				
Cash and due from bank	USD	2,549,683,244	US$ 2,549,683	₩ 2,731,731
	JPY	43,740,515,835	387,480	415,146
	EUR	496,905,585	593,305	635,666
	CNY	12,164,510,396	1,858,057	1,990,722
	IDR	2,749,011,304,722	202,699	217,172
	Others		1,105,890	1,184,851
			6,697,114	7,175,288

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.5 Currency risk concentration (cont'd)

	December 31, 2017			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Financial assets at FVTPL	USD	83,211,240	83,211	89,153
	JPY	49,660,630	440	471
	EUR	315,430	377	404
	CNY	1,419,365	217	232
	IDR	117,500,000	9	9
	Others		2,830	3,033
			87,084	93,302
Available-for-sale financial assets	USD	4,422,392,390	4,422,392	4,738,151
	JPY	503,620,000	4,461	4,780
	EUR	10,762,000	12,850	13,767
	CNY	4,457,287,531	680,824	729,435
	IDR	2,459,541,796,430	181,355	194,304
	Others		1,295,737	1,388,252
			6,597,619	7,068,689
Held-to-maturity financial assets	USD	836,904,497	836,904	896,659
	EUR	37,051,071	44,239	47,398
	CNY	2,037,223,770	311,174	333,392
	IDR	1,150,350,151,785	84,821	90,878
	Others		211,435	226,530
			1,488,573	1,594,857
Loans	USD	18,879,859,000	18,879,859	20,227,881
	JPY	104,605,425,082	926,658	992,821
	EUR	2,280,486,817	2,722,910	2,917,326
	CNY	26,333,773,089	4,022,328	4,309,522
	IDR	18,334,714,078,408	1,351,915	1,448,442
	Others		1,762,043	1,887,853
			29,665,713	31,783,845
Derivative assets used for hedging	USD	10,976,184	US$ 10,976	₩ 11,760
Others	USD	2,716,393,061	US$ 2,716,393	₩ 2,910,344
	JPY	124,867,077,972	1,106,147	1,185,126
	EUR	127,975,829	152,803	163,713
	CNY	2,328,447,426	355,657	381,050
	IDR	208,552,760,530	15,378	16,476
	Others		232,826	249,450
			4,579,204	4,906,159
			US$49,126,283	₩52,633,900
Liabilities				
Financial liabilities at FVTPL	USD	60,143,592	US$ 60,144	₩ 64,438
	JPY	10,412,484	92	99
	CNY	18,986,370	2,900	3,107
	Others		972	1,042
			64,108	68,686
Deposits	USD	19,491,193,359	19,491,193	20,882,865

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.5 Currency risk concentration (cont'd)

Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
		December 31, 2017		
	JPY	207,791,610,616	1,840,742	1,972,171
	EUR	1,566,893,313	1,870,868	2,004,448
	CNY	35,321,132,069	5,395,094	5,780,303
	IDR	16,576,953,575,507	1,222,307	1,309,579
	Others		3,016,152	3,231,505
			32,836,356	35,180,871
Borrowings	USD	6,735,255,879	6,735,256	7,216,153
	JPY	13,761,716,433	121,909	130,614
	EUR	580,965,417	693,672	743,200
	CNY	2,280,450,812	348,325	373,196
	IDR	1,508,494,927,443	111,229	119,171
	Others		32,318	34,625
			8,042,709	8,616,959
Debentures	USD	3,524,483,923	3,524,484	3,776,132
	CNY	1,310,036,800	200,100	214,388
	IDR	242,603,324,492	17,888	19,166
	Others		118,813	127,295
			3,861,285	4,136,981
Derivative liabilities used for hedging	USD	41,391,510	US$ 41,392	₩ 44,347
Others	USD	4,169,027,163	US$ 4,169,027	₩ 4,466,696
	JPY	35,680,952,234	316,083	338,651
	EUR	533,207,321	636,649	682,105
	CNY	3,359,418,826	513,131	549,769
	IDR	198,633,282,200	14,646	15,692
	Others		236,224	253,090
			5,885,760	6,306,003
			US$50,731,610	₩54,353,847

Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
		December 31, 2016		
Assets				
Cash and due from bank	USD	3,211,131,681	US$3,211,132	₩3,880,653
	JPY	134,217,293,440	1,152,586	1,392,900
	EUR	1,001,228,069	1,014,143	1,225,592
	CNY	11,405,165,885	1,639,503	1,981,340
	IDR	2,366,628,129,021	175,857	212,523
	Others		1,002,509	1,211,532
			8,195,730	9,904,540
Financial assets at FVTPL	USD	112,246,368	112,246	135,650
	JPY	178,043,258	1,527	1,846
	EUR	2,075,749	2,177	2,631
	CNY	1,811,901	260	314
	Others		1,238	1,496

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.5 Currency risk concentration (cont'd)

Account	Currency	Amounts in foreign currencies in units (December 31, 2016)	U.S. dollars (*)	Korean won equivalent
			117,448	141,937
Available-for-sale financial assets	USD	3,626,272,390	3,626,272	4,382,350
	JPY	3,308,250,000	28,383	34,300
	EUR	79,048,650	82,914	100,202
	CNY	2,802,523,059	402,649	486,601
	IDR	1,663,318,553,519	123,596	149,366
	Others		1,037,820	1,254,207
			5,301,634	6,407,026
Held-to-maturity financial assets	USD	78,522,394	78,522	94,894
	EUR	37,784,587	39,632	47,896
	CNY	3,153,590,000	453,402	547,936
	IDR	496,999,217,016	36,931	44,631
	Others		75,067	90,718
			US$ 683,554	₩ 826,075
Loans	USD	19,118,901,813	US$19,118,902	₩23,105,247
	JPY	115,970,298,595	994,945	1,202,392
	EUR	1,393,317,892	1,461,549	1,766,283
	CNY	27,006,014,921	3,871,794	4,679,062
	IDR	16,404,938,715,272	1,219,002	1,473,163
	Others		2,697,196	1,791,604
			29,363,388	34,017,751
Derivative assets used for hedging	USD	19,169,856	19,170	23,167
Others	USD	3,258,296,738	3,258,297	3,937,652
	JPY	16,204,955,574	139,027	168,015
	EUR	65,814,631	69,034	83,427
	CNY	4,314,401,828	618,897	747,937
	IDR	182,985,720,624	13,597	16,432
	Others		417,518	504,571
			4,516,370	5,458,034
			US$48,197,294	₩56,778,530
Liabilities				
Financial liabilities at FVTPL	USD	95,684,208	US$ 95,684	₩ 115,634
	JPY	55,727,118	478	578
	EUR	2,426,187	2,545	3,075
	IDR	1,741,758,000	129	157
	Others		2,072	2,504
			100,908	121,948
Deposits	USD	17,281,131,137	17,281,131	20,884,247
	JPY	173,177,372,191	1,486,760	1,796,750
	EUR	1,519,868,621	1,553,723	1,877,674
	CNY	32,273,933,832	4,639,575	5,606,926
	IDR	15,633,458,765,199	1,161,686	1,403,898
	Others		2,625,361	3,172,748

9. Risk management (cont'd)

9.5 Market risk (cont'd)

9.5.5 Currency risk concentration (cont'd)

	December 31, 2016			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
			28,748,236	34,742,243
Borrowings	USD	7,484,651,637	7,484,652	9,045,202
	JPY	26,641,361,899	228,565	276,220
	EUR	295,840,312	310,309	375,008
	CNY	2,028,385,635	291,478	352,251
	IDR	240,929,340,658	17,903	21,635
	Others		234,370	283,237
			US$ 8,567,277	₩10,353,553
Debentures	USD	4,424,555,809	US$ 4,424,556	₩ 5,347,076
	EUR	75,000,000	78,668	95,070
	CNY	1,266,857,776	181,627	219,496
	IDR	242,369,477,445	18,010	21,765
	Others		111,174	134,353
			4,814,035	5,817,760
Derivative liabilities used for hedging	USD	43,312,807	43,313	52,344
Others	USD	3,573,178,547	3,573,179	4,318,186
	JPY	17,566,464,539	150,708	182,131
	EUR	133,538,637	140,069	169,274
	CNY	4,138,952,098	593,393	717,115
	IDR	141,886,318,617	10,543	12,741
	Others		549,735	664,355
			5,017,627	6,063,802
			US$47,291,396	₩57,151,650

(*) All foreign currencies other than USD are expressed in USD amounts at the reporting date.

9.6 Operating risk

Operational risk is the risk of loss arising from system failure, human error, fraud or other external events. Risks related to legal or regulatory implications are identified as operational risks but risks related to the strategy of damaging reputation are excluded from operational risks. Operational risk includes losses from internal operational problems and externalities, such as natural disasters, etc., and legal lawsuit, but excludes losses from policy decision errors or unmeasurable reputation damage, etc. Operational risk does not have a direct correlation with income and the Company needs to mitigate such risk through internal controls and insurance.

The Company calculates the operational risk capital using the Advanced Measurement Approach (AMA) and sets the amount as the basic indicator to manage the limits. Length of the period in which the AMA is in use is one year with a 99.9% confidence level. The Company uses the loss distribution approach to measure 9 different business units and 7 operational risk event types. In addition, the Company combines the loss distribution of the internal and external data on losses with results of the scenario analysis to calculate the amount of capital and takes into account business environment and changes in the controls in order to adjust the amount of capital and determine the total amount.

The Risk Management Committee determines the operational risk limits. In case the capital amount is expected to exceed the internal capital limits, the management measures to be implemented in the future should be reported to the Risk Management Operation Committee, and if additional limits are given, an approval from the Risk Management Committee is needed beforehand. If under exceptional case where the limit is exceeded, an

9. Risk management (cont'd)

9.6 Operating risk (cont'd)

expost facto approval from the Risk Management Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

9.7 Capital management

The Company implements the BIS capital requirement system in order to secure the capital adequacy and comply with the supervisory regulations. By BIS (Bank for International Settlements) regulation, the Company keeps its BIS capital adequacy ratio (hereinafter BIS ratio) above the minimum BIS for risk-weighted assets. In addition, the Company performs a capital adequacy assessment in order to cope with an unexpected loss.

Risk-weighted assets which are calculated per each risk type when calculating BIS ratio are as follows:

- Risk-weighted assets of credit risk are calculated using the Basic Internal Ratings-Based Approach (IRB). The Company uses the Standardized Approach (SA) for governments, banks, public institutes, overseas exposure, other assets, and etc.
- Risk-weighted assets of market risk are calculated by adding higher of (1) the VaR measured on the previous business day and the average VaR measured in the last 60 business days times (3+multiplier) and (2) the sVaR measured on the previous business day under emergency and the average sVaR measured in the last 60 business days times (3+multiplier) under emergency, to the separate risk calculated by using a standardized model. The FSS provides multiplier to each bank based on the results of verification and the level of meeting the requirements.
- Risk-weighted assets of the operational risk are calculated by multiplying 12.5 to the amount of operational risk capital calculated by Advanced Measurement Approach (AMA) for the Bank and Basic Indicator Approach (BIA) for its subsidiaries.

Regulatory capital in accordance with the Regulations on the Supervision of Banking Business for calculating BIS ratio is as follows:

- Common equity: Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments, retained earnings, accumulated other comprehensive income and other capital surplus, capital adjustments, non-controlling interest on common shares issued by banks, affiliated subsidiaries, etc.
- Other basic capital: The capital securities to meet accreditation requirements of other basic capital, capital surplus associated with the issuance of the other basic capital, non-qualifying capital securities and the accredited amount as other basic capital of a non-controlling interest on equity securities issued by a subsidiary, etc.
- Supplementary capital: The capital securities to meet supplementary capital accreditation requirements, capital surplus associated with the issuance of supplementary capital, the accredited amount of supplementary capital of non-qualifying capital securities, the accredited amount as supplementary capital of a non-controlling interest on equity securities issued by a subsidiary, eligible allowance for possible loan losses on "normal" or "precautionary" category assets, allowance for possible loan losses in excess of the total amount of expected losses, etc.

9. Risk management (cont'd)

9.7 Capital management

Regulatory capital and BIS ratios as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017	December 31, 2016
Common equity		
Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments	₩ 5,359,453	₩ 5,359,410
Retained earnings	8,735,759	7,242,262
Accumulated other comprehensive income and other capital surplus, capital adjustments	8,874,660	9,242,968
Non-controlling interest on common shares issued by a bank, a consolidated subsidiary	23,719	23,419
Deduction	(1,604,266)	(1,138,472)
	21,389,325	20,729,587
Other basic capital		
Amount accredited as supplementary capital of non-qualifying capital securities	180,000	180,000
Amount accredited as other basic capital of a non-controlling interest on capital securities issued by a subsidiary	5,291	5,434
	185,291	185,434
Supplementary capital		
Equity securities satisfying the criteria of supplementary capital	1,642,840	1,525,100
Amount accredited as supplementary capital of non-qualifying capital securities	2,055,390	2,482,920
Amount accredited as supplementary capital of a non-controlling interest on equity securities issued by a subsidiary	18,183	18,743
Allowance for possible loan losses on assets categorized as "normal" or "critical"	125,047	153,744
	3,841,460	4,180,507
	₩ 25,416,076	₩ 25,095,528
Risk-weighted assets		
Credit risk-weighted assets (*)	₩144,738,746	₩143,657,625
Operational risk-weighted assets	8,751,643	8,178,864
Market risk-weighted assets	5,572,416	5,244,049
	₩159,062,805	₩157,080,538
BIS capital ratio		
Total capital ratio	15.98%	15.98%
Common equity ratio	13.45%	13.20%
Tier 1 capital ratio	13.56%	13.31%
Tier 2 capital ratio	2.42%	2.66%

(*) The equity below the lowest limit is presented in credit risk weighted assets.

9.7.1 Internal capital adequacy assessment and management

Internal capital is the amount which allows for continuous operation of business while accounting for all risks. Internal capital is defined as the size of capital needed to cope with unexpected loss under a certain rate. The purpose of managing the internal capital is to compare the size of internal capital and available capital (Tier 1) and to serve as a measure of financial strength. Managing the internal capital also provides the amount of risk-adjusted capital and basic measurement. The indicators are composed of the risk appetite ratio as well as exhaustion ratio of foreign holding limits. The risk appetite ratio is an internal capital ratio established after

9. Risk management (cont'd)

9.7 Capital management (cont'd)

9.7.1 Internal capital adequacy assessment and management (cont'd)

taking into consideration a capital buffer in Tier 1 capital. The exhaustion ratio of foreign holding limits is a ratio used to measure the amount of internal capital used against the internal capital limits.

Internal capital limits are established after accounting for the size of current and subsequent Tier 1 capital as well as the components, quality, risk appetite, target credit rating, operational strategy and business plans. The Risk Committee determines risk types and the internal capital limits for the Company more than once a year. In the case where new operations or the expansion of operations result in the amount exceeding the internal capital limits, an approval from the Risk Committee is needed beforehand. If such a situation occurs in cases outlined as exceptions, an approval from the Risk Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

10. Operating segment information

10.1 General information

In order to set strategies to achieve goal and efficiently conduct performance assessment, the business sectors of the Bank are divided by the operations as follows.

A. Operating group segment: It consists of 4 groups (operating support group, Chungcheong, Yeong-nam, and Ho-nam). It offers household loans and deposit, retirement pension benefit, company loans and deposit, etc.,

B. Capital market segment: This segmentation offers investment and operation of securities, purchasing and selling of public bonds, development and operation of derivatives.

C. Others segment: It consists of overseas business segment, headquarter supporting segment, trust segment, risk segment, audit segment and after-management segment.

The Company reorganized the structure by integrating operating channels of six regional segments and dividing it into operating support group and three operating group segments to strengthen sales capacity as at January 2016. Therefore, the Company did not restate the segment information of previous period based on that of current period and restate the segment information of current period based on that of the previous period.

10.2 Profit or loss by operating segment

10.2.1 Details of net income by operating segments for the December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017							
	Operating group segments				Finance sector and other sector	Subtotal	Adjustments	Total
Classification	Operating support group	Chungcheong	Yeongnam	Honam				
Net interest income	₩ 2,935,239	₩ 364,637	₩ 521,860	₩159,763	₩ 847,702	₩ 4,829,201	₩ (15,029)	₩ 4,814,172
Net fee and commission income (loss)	565,774	52,147	84,751	24,641	185,862	913,175	(276,862)	636,313
Net other operating loss	(1,829,937)	(239,339)	(330,776)	(95,224)	(1,027,197)	(3,522,473)	825,006	(2,697,467)
Net segment operating profit (loss)	1,671,076	177,445	275,835	89,180	6,367	2,219,903	533,115	2,753,018
Income tax expenses	404,400	42,942	66,752	21,582	4,182	539,858	100,921	640,779
Net income (loss)	₩ 1,266,676	₩ 134,503	₩ 209,083	₩ 67,598	₩ 2,185	₩ 1,680,045	₩ 432,194	₩ 2,112,239

10. Operating segment information (cont'd)

10.2 Profit or loss by operating segment (cont'd)

10.2.1 Details of net income by operating segments for the December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016							
	Operating group segments				Finance sector and other sector	Subtotal	Adjustments	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Net interest income	₩ 2,603,680	₩ 300,738	₩ 441,849	₩134,689	₩ 830,631	₩ 4,311,587	₩ 17,102	₩ 4,328,689
Net fee and commission income (loss)	505,744	45,652	80,717	21,336	176,546	829,995	(221,342)	608,653
Net other operating loss	(1,868,366)	(229,960)	(328,755)	(97,260)	(1,713,018)	(4,237,359)	1,063,128	(3,174,231)
Net segment operating profit (loss)	1,241,058	116,430	193,811	58,765	(705,841)	904,223	858,888	1,763,111
Income tax expenses	300,336	28,176	46,902	14,221	(166,512)	223,123	159,817	382,940
Net income (loss)	₩ 940,722	₩ 88,254	₩ 146,909	₩ 44,544	₩ (539,329)	₩ 681,100	₩ 699,071	₩ 1,380,171

10.2.2 External customers by operating sector and revenue from transactions in each sector for the December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017							
	Operating group segments				Finance sector and other sector	Subtotal	Adjustments	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Revenue from external customers	₩3,270,732	₩372,029	₩564,154	₩177,944	₩2,109,869	₩6,494,728	₩(58,226)	₩6,436,502

Classification	December 31, 2016							
	Operating group segments				Finance sector and other sector	Subtotal	Adjustments	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Revenue from external customers	₩2,898,635	₩305,028	₩487,020	₩148,166	₩1,515,472	₩5,354,321	₩(47,358)	₩5,306,963

10.2.3 Significant non-cash transactions included in income of operating segments for the December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017							
	Operating group segments				Finance sector and other sector	Subtotal	Adjustment	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Earnings from equity method investments	₩ —	₩ —	₩ —	₩ —	₩ 103,465	₩ 103,465	₩ —	₩ 103,465
Depreciation and amortization	(26,368)	(14,521)	(4,622)	(1,877)	(140,204)	(187,592)	(16,094)	(203,686)
	₩(26,368)	₩(14,521)	₩(4,622)	₩(1,877)	₩ (36,739)	₩ (84,127)	₩(16,094)	₩(100,221)

Classification	December 31, 2016							
	Operating group segments				Finance sector and other sector	Subtotal	Adjustment	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Earnings from equity method investments	₩ —	₩ —	₩ —	₩ —	₩ 42,172	₩ 42,172	₩ —	₩ 42,172
Depreciation and amortization	(24,519)	(12,911)	(5,116)	(1,779)	(139,006)	(183,331)	(16,790)	(200,121)
	₩(24,519)	₩(12,911)	₩(5,116)	₩(1,779)	₩ (96,834)	₩(141,159)	₩(16,790)	₩(157,949)

10. Operating segment information (cont'd)

10.3 Information about regions

Revenue by region from the external customers for the years ended December 31, 2017 and 2016 and non-current assets by region as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Revenue from external customers (*1)		Non-current assets (*2)	
	December 31, 2017	December 31, 2016	December 31, 2017	December 31, 2016
Domestic	₩5,910,490	₩4,730,485	₩2,600,583	₩3,014,931
Overseas:				
Hong Kong	67,162	118,600	499	801
Singapore	24,687	29,560	865	726
U.S	40,101	39,441	5,168	7,743
Japan	16,978	20,121	2,765	3,216
China	138,087	140,799	26,405	31,766
Indonesia	143,557	124,784	9,359	9,442
U.K	18,621	20,955	2,889	2,659
Canada	28,623	29,731	6,774	8,621
Others	106,422	99,845	8,827	11,785
	584,238	623,836	63,551	76,759
Adjustments	(58,226)	(47,358)	49	(535)
	₩6,436,502	₩5,306,963	₩2,664,183	₩3,091,155

(*1) Income from external customers is divided into categories of domestic and overseas based on the locations of operating branches.
(*2) Non-current assets consist of property and equipment, investment property, and intangible asset and are divided into categories of domestic and overseas based on the location of assets.

11. Cash and due from banks

11.1 Cash and due from banks as at December 31, 2017 and 2016 is as follows (Korean won in millions):

Classification	Counterparty	Annual interest rate (%)	December 31, 2017	December 31, 2016
Cash			₩ 2,224,215	₩ 2,129,539
Due from banks in Korean won				
Reserve deposits, etc.	Bank of Korea ("BOK")	—	8,450,993	11,006,860
Monetary stabilization account	BOK	1.53	2,380,000	4,800,000
Time deposits and others	Bank of Communications	1.80	100,000	100,000
Other deposits	Other financial institutions	—	237,334	278,020
			11,168,327	16,184,880
Due from banks in foreign currencies				
Due from banks on demand	BOK and other banks	0.00~1.68	3,075,845	4,619,193
Due from banks on time deposits	Bayern LB, etc.	0.11~6.90	1,495,382	1,985,105
Due from others on demand	Other financial institutions	—	2,020,147	2,632,853
			6,591,374	9,237,151
			₩19,983,916	₩27,551,570

11. Cash and due from banks (cont'd)

11.2 Restricted balances in due from banks as at December 31, 2017 and 2016 are summarized as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016	Restriction
Due from banks in Korean won			
Reserve deposits, etc.	₩ 8,450,993	₩11,006,860	Required under the Bank Act and other related regulations.
Monetary stabilization account	2,380,000	4,800,000	Required by the Bank of Korea for the purpose of liquidity management.
Reserve for future trading	—	550	Deposits received for guarantees as margin for derivatives
Investor's deposits	153,473	142,399	Required under the Financial Investment Services and Capital Markets Act.
Other deposits	500	39,235	Pledge creation and etc.
	10,984,966	15,989,044	
Due from banks in foreign currencies			
Due from banks on demand	342,719	1,592,370	Reserve deposits required under the Banking Act and other related regulations
Due from others on demand	463,056	884,094	Deposits received for guarantees as margin for derivatives.
	805,775	2,476,464	
	₩11,790,741	₩18,465,508	

12. Financial assets at FVTPL

12.1 Financial assets at fair value through profit or loss as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Interest rate (%)	Fair value (book value) December 31, 2017	Fair value (book value) December 31, 2016
Stocks	—	₩ 50,932	₩ 45,728
Government and public bonds	1.25~5.75	1,403,732	1,215,234
Financial bonds	1.29~5.59	990,686	772,077
Corporate bonds and others	0.11~3.76	430,231	292,568
Securities denominated in foreign currencies	2.25	10,545	—
Derivative assets held-for-trading	—	6,557,488	6,339,942
		₩9,443,614	₩8,665,549

12.2 There are no financial assets designated at FVTPL held by the Company as at December 31, 2017.

13. Available-for-sale financial assets

Available-for-sale financial assets as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Counterparty	Interest rate (%)	Fair value (book value) December 31, 2017	Fair value (book value) December 31, 2016
Stocks	Daewoo Shipbuilding & Marine Engineering Co., Ltd. etc.		₩ 768,475	₩ 1,010,232
Investments in partnership	United PF 1ST Corporate Financial Stability Private Equity Fund, etc.		144,653	142,272
Government and public bonds	Treasury bonds	1.00~5.75	11,163,682	10,003,502
	Housing bonds	1.25~2.00	3,197,632	3,676,520
	Other local bonds	1.29~1.32	39,583	39,555
			14,400,897	13,719,577
Finance bonds	Monetary stabilization securities	1.25~2.06	13,063,071	7,197,367
	Deposit bank bonds	1.29~1.95	664,976	768,974
	Small and medium-sized business banking bonds	1.32~2.16	356,164	367,041
	Industrial financial bonds	1.30~3.57	913,823	1,055,733
	Export-import credit bonds		—	79,908
			14,998,034	9,469,023
Corporate bonds and Others	Non-financial corporate bonds	1.29~5.28	3,409,897	4,146,129
	Corporate bonds	1.35~3.00	390,128	686,139
	Others	8.00	2,563	200
			3,802,588	4,832,468
Beneficial securities	Samsung DaVinci Special Investment Type Private Investment Trust No. 1 _Ci, etc.	—	2,330,354	1,509,813
Securities denominated in foreign currencies	Equity securities in foreign currencies		212,910	257,844
	Bonds in foreign currencies	0.00~9.50	7,068,689	6,407,026
	Investment in foreign currencies		5,571	10,310
	Beneficiary certificates securities in foreign currencies		590,341	65,063
			7,877,511	6,740,243
			₩44,322,512	₩37,423,628

14. Held-to-maturity financial assets

Held-to-maturity financial assets as at December 31, 2017 and 2016 consist of the following (Korean won in millions):

Classification	Category	Annual interest rate (%)	Book value December 31, 2017	Book value December 31, 2016
Government and public bonds	Treasury bonds	3.00~5.75	₩ 353,350	₩ 350,736
	Housing bonds	1.25~2.25	781,237	505,665
			1,134,587	856,401
Finance bonds	Deposit bank bonds	3.40~4.61	230,913	241,180
	Small and medium-sized business banking bonds	1.72~4.38	259,783	100,286
	Industrial financial debenture	1.81~3.42	249,957	10,000
			740,653	351,466
Corporate bonds and others	Non-financial corporate bonds	1.79~5.85	2,610,761	1,995,599
	Corporate bonds	2.31~4.71	80,063	100,089
			2,690,824	2,095,688
Securities denominated in foreign currencies	Bonds in foreign currencies	0.60~10.00	1,594,858	826,075
			₩6,160,922	₩4,129,630

15. Pledged assets

Assets pledged as collateral as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Category	Book value December 31, 2017	Book value December 31, 2016
Available-for-sale financial assets	Intraday overdraft	₩ 566,317	₩ 541,725
	Foreign currency borrowings	290,586	489,620
	Securities lent	599,777	761,901
	Borrowings	1,467,404	1,346,194
	BOK payment	2,554,249	3,106,348
	Futures	66,955	29,491
	Others	979,720	845,772
		6,525,008	7,121,051
Held-to-maturity financial assets	Futures	257,233	278,398
	BOK payment	1,121,782	1,095,998
	Intraday overdraft	45,740	45,882
	Borrowings	275,370	390,991
	Foreign currency borrowing	31,364	42,252
	Others	69,815	74,760
		1,801,304	1,928,281
Loans	Borrowings	10,212	9,466
		₩8,336,524	₩9,058,798

16. Loans and receivables

16.1 Loans and receivables as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Loans		
Loans in Korean won	₩187,647,345	₩177,781,410
Loans denominated in foreign currencies	19,878,908	21,859,135
Domestic import usance	3,450,088	3,441,151
Call loans	2,163,949	2,477,066
Bills purchased in Korean won	66,918	336,072
Bills purchased denominated in foreign currencies	5,663,420	5,844,073
Advance payments on acceptances and guarantees	17,816	25,394
Bonds purchased under resale agreement	4,524,823	2,958,941
Privately-placed corporate bonds	1,193,070	934,986
Others	591,708	649,036
	225,198,045	216,307,264
Plus (less)		
Deferred loan fees, net of expenses	261,485	256,413
Allowance for possible loan losses	(1,362,821)	(1,462,944)
	(1,101,336)	(1,206,531)
	₩224,096,709	₩215,100,733

16.2 Loans in Korean won and in foreign currencies by customer as at December 31, 2017 and 2016 are listed as follows (Korean won in millions):

	December 31, 2017		
Classification	Korean won	Foreign currencies	Total
Corporate loans			
Large-sized businesses	₩ 15,568,167	₩18,346,830	₩ 33,914,997
Small and medium-sized businesses	71,134,037	6,605,694	77,739,731
Public sector and others	7,270,292	6,009,960	13,280,252
	93,972,496	30,962,484	124,934,980
Household loans	99,138,604	1,124,461	100,263,065
	193,111,100	32,086,945	225,198,045
Plus (less)			
Deferred loan fees, net of expenses	275,795	(14,310)	261,485
Allowance for possible loan losses	(1,074,031)	(288,790)	(1,362,821)
	(798,236)	(303,100)	(1,101,336)
	₩192,312,864	₩31,783,845	₩224,096,709

16. Loans and receivables (cont'd)

16.2 Loans in Korean won and in foreign currencies by customer as at December 31, 2017 and 2016 are listed as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016 Korean won	Foreign currencies	Total
Corporate loans			
Large-sized businesses	₩ 16,394,160	₩17,992,810	₩ 34,386,970
Small and medium-sized businesses	65,144,439	8,648,845	73,793,284
Public sector and others	5,283,250	6,616,317	11,899,567
	86,821,849	33,257,972	120,079,821
Household loans	95,111,602	1,115,841	96,227,443
	181,933,451	34,373,813	216,307,264
Plus (less)			
Deferred loan fees, net of expenses	269,908	(13,495)	256,413
Allowance for possible loan losses	(1,120,377)	(342,567)	(1,462,944)
	(850,469)	(356,062)	(1,206,531)
	₩181,082,982	₩34,017,751	₩215,100,733

16.3 Changes in allowance for possible loan losses for the years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions):

Classification	2017 Loans in Korean won	Loans in foreign currencies	Advance payments on acceptances and guarantees	Bills purchased dominated in foreign currencies	Privately placed corporate bonds	Total
As at January 1, 2017	₩1,090,644	₩ 285,366	₩3,745	₩56,369	₩26,820	₩1,462,944
Disposal of non-performing loans	(33,843)	—	—	—	—	(33,843)
Write-offs	(336,056)	(50,065)	(238)	—	—	(386,359)
Collection of loans written-off in prior periods	171,171	35,343	683	—	—	207,197
Debt-to-equity swap	(109,053)	(255,690)	—	—	—	(364,743)
Exchange rate fluctuation and others	73	(28,664)	—	(5,172)	(3)	(33,766)
Provision for possible loan losses	273,369	246,714	(337)	7,196	1,116	528,058
Interest income from impaired loans	(13,010)	(2,493)	(52)	(782)	(330)	(16,667)
December 31, 2017	₩1,043,295	₩ 230,511	₩3,801	₩57,611	₩27,603	₩1,362,821

16. Loans and receivables (cont'd)

16.3 Changes in allowance for possible loan losses for the years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions): (cont'd)

	2016					
Classification	Loans in Korean won	Loans in foreign currencies	Advance payments on acceptances and guarantees	Bills purchased in foreign currencies	Privately -placed corporate bonds	Total
As at January 1, 2016	₩1,446,146	₩ 329,548	₩ 9,769	₩ 64,387	₩ 24,978	₩1,874,828
Changes in scope of consolidation	—	4,942	—	—	—	4,942
Disposal of non-performing loans	(37,738)	(884)	(14,586)	—	—	(53,208)
Write-offs	(786,723)	(111,788)	(36,851)	(15,359)	(27,600)	(978,321)
Collection of loans written-off in prior periods	174,016	30,645	1,994	—	—	206,655
Debt-to-equity swap	(75,218)	—	—	—	—	(75,218)
Exchange rate fluctuation and others	2	(34,470)	(28)	1,597	59	(32,840)
Provisions of allowance of possible loan losses	399,799	70,983	43,782	6,536	29,902	551,002
Interest income from impaired loans	(29,640)	(3,610)	(335)	(792)	(519)	(34,896)
As at December 31, 2016	₩1,090,644	₩ 285,366	₩ 3,745	₩ 56,369	₩ 26,820	₩1,462,944

16.4 Leases investments and net lease investments of the financial lease loans included in loans as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017		
Classification	Short-term	Long-term	Total
Present value of minimum lease payments	₩—	₩1,613	₩1,613
Net lease investments	—	1,613	1,613
Total lease investments	₩—	₩1,613	₩1,613

	December 31, 2016		
Classification	Short-term	Long-term	Total
Present value of minimum lease payments	₩1,193	₩7,048	₩8,241
Net lease investments	1,193	7,048	8,241
Unrealized interest income	9	—	9
Total lease investments	₩1,202	₩7,048	₩8,250

16.5 Leases investments and net lease investments of the financial lease loans by lease period as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017	
Classification	Total lease investment	Net lease investment
Over 1 year but less than 5 years	1,613	1,613
	₩1,613	₩1,613

16. Loans and receivables (cont'd)

16.5 Leases investments and net lease investments of the financial lease loans by lease period as at December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

	December 31, 2016	
Classification	Total lease investment	Net lease investment
Within 1 year	₩1,202	₩1,193
Over 1 year but less than 5 years	7,048	7,048
	₩8,250	₩8,241

17. Derivative instruments

17.1 Details of the amounts of unsettled derivative contracts and fair values of derivatives held by the Company as at December 31, 2017 and 2016 are as follows:

			Accumulated valuation gain (loss)			
	Amounts of unsettled contract		December 31, 2017		December 31, 2016	
Classification	December 31, 2017	December 31, 2016	Assets	Liabilities	Assets	Liabilities
Currency				—		
Forward	₩201,269,429	₩177,127,851	₩4,388,876	₩4,508,586	₩4,062,916	₩3,452,400
Swap	61,630,029	51,819,818	1,809,223	1,477,573	1,582,573	1,832,848
Options purchased	79,069	678,022	1,298	—	12,137	—
Options sold	96,426	610,310	—	2,450	—	8,727
Futures	1,137,045	2,112,071	—	—	—	—
	264,211,998	232,348,072	6,199,397	5,988,609	5,657,626	5,293,975
Interest						
Swap	75,261,996	85,416,041	350,285	382,205	668,066	657,806
Options purchased	776,000	1,160,500	16,854	—	30,944	—
Options sold	3,304,802	4,191,437	—	43,050	—	83,631
Futures	118,339	16,436	—	—	—	—
	79,461,137	90,784,414	367,139	425,255	699,010	741,437
Stock						
Options purchased	819	82,668	170	—	184	—
Options sold	16,160	25,628	—	68	—	273
Futures	1,223	1,950	—	—	—	—
	18,202	110,246	170	68	184	273
Others						
Other derivatives	113,795	86,659	1,157	—	3,416	865
Credit risk adjustment	—	—	(10,375)	—	(20,294)	—
	113,795	86,659	(9,218)	—	(16,878)	865
	₩343,805,132	₩323,329,391	₩6,557,488	₩6,413,932	₩6,339,942	₩6,036,550

17. Derivative instruments (cont'd)

17.2 Details of valuation gain (loss) of the derivatives for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

17.2 Details of valuation gain (loss) of the derivatives for the years ended December 31, 2017 and 2016 are as follows:

Classification	2017 Gain	2017 Loss	2016 Gain	2016 Loss
Currency				
Forward	₩4,447,688	₩4,760,172	₩3,560,230	₩3,248,931
Swap	2,750,913	2,336,546	900,389	978,495
Options purchased	317	—	10,602	—
Options sold	—	364	—	6,718
	7,198,918	7,097,082	4,471,221	4,234,144
Interest				
Swap	249,149	271,986	229,054	188,093
Options purchased	12,558	—	4,503	—
Options sold	—	4,261	—	7,984
	261,707	276,247	233,557	196,077
Stock				
Options purchased	136	—	26	—
Options sold	—	15	—	20
	136	15	26	20
Others				
Other derivatives	898	1,585	308	3,591
Credit risk adjustment	9,918	—	5	4,371
	10,816	1,585	313	7,962
	₩7,471,577	₩7,374,929	₩4,705,117	₩4,438,203

17.3 Derivative instruments used for hedging purposes edging and related assets and liabilities as at December 31, 2017 and 2016 are as follows. And valuation of fair value and gain and loss on valuation for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017 Unsettled contract amounts	Valuation gain	Valuation loss	Assets	Liabilities
Currency					
Currency swaps	₩ 279,922	₩31,872	₩ —	₩ —	₩14,225
Interest					
Interest rate swaps	3,530,626	11,884	30,298	11,760	58,799
	₩3,810,548	₩43,756	₩30,298	₩11,760	₩73,024

Classification	December 31, 2016 Unsettled contract amounts	Valuation gain	Valuation loss	Assets	Liabilities
Currency					
Currency swaps	₩ 294,231	₩ 670	₩22,033	₩ —	₩46,097
Interest					
Interest rate swaps	5,803,695	1,353	67,013	25,825	52,877
	₩6,097,926	₩2,023	₩89,046	₩25,825	₩98,974

Derivative transactions of which purchase and sale incur simultaneously like foreign exchange forward transaction, currency futures and currency swap, do not distinguish purchase contract amount from sale contract

17. Derivative instruments (cont'd)

17.3 Derivative instruments used for hedging purposes edging and related assets and liabilities as at December 31, 2017 and 2016 are as follows. And valuation of fair value and gain and loss on valuation for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

amount. For a derivative transaction involving both Korean won and foreign currencies, the contract amount based on foreign currencies is denominated using a fair exchange rate prevailing at the end of reporting period. For a derivative transaction involving only foreign currencies, the contract amount based on foreign currencies purchased are denominated using a fair exchange rate prevailing at the end of reporting period.

17.4 Gain or loss on valuation of hedged items for the years December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017		2016	
Classification	Net valuation gain	Net valuation loss	Net valuation gain	Net valuation loss
Finance debentures	₩12,581	₩13,205	₩53,157	₩2,617
Depository liabilities	17,821	7,125	18,959	—
Available-for-sale financial assets	—	27,420	22,700	—
	₩30,402	₩47,750	₩94,816	₩2,617

As at December 31, 2017, interest rate swap or currency swap is designated as hedging instrument and the fair value hedge accounting is applied in order to hedge fair value fluctuation risk incurred due to interest rate fluctuations and foreign exchange rate fluctuations in finance debentures issued and depository liabilities. Foreign currency debentures are used as hedging instrument for exchange rate risks in investment stocks in subsidiaries and available-for-sale financial assets.

17.5 Details of the amount of exchange rate differences reflected on transaction of foreign operations with reference to hedge accounting of the net investment in the foreign operation for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017		2016	
Classification	Gain	Loss	Gain	Loss
Hedged items				
Exchange differences on translation of foreign operations (branches and subsidiaries)	₩ —	₩42,427	₩14,369	₩ —
Hedging instruments				
Debentures denominated in foreign currencies	42,427	—	—	17,965
Borrowings denominated in foreign currencies	—	—	3,596	—
	42,427	—	3,596	17,965
	₩42,427	₩42,427	₩17,965	₩17,965

18. Investments in associates

18.1 Details of investments in associates as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Country	Reporting date	Industry	Ownership (%) Dec 31, 2017	Ownership (%) Dec 31, 2016	Book value Dec 31, 2017	Book value Dec 31, 2016
Bank of Jilin (*1)	China	December 31, 2017	Bank	16.98	16.98	₩644,252	₩639,369
Hana Equity Partners I, L.P	Korea	December 31, 2017	Other financial services	29.97	29.97	16,586	23,812
Korea Credit Bureau (*1)	Korea	December 31, 2017	Credit investigation and Collection agency	9.00	9.00	5,601	5,398
Darby Hana Infrastructure Fund Management (*1)	Korea	December 31, 2017	Asset Management Company	9.90	9.90	1,242	1,084
CM International financing leases	China	December 31, 2017	Other financial services	25.00	25.00	201,064	211,928
Beijing Langa Asset Management	China	December 31, 2017	Credit finance business	25.00	—	45,113	—
Somesevit Corporation (*1) (*2)	Korea	December 31, 2017	Construction	1.92	1.92	—	—
Midan City Development Co., Ltd. (*1) (*2)	Korea	December 31, 2017	Construction	2.17	2.17	—	226
Masan Marine New Town Co., Ltd. (*1)	Korea	December 31, 2017	Construction	10.00	10.00	101	101
Company KStartup winwin fund	Korea	December 31, 2017	Investment	23.81	23.81	9,643	9,585
Darby Latin American Private Debt Fund III	USA	September 30, 2017	Investment	24.99	—	6,770	—
Darby Latin American Private Debt Fund IIIA	USA	September 30, 2017	Investment	24.97	—	1,045	—
BSK-6 Patent Technology Investment Association	Korea	December 31, 2017	Investment	20.00	—	885	—
KEB Mirae Asset First Securitization Specialty Co., Ltd. (*2)	Korea	December 31, 2017	Asset securitization	40.00	40.00	—	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd. (*2)	Korea	December 31, 2017	Asset securitization	45.00	45.00	—	—
PT Sinarmas Hana Finance	Indonesia	December 31, 2017	Financial services	30.00	30.00	3,253	3,832
						₩935,555	₩895,335

(*1) These entities are presented as investments in associates as the Company exercises a significant influence on the investee's Board of Directors.

(*2) The equity method is no longer appropriate because the current balances for the investments are below "0"

18. Investments in associates (cont'd)

18.2 Condensed financial statements for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017						
Classification	Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income (loss)	Dividend income
Bank of Jilin	₩62,533,816	₩58,823,646	₩3,710,170	₩1,401,157	₩484,330	₩344,357	₩20,006
Hana Equity Partners I. L.P	71,568	16,224	55,344	1,102	7,553	(17,555)	—
Korea Credit Bureau	75,504	19,323	56,181	68,750	3,580	3,580	149
Darby Hana Infrastructure Fund Management ("DHIF")	14,423	1,884	12,539	6,189	2,213	2,213	59
CM International financing leases	5,713,627	4,909,370	804,257	358,637	57,835	57,835	13,019
Beijing Langa Asset Management	416,310	235,856	180,454	23,843	16,884	16,884	—
Somesevit Corporation	82,400	128,244	(45,844)	10,498	(2,224)	(2,224)	—
Midan City Development Co., Ltd.	664,251	683,621	(19,370)	71,448	615	615	—
Masan Marine New Town Co., Ltd.	134,980	133,974	1,006	402	—	—	—
Company KStartup winwin fund	41,025	525	40,500	3,828	3,012	3,641	—
Darby Latin American Private Debt Fund III	14,258	1,934	12,324	—	(1,871)	(1,871)	—
Darby Latin American Private Debt Fund IIIA	2,508	333	2,175	—	(333)	(333)	—
BSK-6 Patent Technology Investment Association	4,505	79	4,426	6	(74)	(74)	—
KEB Mirae Asset First Securitization Specialty Co., Ltd.	7,388	12,587	(5,199)	737	(4,082)	(4,082)	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	3,234	9,136	(5,902)	2,261	(405)	(405)	—
PT Sinarmas Hana Finance	39,420	29,511	9,909	6,249	(1,196)	(1,769)	—

18. Investments in associates (cont'd)

18.2 Condensed financial statements for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016 Assets	Liabilities	Equity (deficit)	Revenue	Net income (loss)	Comprehensive income (loss)	Dividend income
Bank of Jilin	₩73,278,605	₩69,602,185	₩3,676,420	₩5,622,873	₩498,867	₩340,216	₩20,998
Hana First Private Equity Fund	102,616	23,166	79,450	1,128	(51,866)	(70,706)	—
Korea Credit Bureau	71,245	17,322	53,923	59,868	3,517	3,517	135
Darby Hana Infrastructure Fund Management	12,575	1,629	10,946	4,408	1,471	1,471	—
CM International financing leases	5,193,459	4,345,746	847,713	219,628	41,445	41,445	—
Somesevit Corporation	84,811	128,457	(43,646)	10,390	(3,220)	(3,209)	—
Midan City Development Co., Ltd.	744,855	724,981	19,874	8,936	10,651	10,651	—
Masan Marine New Town Co., Ltd	134,975	133,968	1,007	477	3	3	—
Company K startup winwin fund	40,471	214	40,257	288	(572)	(572)	—
KEB Mirae Asset First Securitization Specialty Co., Ltd.	12,424	13,549	(1,125)	995	(4,232)	(4,232)	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	25,481	30,978	(5,497)	860	(4,610)	(4,610)	—
PT Sinarmas Hana Finance	31,846	19,311	12,535	2,688	(1,051)	(1,051)	—

18.3 Changes in investments in associates for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017										
						Equity method valuation					
Classification	Owner ship (%)	Beginning balance	Acquisition and others	Dividends	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩639,369	₩ —	₩(20,006)	₩619,363	₩ 82,241	₩ —	₩(57,352)	₩ —	₩ —	₩644,252
Hana First Private Equity Fund	29.97	23,812	—	—	23,812	2,263	—	(7,524)	—	(1,965)	16,586
Korea Credit Bureau	9.00	5,398	—	(149)	5,249	352	—	—	—	—	5,601
Darby Hana Infrastructure Fund Management	9.90	1,084	—	(59)	1,025	217	—	—	—	—	1,242
CM International financing leases	25.00	211,928	—	(13,019)	198,909	14,459	—	(12,304)	—	—	201,064
Beijing Rangjia Asset Management	25.00	—	41,801	—	41,801	4,200	—	(888)	—	—	45,113
Somesevit Corporation	1.92	—	—	—	—	—	—	—	—	—	—
Midan City Development Co., Ltd.	2.17	226	—	—	226	—	(226)	—	—	—	—
Masan Marine New Town Co., Ltd.	10.00	101	—	—	101	—	—	—	—	—	101
Company KStartup winwin fund	23.81	9,585	—	—	9,585	719	—	39	—	(700)	9,643
Darby Latin American Private Debt Fund III	24.99	—	7,621	—	7,621	(606)	—	(245)	—	—	6,770
Darby Latin American Private Debt Fund IIIA	24.97	—	1,190	—	1,190	(107)	—	(38)	—	—	1,045
BSK-6 Patent Technology Investment Association	20.00	—	900	—	900	(15)	—	—	—	—	885
KEB Mirae Asset First Securitization Specialty Co., Ltd.	40.00	—	—	—	—	—	—	—	—	—	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	45.00	—	—	—	—	—	—	—	—	—	—
PT Sinarmas Hana Finance	30.00	3,832	—	—	3,832	(258)	—	—	(321)	—	3,253
		₩895,335	₩51,512	₩(33,233)	₩913,614	₩103,465	₩(226)	₩(78,312)	₩(321)	₩(2,665)	₩935,555

18. Investments in associates (cont'd)

18.3 Changes in investments in associates for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

	December 31, 2016										
						Equity method valuation					
Classification	Owner ship (%)	Beginning balance	Acquisition and others	Dividends	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩ 625,760	₩ —	₩(20,998)	₩ 604,762	₩ 84,710	₩ —	₩(50,103)	₩—	₩ —	₩639,369
UAMCO., Ltd.	—	126,346	—	(26,960)	99,386	4,216	—	(70)	—	(103,532)	—
Hana First Private Equity Fund	29.97	64,387	—	—	64,387	(15,542)	—	(5,545)	—	(19,488)	23,812
Korea Credit Bureau	9.00	5,026	—	(135)	4,891	408	—	99	—	—	5,398
Darby Hana Infrastructure Fund Management ("DHIF")	9.90	928	—	—	928	156	—	—	—	—	1,084
CM International financing leases	25.00	141,792	66,968	—	208,760	10,361	—	(7,193)	—	—	211,928
Somesevit Corporation	1.92	—	—	—	—	—	—	—	—	—	—
Midan City Development Co., Ltd.	2.17	226	—	—	226	—	—	—	—	—	226
Masan Marine New Town Co., Ltd.	10.00	101	—	—	101	—	—	—	—	—	101
Hyundai Cement Co., Ltd.	—	23,493	—	—	23,493	(40,515)	26,494	3,152	—	(12,624)	—
Company KStartup winwin fund	23.81	8,722	1,000	—	9,722	(137)	—	—	—	—	9,585
KEB Mirae Asset First Securitization Specialty Co., Ltd.	40.00	1,243	—	—	1,243	(1,243)	—	—	—	—	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	45.00	—	—	—	—	—	—	—	—	—	—
PT Sinarmas Hana Finance	30.00	3,867	—	—	3,867	(242)	—	—	207	—	3,832
		₩1,001,891	₩67,968	₩(48,093)	₩1,021,766	₩ 42,172	₩26,494	₩(59,660)	₩207	₩(135,644)	₩895,335

(*) The Company lost significant influence on the investee in the prior year, and therefore, it has been reclassified as available-for-sale financial assets.

The Company discontinued recognizing its losses in shares since the balance of investments in associates was "0" and the losses which are accumulated for the current year and before the current year are as follows (Korean won in millions):

	December 31, 2017	
Company	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (42)	₩ (880)
Midan City Development Co., Ltd.	(420)	(420)
KEB Mirae Asset First Securitization Specialty Co., Ltd.	(1,630)	(2,080)
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	(453)	(2,656)
	₩(2,545)	₩(6,036)

	December 31, 2016	
Company	Amount for the current year	Accumulated amount before the current year
Somesevit Corporation	₩ (60)	₩ (838)
KEB Mirae Asset First Securitization Specialty Co., Ltd.	(450)	(450)
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	(1,804)	(2,203)
	₩(2,314)	₩(3,491)

19. Property and equipment

19.1 Property and equipment as at December 31, 2017 and 2016 consist of the following (Korean won in millions):

Classification	December 31, 2017 Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩ 854,025	₩ —	₩—	₩ 854,024
Buildings	733,257	(256,415)	(34)	476,808
Leasehold improvements	386,973	(311,678)	(62)	75,233
Equipment and vehicles	901,859	(757,935)	—	143,924
Construction in progress	15,555	—	—	15,555
Others	69,808	—	—	69,808
	₩2,961,476	₩(1,326,028)	₩ (96)	₩1,635,352

Classification	December 31, 2016 Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩1,353,181	₩ —	₩ —	₩1,353,181
Buildings	862,408	(300,013)	(80)	562,315
Leasehold improvements	425,719	(350,940)	(130)	74,649
Equipment and vehicles	962,692	(815,025)	—	147,667
Construction in progress	91,664	—	—	91,664
Others	71,796	—	—	71,796
	₩3,767,460	₩(1,465,978)	₩(210)	₩2,301,272

19.2 Changes in property and equipment for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	January 1, 2017	Additions	Disposal	Depreciation	Transfer out	Others	December 31, 2017
Land	₩1,353,181	₩ —	₩ (71,814)	₩ —	₩(427,280)	₩ (63)	₩ 854,024
Buildings	562,315	25,337	(25,553)	(19,249)	(62,281)	(3,761)	476,808
Leasehold improvements	74,649	22,928	(3,588)	(25,614)	1,922	4,936	75,233
Equipment and vehicles	147,667	71,531	(9,686)	(77,657)	1,128	10,941	143,924
Construction in progress	91,664	145,249	—	—	(221,357)	(1)	15,555
Others	71,796	—	(1,988)	—	—	—	69,808
	₩2,301,272	₩265,045	₩(112,629)	₩(122,520)	₩(707,868)	₩12,052	₩1,635,352

Classification	January 1, 2016	Changes in scope of consolidation	Additions	Disposal	Depreciation	Transfer out	Others	December 31, 2016
Land	₩1,501,611	₩1,187	₩ 101	₩ (79,949)	₩ —	₩(69,871)	₩ 102	₩1,353,181
Buildings	622,538	1,572	8,551	(23,476)	(24,001)	(22,852)	(17)	562,315
Leasehold improvements	74,676	2,527	19,402	(662)	(27,018)	—	5,724	74,649
Equipment and vehicles	180,719	1,364	55,683	(1,899)	(83,392)	86	(4,894)	147,667
Construction in progress	33,985	—	57,793	—	—	(86)	(28)	91,664
Others	77,952	—	—	(6,156)	—	—	—	71,796
	₩2,491,481	₩6,650	₩141,530	₩(112,142)	₩(134,411)	₩(92,723)	₩ 887	₩2,301,272

20. Investment property

20.1 Details of investment property as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017			
Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩455,703	₩ —	₩ (2)	₩455,701
Buildings	404,516	(73,418)	(645)	330,453
	₩860,219	₩(73,418)	₩(647)	₩786,154

	December 31, 2016			
Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩415,344	₩ —	₩ (2)	₩415,342
Buildings	227,232	(86,696)	(645)	139,891
	₩642,576	₩(86,696)	₩(647)	₩555,233

20.2 Changes in investment property for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
Classification	Jan 1, 2017	Depreciation	Transfer (*)	Other	Dec 31, 2017
Land	₩415,342	₩ —	₩ 40,359	₩ —	₩455,701
Buildings	139,891	(9,302)	201,470	(1,606)	330,453
	₩555,233	₩(9,302)	₩241,829	₩(1,606)	₩786,154

	December 31, 2016					
Classification	Jan 1, 2016	Changes in scope of consolidation	Depreciation	Transfer (*)	Others	Dec 31, 2016
Land	₩345,471	₩ —	₩ —	₩69,871	₩—	₩415,342
Buildings	121,107	1,461	(5,894)	22,852	365	139,891
	₩466,578	₩1,461	₩(5,894)	₩92,723	₩365	₩555,233

(*) The transferred amounts are composed of changes in the book values of investment property due to the changes in the ratio of leased properties held by the Company, and the transfer to non-current assets held-for-sale.

Fair values of investment property are in the amount of ₩944,369 million and ₩568,600 million as at December 31, 2017 and 2016, respectively, which were measured by external independent agencies. They fall under level 3 of fair value hierarchy.

20.3 Rental income and operating expenses arising from the Company's investment properties for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Rental income	₩11,582	₩11,168

21. Intangible assets

21.1 Intangible assets as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017 Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ —	₩ —	₩ 892
Industrial proprietary rights	1,260	(593)	—	667
Core deposits	4,980	(1,545)	—	3,435
Software	168,382	(116,596)	—	51,786
Systems development costs	733,581	(612,399)	—	121,182
Memberships	20,642	—	(1,725)	18,917
Others	135,669	(89,842)	(29)	45,798
	₩1,065,406	₩(820,975)	₩(1,754)	₩242,677

Classification	December 31, 2016 Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ —	₩ —	₩ 892
Industrial proprietary rights	1,018	(402)	—	616
Core deposits	4,980	(1,227)	—	3,753
Software	147,706	(102,060)	—	45,646
Systems development costs	695,801	(573,229)	(442)	122,130
Memberships	26,282	—	(3,414)	22,868
Others	109,996	(71,222)	(29)	38,745
	₩986,675	₩(748,140)	₩(3,885)	₩234,650

21.2 Changes in the carrying amount of intangible assets for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017 January 1, 2017	Acquisition	Disposal	Amortization	Others	December 31, 2017
Goodwill	₩ 892	₩ —	₩ —	₩ —	₩ —	₩ 892
Industrial proprietary rights	616	242	—	(191)	—	667
Core deposits	3,753	—	—	—	(318)	3,435
Software	45,646	21,595	(11)	(15,491)	47	51,786
Systems development costs	122,131	40,482	(566)	(40,704)	(161)	121,182
Memberships	22,691	478	(2,569)	(27)	(1,656)	18,917
Others	38,921	26,121	(4,240)	(15,451)	447	45,798
	₩234,650	₩88,918	₩(7,386)	₩(71,864)	₩(1,641)	₩242,677

Classification	December 31, 2016 January 1, 2016	Changes in scope of consolidation	Acquisition	Disposal	Amortization	Others	December 31, 2016
Goodwill	₩ 892	₩ —	₩ —	₩ —	₩ —	₩ —	₩ 892
Industrial proprietary rights	123	—	664	(54)	(117)	—	616
Core deposits	—	3,909	—	—	(344)	188	3,753
Software	38,573	—	15,699	—	(13,451)	4,825	45,646
Systems development costs	71,853	—	82,646	(274)	(31,814)	(281)	122,130
Memberships	28,861	—	1,180	(5,916)	(1,102)	(155)	22,868
Others	22,021	2,669	26,366	(223)	(12,988)	900	38,745
	₩162,323	₩6,578	₩126,555	₩(6,467)	₩(59,816)	₩5,477	₩234,650

22. Non-current assets held for sale

Details of non-current assets held-for-sale as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Acquisition cost (*)	₩457,699	₩21,326
Accumulated impairment loss	—	—
	₩457,699	₩21,326

(*) Acquisition cost is presented as net of accumulated depreciation before classification as non-current assets held-for-sale.

Myung-dong office used by the Bank as head office and 20 collaterals acquired for the purpose of settling credit were classified as non-current assets held-for-sale as at December 31, 2017 based on the decision of the management and the Company is in the process of selling them.

23. Other assets and merchant banking account assets

23.1 Details of other assets as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Guarantee deposits paid	₩ 942,744	₩ 1,026,022
Accounts receivable	6,264,124	8,354,411
Accrued income	875,835	734,443
Prepaid expenses	100,268	98,929
Suspense payments	22,945	14,906
Expenditures	846	1,193
Deposit money to court	8,196	9,644
Domestic exchange settlement debits	1,500,004	974,480
Others	29,697	15,484
Allowance for possible other asset losses	(10,713)	(14,193)
	₩9,733,946	₩11,215,319

23.2 Changes in allowance for possible losses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Beginning balance	₩14,193	₩12,793
Write-offs	(3,989)	(8,090)
Disposal of non-performing loans	—	(840)
Collection of loans written-off in prior periods	697	(1,036)
Provision for possible loss and other asset losses	408	11,662
Interest income from impaired assets	(14)	(19)
Exchange rate fluctuation and others	(582)	(277)
Ending balance	₩10,713	₩14,193

23. Other assets and merchant banking account assets (cont'd)

23.3 Details of merchant banking account assets as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Merchant banking account loans	₩ 4,000	₩ 49,000
Merchant banking account trading bonds	2,602,903	1,845,462
CMA assets:		
Loans	—	4,000
Trading bonds	359,121	698,575
	359,121	702,575
Allowance for possible loan losses	(5)	(78)
	₩2,966,019	₩2,596,959

24. Deposits

24.1 Deposit liabilities as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Demand deposits		
Demand deposits in Korean won	₩ 9,163,654	₩ 8,781,464
Demand deposits in foreign currency	22,402,354	22,357,953
	31,566,008	31,139,417
Time and savings deposits		
Time and savings deposits in Korean won	182,682,083	175,107,829
Time and savings deposits in foreign currency	12,778,517	12,384,290
	195,460,600	187,492,119
Certificate of deposits	3,383,886	1,981,870
	₩230,410,494	₩220,613,406

24.2 Classification of deposits by customers as at December 31, 2017 and 2016 are listed as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Individuals	₩ 84,503,385	₩ 82,214,700
Corporations	72,708,564	66,703,164
Other banks	14,094,524	12,792,227
Public institutions	6,476,320	4,650,621
Other financial institutions	29,946,173	33,207,717
Government	5,834,251	5,410,856
Non-profit corporations	9,701,953	8,615,913
Foreign corporations	2,094,367	2,117,887
Others	5,050,957	4,900,321
	₩230,410,494	₩220,613,406

25. Financial liabilities at FVTPL

25.1 Details of financial liabilities held-for-trading as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Derivative liabilities held-for-trading	₩6,413,932	₩6,036,550

25.2 In order to eliminate or significantly reduce the inconsistencies between the recognized and measured amounts, the financial liabilities designated at FVTPL has been categorized accordingly. Details of financial liabilities at FVTPL as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Deposits	₩425,627	₩378,595

Differences between the book value and maturity amount of the financial liabilities designated at FVTPL as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Book value	₩425,627	₩378,595
Maturity amount	450,000	390,000
Difference	₩(24,373)	₩(11,405)

26. Borrowings

Borrowings as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Lender	Annual interest rate (%)	December 31, 2017	December 31, 2016
Borrowings in Korean won:				
Borrowings from BOK	BOK	0.50 ~ 0.75	₩ 1,606,722	₩ 1,579,178
Borrowings from Government	Korea Finance Corporation (KoFC), etc.	1.44 ~ 2.50	1,456,174	1,569,444
Other borrowings	Korea Energy Management Corporation, etc.	0.00 ~ 3.28	1,865,685	1,777,607
			4,928,581	4,926,229
Borrowings in foreign currencies:				
Bank overdrafts	Foreign Banks, etc.	0.65 ~ 6.25	586,941	516,494
Other borrowings	OCBC, etc.	0.00 ~ 10.50	5,771,681	6,293,960
			6,358,622	6,810,454
Call money:				
Call money in Korean won	Korea Kakao Bank, etc.	1.33 ~ 1.47	174,000	—
Call money in foreign currencies	The Export-Import Bank of Korea, etc.	0.00 ~ 6.50	2,006,567	2,866,675
			2,180,567	2,866,675
Bonds sold under repurchase agreements:				
Bonds sold under repurchase agreements in Korean won	General customers.	0.00	220	239
Bonds sold under repurchase agreements in foreign currencies	Nomura International.	1.59 ~ 4.05	251,770	676,424
			251,990	676,663
Others				
Bills sold	General customers, etc.	0.00 ~ 2.15	54,742	30,614
			₩13,774,502	₩15,310,635

27. Debentures

Debentures as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	Lenders	Annual interest rate (%)	December 31, 2017	December 31, 2016
Debentures in Korean won:				
Debentures	Institutions	1.28~2.19	₩13,730,000	₩ 9,230,000
Subordinated debentures	Institutions and general customers	2.45~8.00	4,480,697	4,280,926
Net gain on fair value hedges (previous periods)			—	364
Less present value discount			(35,941)	(18,177)
			18,174,756	13,493,113
Debentures in foreign currencies:				
Debentures	Barclays, etc.	1.75~5.00	3,281,291	4,849,629
Subordinated debentures	Barclays, etc.	4.25~9.95	884,215	1,003,567
Net gain (loss) on fair value hedges (current period)			624	(50,540)
Net gain (loss) on fair value hedges (previous periods)			(15,331)	34,842
Less present value discount			(13,818)	(19,738)
			4,136,981	5,817,760
			₩22,311,737	₩19,310,873

28. Net defined benefit liability (Assets)

28.1 Details of net defined benefit liability (Assets)

Details of net defined benefit liability as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Present value of defined benefit obligation deposited to plan assets	₩ 1,358,685	₩ 1,305,234
Fair value of plan assets	(1,398,060)	(1,261,246)
	(39,375)	43,988
Net defined benefit liability	5,170	43,988
Net defined benefit asset	₩ (44,545)	₩ —

28. Net defined benefit liability (Assets)

28.2 Defined benefit obligations

28.2.1 Changes in present value of defined benefit obligation

Changes in present value of defined benefit obligation for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Beginning balance	₩1,305,234	₩1,233,943
Current service cost	131,574	124,467
Past service cost	3,649	7,206
Interest cost	31,302	28,976
Remeasurements of the net defined benefit liability	(50,151)	54,705
Benefits paid	(64,697)	(142,980)
Changes due to transference between affiliates	3,193	(1,518)
Others	(1,419)	435
	₩1,358,685	₩1,305,234

28.2.2 Total costs recognized in accordance to defined benefit plans

Total costs incurred in relation to defined benefit pension plans for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Current service cost	₩131,574	₩124,467
Past service cost	3,649	7,206
Interest cost	31,302	28,976
Interest income on plan assets	(28,495)	(24,896)
Actuarial losses	(927)	(1,174)
	₩137,103	₩134,579

28.2.3 Weighted average duration of defined benefit obligation as at December 31, 2017 and 2016 is 8.14 years and 9.1 years, respectively.

28.3 Actuarial assumptions

28.3.1 Principal assumptions for actuarial valuation method as at December 31, 2017 and 2016 are as follows:

	2017	
	Rate (%)	Content
Demographic assumptions		
Death rate	0.004~0.080	Korea Insurance Development Institute
Retirement rate	7.30	
Financial assumptions		
Wage growth rate	5.50	Average of past 5 years
Discounting rate	2.80	Return rate of AAA corporate bond

28. Net defined benefit liability (Assets) (cont'd)

28.3 Actuarial assumptions (cont'd)

28.3.1 Principal assumptions for actuarial valuation method as at December 31, 2017 and 2016 are as follows: (cont'd)

	2016	
	Rate (%)	Content
Demographic assumptions		
Death rate	0.004~0.080	Korea Insurance Development Institute
Retirement rate	6.50	
Financial assumptions		
Wage growth rate	5.50	Average of past 5 years
Discounting rate	2.50	Return rate of AAA corporate bond

28.3.2 Changes in the present values of defined benefit liability due to changes in the principal actuarial assumptions as at December 31, 2017 and 2016 are as follows (Korean won in millions):

1) Discounting rate

	December 31, 2017	1%p Increase	1%p Decrease
Present value of defined benefit liability	₩1,358,685	₩1,246,341	₩1,459,553

2) Wage growth rate

	December 31, 2017	1%p Increase	1%p Decrease
Present value of defined benefit liability	₩1,358,685	₩1,455,814	₩1,247,446

28.4 Plan assets

28.4.1 Details of changes in the value of plan assets

Changes in the fair value of plan assets for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Beginning balance	₩1,261,246	₩1,092,449
Employer contributions	175,325	289,330
Interest income on plan assets	28,495	24,896
Remeasurements of the net defined benefit liability	(9,030)	(5,410)
Benefit provided	(60,784)	(138,880)
Changes due to transference between affiliates	2,808	(69)
Others	—	(1,070)
	₩1,398,060	₩1,261,246

28.4.2 Details of plan assets

Details of plan assets as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Time deposits	₩1,296,885	₩1,180,509
Others	101,175	80,737
	₩1,398,060	₩1,261,246

28.4.3 The Bank expects to contribute ₩121,400 million in 2017, in relation to the defined benefit plan.

28. Net defined benefit liability (Assets) (cont'd)

28.5 Remeasurements of the net defined benefit liability

Remeasurements of the net defined benefit liability as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	2017	2016
Actuarial gains and losses		
Effects on changing financial assumptions	₩ 33,232	₩(17,620)
Effects on changing demographic Assumptions	5,922	2,221
Others	10,997	(40,480)
	50,151	(55,879)
The return on plan assets		
The actual return on plan assets	21,475	20,328
The amount included in net interest of net defined benefit liability	(30,505)	(25,738)
	(9,030)	(5,410)
	₩ 41,121	₩(61,289)

29. Contingent liabilities, agreements, and provisions

29.1 Details of provisions as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Allowance for possible losses on acceptances and guarantees:		
Financial acceptances and guarantees (*)	₩ 765	₩ 912
Non-financial acceptances and guarantees	84,294	81,788
Bills endorsed	165	222
	85,224	82,922
Allowances for unused commitments	58,995	70,429
Other allowance:		
Allowances for asset retirement obligation	55,071	52,619
Allowance for lawsuits	69,110	95,446
Others	18,559	8,233
	142,740	156,298
	₩286,959	₩309,649

(*) The Company recognizes the amount exceeding the unamortized amount of the initial fair value at subsequent measurement of the financial guarantee contract as provisions for guarantees. The Company recognizes the unamortized amount as financial guarantee contract liabilities in the amount of ₩13, 867 million and ₩9,466 million as at December 31, 2017 and 2016 respectively.

29. Contingent liabilities, agreements, and provisions (cont'd)

29.2 Changes in provisions for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017 Beginning balance	Provision for (reversal of) allowance	Allowance used	Others	Ending balance
Allowance for possible losses on acceptances and guarantees	₩ 82,922	₩ 9,405	₩ —	₩(7,103)	₩ 85,224
Allowances for unused commitments	70,429	(11,088)	—	(346)	58,995
Other allowances:					
Allowances for asset retirement obligation	52,619	5,905	(9,164)	5,711	55,071
Allowance for lawsuits	95,446	(23,675)	(2,712)	51	69,110
Others	8,233	14,450	(3,667)	(457)	18,559
	156,298	(3,320)	(15,543)	5,305	142,740
	₩309,649	₩ (5,003)	₩(15,543)	₩(2,144)	₩286,959

Classification	December 31, 2016 Beginning balance	Changes in scope of consolidation	Provision for (reversal of) allowance	Allowance used	Others	Ending balance
Allowance for possible losses on acceptances and guarantees	₩ 81,751	₩—	₩ 61	₩ —	₩1,110	₩ 82,922
Allowances for unused commitments	61,650	57	8,800	—	(78)	70,429
Other allowances:						
Allowances for asset retirement obligation	37,449	—	10,404	(2,901)	7,667	52,619
Allowance for lawsuits	51,795	—	45,530	(1,910)	31	95,446
Others	21,528	—	6,882	(21,047)	870	8,233
	110,772	—	62,816	(25,858)	8,568	156,298
	₩254,173	₩ 57	₩71,677	₩(25,858)	₩9,600	₩309,649

29. Contingent liabilities, agreements, and provisions (cont'd)

29.3 Details of guarantees as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Financial guarantees in Korean won:		
Collateral for loans	₩ 99,940	₩ 99,667
Purchasing loans	488,563	557,916
	588,503	657,583
Financial guarantees in foreign currencies:		
Local financial acceptances and guarantees	96,441	217,131
Confirmed acceptance and guarantees in Korean won	1,634,495	1,847,362
Confirmed acceptance and guarantees in foreign currencies:		
Acceptance on letter of credit	835,516	431,957
Acceptance on letter of guarantees	119,910	126,175
Others	9,928,841	11,712,387
	10,884,267	12,270,519
Contingent acceptance and guarantees:		
Letters of credit	3,281,199	3,202,590
Others	382,479	281,138
	3,663,678	3,483,728
Bills endorsed	47,169	46,003
	₩16,914,553	₩18,522,326

29.4 Commitments

Details of unused commitments as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Commitments on loans in Korean won	₩42,970,132	₩45,655,445
Commitments on loans in foreign currencies	19,242,684	25,052,483
Commitments on purchase of asset-backed commercial papers	418,700	303,100
Commitments on credit lines on asset-backed securities	1,395,428	1,229,674
Commitments on purchase of securities	912,847	1,232,098
	₩64,939,791	₩73,472,800

29.5 Lawsuits

As at December 31, 2017, the Company is involved in 288 lawsuits as a plaintiff and 169 lawsuits as a defendant. The aggregate amounts of claims as plaintiff and defendant are ₩487,126 million and ₩298,237 million, respectively. The Company's major lawsuits in progress as a defendant are summarized as follows (Korean won in millions):

		Status of lawsuit		
Plaintiff	Amount	First trial	On appeal	Content
Individual	₩57,015	Won	In progress	Return of deposits
F********Bankruptcy administrator	35,992	In-progress	—	Return of an illicit gain
**** Securities Co., Ltd.,	37,136	In-progress	—	Compensation for damages
**** Investments Co., Ltd.	16,798	In-progress	—	Compensation for damages
****Industrial, Co., Ltd.	15,169	lost	In progress	Return of deposits

30. Other liabilities and merchant banking account liabilities

30.1 Details of other liabilities as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Borrowing from trust accounts	₩ 4,690,383	₩ 5,127,806
Foreign exchanges settlement credits	303,576	637,021
Domestic exchange settlement credits	4,307,177	5,120,057
Accounts payables	6,791,099	9,169,043
Accrued expense payables	1,417,404	1,403,708
Unearned income	57,095	56,982
Deferred income	627	987
Deposits for letter of guarantees and others	1,037,823	256,442
Suspense receipt	320,643	271,101
Withholding taxes	103,250	56,814
Security deposits received	123,108	28,061
Accounts for agency businesses	158,583	158,411
Liability incurred by agency relationship	1,918,483	1,452,871
Financial acceptance and guarantees:	13,867	9,466
Other liabilities	19,957	13,982
	₩21,263,075	₩23,762,752

30.2 Details of merchant banking account liabilities as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Merchant banking account deposits	₩2,017,718	₩2,405,487
Others:		
Provision for unused commitments	99	273
Other liabilities (*)	529	509
	628	782
	₩2,018,346	₩2,406,269

(*) Include accrued expenses, unearned income and others.

31. Common stock and capital surplus

31.1 Issued capital as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Number of shares authorized	2,000,000,000	2,000,000,000
Par value per share (Korean won)	₩ 5,000	₩ 5,000
Number of shares issued	1,071,915,717	1,071,915,717
Common stock	₩ 5,359,578	₩ 5,359,578

31. Common stock and capital surplus (cont'd)

31.2 Other paid-in capital as at December 31, 2017 and 2016 is as follows (Korea won in millions):

Classification	December 31, 2017	December 31, 2016
Consolidated capital surplus (*1)	₩9,668,863	₩9,668,897
Hybrid equity securities (*2)	179,737	179,737
Consolidated capital adjustments:		
Stock option	(10,367)	(395)
Others	(32,257)	(30,390)
	(42,624)	(30,785)
	₩9,805,976	₩9,817,849

(*1) The amount recognized in business combinations under common control and stock options that were extinguished (not exercised) and accounted for as capital adjustments transferred to the consolidated capital surplus or other capital surplus as at December 31, 2017.

(*2) The hybrid securities have maturities, but as the Company has the right to continuously extend the maturity, the securities have been recognized as equity.

32. Accumulated other comprehensive income

Changes in accumulated other comprehensive income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017				
Classification	January 1, 2017	Increase and decrease	Reclassification (*)	Tax effects	December 31, 2017
Gain (loss) on valuation of available-for-sale financial assets	₩ 81,004	₩ 57,506	₩(318,331)	₩ 80,652	₩ (99,169)
Exchange differences on translation of foreign operations	(147,442)	(209,528)	—	15,165	(341,805)
Changes in equities of investments in associates	(30,709)	(78,317)	—	22,874	(86,152)
Gain (loss) on valuation of net investment hedges of foreign operations	(29,715)	55,972	—	(13,545)	12,712
Remeasurement of the net defined benefit plan	(268,461)	41,121	—	(9,950)	(237,290)
	₩(395,323)	₩(133,246)	₩(318,331)	₩ 95,196	₩(751,704)

	December 31, 2016				
Classification	January 1, 2016	Increase and decrease	Reclassification (*)	Tax effects	December 31, 2016
Gain (loss) on valuation of available-for-sale financial assets	₩ 429,411	₩ (76,700)	₩(382,940)	₩111,233	₩ 81,004
Exchange differences on translation of foreign operations	(187,605)	52,986	—	(12,823)	(147,442)
Changes in equities of investments in associates	14,513	(56,579)	(3,081)	14,438	(30,709)
Gain (loss) on valuation of net investment hedges of foreign operations	(15,346)	(18,957)	—	4,588	(29,715)
Remeasurement of the net defined benefit plan	(222,004)	(61,289)	—	14,832	(268,461)
	₩ 18,969	₩(160,539)	₩(386,021)	₩132,268	₩(395,323)

32. Accumulated other comprehensive income (cont'd)

(*) Gain (loss) on valuation of available-for-sale financial assets recognized as accumulated other comprehensive income has been reclassified to profit or loss due to disposals or recognition of impairment of the available-for-sale financial assets. Changes in equities of investments in associates classified as accumulated other comprehensive income were reclassified to profit or loss due to the disposal of investments in associates.

33. Retained earnings

33.1 Details of retained earnings as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Legal reserve:		
Reserve of earned surplus (*1)	₩1,027,500	₩ 904,400
Voluntary reserve:		
Revaluation reserves on tangible assets (*2)	414,616	414,709
Other reserves (*3)	152,502	137,490
Regulatory reserve for bad debts (*4)	1,915,033	1,881,607
Other voluntary reserve	2,819,822	2,338,670
	5,301,973	4,772,476
Unappropriated retained earnings	2,406,286	1,565,386
	₩8,735,759	₩7,242,262

(*1) The *Banking Law* of the Republic of Korea requires the Company to appropriate at least 10% of net income after income tax to legal reserve, until such reserve equals 100% of its paid-in capital. This reserve is restricted to the payment of cash dividends; however, it can be used to reduce deficit or be transferred to capital.

(*2) The Company records gains from revaluation of property and equipment previously recognized as other comprehensive income to the voluntary reserve, as it applies the revaluation amount as deemed cost at the first-time adoption of KIFRS. The reserve is recognized in distributable retained earnings when the relevant property and equipment are disposed.

(*3) Relevant Japanese regulations require the Company's overseas branches located in Japan to appropriate a minimum of 10% of net income for the period as a legal reserve, until such reserve equals ¥2,000 million. This reserve is restricted to be used upon liquidation of the Japanese branches. Singapore, Hong Kong and Hanoi branches' statutory reserves are included in other reserves in accordance with the relevant regulations.

(*4) The Company has provided allowances for possible loan losses in accordance with KIFRS. The difference in this amount and the provision of allowance accumulated in accordance with the minimum accumulation ratio required by FSS has been accounted for as regulatory reserve for bad debts.

33.2 Changes in appropriated retained earnings for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Beginning balance	₩7,242,262	₩6,299,338
Net income for the period	2,103,510	1,372,737
Dividends	(600,200)	(420,000)
Dividends on hybrid securities	(9,813)	(9,813)
Ending balance	₩8,735,759	₩7,242,262

33. Retained earnings (cont'd)

33.3 Dividends

Details of calculation on common stock dividends for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions and shares in units):

	2017 (*1)	2016
Number of shares	1,071,915,717	1,071,915,717
Par value per share (Korean won)	₩ 5,000	₩ 5,000
Dividend ratio	18.15%	11.20%
Dividend per share (Korean won)	₩ 907.35	₩ 559.93
Dividends	₩ 972,600	₩ 600,200
Net income (*2)	₩ 2,103,510	₩ 1,372,737
Dividend pay-out ratio based on net income	46.24%	43.72%
Adjusted income after deducting provisions for bad debt reserve (*2)	₩ 2,084,221	₩ 1,339,311
Dividends pay-out ratio based on adjusted income after deducting provisions for bad debt	46.66%	44.81%

(*1) The dividend for 2017 will be presented at the annual general meeting of shareholders, which is scheduled on March 22, 2018.
(*2) Net income before deducting provisions for bad debt and adjusted income after deducting provisions for bad debt is calculated on the basis of the controlling company's shares.

34. Regulatory reserve for bad debts

Regulatory reserve for bad debt is calculated and disclosed in accordance with Article 29, Section 1 and 2 of supervision of Banking Business of the Republic of Korea.

34.1 Details of regulatory reserve for bad debts as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Beginning balance	₩1,915,033	₩1,881,607
Planned provision for bad debts	19,289	33,426
Ending balance	₩1,934,322	₩1,915,033

34.2 Provisions for bad debt reserve and income adjusted for deductions of provisions for bad debt for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Net income attributable to equity holders of the parent before deducting provisions for bad debt	₩2,103,510	₩1,372,737
Reversal of (provisions for) bad debt reserve	(19,289)	(33,426)
Adjusted income after deducting provisions for bad debt	2,084,221	1,339,311
Basic earnings per share adjusted after reflecting reserve for bad debt (*1) (Korean won)	1,935	1,240
Diluted earnings per share adjusted after reflecting reserve for bad debt (*2) (Korean won)	1,935	1,240

(*1) The dividend on hybrid equity securities in the amount of ₩9,813 million and ₩9,813 million for the years ended December 31, 2017 and 2016, respectively, were deducted from the adjusted income after reflecting the bad debt reserve for the calculation of earnings per share after reflecting reserve for bad debt for each period.
(*2) As the Company has no potentially dilutive ordinary stock, basic earnings per share is the same as diluted earnings per share.

35. Operating income and operating expenses

35.1 Operating income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Interest income	₩ 8,111,335	₩ 7,582,570
Fees and commission income	835,420	801,964
Gains on financial instruments at FVTPL	18,949,975	16,564,133
Gains on derivative instruments used for hedging	80,806	90,810
Gains on financial instruments available-for-sale	555,384	414,594
Other operating income	4,512,008	3,859,133
	₩33,044,928	₩29,313,204

35.2 Operating expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Interest expenses	₩ 3,297,163	₩ 3,253,881
Fees and commission expenses	199,107	193,311
Losses on financial instruments at FVTPL	19,085,174	16,049,069
Losses on derivative instruments used for hedging	57,256	106,897
Losses on financial instruments available-for-sale	21,589	31,995
Impairment loss of financial instruments	669,129	599,774
General and administrative expenses	3,091,795	3,161,220
Other operating expenses	3,948,138	4,371,088
	₩30,369,351	₩27,767,235

36. Net interest income

36.1 Interest income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Interest income on due from banks	₩ 142,403	₩ 85,928
Interest income on available-for-sale financial assets	653,203	601,382
Interest income on held-to-maturity financial assets	156,779	148,980
Interest income on financial assets at FVTPL	46,129	42,425
Interest income on loans	7,112,821	6,703,855
	₩8,111,335	₩7,582,570

36.2 Interest expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Interest expenses on deposit liabilities	₩2,460,875	₩2,405,297
Interest expenses on borrowings	207,720	183,094
Interest expenses on financial liabilities at FVTPL	11,682	13,593
Interest expenses of debentures	518,902	494,049
Others	97,984	157,848
	₩3,297,163	₩3,253,881

37. Net fees and commission income

37.1 Fees and commission income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Commissions received from loans and others	₩542,058	₩507,356
Commissions received on guarantee	68,559	74,940
Commissions related foreign exchange	224,803	219,668
	₩835,420	₩801,964

37.2 Fees and commission expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Commissions paid borrowings and others	₩158,771	₩147,404
Commissions related foreign exchange	40,336	45,907
	₩199,107	₩193,311

38. Net gain (loss) from financial instruments at fair value through profit or loss

38.1 Details of gain (loss) on financial assets and liabilities at FVTPL for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Gain from financial instruments at FVTPL		
Financial instruments held-for-trading		
Gain on valuation	₩ 3,489	₩ 3,423
Gain on disposal	31,333	29,117
	34,822	32,540
Derivatives instruments held-for-trading		
Gain on valuation of derivatives		
Currency related derivatives	7,198,918	4,471,221
Interest related derivatives	261,707	233,557
Stock related derivatives	136	26
Others	10,816	314
	7,471,577	4,705,118
Gain on transaction of derivatives		
Currency related derivatives	10,444,059	10,662,412
Interest related derivatives	978,923	1,145,471
Stock related derivatives	5,588	5,361
Others	992	7
	11,429,562	11,813,251
Gain on securities sold	791	48
	₩18,936,752	₩16,550,957
Loss from financial instruments at FVTPL		
Financial instruments held-for-trading		
Loss on valuation	₩ 8,527	₩ 3,179
Loss on disposal	22,738	26,518
Loss on redemption	—	19
	31,265	29,716

38. Net gain (loss) from financial instruments at fair value through profit or loss (cont'd)

38.1 Details of gain (loss) on financial assets and liabilities at FVTPL for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

Classification	2017	2016
Derivatives instruments held-for-trading		
Loss on valuation of derivatives		
Currency related derivatives	7,097,082	4,234,144
Interest related derivatives	276,247	196,077
Stock related derivatives	15	20
Others	1,585	7,962
	7,374,929	4,438,203
Loss on transaction of derivatives		
Currency related derivatives	10,706,993	10,409,179
Interest related derivatives	963,374	1,166,472
Stock related derivatives	5,338	4,507
Others	1,277	1
	11,676,982	11,580,159
Loss on securities sold	1,755	523
	19,084,931	16,048,601
	₩ (148,179)	₩ 502,356

38.2 Details of gain (loss) on financial assets and liabilities designated at FVTPL for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Gain on financial assets and liabilities designated at FVTPL		
Deposits		
Gain on valuation	₩13,223	₩11,098
Gain on disposal	—	1,380
	13,223	12,478
Borrowings		
Gain on disposal	—	698
	13,223	13,176
Loss on financial assets and liabilities designated at FVTPL		
Deposits		
Loss on valuation	160	—
Loss on disposal	83	468
	243	468
	₩12,980	₩12,708

39. Gain (loss) from derivative financial instruments used for hedging

Gain (loss) from derivative instruments used for hedging for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Gain from derivative instruments used for hedging		
Hedged item		
Gain on valuation		
Gain on valuation of debentures	₩12,581	₩ 53,157
Gain on valuation of deposits	17,821	18,959
	30,402	72,116
Gain on transaction		
Gain on transaction of debentures	1,466	8,790
Gain on transaction of deposits	2,658	—
	4,124	8,790
Derivative instruments used for hedging		
Gain on valuation of derivatives		
Gain on valuation of currency related derivatives	31,872	670
Gain on valuation of interest related derivatives	11,884	1,353
	43,756	2,023
Gain on transaction of derivatives		
Gain on transaction of currency related derivatives	—	1,775
Gain on transaction of interest related derivatives	2,524	6,106
	2,524	7,881
	80,806	90,810
Loss from derivative instruments used for hedging		
Hedged item		
Loss on valuation		
Loss on valuation of debentures	13,205	2,617
Loss on valuation of deposits	7,125	—
	20,330	2,617
Loss on transaction		
Loss on transaction of debentures	1,833	—
Loss on transaction of deposits	698	6,106
	2,531	6,106
Derivative instruments used for hedging		
Loss on valuation of derivatives		
Loss on valuation of currency related derivatives	—	22,033
Loss on valuation of interest related derivatives	30,298	67,013
	30,298	89,046
Loss on transaction of derivatives		
Loss on transaction of currency related derivatives	—	333
Loss on transaction of interest related derivatives	4,097	8,795
	4,097	9,128
	57,256	106,897
	₩23,550	₩ (16,087)

40. Gain on available-for-sale financial assets and liabilities

Net income on other financial instruments for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Gain on disposal of available-for-sale financial assets	₩555,384	₩414,594
Loss on disposal of available-for-sale financial assets	21,589	31,995
	₩533,795	₩382,599

41. Impairment loss on financial assets

Impairment loss on financial assets for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Impairment loss of available-for-sale financial assets	₩140,663	₩ 37,110
Provision for possible loan losses	528,058	551,002
Provision for possible other asset losses	408	11,662
	₩669,129	₩599,774

42. General and administrative expenses

General and administrative expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Salaries	₩1,614,849	₩1,505,100
Retirement benefits	137,103	134,579
Termination benefits	130,670	296,441
Employee welfare benefits	87,330	92,500
Depreciation	131,822	140,305
Amortization	71,864	59,816
Rental expenses	280,631	286,579
Entertainment expenses	20,600	24,179
Taxes and dues	105,001	101,447
Advertising expenses	104,333	88,569
Others	407,592	431,705
	₩3,091,795	₩3,161,220

43. Other operating income

Other operating income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Gain on disposal of loans	₩ 58,524	₩ 64,878
Reversal of allowances for unused commitments	11,088	—
Reversal of other provisions	3,320	—
Trust commissions	167,232	113,986
Gain on foreign exchange transaction	4,153,506	3,567,181
Gain on merchant banking accounts (*)	51,889	37,311
Dividends	58,223	54,544
Others	8,226	21,233
	₩4,512,008	₩3,859,133

43. Other operating income (cont'd)

(*) Details of gain on merchant banking accounts for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Interest income	₩35,111	₩25,956
Fee and commission income	362	590
Gain on disposal of trading bonds	1,013	1,033
Gain on valuation of CMA securities	16	3
Gain on disposal of bills	15,139	9,510
Reversal of allowance for doubtful accounts on loans	74	—
Reversal of provisions for unused commitments	174	219
	₩51,889	**₩37,311**

44. Other operating expenses

Other operating expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Loss on disposal of loans	₩ 634	₩ 9,721
Provision of acceptance and guarantees transferred in	9,405	61
Provision of unused commitments transferred in	—	8,800
Other provisions transferred in	—	62,816
Contribution to Korea Credit Guarantee Fund	265,425	278,149
Insurance fee on deposit	308,205	294,801
Loss on foreign exchange transaction	3,331,342	3,677,106
Loss on merchant banking accounts (*)	31,687	25,678
Others	1,440	13,956
	₩3,948,138	₩4,371,088

(*) Details of loss on merchant banking accounts for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Interest expenses	₩31,538	₩25,459
Allowance for doubtful accounts on loans transferred in	—	24
Others	149	195
	₩31,687	₩25,678

45. Other non-operating income

Other non-operating income for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Rental fee income	₩ 11,582	₩ 11,168
Gain on disposal of property and equipment	24,416	90,933
Gain on disposal of intangible asset	411	165
Gain on disposal of investments in associates	—	65,428
Gain on equity method	103,465	59,094
Reversal of impairment loss on investments in associates	—	26,494
Others	69,241	72,684
	₩209,115	₩325,966

46. Other non-operating expenses

Other non-operating expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Loss on disposal of property and equipment	₩ 5,911	₩ 8,866
Loss on disposal of intangible asset	35	172
Loss on equity method	—	16,922
Collection expenses for written-off claims	2,429	2,029
Collection commissions for written-off claims	3,944	3,630
Loss on disposal of investments in associates	—	22,958
Impairment loss on investments in associates	226	—
Donations	19,228	17,971
Others	99,901	36,276
	₩131,674	₩108,824

47. Income tax expenses

47.1 The components of income tax expenses for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Current income taxes		
Income taxes	₩ 838,702	₩281,719
Additional refund of prior year's income tax	(23,429)	(25,349)
Changes in deferred income tax assets	(236,290)	29,114
Current and deferred income taxes recognized directly to equity	98,343	144,180
Tax effect of consolidated tax returns	(36,547)	(46,724)
Income tax expenses	₩ 640,779	₩382,940

47.2 Reconciliations of income tax expenses applicable to the net income before income tax expenses at the Korea statutory tax rate to income tax expenses at the effective income tax rate of the Company for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Net income before income tax expenses	₩2,753,018	₩1,763,111
Tax at domestic statutory income tax rate (*)	663,248	426,211
Non-taxable income	(3,170)	(5,271)
Expenses not deductible for tax purposes	5,088	6,719
Tax credit	(14,027)	(13,317)
Income tax expenses of foreign branches and subsidiaries	34,049	33,002
Tax effect of consolidated tax return	(36,547)	(46,724)
Additional refund of prior year's income tax	(23,429)	(25,349)
Others (Effect of tax rates change, etc)	15,567	7,669
Income tax expenses	₩ 640,779	₩ 382,940
Effective income tax rate (%)	23.28	21.72

(*) 11% is applied to income under ₩200 million, 22% is applied to income exceeding ₩200 million and under ₩20 billion, and 24.2% is applied to income above ₩20 billion.

47. Income tax expenses (cont'd)

47.3 Temporary differences and deferred income tax assets (liabilities) as of December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017	
Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 823,772	₩ 226,551
Impairment loss on securities	2,581	568
Valuation of investment in associates	(464,687)	(127,789)
Gain on valuation of derivatives	(191,033)	(52,534)
Deemed dividends	158,343	43,544
Deferred loan fees, net of expenses	(273,888)	(75,319)
Accrued interest income	(261,706)	(71,969)
Accrued expenses	147,704	40,556
Provisions on acceptance and guarantees	83,187	22,877
Severance and retirement insurance	(1,232,842)	(339,026)
Severance and retirement benefit liabilities	1,232,895	339,037
Other provisions	150,859	41,486
Loans written-off	601,930	164,682
Depreciation	(25,569)	(7,032)
Fair value valuation resulting from merger	32	9
Dormant deposits	15,441	4,246
Allowance for advanced depreciation	(180,315)	(49,587)
Deemed cost for property and equipment	(931,110)	(256,055)
Available-for-sale securities	149,859	41,211
Net loss carried over	87,016	19,144
Investment in kind at KEB China	18,479	5,082
Financial guarantee contract	1,975	543
Deferred reward points income	627	172
Others	233,486	63,484
	₩ 147,036	₩ 33,881
Domestic deferred income tax assets (*1)		33,881
Foreign deferred income tax assets (*2)		28,758
Foreign deferred income tax liabilities (*2)		(52,852)
		₩ 9,787

47. Income tax expenses (cont'd)

47.3 Temporary differences and deferred income tax assets (liabilities) as of December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016 Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 559,932	₩ 135,358
Valuation of investment in associates	(340,138)	(82,313)
Gain on valuation of derivatives	(369,414)	(89,398)
Deemed dividends	29,631	7,171
Deferred loan fees, net of expenses	(265,486)	(64,248)
Accrued interest income	(216,148)	(52,308)
Accrued expenses	122,121	29,552
Provisions on acceptance and guarantees	81,048	19,614
Severance and retirement insurance	(1,172,918)	(283,846)
Severance and retirement benefit liabilities	1,173,013	283,867
Other provisions	190,062	45,995
Loans written-off	348,321	83,781
Depreciation	(23,016)	(5,570)
Fair value valuation resulting from merger	32	8
Dormant deposits	17,795	4,306
Allowance for advanced depreciation	(180,315)	(43,636)
Deemed cost for property and equipment	(1,003,274)	(242,792)
Net loss carried over	102,427	22,534
Financial guarantee contract	(3,302)	(799)
Deferred reward points income	987	239
Others	(95,466)	(23,101)
	₩(1,044,108)	₩(255,586)
Domestic deferred income tax assets (*1)		28,310
Domestic deferred income tax liabilities (*1)		(283,896)
Foreign deferred income tax assets (*2)		33,755
Foreign deferred income tax liabilities (*2)		(4,672)
		₩(226,503)

(*1) Deferred income tax asset is from domestic subsidiaries excluded from the consolidated tax return and overseas branches. It was not offset with deferred income tax liability as the tax authorities differ between subsidiaries.
(*2) Deferred income tax assets of foreign branches are not offset against the deferred income tax liabilities due to the differences in tax jurisdictions.

The effective income tax rate of 27.5% as at December 31, 2017 is applied when calculating deferred income tax assets or liabilities. Also, deferred income tax assets are recognized when it is foreseeable that future taxable income will be incurred and that future tax credits will be realized.

47.4 Details of deferred income taxes charged (credited) directly to equity as of December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017 Before tax amounts	Deferred income tax assets (liabilities)
Gain (loss) on valuation of available-for-sale financial assets	₩(149,859)	₩41,211
Capital change in equity method	(118,830)	32,678
Gain (loss) on foreign currency translation of foreign operations	(65,714)	18,071
	₩(334,403)	₩91,960

47. Income tax expenses (cont'd)

47.4 Details of deferred income taxes charged (credited) directly to equity as of December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016 Before tax amounts	Deferred income tax assets (liabilities)
Gain (loss) on valuation of available-for-sale financial assets	₩ 106,865	₩(25,862)
Capital change in equity method	(40,514)	9,805
Gain (loss) on foreign currency translation of foreign operations	(194,513)	47,072
	₩(128,162)	₩ 31,015

48. Earnings per share

48.1 Weighted-average number of ordinary shares for the years ended December 31, 2017 and 2016 are as follows (shares in units):

Classification	Periods	Number of ordinary shares	Weights	Weighted-average number of ordinary shares
December 31, 2017	2017.01.01~2017.12.31	1,071,915,717	365/365	1,071,915,717
December 31, 2016	2016.01.01~2016.12.31	1,071,915,717	365/365	1,071,915,717

Since the Company does not have potentially dilutive ordinary stock, the weighted average number of shares of ordinary stock outstanding per basic share is the same as the weighted average number of shares of ordinary stock outstanding per diluted share.

48.2 The Company's basic earnings per share for the years ended December 31, 2017 and 2016 are calculated as follows (Korean won in millions and per share amounts in units):

Classification	2017	2016
Net income attributable to equity holders of the parent for the year	₩ 2,103,510	₩ 1,372,737
Dividends on hybrid equity securities	(9,813)	(9,813)
Net income attributable to common stock	2,093,697	1,362,924
Weighted-average number of shares of ordinary stocks outstanding	1,071,915,717	1,071,915,717
Basic earnings per share (Korean won) (*)	₩ 1,953	₩ 1,271

(*) Basic earnings per share are the same as diluted earnings per share for the years ended December 31, 2017 and 2016.

49. Share-based payment

When the stock options are exercised, the Company has the option to settle either through issuance of new shares or treasury stock or through payment of cash equivalents to the difference between the market price and the exercise price. The number of exercisable stock option is determined in accordance with management performance and the calculation criteria for the number of exercisable shares. Also, the Company granted the equity-linked special incentive (Rose Bonus and/or Rose Share) to employees for the purpose of motivation to improve long-term performance. The equity-linked special incentive is settled in cash. It can be exercised from 1 to 3 years after the grant date for the following 3 to 4 years.

49. Share-based payment (cont'd)

Details of liabilities related to share-based payment and total intrinsic value of rights accounted for as accounts payable in case that option holders achieve rights to receive cash or other assets as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Book value of liabilities related to share-based payment		
Stock options	₩ 329	₩ 68
Equity-linked special incentives (granted by the Bank)	200	481
Equity-linked special incentives (granted by HFG)	48,547	22,955
	₩49,076	₩23,504

The compensation costs for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	2017	2016
Costs recognized due to share-based payment		
Stock options	₩ 261	₩ 48
Equity-linked special incentive (granted by the Bank)	126	94
Equity-linked special incentive (granted by HFG)	8,278	14,399
	₩8,665	₩14,541

49.1 Stock options

Details of the share-based payment as at December 31, 2017 are as follows. Stock options are measured at fair value based on Black-Scholes model (in Korean won and share in units):

Grant date	Exercise period	Risk-free rate	Expected service period	Volatility of the underlying stock price	Expected dividends	Stock price at grant date	Fair value
2011-08-10	2015-08-11 ~ 2019-08-10	1.12%	8.01	26.68%	800	8,060	1,894
2011-08-26	2015-08-27 ~ 2019-08-26	1.20%	8.01	27.60%	800	7,720	2,193
2011-09-02	2015-09-03 ~ 2019-09-02	1.24%	8.01	27.73%	800	7,930	2,289

Changes in shares of stock options for the years ended December 31, 2017 are as follows (Korean won and share):

Grant date	Shares at beginning	Exercise	Divesture	Extinction at maturity	Shares at ending	Stock option outstanding	Exercise price
2010-03-10	312,350	—	(312,350)	—	—	—	—
2010-03-30	237,140	—	(237,140)	—	—	—	—
2010-08-04	251,890	—	(251,890)	—	—	—	—
2010-09-29	17,810	—	(17,810)	—	—	—	—
2011-08-10	333,000	—	—	—	333,000	333,000	9,100
2011-08-26	42,290	—	—	—	42,290	42,290	8,500
2011-09-02	11,250	—	—	—	11,250	11,250	8,400
	1,205,730	—	(819,190)	—	386,540	386,540	

There was no stock option exercised for the year ended December 31, 2017.

Weighted average residual expiration of exercisable stock options is 1.61 years as at December 31, 2017.

49. Share-based payment (cont'd)

49.2 Equity-linked special incentives

Equity-linked special incentives are measured at fair value based on the binomial model and become exercisable from 1 to 3 years after the grant date for the following 3 to 4 years. There is no equity-linked special incentive provided by the Bank to the employees as at December 31, 2017.

Changes in shares of equity linked special incentives for the years ended December 31, 2017 and 2016 are as follows (shares in units):

	Number of shares	
Classification	2017	2016
Beginning	₩ 25,430	₩ 132,645
Divesture	—	(1,290)
Number of shares exercised	(25,430)	(105,925)
Ending	₩ —	₩ 25,430

Weighted average stock price of equity linked special incentives at the exercise date is in the amount of ₩6,515 for the year ended December 31, 2017.

49.3 Performance-linked share-based compensation

Hana Financial Group (HFG) and the Bank operate performance share plan, granting the executives and department head of the Bank with performance-linked stocks. Details of performance-linked stocks granted to the executives and department head of the Bank as at December 31, 2017 are as follows:

Classification	5th	6th	7th
Granted by	Hana Financial Group	Hana Financial Group	Hana Financial Group
Grant date	2015-01-01	2016-01-01	2017-01-01
Payment date	2017-12-31	2018-12-31	2019-12-31
Grant period	2015-01-01~2017-12-31	2016-01-01~2018-12-31	2017-01-01~2019-12-31
Grant method	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock	Payment of cash equivalents to the difference between the market price and the exercise price or treasury stock
Shares at settlement date (*)	351,558	366,383	114,040

(*) Hana Financial Group (HFG) and the Bank provide the executives and department head of the Bank with the right to receive stocks. The amount of stocks paid is adjusted based on the performance. The amounts of 5th and 6th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income) is 60%. The amounts of 7th stock grants are adjusted based on the assessment indicator of which the group performance (relative shareholders' rate of return) is 40% and bank performance (ROE, net income, soundness) is 60%.

50. Cash flow information

50.1 Details of cash and cash equivalents as at December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Cash	₩ 2,224,215	₩ 2,129,539
Due from banks in Korean won	11,168,327	16,184,880
Due from banks In foreign currencies	6,591,374	9,237,151
	19,983,916	27,551,570
Less: Restricted balances	11,790,742	18,465,508
Deposits which have a maturity period of three months or above	754,133	472,266
	₩ 7,439,041	₩ 8,613,796

50.2 Significant non-cash transactions for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

Classification	December 31, 2017	December 31, 2016
Unrealized gain on valuation of available-for-sale financial assets	₩(259,664)	₩(459,640)
Transfer from property and equipment to investment properties	241,830	92,723
Transfer from property and equipment to non-current assets held for sale	466,037	—
Transfer from loans to available-for-sale financial assets resulting from debt-to-equity swap	11,014	204,506

50-3 Changes in liabilities arising from financing activities are as follows (Korean won in millions):

	January 1, 2017	Cash flows	Exchange rate fluctuation	Fair value hedge	Others	December 31, 2017
Borrowings	₩15,310,635	₩ (243,485)	₩(1,292,648)	₩ —	₩ —	₩13,774,502
Debentures	19,301,873	3,248,768	(240,239)	(55,349)	47,684	22,311,737
	₩34,621,508	₩3,005,283	₩(1,532,887)	₩(55,349)	₩47,684	₩36,086,239

51. Related parties

51.1 Equity interests among the Company and its affiliates as at December 31, 2017 are summarized as follows:

Type	Related parties
Controlling company	Hana Financial Group (HFG)
Associates	Bank of Jilin
	Hana Equity Partners I, L.P
	Korea Credit Bureau
	Darby Hana Infrastructure Fund Management
	CM International financing leases
	Beijing Langa Asset Management Co., Ltd.
	Somesevit Corporation
	Midan City Development Co., Ltd.
	Masan Marine New Town Co., Ltd.
	Company KStartup winwin fund
	Darby Latin American Private Debt Fund III
	Darby Latin American Private Debt Fund IIIA
	BSK-6 Patent Technology Investment Association
	KEB Mirae Asset First Securitization Specialty Co., Ltd.
	KEB Mirae Asset Second Securitization Specialty Co., Ltd.
	PT Sinarmas Hana Finance

51. Related parties (cont'd)

51.1 Equity interests among the Company and its affiliates as at December 31, 2017 are summarized as follows: (cont'd)

Type	Related parties
Entities under common control	Hana Financial Investment Co., Ltd.
	Hana Card Co., Ltd.
	Hana Capital Co., Ltd.
	Hana Asset Trust
	Hana Alternative Asset Management Co., Ltd.
	Hana TI Co., Ltd.
	Hana Life Insurance Co., Ltd.
	Hana Savings Bank
	Hana Investors Services Company
	Hana Professional investment type private real estate 28
	Hana Japan Residence Professional Investment Type 47
	Hana US Sunlight Specialized Investment-Type Trust 52
Other related parties	Odin2. LLC
	Warden 1 SPC Ltd.
	Radian 1 SPC Co., Ltd.
	Gunsan bio-energy Corp.
	Advanced&Different Credit Information Co., Ltd.
	Finnq Co., Ltd.
	Mirae Credit Information Services Corp
	UBS Hana Asset Management Co., Ltd.
	F&U Credit Information Co., Ltd.
	Hana AIM Investment Management Inc.
	HN Housing Co., Ltd.
	Hana Lantern Energy Factory Private Equity.
	Thehue Company Ltd.

51. Related parties (cont'd)

51.2 Transactions with related parties for the years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions):

	December 31, 2017						
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company							
Hana Financial Group (HFG)	₩—	₩ 1,533	₩1,985	₩—	₩ 10	₩ —	₩ 13
Associates:							
Korea Credit Bureau	—	—	—	—	56	—	—
Darby Hana Infrastructure Fund Management	—	—	505	—	159	—	—
Hana Equity Partners I, L.P	—	9	—	—	6	—	—
Masan Marine New Town Co., Ltd.	108	—	—	—	2	—	—
Midan City Development Co., Ltd.	—	—	—	—	33	—	—
Company KStartup winwin fund	—	—	—	—	31	—	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	—	—	—	—	2	—	—
	₩108	₩ 9	₩ 505	₩—	₩ 289	₩ —	₩ —
Entities under common control:							
Hana Financial Investment Co., Ltd.	31	1,404	4,785	—	1,910	—	40,675
Hana Card Co., Ltd.	(1)	79,216	617	—	1,365	2,200	589
Hana Capital Co., Ltd.	—	367	138	—	99	9	43
Hana Asset Trust	—	25	—	—	768	—	—
Hana Alternative Asset Management Co., Ltd.	—	9	38	—	137	—	—
Hana TI Co., Ltd.	—	3	9	—	4	62,842	—
Hana Institute of Finance (*1)	—	—	—	—	11	3,272	—
Hana Savings Bank	—	7	37	—	—	—	1
Hana Life Insurance Co., Ltd.	—	12,799	1,085	—	—	—	31
Hana Investors Services Company	—	6	162	—	111	—	32
	₩ 30	₩93,836	₩6,871	₩—	₩4,405	₩68,323	₩41,371

51. Related parties (cont'd)

51.2 Transactions with related parties for the years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions): (cont'd)

	December 31, 2017						
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties:							
Odin2.LLC	—	—	—	2,126	—	—	—
Radian 1 SPC Co., Ltd	4	—	—	—	—	—	—
Gunsan bio-energy Corp.	—	—	—	—	13	—	—
Advanced&Different Credit Information Co., Ltd.	—	—	—	—	3	—	—
Finnq Co., Ltd.	—	67	—	—	1	—	—
Mirae Credit Information Services Corp	89	—	—	5	54	222	—
UBS Hana Asset Management Co., Ltd.	—	2	—	—	—	1	—
F&U Credit Information Co., Ltd.	—	3	—	—	—	—	—
Hana AIM Investment Management Inc.	—	—	—	—	10	—	—
HN Housing Co,. Ltd	100	—	—	26	—	—	—
Thehue Company. Ltd.	232	2	—	(11)	—	—	—
	425	74	—	2,146	81	223	—
	₩563	₩95,452	₩9,361	₩2,146	₩4,785	₩68,546	₩41,384

(*1) Although Hana Institute of Finance was a wholly-owned subsidiary of Hana Financial Group, the liquidation process was terminated in December 2017 after transfer of business in July 2017.

51. Related parties (cont'd)

51.2 Transactions with related parties for the years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions): (cont'd)

	December 31, 2016						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company:							
Hana Financial Group (HFG)	₩—	₩ 5,584	₩ 2,196	₩—	₩ 22	₩ —	₩ 12
Associates:							—
UAMCO., Ltd.	—	1	—		—		—
Korea Credit Bureau	—	—	—	—	16	—	—
Darby Hana Infrastructure Fund Management	—	—	431	—	149	—	—
Hyundai Cement Co., Ltd.	—	17	—	—	6	—	—
Hana Equity Partners I, L.P	—	13	—	—	33	—	—
Masan Marine New Town Co., Ltd.	95	10	—	3	4	—	—
Midan City Development Co., Ltd.	—	—	—	—	400	—	—
Company KStartup winwin fund	—	—	—	—	16	—	—
	95	41	431	3	624	—	—
Entities under common control:							
Hana Financial Investment Co., Ltd.	27	1,547	19,441	—	807	—	14,607
Hana Card Co., Ltd.	4	71,583	391	—	1,978	3,337	511
Hana Capital Co., Ltd.	3	326	178	16	81	—	33
Hana Asset Trust	—	16	—	—	379	—	—
Hana Alternative Asset Management Co., Ltd	—	1	—	—	157	—	—
Hana TI Co., Ltd.	—	—	19	—	137	44,407	—
Hana Institute of Finance	—	—	—	—	10	6,196	—
Hana Life Insurance Co., Ltd.	—	12,830	102	—	—	—	20
Hana Investors Services Company	—	—	71	—	104	—	51
	₩ 34	₩86,303	₩20,202	₩ 16	₩3,653	₩53,940	₩15,222

51. Related parties (cont'd)

51.2 Transactions with related parties for the years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions): (cont'd)

	December 31, 2016						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties:							
Odin2.LLC	₩123	₩ 1	₩ —	₩25,973	₩ —	₩ —	₩ —
Gunsan bio-energy Corp.	—	—	—	—	25	—	—
Advanced&Different Credit Information Co., Ltd.	—	—	—	—	13	—	—
Finnq Co., Ltd.	—	—	—	—	3	—	—
Mirae Credit Information Services Corp.	—	10	—	—	122	718	—
UBS Hana Asset Management Co., Ltd.	—	1	—	—	18	1	359
Plakor Co., Ltd.	304	17	—	20	226	—	—
F&U Credit Information Co., Ltd	—	3	—	—	—	—	—
Hana Lantern Energy Factory Private Equity	—	1	—	—	—	—	—
HN housing Co,. Ltd.	20	—	—	7	6	—	—
Thehue Company Ltd.	307	2	—	50	—	—	—
	754	35	—	26,050	413	719	359
	₩883	₩91,963	₩22,829	₩26,069	₩4,712	₩54,659	₩15,593

51. Related parties (cont'd)

51.3 Details of transactions with related parties for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017		
Classification	Increase /decrease in loans	Increase/decrease in deposits and borrowings	Investment in cash
Controlling company:			
Hana Financial Group (HFG)	₩ —	₩ (11,237)	₩ —
Associates:			
Korea Credit Bureau	—	3,985	—
Darby Hana Infrastructure Fund Management	—	1,846	—
Beijing Langa Asset Management Co., Ltd.	—	—	41,801
Hana Equity Partners I, L.P	—	(1,219)	—
Masan Marine New Town Co., Ltd	—	26	—
Midan City Development Co., Ltd.	—	(22,317)	—
Company KStartup winwin fund	—	3,120	—
Darby Latin American Private Debt Fund III	—	—	7,621
Darby Latin American Private Debt Fund IIIA	—	—	1,190
BSK-6 Patent Technology Investment Association	—	—	900
KEB Mirae Asset First Securitization Specialty Co., Ltd.	—	620	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	—	744	—
	—	(13,285)	51,512
Entities under common control:			
Hana Financial Investment Co., Ltd.	—	(10,102)	—
Hana Card Co., Ltd.	—	59,830	—
Hana Capital Co., Ltd.	—	31,616	—
Hana Asset Trust	—	45,165	—
Hana Alternative Asset Management Co., Ltd	—	1,209	—
Hana TI Co., Ltd.	—	(13,832)	—
Hana Institute of Finance (*1)	—	(2,178)	—
Hana Life Insurance Co., Ltd.	—	10	—
Hana Investors Services Company	—	4,306	—
	—	116,024	—
Other related parties:			
Warden 1 SPC Ltd.	—	7	—
Radian 1 SPC Co., Ltd.	—	(193)	—
Gunsan bio-energy Corp.	—	(1,577)	—
Advanced&Different Credit Information Co., Ltd.	—	(1,000)	—
Finnq Co., Ltd.	—	4,515	—
Mirae Credit Information Services Corp.	—	1,009	—
UBS Hana Asset Management Co., Ltd.	—	182	—
F&U Credit Information Co., Ltd.	—	1	—
Hana AIM Investment Management Inc.	—	2,061	—
HN Housing Co., Ltd.	3,200	(621)	—
Hana Lantern Energy Factory Private Equity Fund	—	(2)	—
Thehue Company Ltd.	(994)	58	—
	2,206	4,440	—
Key management	912	(2,160)	—
	₩3,118	₩ 93,782	₩51,512

(*1) Although Hana Institute of Finance was a wholly-owned subsidiary of Hana Financial Group, the liquidation process was terminated in December 2017 after transfer of business in July 2017.

51. Related parties (cont'd)

51.3 Details of transactions with related parties for the years ended December 31, 2017 and 2016 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016 Increase /decrease in loans	Increase/decrease in deposits and borrowings	Investment in cash
Controlling company:			
Hana Financial Group (HFG)	₩ —	₩ 14,218	₩ —
Associates:			
UAMCO., Ltd.	—	(3)	—
Korea Credit Bureau	—	97	—
Darby Hana Infrastructure Fund Management	—	1,614	—
CM International financing leases	—	—	66,968
Hyundai Cement Co., Ltd.	—	206	—
Hana Equity Partners I, L.P		1,054	—
Masan Marine New Town Co., Ltd	—	(2)	—
Midan City Development Co., Ltd.	—	5,037	—
Company KStartup winwin fund	—	900	1,000
	—	8,903	67,968
Entities under common control:			
Hana Financial Investment Co., Ltd.	—	(950,973)	—
Hana Card Co., Ltd.	—	18,035	—
Hana Capital Co., Ltd.	(10,000)	(2,818)	—
Hana Asset Trust	—	(612,201)	—
Hana Alternative Asset Management Co., Ltd	—	(1,257)	—
Hana TI Co., Ltd.	—	14,323	—
Hana Institute of Finance.	—	(218)	—
Hana Life Insurance Co., Ltd.	—	(11)	—
Hana Investors Services Company	—	8,882	—
	(10,000)	(1,526,238)	—
Other related parties:			
Odin2 LLC.	(25,151)	—	—
Warden 1 SPC Ltd.	—	4	—
Radian 1 SPC Co., Ltd.	—	187	—
Special Money Trust (Hana FI)	—	(4,394)	—
Doosan Capital Co., Ltd	—	108	—
Gunsan bio-energy Corp.	—	6,771	—
Advanced&Different Credit Information Co., Ltd.	—	1,000	—
Finnq Co., Ltd.	—	82	—
Mirae Credit Information Services Corp.	—	1,768	—
UBS Hana Asset Management Co., Ltd.	—	(5,589)	—
Plakor Co., Ltd.	(1,475)	613	—
Hana AIM Investment Management Inc.	—	56	—
HN Housing Co., Ltd.	1,700	728	—
Hana Lantern Energy Factory Private Equity Fund	—	76	—
Thehue Company Ltd.	6,244	15	—
	(18,682)	1,425	—
Key management	1,861	9,743	—
	₩(26,821)	₩(1,491,949)	₩67,968

51. Related parties (cont'd)

51.4 Outstanding balances with related parties arising from the above transactions as at December 31, 2017 and 2016 are summarized as follows (Korean won in millions):

	December 31, 2017				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company:					
Hana Financial Group (HFG)	₩ —	₩ 5,405	₩ —	₩ 10,744	₩640,494
Associates:					
Korea Credit Bureau	—	—	—	6,009	—
Darby Hana Infrastructure Fund Management	—	11,734	—	12,121	—
Hana Equity Partners I, L.P	—	—	—	33	—
Masan Marine New Town Co., Ltd.	1,513	—	—	787	—
Midan City Development Co., Ltd.	—	—	—	327	—
Company KStartup winwin fund	—	—	—	4,020	—
KEB Mirae Asset First Securitization Specialty Co., Ltd.	—	—	—	620	
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	—	—	—	744	
	1,513	11,734	—	24,661	—
Entities under common control:					
Hana Financial Investment Co., Ltd.	—	8,246	—	203,593	10,688
Hana Card Co., Ltd.	—	88	—	269,207	65,776
Hana Capital Co., Ltd.	—	—	—	43,691	5,041
Hana Asset Trust	—	—	—	80,564	63
Hana Alternative Asset Management Co., Ltd	—	—	—	15,302	605
Hana TI Co., Ltd.	—	—	—	6,861	20
Hana Saving Bank	—	1	—	—	52
Hana Life Insurance Co., Ltd.	—	1,082	—	11	2,372
Hana Investors Services Company	—	—	—	13,191	811
	—	9,417	—	632,420	85,428
Other related parties:					
Odin2.LLC	2,237	—	2,237	—	—
Warden 1 SPC Ltd.	—	—	—	10	—
Radian 1 SPC Co., Ltd.	—	—	—	2	—
Gunsan bio-energy Corp.	—	—	—	5,194	—
Finnq Co., Ltd.	—	—	—	4,597	—
Mirae Credit Information Services Corp.	7,000	—	5	10,734	—
UBS Hana Asset Management Co., Ltd.	—	—	—	408	—
F&U Credit Information Co., Ltd.	—	—	—	1	—
Hana AIM Investment Management Inc.	—	—	—	2,117	—
HN Housing Co., Ltd.	4,900	—	33	107	—
Hana Lantern Energy Factory Private Equity Fund	—	—	—	74	—
Thehue Company Ltd.	5,250	—	86	74	—
	19,387	—	2,361	23,318	—
Key management	5,715	—	—	9,735	—
	₩26,615	₩26,556	₩2,361	₩700,878	₩725,922

51. Related parties (cont'd)

51.4 Outstanding balances with related parties arising from the above transactions as at December 31, 2017 and 2016 are summarized as follows (Korean won in millions): (cont'd)

	December 31, 2016				
Classification	Accounts receivable	Other receivables	Allowance for possible loan losses	Deposits	Other liabilities
Controlling company					
Hana Financial Group (HFG)	₩ —	₩19,047	₩—	₩ 21,980	₩104,589
Associates					
Korea Credit Bureau	—	—	—	2,114	—
Darby Hana Infrastructure Fund Management	—	11,581	—	10,275	—
Hyundai Cement Co., Ltd.	—	—	—	959	—
Hana Equity Partners I, L.P	—	—	—	1,252	—
Masan Marine New Town Co., Ltd.	1,513	—	—	761	—
Midan City Development Co., Ltd.	—	—	—	22,644	—
Company KStartup winwin fund	—	—	—	900	—
	1,513	11,581	—	38,905	—
Entities under common control					
Hana Financial Investment Co., Ltd.	—	29,247	—	213,695	11,123
Hana Card Co., Ltd.	—	85	—	209,377	72,934
Hana Capital Co., Ltd.	—	—	—	12,075	3,980
Hana Asset Trust	—	—	—	35,399	86
Hana Asset Management	—	—	—	14,093	26
Hana TI Co., Ltd.	—	—	—	20,694	3
Hana Institute of Finance	—	—	—	2,178	490
Hana Life Insurance Co., Ltd.	—	964	—	—	1,569
Hana Investors Services Company	—	—	—	8,885	5,369
	—	30,296	—	516,396	95,580
Other related parties					
Warden 1 SPC Ltd.	—	—	—	4	—
Radian 1 SPC Co., Ltd.	—	—	—	195	—
Odin2.LLC	2,237	—	111	—	—
Doosan Capital Co., Ltd.	—	—	—	141	—
Gunsan bio-energy Corp.	—	—	—	6,771	—
Advanced&Different Credit Information Co., Ltd	—	—	—	1,000	—
Finnq Co., Ltd.	—	—	—	82	—
Mirae Credit Information Services Corp.	—	—	—	9,725	—
UBS Hana Asset Management Co., Ltd.	—	—	—	226	—
Hana Lantern Energy Factory Private Equity Fund	—	—	—	76	—
Hana AIM Investment Management Inc.	—	—	—	56	300
HN Housing Co., Ltd.	1,700	—	7	728	—
Thehue Company Ltd.	6,244	—	97	15	—
	10,181	—	215	19,019	300
Key management	4,803	—	—	11,896	—
	₩16,497	₩60,924	₩215	₩608,196	₩200,469

51. Related parties (cont'd)

51.5 Guarantees and acceptances with subsidiaries as at December 31, 2017 and 2016 are as follows (Korean won in millions):

	December 31, 2017		
Company	Classification	Limit	Counterparty
The Bank	Loan commitments in Korean won	₩500,000	Hana Card Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies	2,143	
	Loan commitments in Korean won	260,000	Hana Capital Co., Ltd.
	Loan commitments in Korean won	100	HN Housing Co., Ltd.
Hana Card Co., Ltd.	Collateral provided	3,000	The Bank
Hana Capital Co., Ltd	Collateral provided	389,719	

	December 31, 2016		
Company	Classification	Limit	Counterparty
The Bank	Loan commitments in Korean won	₩500,000	Hana Card Co., Ltd.
	Guarantees and acceptances denominated in foreign currencies	2,417	
	Loan commitments in Korean won	260,000	Hana Capital Co., Ltd
Hana Card Co., Ltd.	Collateral provided	3,000	The Bank
Hana Capital Co., Ltd	Collateral provided	365,231	

51.6 Details of compensation for standing directors and executive officers for the years ended December 31, 2017 and 2016 are summarized as follows (Korean won in millions):

Classification	2017	2016
Short-term employee payment	₩8,613	₩ 7,002
Severance payment	752	797
Stock options	2,467	13,559

KEB Hana Bank and its subsidiaries

Consolidated financial statements for the years ended December 31, 2016 and 2015 with the independent auditors' report

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Building a better working world

Independent auditors' report

The Shareholders and Board of Directors
KEB Hana Bank and its subsidiaries

We have audited the accompanying consolidated financial statements of KEB Hana Bank (the "Bank") and its subsidiaries (collectively referred to as the "Company"), which comprise the consolidated statements of financial position as at December 31, 2016 and 2015, and the consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2016 and 2015, and its financial performance and cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Ernst & Young Han Young

March 2, 2017

This audit report is effective as at March 2, 2017, the independent auditors' report date. Accordingly, certain material subsequent events or circumstances may have occurred during the period from the date of the independent auditors' report to the time this report is used. Such events and circumstances could significantly affect the accompanying consolidated financial statements and may result in modifications to this report.

KEB Hana Bank and its subsidiaries
Consolidated statements of financial position
as at December 31, 2016 and 2015

(Korean won in millions)

	Notes	December 31, 2016	December 31, 2015
Assets			
Cash and due from banks	5,6,7,9,11 and 50	₩ 27,551,570	₩ 17,025,613
Financial assets at FVTPL	5,6,7,8,9,12 and 17	8,665,549	6,936,965
Derivative assets used for hedging	5,6,7,8,9 and 17	25,825	65,439
Available-for-sale financial assets	5,6,7,8,9,13 and 15	37,423,628	35,014,060
Held-to-maturity financial assets	5,6,7,9,14 and 15	4,129,630	5,184,672
Loans	5,6,7,8,9,15 and16	215,100,733	209,456,833
Investments in associates	18	895,335	1,001,891
Property and equipment	10 and 19	2,301,272	2,491,481
Investment property	10 and 20	555,233	466,578
Intangible assets	10 and 21	234,650	162,323
Current income tax assets		5,132	55,437
Deferred income tax assets	47	62,065	56,616
Other assets	5,6,7,8,9 and 23	11,215,319	11,920,156
Merchant banking account assets	5,6,7,9 and 23	2,596,959	2,565,619
Non-current assets held for sale	22	21,326	416
Total assets		₩310,784,226	₩292,404,099
Liabilities and equity			
Liabilities			
Deposits	5,6,7,9 and 24	₩220,613,406	₩204,742,719
Financial liabilities at FVTPL	5,6,7,8,9 and 25	6,415,145	5,284,192
Derivative liabilities used for hedging	5,6,7,8,9 and 17	98,974	40,109
Borrowings	5,6,7,9 and 26	15,310,635	17,133,370
Debentures	5,6,7,9 and 27	19,310,873	18,484,475
Net defined benefit liability	28	43,988	141,494
Provisions	29	309,649	254,173
Current income tax liabilities		111,351	19,157
Deferred income tax liabilities	47	288,568	254,005
Other liabilities	5,6,7,8,9 and 30	23,762,752	22,173,226
Merchant banking account liabilities	5,6,7,9 and 30	2,406,269	2,333,301
Total liabilities		288,671,610	270,860,221
Equity			
Issued capital	31	5,359,578	5,359,578
Capital surplus	31	9,668,897	9,667,965
Hybrid equity securities	31	179,737	179,737
Capital adjustments	31	(30,785)	(25,134)
Retained earnings	33	7,242,262	6,299,338
(Regulatory reserve for bad debts in the amount of ₩1,881,607 and ₩679,004 as at December 31, 2016 and 2015, respectively)			
(Required provision for (reversal of) bad debts in the amount of ₩33,426 and ₩(3,325) as at December 31, 2016 and 2015, respectively)			
(Planned provision for bad debts in the amount of ₩33,426 and ₩1,202,603 as at December 31, 2016 and 2015, respectively)	34		
Accumulated other comprehensive income	32	(395,323)	18,969
Equity attributable to equity holder of the parent		22,024,366	21,500,453
Non-controlling shareholders' equity		88,250	43,425
Total equity		22,112,616	21,543,878
Total liabilities and equity		₩310,784,226	₩292,404,099

The accompanying notes are an integral part of the consolidated financial statements

KEB Hana Bank and its subsidiaries
Consolidated statements of comprehensive income
for the years ended December 31, 2016 and 2015

(Korean won in millions)

	Notes	2016	2015
Net interest income	10,35 and 36		
Interest income		₩ 7,582,570	₩ 4,648,516
Interest expenses		(3,253,881)	(2,016,169)
		4,328,689	2,632,347
Net fee and commission income	10,35 and 37		
Fee and commission income		801,964	618,129
Fee and commission expenses		(193,311)	(146,227)
		608,653	471,902
Net gain on financial instruments at FVTPL	35 and 38	515,064	153,994
Net loss on derivative financial instruments used for hedging purposes	35 and 39	(16,087)	(4,336)
Net gain on available-for-sale financial assets	35 and 40	382,599	288,894
Impairment loss	35 and 41	(599,774)	(639,798)
General and administrative expenses	10,35 and 42	(3,161,220)	(2,423,989)
Net other operating expenses			
Other operating income	35 and 43	3,859,133	2,874,479
Other operating expenses	35 and 44	(4,371,088)	(2,971,703)
		(511,955)	(97,224)
Operating income		1,545,969	381,790
Net non-operating income			
Non-operating income	45	325,966	168,147
Non-operating expenses	46	(108,824)	(67,440)
		217,142	100,707
Net income before income tax expense		1,763,111	482,497
Income tax expenses	10 and 47	(382,940)	(49,463)
Net income		1,380,171	433,034
Equity holder of the parent		1,372,737	421,001
(Adjusted income after deducting regulatory reserve for bad debt in the amount of ₩1,339,311 and ₩424,326 for the years ended December 31, 2016 and 2015, respectively)	34		
Non-controlling interests		7,434	12,033
		1,380,171	433,034
Other comprehensive loss	32		
Items that may be reclassified subsequently to profit or loss:			
Loss on valuation of available-for-sale financial assets		(460,030)	(187,371)
Exchange differences on translation of foreign operations		57,183	(50,400)
Changes in capital from valuation of equity method for investments in associates		(59,660)	26,744
Loss on valuation of net investment hedges of foreign operations		(18,957)	(15,199)
Tax effect		116,514	42,550
		(364,950)	(183,676)
Items that will not be reclassified subsequently to profit or loss:			
Remeasurements of the defined benefit plan		(61,289)	(50,202)
Tax effect		14,832	12,149
		(46,457)	(38,053)
Total comprehensive income		₩ 968,764	₩ 211,305
Equity holder of the parent		958,445	206,356
Non-controlling interests		10,319	4,949
Earnings per share	48		
Basic earnings per share		₩ 1,271	₩ 585
Diluted earnings per share		₩ 1,271	₩ 585

The accompanying notes are an integral part of the consolidated financial statements

KEB Hana Bank and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2016 and 2015

(Korean won in millions)

	Issued capital	Capital surplus	Hybrid equity securities	Capital adjustments	Retained earnings	Accumulated other comprehensive income	Equity attributable to equity holder of the parent	Non-controlling shareholders' equity	Total
As at January 1, 2015	₩2,584,534	₩ 946	₩179,737	₩(26,923)	₩6,051,930	₩ 112,060	₩ 8,902,284	₩ 124,397	₩ 9,026,681
Dividends	—	—	—	—	(146,384)	—	(146,384)	—	(146,384)
Dividends on hybrid equity securities	—	—	—	—	(9,814)	—	(9,814)	—	(9,814)
Share-based payment transactions	—	177	—	1,688	—	—	1,865	—	1,865
Other capital adjustments	—	—	—	51	—	—	51	—	51
Appropriation of other capital adjustments to retained earnings	—	—	—	228	(228)	—	—	—	—
Business combination under common control	2,775,044	9,666,842	—	—	—	121,554	12,563,440	(140,718)	12,422,722
Acquisition of subsidiary	—	—	—	(178)	—	—	(178)	54,797	54,619
Others	—	—	—	—	(17,167)	—	(17,167)	—	(17,167)
	5,359,578	9,667,965	179,737	(25,134)	5,878,337	233,614	21,294,097	38,476	21,332,573
Net income for the year	—	—	—	—	421,001	—	421,001	12,033	433,034
Loss on valuation of available-for-sale financial assets	—	—	—	—	—	(141,088)	(141,088)	(938)	(142,026)
Exchange differences on translation of foreign operations	—	—	—	—	—	(44,255)	(44,255)	(6,146)	(50,401)
Changes in equity on investments in associates	—	—	—	—	—	20,272	20,272	—	20,272
Loss on valuation of net investment hedges of foreign operations	—	—	—	—	—	(11,521)	(11,521)	—	(11,521)
Remeasurements of the defined benefit plan	—	—	—	—	—	(38,053)	(38,053)	—	(38,053)
Total comprehensive income for the year	—	—	—	—	421,001	(214,645)	206,356	4,949	211,305
As at December 31, 2015	₩5,359,578	₩9,667,965	₩179,737	₩(25,134)	₩6,299,338	₩ 18,969	₩21,500,453	₩ 43,425	₩21,543,878

KEB Hana Bank and its subsidiaries
Consolidated statements of changes in equity
for the years ended December 31, 2016 and 2015

(Korean won in millions) (Continued)

	Issued capital	Capital surplus	Hybrid equity securities	Capital adjustments	Retained earnings	Accumulated other comprehensive income	Equity attributable to equity holder of the parent	Non-controlling shareholders' equity	Total
As at January 1, 2016	₩5,359,578	₩9,667,965	₩179,737	₩(25,134)	₩6,299,338	₩ 18,969	₩21,500,453	₩43,425	₩21,543,878
Dividends	—	—	—	—	(420,000)	—	(420,000)	—	(420,000)
Dividends on hybrid equity securities	—	—	—	—	(9,813)	—	(9,813)	(1,761)	(11,574)
Share-based payment transactions	—	932	—	(2,572)	—	—	(1,640)	—	(1,640)
Other capital adjustments	—	—	—	33	—	—	33	—	33
Issuance of subsidiary's hybrid equity securities	—	—	—	—	—	—	—	29,835	29,835
Acquisition of subsidiary	—	—	—	(3,112)	—	—	(3,112)	6,432	3,320
	5,359,578	9,668,897	179,737	(30,785)	5,869,525	18,969	21,065,921	77,931	21,143,852
Net income for the year	—	—	—	—	1,372,737	—	1,372,737	7,434	1,380,171
Loss on valuation of available-for-sale financial assets	—	—	—	—	—	(348,407)	(348,407)	(296)	(348,703)
Exchange differences on translation of foreign operations	—	—	—	—	—	40,163	40,163	3,181	43,344
Changes in equity on investments in associates	—	—	—	—	—	(45,222)	(45,222)	—	(45,222)
Loss on valuation of net investment hedges of foreign operations	—	—	—	—	—	(14,369)	(14,369)	—	(14,369)
Remeasurements of the defined benefit plan	—	—	—	—	—	(46,457)	(46,457)	—	(46,457)
Total comprehensive income for the year	—	—	—	—	1,372,737	(414,292)	958,445	10,319	968,764
As at December 31, 2016	₩5,359,578	₩9,668,897	₩179,737	₩(30,785)	₩7,242,262	₩(395,323)	₩22,024,366	₩88,250	₩22,112,616

The accompanying notes are an integral part of the consolidated financial statements

KEB Hana Bank and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2016 and 2015

(Korean won in millions)

	2016	2015
Operating activities		
Net income before income tax expenses	₩ 1,763,111	₩ 482,497
Net gain adjustments		
Interest expenses	3,253,881	2,016,169
Interest income	(7,582,570)	(4,648,516)
Dividend income	(54,544)	(30,308)
	(4,383,233)	(2,662,655)
Adjustments to non-cash items:		
Net gain on valuation of financial instruments at fair value through profit or loss	(278,257)	(55,918)
Net loss on valuation of derivative financial instruments used for hedging	17,524	4,440
Net gain on disposal of available-for-sale financial assets	(382,599)	(288,894)
Impairment loss on available-for-sale financial assets	37,110	35,637
Provision of allowance	562,664	604,161
Gain on disposal of investments in associates	(42,470)	(8,672)
Reversal of impairment loss on investments in associates	(26,494)	—
Net gain on valuation of equity method investments	(42,172)	(75,386)
Depreciation and amortization	200,121	138,231
Net gain on disposal of property, equipment and intangible assets	(82,060)	(4,448)
Retirement benefits	134,579	95,028
Share based payment expenses	14,541	3,205
Net provisions transferred	71,677	64,921
Net loss (gain) on foreign exchange transactions	218,411	(118,054)
Others	(60,362)	(25,268)
	342,213	368,983
Changes in operating assets and liabilities:		
Financial assets at fair value through profit or loss	(1,558,131)	1,466,661
Derivative assets used for hedging	11,680	7,772
Loans	(4,290,881)	(1,546,241)
Other assets	1,114,856	1,905,926
Merchant banking account assets	(31,721)	(206,975)
Deposits	14,565,588	3,105,636
Financial liabilities at fair value through profit or loss	1,246,393	(1,064,940)
Derivative liabilities used for hedging	49,491	3,101
Net defined benefit liability	(286,608)	(160,466)
Provisions	(15,532)	(87,992)
Other liabilities	1,235,815	(934,692)
Merchant banking account liabilities	72,968	(102,978)
	12,113,918	2,384,812
Cash received from operating activities:		
Interest receipts	7,420,453	4,645,867
Dividend receipts	54,544	39,100
	7,474,997	4,684,967
Cash payment for operating activities:		
Interest payments	3,659,240	1,831,314
Payment of income tax	246,435	156,153
	(3,905,675)	(1,987,467)
Net cash flows from operating activities	13,405,331	3,271,137

(Continued)

KEB Hana Bank and its subsidiaries
Consolidated statements of cash flows
for the years ended December 31, 2016 and 2015

(Korean won in millions) (Continued)

	2016	2015
Investing activities		
Increase in restricted due from banks, net	₩ (8,784,503)	₩ (1,341,673)
Increase in available-for-sale financial assets	(27,084,812)	(11,388,380)
Decrease in available-for-sale financial assets	24,963,796	7,994,758
Increase in held-to-maturity financial assets	(612,353)	(1,327,512)
Decrease in held-to-maturity financial assets	1,675,147	1,526,846
Increase in investments in associates	(137,603)	(152,615)
Decrease in investments in associates	84,293	694,591
Acquisition of property and equipment	(141,530)	(148,403)
Proceeds from disposal of property and equipment	194,209	40,970
Acquisition of intangible assets	(126,555)	(46,878)
Proceeds from disposal of intangible assets	6,460	14,292
Proceeds from disposal of non-business use assets	3,192	5,783
Cash inflow related to lease, net	9,812	2,285
Decrease in guarantee deposits paid, net	130,067	117,134
Business combination under common control	—	5,144,007
Net cash flows from investing activities	(9,820,380)	1,135,205
Financing activities		
Decrease in borrowings, net	(2,110,893)	(2,860,810)
Issuance of debentures	6,122,968	3,024,955
Redemption of debentures	(5,572,353)	(2,584,183)
Dividends paid	(420,000)	(146,384)
Dividends on hybrid equity securities	(9,813)	(9,814)
Expense of stock issued	—	(13,320)
Net cash flows from financing activities	(1,990,091)	(2,589,556)
Net increase in cash and cash equivalents	1,594,860	1,816,786
Cash and cash equivalents at the beginning of the year	6,871,236	5,053,236
Effect of exchange rate changes on cash and cash equivalents	147,700	1,214
Cash and cash equivalents at the end of the year (Note 50)	₩ 8,613,796	₩ 6,871,236

The accompanying notes are an integral part of the consolidated financial statements

1. Company information

The accompanying consolidated financial statements include KEB Hana Bank (the "Bank"), and its controlled subsidiaries (collectively, the "Company"). The general information describing the Company's operations and equity-method investees is provided below.

1.1 KEB Hana Bank

Hana was established on at January 30, 1967, as a government-invested bank which primarily engages in foreign exchange and trade finance business under the Korea Exchange Bank Act published on July 28, 1966. On December 30, 1989, the Korea Exchange Bank Act was repealed, and KEB was reorganized as a corporation under the Commercial Code of the Republic of Korea. On April 4, 1994, Hana was listed on the Korean Stock Exchange. The merger between Hana and the Korea Exchange Bank Credit Service Co., Ltd. was finalized on February 28, 2004. Then, the spinoff of credit card division was finalized on August 31, 2014.

Hana Financial Group Inc. (the "HFG") had controlling power over the Bank by acquiring 52.27% ownership of the Bank on February 9, 2012. The Bank became HFG's wholly owned subsidiary as HFG acquired 100 percent stake of the Bank on April 5, 2013.

The Bank merged with Hana Bank on September 1, 2015, and changed the corporate name from KEB to KEB Hana Bank

The Bank primarily provides commercial banking services, trust banking services, foreign exchange, merchant banking business as a result of the merger with Korea International Merchant Bank, a domestic subsidiary Hana, and other related operations as permitted under the Korea Exchange Bank Act and other relevant laws and regulations in the Republic of Korea. As at December 31, 2015, the Bank operates through 862 branches (including 77 depositary offices) and 24 branches (including 2 depositary offices and 5 offices).

As at December 31, 2016, the Bank had processed a number of increases in capital by issuing new stocks, decreases in paid-in capital, transformation of preferred stock to ordinary stock, spin-off and merger. The Bank is authorized to issue 2,000 million shares (at par value of ₩5,000) after reflecting the effects of the merger as described in Note 52, and has issued 1,071,915,717 ordinary shares amounting to ₩5,359,578 million for paid-in capital. The 2016 consolidated financial statements of the Bank were approved by the Board of Directors on February 28, 2017.

1.2 Scope and overview of consolidation

The Company's ownership percentages in its consolidated subsidiaries as at December 31, 2016 are summarized as follows (ownership in %):

Investee	Country	Major business	Share ratio (%)	Reporting date
Subsidiaries of KEB Hana Bank				
Hana Bank (China) Co., Ltd. (*1)	China	Bank	100.0	December 31
Hana Micro Finance Ltd.	Myanmar	Other financial business	100.0	December 31
DGB Leading Solution PEF Invest Trust 143 (*2)	Korea	Asset management company	100.0	December 31
Hana UBS Power PEF Invest Trust 21 (*2)	Korea	Asset management company	100.0	December 31
Hyundai Trust PEF Invest 16 (*2)	Korea	Asset management company	100.0	December 31
Korea Basic PEF Invest Trust 63 (*2)	Korea	Asset management company	100.0	December 31
Sevenstar Co., Ltd. (*2)	Korea	Other financial business	—	December 31
Marine Solution Co., Ltd. (*2)	Korea	Other financial business	—	December 31
Joong-ang star Co., Ltd. (*2)	Korea	Other financial business	—	December 31
Okea Co., Ltd. (*2)	Korea	Other financial business	—	December 31
HS First Securitization Specialty Co., Ltd. (*2)	Korea	Other financial business	—	December 31

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
Antakya Co., Ltd. (*2)	Korea	Other financial business	—	December 31
Cosmosolution Co., Ltd. (*2)	Korea	Other financial business	—	December 31
Trust accounts guaranteeing he repayment of principal (*2)	Korea	Trust account	—	December 31
Hana F&I Inc.	Korea	Investment and management service for NPL assets backed securities	99.5	December 31
KEB Hana Bank of Canada	Canada	Financial business	100.0	December 31
KEB Hana Bank (Deutschland) A.G. (KEBDAG)	Germany	Financial business	100.0	December 31
PT Bank KEB Hana (former, PT. Bank KEB Indonesia) (KEBI)	Indonesia	Financial business	88.1	December 31
Banco KEB Hana Do Brasil S.A. (KEBB)	Brazil	Financial business	100.0	December 31
KEB Hana NY Financial Corp (NYFinCo)	USA	Financial business	100.0	December 31
KEB Hana LA Financial Corp (LAFinCo)	USA	Financial business	100.0	December 31
KEB Hana Global Finance Limited (KAF)	Hongkong	Financial business	100.0	December 31
KEB RUS LLC.	Russia	Financial business	99.9	December 31
Hana Bancorp., Inc.	USA	Financial business	90.6	December 31
Subsidiaries of Hana F&I Inc.				
KEBW First Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	5.0	December 31
KEB VERITAS Second Securitization Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
KEBS First Securitization Co., Ltd. (*2)	Korea	Asset securitization	5.0	December 31
KEB Pepper First Securitization Co., Ltd. (*2)	Korea	Asset securitization	5.0	December 31
KEBI First Securitization Co., Ltd. (*2)	Korea	Asset securitization	9.0	December 31
KEBS Third Securitization Co., Ltd. (*2)	Korea	Asset securitization	5.0	December 31
KEBT First Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	5.0	December 31
Hongdae Picasso Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
KEB The Loft Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
HFS First Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	14.0	December 31
Hana Miraeasset Third Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	5.1	December 31
Shinseung Building Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
Hana Stone First Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
Hana Stone Second Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
Hana Stone Third Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
HFT Second Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	5.0	December 31
Hana Hanmi First Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
Hana VERITAS First Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
Hana Sinji First, Inc. (*2)	Korea	Asset securitization	—	December 31
Hana Stone Fifth Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
Hana SH First Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	14.0	December 31
HFS Second Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	14.0	December 31

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

Investee	Country	Major business	Share ratio (%)	Reporting date
Hana K First Securitization Specialty Co., Ltd. (*2)	Korea	Asset securitization	14.0	December 31
Hana Stone Sixth Co., Ltd. (*2)	Korea	Asset securitization	—	December 31
Subsidiaries of Hana Bancorp., Inc.				
KEB Hana Bank USA	USA	Bank	100.0	December 31
BNB Statutory trust I	USA	Special Purpose Entities	100.0	December 31
Subsidiaries of KEB Hana Bank USA				
BNB Funding Corp.	USA	Special Purpose Entities	100.0	December 31

(*1) The Bank has changed classification of Hana Bank (China) Co., Ltd from investments in associates to investments in subsidiaries since the Bank holds control over the company as a result of business combination under common control on December 31, 2015.
(*2) Although the entity is a structured SPC, the Company recognized the entity as a subsidiary considering its exposure to variable returns and knowledge with regards to its activities.

Condensed financial statements as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016					
	Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩7,983,872	₩7,056,615	₩927,257	₩324,324	₩28,667	₩ (9,613)
Hana Micro Finance., Ltd.	12,361	733	11,628	2,113	1,019	1,648
Hana F&I Inc. (*)	553,514	475,718	77,796	37,257	359	105
KEB Hana Bank Canada	1,428,509	1,239,409	189,100	59,974	(2,302)	8,409
KEB Hana Bank (Deutschland) A.G.	835,177	748S,196	86,981	73,365	3,801	2,438
PT Bank KEB Hana	3,118,265	2,650,333	467,932	220,408	57,105	81,456
Banco KEB Hana Do Brasil S.A.	173,083	127,740	45,343	16,202	4,177	12,911
KEB Hana NY Financial Corp.	457,930	399,413	58,517	14,552	4,335	5,189
KEB Hana LA Financial Corp.	309,733	248,589	61,144	13,014	2,587	4,461
KEB Hana Global Finance Limited.	206,279	138,705	67,574	8,954	2,003	4,227
KEB RUS LLC.	183,851	163,349	20,502	75,579	882	4,939
Hana Bancorp., Inc. (*)	284,656	226,531	58,125	10,522	(8,580)	(7,656)
Trust accounts guaranteeing the repayment of principal	1,585,188	1,548,461	36,727	41,617	(307)	(307)

Classification	December 31, 2015					
	Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Hana Bank (China) Co., Ltd.	₩6,101,975	₩5,165,150	₩936,825	₩133,784	₩ (1,375)	₩ 15,597
Hana Micro Finance., Ltd.	5,337	129	5,208	265	127	(328)
Trust accounts guaranteeing the repayment of principal	1,486,189	1,453,282	32,907	31,881	495	495
Hana F&I Inc. (*)	531,226	481,590	49,636	32,922	2,535	2,093
Hana Futures Co., Ltd.	685,129	619,560	65,569	14,512	106	43
KEB Hana Bank Canada	1,385,334	1,205,168	180,166	46,000	1,475	(17,488)
KEB Hana Bank (Deutschland) A.G.	817,595	733,631	83,964	177,409	3,039	(424)
PT Bank KEB Hana	2,418,911	2,030,086	388,825	173,219	35,793	24,570

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

	December 31, 2015					
Classification	Assets	Liabilities	Equity	Operation Income	Net income (loss)	Comprehensive income (loss)
Banco KEB Hana Do Brasil S.A.	139,786	107,354	32,432	17,130	2,884	(9,442)
KEB Hana NY Financial Corp.	565,642	513,273	52,369	14,930	4,890	8,004
KEB Hana LA Financial Corp.	362,634	305,951	56,683	11,682	3,333	6,759
KEB USA Int'l Corp.	7,205	129	7,076	730	(750)	(289)
KEB Hana Global Finance Ltd.	232,985	169,561	63,424	8,347	474	4,348
KEB RUS LLC.	113,893	98,327	15,566	44,851	3	(3,569)

(*) The amounts presented are based on consolidation.

There is no entity excluded from the Company's scope of consolidation as at December 31, 2016 even though the Company holds a majority of voting rights.

Subsidiaries included in consolidation scope during the year ended December 31, 2016 are as follows:

Company	Reasons
Included in scope of consolidation	
Subsidiaries of KEB Hana Bank	
Hana Bancorp., Inc.	Transferred from HFG
Okea Co., Ltd.	Newly invested
HS First Securitization Specialty Co., Ltd.	Newly invested
Antakya Co., Ltd.	Newly invested
Cosmosolution Co., Ltd.	Newly invested
Subsidiaries of Hana F&I Inc.	
HS4	Newly invested
Hana VERITAS First Co., Ltd	Newly invested
Hana Sinji First, Inc.	Newly invested
HS5	Newly invested
Hana SH First Securitization Specialty Co., Ltd.	Newly invested
HFS Second Securitization Specialty Co., Ltd.	Newly invested
Hana K First Securitization Specialty Co., Ltd.	Newly invested
HS6	Newly invested
Subsidiaries of Hana Bancorp., Inc.	
KEB Hana Bank USA	Transferred from HFG
BNB Statutory trust I	Transferred from HFG
Subsidiaries of KEB Hana Bank USA	
BNB Funding Corp.	Transferred from HFG
Excluded in scope of consolidation	
Subsidiaries of KEB Hana Bank	
Hana Futures Co., Ltd	Excluded due to the disposal
KEB USA Int'l Corp.	Excluded due to the disposal
HB rainbow the 1st, Ltd.	Excluded due to the disposal
Subsidiaries of Hana F&I Inc.	
KEBS Second Securitization Specialty Co., Ltd.	Excluded due to the disposal
Eco Asset Management Co., Ltd.	Excluded due to the disposal
HS4	Excluded due to the disposal

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

1.2.1 Hana Bank (China) Co., Ltd. (Hana Bank China)

Hana Bank China was incorporated to engage in commercial banking, foreign currency exchanges and other related operations in China on December 14, 2007. The Bank contributed the assets and liabilities of the branches in Shanghai and Shenyang and its interests in the International Bank of Qingdao, which is the subsidiary of the Bank, to the Hana Bank China in the form of equity contributions on December 24, 2007. Hana Bank (China) Co., Ltd., one of subsidiaries in China, acquired and merged with KEB China, one of affiliates in the Hana Financial Group, on December 15, 2014. (Before the merger, equity interests in Hana Bank China were 59.7% for Hana Bank, 40.3% for Korea Exchange Bank). Its paid-in capital is 3.35 billion yuan as at December 31, 2016.

1.2.2 Hana Micro Finance, Ltd.

Hana Micro Finance Ltd., a subsidiary established in Yangon, Myanmar on August 7, 2014, is doing a small-loan finance service. The objective of the service is to satisfy low incomers' demand for small-loan finance and at the same time to lay the foundation for a retail market with excellent growth potential. As at December 31, 2016, its paid-in capital is 10.7 billion kyat and it owns a head office in Yangon.

1.2.3 Hana F&I Inc.

Hana F&I Inc. (former, KEB F&I) was established on September 11, 1989, to engage in equipment rental and other relevant businesses under the Specialized Credit Financial Business Act (formerly, Equipment Rental Business Act) and was listed on the Korea Securities Dealers Automated Quotation ("KOSDAQ") on January 15, 1995. KEB F&I has changed its name to KEB F&I Inc. KEB is restricted to control a company which runs the specialized credit financial business in accordance with the Financial Holding Companies Act Article 19 as on and after January 31, 2014. On October 17, 2013, KEB F&I's Board of Directors approved to change business field to investment in asset backed securities and asset management business in Asset-Backed Securitization Act. It changed its name from KEB F&I to Hana F&I Co. Ltd. on September 1, 2015. Its paid-in capital is 95,400 million won as at December 31, 2016.

1.2.4 KEB Hana Bank Canada

KEBOC was established in Toronto, Canada on October 6, 1981 to provide financial services to Korean companies and residents in Toronto and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2016. Korea Exchange Bank of Canada has gone through numerous capital increases after the establishment. Its paid-in capital is 83,400 thousand Canadian dollars as at December 31, 2016.

1.2.5 KEB Hana Bank (Deutschland) AG

KEBDAG was established in Frankfurt, Germany on December 29, 1992 to provide financial services to Korean companies and residents in Frankfurt and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2016. Its paid-in capital is 23,008 thousand euro as at December 31 2016.

1.2.6 PT Bank KEB Hana

PT Bank KEB Hana was established in Jakarta, Indonesia on November 5, 1990 to provide financial services to Korean companies and residents in Jakarta. In accordance with the regulations of the Bank Indonesia, 2 or more local banks with the same ultimate parent company are prohibited to operate as an independent entity in Indonesia. Accordingly, PT Bank KEB Indonesia (KEBI), a subsidiary of the Bank, and PT Bank Hana, a subsidiary of Hana Bank, have completed a merger process on February 20, 2014 and changed the name to PT Bank KEB Hana. PT. Bank KEB Hana incorporated into a subsidiary of KEB on February 28, 2014 since KEB owned the major shares of PT. Bank KEB Hana after the acquisition. The Bank holds 88.07% stake of the company as at December 31, 2016.

1. Company information (cont'd)

1.2 Scope and overview of consolidation (cont'd)

1.2.7 Banco KEB Hana Do Brasil S.A. (KEBB)

KEBB was incorporated on May 21, 1999 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as at December 31, 2016. By increasing capital in 2012, its paid-in capital is 69,726 thousand Real as at December 31, 2016.

1.2.8 KEB Hana NY Financial Corp. (NYFinCo)

NYFinCo was established in New York, USA on April 8, 2004 to provide financial services to Korean companies and residents in New York and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2016. Its paid-in capital is 1 dollar as at December 31, 2016.

1.2.9 KEB Hana LA Financial Corp. (LAFinCo)

LAFinCo was established in Los Angeles, USA on July 2, 2009 to provide financial services to Korean companies and residents in Los Angeles and the surrounding area. The Bank holds 100% stake of the company as at December 31, 2016. Its paid-in capital is 1 dollar as at December 31, 2016.

1.2.10 KEB Hana Global Finance Limited (KAF)

KAF was established on July 2, 2009 to provide finance services for foreign clients, advisory services, finance arrangement and security investment trust services regarding overseas investment for domestic companies. The Bank holds 100% stake of the company as at December 31, 2016. Its paid-in capital is 50,000 thousand dollars as at December 31, 2016.

1.2.11 KEB RUS LLC

KEB launched a Moscow representative office in 2008 to provide financial information and consulting services for Korean and local companies in Russia. KEB RUS LLC was established on August 15, 2014 after obtaining permission to operate corporation from Russian supervisory authorities in order to expand business area. The Bank holds 99.99% stake of the company as at December 31, 2016. Its paid-in capital is 1 billion roubles as at December 31, 2016.

1.2.12 Hana Bancorp., Inc.

Hana Bancorp, Inc. (formerly, BNB Financial Service Corporation) was incorporated on April 8, 1988 to engage in the bank business. HFG acquired ownership of BNB Financial Service Corporation and incorporated Hana Bancorp, Inc. as its subsidiary on August 30, 2013 and changed the name to Hana Bancorp, Inc. The Bank purchased the securities from HFG on March 28, 2016, and issued capital. The Bank holds 90.56% stake of the company as at December 31 2016. Its paid-in capital is 16,571 thousand dollars as at December 31, 2016.

1.3 Structured entities

1.3.1 Consolidated structured entities

1.3.1.1 DGB Leading Solution PEF Investment Trust 143 and a set of 3 other private equity investment vehicles

In accordance with K-IFRS 1110 Consolidated Financial Statements, 4 private equity investment vehicles were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.1 Consolidated structured entities (cont'd)

1.3.1.2 Sevenstar Co., Ltd. and 6 other special purpose entities

In accordance with K-IFRS 1110 Consolidated Financial Statements, 7 special purpose companies were included in consolidation scope, because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.3 Trust accounts

In accordance with K-IFRS 1110 Consolidated Financial Statements, trust accounts are included in consolidation scope because the Company has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee.

1.3.1.4 Contractual commitments to consolidated structured entities

Characteristics and intentions of contractual commitments offered by the Company to the consolidated structured entities are as follows:

Entity	The Characteristics and Purposes	Intention
Trust accounts guaranteeing the repayment of principal	The Company offers principal conservation commitment to trust accounts. The Company is required to conserve the deficit amount in case the trust account stands below the principal as a result of the operation	Credit risk mitigation on financial management of trust account
Joong-ang star Co., Ltd.	The Company provides a ₩12,300 million loan to Joong-ang star Co., Ltd.	Operating activities
Okea Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩50,000 million) from Okea Co., Ltd.	Operating activities
HS First Securitization Specialty Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩25,300 million) from Okea Co., Ltd.	Operating activities
Antakya Co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩50,000 million) from Okea Co., Ltd.	Operating activities
Cosmosolution co., Ltd.	The Company partially purchased ABCP (purchase commitment of ₩30,000 million) from Cosmosolution Co., Ltd.	Operating activities
KEBW First Securitization Specialty Co., Ltd.	Hana F&I Inc. purchased the unsubordinated securities and subordinated securities issued by KEBW First Securitization Specialty Co., Ltd. in the amount of ₩34,700 million, respectively.	Operating activities
KEB VERITAS Second Co., Ltd	Hana F&I Inc. purchased the securities issued by KEB VERITAS Second Co., Ltd in the amount of ₩76,400 million.	Operating activities
KEBS First Securitization Co., Ltd.	Hana F&I Inc. underwrote ₩21,800 million of senior bonds issued by KEBS First Securitization Co., Ltd.	Operating activities
KEB Pepper First Securitization Co., Ltd.	Hana F&I Inc. underwrote ₩4,900 million of senior bonds and ₩3,300 million of subordinated bonds issued by KEB Pepper First Securitization Co., Ltd.	Operating activities

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.1 Consolidated structured entities (cont'd)

1.3.1.4 Contractual commitments to consolidated structured entities (cont'd)

Entity	The Characteristics and Purposes	Intention
KEBI First Securitization Co., Ltd.	Hana F&I Inc. underwrote ₩40,700 million of senior bonds and ₩40,700 million of subordinated bonds issued by KEBI First Securitization Co., Ltd.	Operating activities
KEBS Third Securitization Co., Ltd.	Hana F&I Inc. underwrote ₩21,600 million of subordinated bonds issued by KEBS Third Securitization Co., Ltd.	Operating activities
KEBT First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩14,200 million of bonds issued by KEBT First Securitization Specialty Co., Ltd.	Operating activities
Hongdae Picasso Co., Ltd.	Hana F&I Inc. underwrote ₩15,900 million of bonds issued by Hongdae Picasso Co., Ltd.	Operating activities
KEB The Loft Co., Ltd.	Hana F&I Inc. underwrote ₩18,000 million of bonds issued by KEB The Loft Co., Ltd.	Operating activities
HFS First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩38,300 million of bonds issued by HFS First Securitization Specialty Co., Ltd.	Operating activities

1.3.1.4 Contractual commitments to consolidated structured entities

Characteristics and intentions of contractual commitments offered by the Company to the consolidated structured entities are as follows:

Entity	The Characteristics and Purposes	Intention
Hana Miraeasset Third Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩7,900 million of bonds issued by Hana Miraeasset Third Securitization Specialty Co., Ltd.	Operating activities
Shinseung Building Co., Ltd.	Hana F&I Inc. underwrote ₩6,700 million of bonds issued by Shinseung Building Co., Ltd.	Operating activities
Hana Stone First Co., Ltd.	Hana F&I Inc. underwrote ₩17,500 million of bonds issued by Hana Stone First Co., Ltd.	Operating activities
Hana Stone Second Co., Ltd.	Hana F&I Inc. underwrote ₩6,800 million of bonds issued by Hana Stone Second Co., Ltd.	Operating activities
Hana Stone Third Co., Ltd.	Hana F&I Inc. underwrote ₩14,000 million of bonds issued by Hana Stone Third Co., Ltd.	Operating activities
HFT Second Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩36,300 million of bonds issued by HFS First Securitization Specialty Co., Ltd.	Operating activities
Hana Hanmi First Co., Ltd.	Hana F&I Inc. underwrote ₩15,600 million of senior bonds issued by Hana Hanmi First Co., Ltd.	Operating activities
Hana Sinji First Co., Ltd.	Hana F&I Inc. underwrote ₩5,000 million of bonds issued by Hana Sinji First Co., Ltd.	Operating activities
Hana Stone Fifth Co., Ltd.	Hana F&I Inc. underwrote ₩13,100 million of bonds issued by Hana Stone Fifth Co., Ltd.	Operating activities
Hana SH First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩21,000 million of bonds issued by Hana SH First Securitization Specialty Co., Ltd.	Operating activities
HFS Second Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩48,100 million of bonds issued by HFS Second Securitization Specialty Co., Ltd.	Operating activities
Hana K First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩85,600 million of bonds issued by Hana K First Securitization Specialty Co., Ltd.	Operating activities
Hana Stone Sixth Co., Ltd.	Hana F&I Inc. underwrote ₩6,500 million of bonds issued by Hana Stone Sixth Co., Ltd.	Operating activities
HFHB Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩14,100 million of bonds issued by HFHB Securitization Specialty Co., Ltd.	Operating activities
HFD First Securitization Specialty Co., Ltd.	Hana F&I Inc. underwrote ₩26,500 million of bonds issued by HFD First Securitization Specialty Co., Ltd.	Operating activities

1. Company information (cont'd)

1.3 Structured entities (cont'd)

1.3.2 Unconsolidated structured entities

1.3.2.1 The nature of the Company's interests in unconsolidated structured entities

Details of the nature of the Company's Interests in unconsolidated structured entities as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Type	Characteristics and purposes	Financing arrangement	Total assets December 31, 2016	Total assets December 31, 2015
Special purpose company	Securitization of backed asset	Issuing ABL/ABCP and others	₩11,793,436	₩ 8,347,007
Real estate finance	Operation for real estate (including SOC) development	Investment and borrowing	24,874,074	98,645,401
Shipping finance and primary market finance	Building or purchasing ships and NPL purchase, M&A	Investment and borrowing	12,095,352	40,701,781
Investment fund	Managing investment property	Issuing beneficiary certificates	62,498,962	78,697,318

1.3.2.2 Maximum exposure to loss from interests in unconsolidated structured entities

Classification	December 31, 2016 Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund
Assets				
Loans (A)	₩1,768,805	₩1,614,679	₩ 913,886	₩1,148,752
Securities (B)	643	76,553	—	5,182,914
Derivatives (C)	39,182	8,936	47,165	111,598
Others (D)	3,874	3,119	3,019	409
	1,812,504	1,703,287	964,070	6,443,673
Liabilities				
Derivative liabilities	1,278	30	570	1
Provision	746	4,374	14,322	5,001
Others	110	20	206	454
	2,134	4,424	15,098	5,456
Net asset	₩1,810,370	₩1,698,863	₩ 948,972	₩6,438,217
Maximum exposure to loss	3,489,396	1,786,436	1,245,993	6,458,803
Financial assets (A+B+C+D)	1,812,504	1,703,287	964,070	6,443,673
Credit and other commitment	1,676,892	83,149	281,923	15,130

Classification	December 31, 2015 Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund
Assets				
Loans (A)	₩955,315	₩535,634	₩1,259,113	₩ 301,131
Securities (B)	—	76,256	—	6,483,659
Derivatives (C)	614	5,600	25,185	22,740
Others (D)	2,646	2,118	4,123	1,048
	958,575	619,608	1,288,421	6,808,578

	December 31, 2015			
Classification	Special purpose company	Real estate finance	Shipping finance and primary market finance	Investment fund
Liabilities				
Derivative liabilities	—	—	3,921	7,505
Provision	386	6	72	—
	386	6	3,993	7,505
Net asset	₩ 958,189	₩619,602	₩1,284,428	₩6,801,073
Maximum exposure to loss	1,422,039	630,591	1,420,444	6,809,222
Financial assets (A+B+C+D)	958,575	619,608	1,288,421	6,808,578
Credit and other commitment	463,464	10,983	132,023	644

2. Scope and principles of consolidation

The Company prepares statutory consolidated financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the Act on External Audit of Stock Companies.

2.1 Subsidiaries

The Bank has the ability to determine the financial and operating policies of subsidiaries. Generally the Bank classified the entity as subsidiary in case the Bank has existing rights that give it the current ability to direct the relevant activities, and is not only exposed, or has rights, to variable returns, but also has the ability to use its power to affect the Company's returns from its involvement with the investee. Subsidiaries are fully consolidated from the date on which the control is transferred to the Company.

2.2 Offset of the investment accounts of the Company and the corresponding equity accounts

The investment accounts of the Company and the corresponding equity accounts of the subsidiaries are eliminated in consolidation.

2.3 Process of difference between the cost of investment

The consolidated financial statements reflect on only the share of the consolidated subsidiaries post-application of purchase accounting method. The difference between the cost of investment and the Company's share of the fair value of identifiable net assets and liabilities of the subsidiaries at the date of purchase accounting method application is presented as goodwill or negative goodwill. A review of impairment is performed at the end of each reporting date.

If the controlling company additionally acquires the subsidiaries' share, the elimination of subsidiaries' equity account is based on the acquisition date of shares. The difference between the investment accounts of the Company and the corresponding equity accounts of the subsidiaries is amounted to the consolidated capital surplus (or capital adjustment).

2.4 Elimination of intercompany transactions and the unrealized gain or loss, etc.

All significant intercompany transactions and the account balances among the consolidated companies are eliminated on consolidation. Unrealized gains or losses included in loans and borrowings arising from transactions between consolidated companies are eliminated on consolidation. The related accounts receivable and payable are also eliminated on consolidation.

2.5 Investments in associates

Investments in entities over which the Company has control or significant influence are accounted for using the equity method. Under the equity method of accounting, the Company's initial investment in an investee is

2. Scope and principles of consolidation (cont'd)

2.5 Investments in associates (cont'd)

recorded at acquisition cost. Subsequently, the carrying amount of the investment is adjusted to reflect the Company's share of income or loss of the investee in the statement of comprehensive income and share of changes in equity that have been recognized directly in the equity of the investee in the related equity account of the Company on the statement of financial position. If the Company's share of losses of the investee equals or exceeds its interest in the investee, it suspends recognizing its share of further losses. However, if the Company has other long-term interests in the investee, it continues recognizing its share of further losses to the extent of the carrying amount of such long-term interests. The Company resumes the application of the equity method if the Company's share of income or change in equity of an investee exceeds the Company's share of losses accumulated during the period of suspension of the equity method of accounting.

At the date of acquisition, the excess of the cost of the investment over the Company's share of the net fair value of the investee's identifiable assets and liabilities is accounted for as goodwill or negative goodwill. The amortization expenses is included as a part of valuation gain or loss on the equity method investments in the statement of comprehensive income. The difference related to goodwill is recorded as the carrying amount. Goodwill is reviewed for the impairment when signs of damage arise and is not amortized over its useful life. Further, the Company's share of any difference between the net fair value of the investee's identifiable assets and liabilities, and the net book value of such assets and liabilities are amortized based on the investee's accounting treatments on the related assets and liabilities and charged or credited to the valuation gain or loss on the equity method investments in the statement of comprehensive income.

The Company's share in the investee's unrealized profits and losses resulting from transactions between the Company and its investee are eliminated to the extent of the interest in the investee.

2.6 A special reserve on trust accounts

A special reserve provided for the possible future losses on certain trust accounts under the arrangement of guaranteed fixed rate of return and repayment of the principal and guaranteed repayment of the principal is included under the retained earnings in the consolidated fixed.

2.7 Non-controlling interests

Subsidiaries' equity which is not included in the Company's share is accounted as non-controlling interests. In case subsidiaries' non-controlling interests is below "0", minus non-controlling interests is presented as deduction of equity.

3. Basis of preparation and significant accounting policies

3.1 Basis of preparation

The Company prepares statutory financial statements in the Korean language in accordance with Korean International Financial Reporting Standards (KIFRS) enacted by the *Act on External Audit of Stock Companies*. The accompanying consolidated financial statements have been translated into English from the Korean language financial statements. In the event of any differences in interpreting the financial statements or the independent auditors' report thereon, the Korean version, which is used for regulatory reporting purposes, shall prevail.

3.2 Changes in accounting policies and disclosures

The accounting policies adopted in the preparation of the consolidated financial statements are consistent with those followed in the preparation of the Company's annual financial statements for the year ended December 31, 2015, except for the adoption of new standards and interpretation as at January 1, 2016. The nature and the impact of each new standard or amendment are described below:

3.2.1 Amendments to KIFRS 1111 Joint Arrangements: Accounting for Acquisitions of Interests

The amendments to *KIFRS 1111* require that a joint operator accounting for the acquisition of an interest in a joint operation, in which the activity of the joint operation constitutes a business, must apply the relevant

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.1 Amendments to KIFRS 1111 Joint Arrangements: Accounting for Acquisitions of Interests (cont'd)

KIFRS 1103 principles for business combinations accounting. The amendments also clarify that a previously held interest in a joint operation is not remeasured on the acquisition of an additional interest in the same joint operation while joint control is retained. In addition, a scope exclusion has been added to *KIFRS 1111* to specify that the amendments do not apply when the parties sharing joint control, including the reporting entity, are under common control of the same ultimate controlling party.

The amendments apply to both the acquisition of the initial interest in a joint operation and the acquisition of any additional interests in the same joint operation and are prospectively effective for annual periods beginning on or after January 1, 2016, with early adoption permitted. These amendments do not have significant impact on the Company.

3.2.2 Amendments to KIFRS 1016 and KIFRS 1038: Clarification of Acceptable Methods of Depreciation and Amortization

The amendments clarify the principle in KIFRS 1016 and KIFRS 1038 that revenue reflects a pattern of economic benefits that are generated from operating a business (of which the asset is part) rather than the economic benefits that are consumed through use of the asset. As a result, a revenue-based method cannot be used to depreciate property, plant and equipment and may only be used in very limited circumstances to amortize intangible assets. The amendments are effective prospectively for annual periods beginning on or after January 1, 2016, with early adoption permitted. These amendments do not have any significant impact on the Company given that the Company has not used a revenue-based method to depreciate its non-current assets.

3.2.3 KIFRS 1001 Disclosure Initiative

The amendments to KIFRS 1001 clarify, rather than significantly change, existing KIFRS 1001 requirements. The amendments clarify:

- The materiality requirements in KIFRS 1001
- That specific line items in the statement(s) of profit or loss and OCI and the statement of financial position may be disaggregated
- That entities have flexibility as to the order in which they present the notes to financial statements
- That the share of OCI of associates and joint ventures accounted for using the equity method must be presented in aggregate as a single line item, and classified between those items that will or will not be subsequently reclassified to profit or loss

Furthermore, the amendments clarify the requirements that apply when additional subtotals are presented in the statement of financial position and the statement(s) of profit or loss and OCI. These amendments are retrospectively effective for annual periods beginning on or after January 1, 2016. These amendments do not have any impact on the Company's financial statements.

3.2.4 Annual Improvements 2012-2014 Cycle

These improvements are effective for annual periods beginning on or after January 1, 2016. They are included in the following standards. These improvements do not have any impact on the Company's financial statements.

3.2.4.1 Amendments to KIFRS 1105: Non-current Assets Held for Sale and Discontinued Operations

Assets (or disposal groups) are generally disposed of either through sale or distribution to owners. The amendment clarifies that changing from one of these disposal methods to the other would not be considered a new plan of disposal, rather it is a continuation of the original plan. There is, therefore, no interruption of the application of the requirements in KIFRS 1105. This amendment must be applied prospectively

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.4 Annual Improvements 2012-2014 Cycle (cont'd)

3.2.4.2 Amendments to KIFRS 1107: Financial Instruments: Disclosures

(1) Servicing contracts

The amendment clarifies that a servicing contract that includes a fee can constitute continuing involvement in a financial asset. An entity must assess the nature of the fee and the arrangement against the guidance for continuing involvement in KIFRS 1107 in order to assess whether the disclosures are required. The assessment of which servicing contracts constitute continuing involvement must be done retrospectively. However, the required disclosures would not need to be provided for any period beginning before the annual period in which the entity first applies the amendments.

(2) Applicability of the amendments to KIFRS 1107 to condensed interim financial statements

The amendment clarifies that the offsetting disclosure requirements do not apply to condensed interim financial statements, unless such disclosures provide a significant update to the information reported in the most recent annual report.

3.2.4.3 Amendments to KIFRS 1019: Employee Benefits

The amendment clarifies that market depth of high quality corporate bonds is assessed based on the currency in which the obligation is denominated, rather than the country where the obligation is located. When there is no deep market for high quality corporate bonds in that currency, government bond rates must be used. This amendment must be applied prospectively.

3.2.4.4 Amendments to KIFRS 1034: Interim Financial Reporting

The amendment clarifies that the required interim disclosures must either be in the interim financial statements or incorporated by cross-reference between the interim financial statements and wherever they are included within the interim financial report (e.g., in the management commentary or risk report). The other information within the interim financial report must be available to users on the same terms as the interim financial statements and at the same time. This amendment must be applied retrospectively.

The standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Company's consolidated financial statements are disclosed below.

3.2.5.1 Amendments to KIFRS 1109: Financial Instruments

KIFRS 1109, enacted on September 25, 2015, is effective for annual periods beginning on or after January 1, 2018, with early application permitted. KIFRS 1109 will replace KIFRS 1039 Financial Instruments: Recognition and Measurement. The Company plans to apply KIFRS 1109 for annual periods beginning on or after January 1, 2018.

The new KIFRS 1109 is retrospectively applied in principle, but there are some exceptions such as exemption of restatement of comparative information for classification, measurement, impairment of financial instruments. For hedge accounting, the requirements are generally applied prospectively, with some exceptions such as accounting for time value of options.

Major characteristics of KIFRS 1109 are financial assets being classified and measured on the basis of the holder's business model and instrument's contractual cash flow characteristics, impairment model of financial instruments based on expected credit losses (ECL), broader range of hedged items and hedging instruments that qualify for the application of hedge accounting or changes in evaluation of hedging effectiveness etc.

For smooth adoption of KIFRS 1109, financial impact analysis, accounting policies establishment, accounting system establishment and stabilization need to take place. The impact of the standards on the financial statements

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.4 Annual Improvements 2012-2014 Cycle (cont'd)

3.2.5.1 Amendments to KIFRS 1109: Financial Instruments (cont'd)

in the period they are initially adopted may differ depending on the Company's decisions and judgments of accounting policies as well as economic environment and its financial instruments.

In connection with the adoption of KIFRS 1109, the Company is in the process of undertaking any update on its internal control processes or a change in the accounting system related to the reporting of financial instruments, and is in the process of analyzing the financial impact of the new standard on the financial statements.

The general impacts on the financial statements are as follows:

3.2.5.1.1 Financial asset classification and measurement

The new KIFRS 1109 requires a financial instrument to be classified and measured subsequently at amortized cost, fair value through other comprehensive income (FVOCI), or fair value through profit or loss (FVTPL), on the basis of the holder's business model and instrument's contractual cash flow characteristics as shown below. The requirements should be applied to an entire financial asset, even if it contains an embedded derivative. That is, in contrast with the requirements of KIFRS 1039, a derivative embedded within a hybrid (combined) contract containing a financial asset host is not accounted for separately.

3.2.5.1.1 Financial asset classification and measurement

	Contractual cash flow characteristics	
Business model	Composed solely of principal and interest	Other
Purpose of collecting contractual cash flows	Measured at amortized cost (*1)	
Purpose of collecting and selling contractual cash flows	Measured at FVOCI (*1)	Measured at FVTPL (*2)
Purpose of selling, others	Measured at FVTPL	

(*1) can be irrevocably designated at FVTPL in order to get rid of or reduce accounting mismatch (cannot cancel).
(*2) can be irrevocably designated at FVOCI in case of equity securities not for the purpose of realizing investment gains (cannot cancel).

The requirements in KIFRS 1109 to classify financial assets measured at amortized costs or at FVOCI are stricter than KIFRS 1039, and thus, the proportion of financial assets measured at FVTPL may increase, which may lead to a rise in profit or loss volatility at the adoption of KIFRS 1109.

3.2.5.1.2 Impairment: financial assets and contract assets

In KIFRS 1039, impairment is recognized only when there is objective evidence of impairment based on incurred loss model. In the new KIFRS 1109, impairment of debt instruments, lease bonds, contract assets, loan commitments and financial guarantee contracts that are measured at amortized costs or at FVOCI is recognized based on the expected credit loss (ECL) impairment model.

KIFRS 1109 outlines a 'three-stage' model for impairment based on changes in credit risk since initial recognition. Loss allowance is measured based on the 12-month ECL or life-time ECL which allows early recognition of credit loss compared to the incurred loss model of KIFRS 1039.

3. Basis of preparation and significant accounting policies (cont'd)

3.2 Changes in accounting policies and disclosures (cont'd)

3.2.4 Annual Improvements 2012-2014 Cycle (cont'd)

3.2.5.1 Amendments to KIFRS 1109: Financial Instruments (cont'd)

3.2.5.1.2 Impairment: financial assets and contract assets (cont'd)

	Classification	Loss allowance
Stage 1	Assets with no significant increase in credit risk since initial recognition (*)	12-month ECL: Expected credit losses that result from default events that are possible within 12 months after the reporting date.
Stage 2	Assets with significant increase in credit risk since initial recognition	Lifetime ECL: Expected credit losses that result from all possible default events over the expected life of the financial instrument.
Stage 3	Credit-impaired assets	

(*) Low credit risk at the end of reporting period may be considered as no significant increase in credit risk

In KIFRS 1109, accumulated changes in the life-time ECL after initial recognition are taken into account as loss allowance in case credit is impaired at initial recognition of financial assets.

3.2.5.1.3 Hedge accounting

The new KIFRS 1109 maintains mechanics of hedge accounting (fair value hedge, cash flow hedge and a hedge of a net investment in a foreign operation) as set forth in KIFRS 1039. However, unlike requirements in KIFRS 1039 that are too complex and strict, KIFRS 1109 is more practical, principle based and less strict and focuses on the entity's risk management activities. Also, KIFRS 1109 allows broader range of hedged items and hedging instruments. Under KIFRS 1039, a hedge is assessed to be highly effective only if the offset is in the range of 80-125 percentage by performing numerical test of effectiveness. In KIFRS 1109, such requirements are alleviated.

Transactions not qualifying for hedge accounting requirements of KIFRS 1039 may now qualify for hedge accounting under KIFRS 1109, resulting in less volatility in profit or loss.

Pursuant to transitional provisions of hedge accounting, the Company may choose to continue hedge accounting under KIFRS 1039 at first-time adoption of KIFRS 1109.

3.2.5.2 Amendments to KIFRS 1115: Revenue from contract with customers

KIFRS 1115 establishes a five-step model to account for revenue arising from contracts with customers. Under KIFRS 1115, revenue is recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The new revenue standard will supersede all current revenue recognition requirements under KIFRS. Either a full retrospective application or a modified retrospective application is required for annual periods beginning on or after January 1, 2018. Early adoption is permitted. The Company is in the process of reviewing the impact of this standard on the financial statements, and plans to adopt the new standard on the required effective date.

3.3 Foreign currency transaction

3.3.1 Functional currency

When preparing for the consolidated financial statements, the Company measures and recognizes all items and transactions according to the functional currency. The term, functional currency, is defined as the monetary unit of account of the principal economic environment in which the entity operates, and trades between entities using its own functional currency and other currencies which are converted to the Company's functional currency to be measured and recognized.

3. Basis of preparation and significant accounting policies (cont'd)

3.3 Foreign currency transaction (cont'd)

3.3.2 Transactions and balances at the end of the reporting period

Transactions in foreign currencies are initially recorded at the spot rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at the spot rate of exchange at the reporting date. Non-monetary items measured at fair value in a foreign currency are translated at the exchange rates at the end of reporting date. When a gain or loss on a non-monetary item is recognized in other comprehensive income, any exchange component of that gain or loss is recognized in other comprehensive income. Conversely, when a gain or loss on a non-monetary item is recognized in profit or loss, any exchange component of that gain or loss is recognized in profit or loss. Non-monetary items not measured at fair value in a foreign currency are translated using the exchange rates as at the dates of the initial transactions and thus there are no exchange differences.

The Company may have a monetary item that is receivable from or payable to a foreign operation. An item for which settlement is neither planned nor likely to occur in the foreseeable future is, in substance, a part of the entity's net investment in that foreign operation. Exchange differences arising on a monetary item that forms part of a reporting entity's net investment in a foreign operation are recognized initially in other comprehensive income and reclassified from equity to profit or loss on disposal of the net investment

3.3.3 Translation of the presentation currency

As at the reporting date, the assets and liabilities of overseas branches are translated into the Company's presentation currency, Korean won (KRW), at the rate of exchange as at the reporting date, and their statement of comprehensive income and equity are translated using the exchange rates at transaction date or the average exchange rates for the period. Exchange differences arising on translation are taken directly to a separate component of equity. On disposal of a foreign entity, the deferred cumulative amount recognized in equity related to that particular foreign operation is recognized in 'Other operating expenses' or 'Other operating income' in the statement of comprehensive income.

3.4 Cash and cash equivalents

Cash and cash equivalents in the statement of financial position comprise of cash at Banks and on hand and short-term deposits with an original maturity of three months or less. The purpose of cash and cash equivalents is to make short-term investments and to meet short-term cash demands. Cash and cash equivalents are highly liquidable, easily convertible and subject to changes in value.

3.5 Financial assets – classification and subsequent measurement

All financial assets are classified as financial assets at FVTPL, available-for-sale financial assets, held-to-maturity financial assets, and loans and receivables. The Company determines the classification of its financial assets at initial recognition.

All financial assets are initially recognized on the trade date, i.e., the date that the Company becomes a party to the contractual provisions of the instrument. This includes 'Regular way trades': purchases or sales of financial assets that require delivery of assets within the time frame generally established by regulation or convention in the market place.

The classification of financial assets at initial recognition depends on their purpose and characteristics and the management's intention in acquiring them. All financial assets are measured initially at their fair value plus transaction costs, except in the case of financial assets recorded at FVTPL.

3.5.1 Financial assets at FVTPL

Financial assets at fair value through profit or loss include financial assets held-for-trading and financial assets designated upon initial recognition at fair value through profit or loss. Financial assets are classified as held-for-

3. Basis of preparation and significant accounting policies (cont'd)

3.5 Financial assets – classification and subsequent measurement (cont'd)

3.5.1 Financial assets at FVTPL (cont'd)

trading if they are acquired for the purpose of selling or repurchasing in the short-term. This category includes derivative financial instruments entered into by the Company that are not designated as hedging instruments as defined by K-IFRS 1039 Financial Instruments: Recognition and Measurement. Derivatives, including separate embedded derivatives are also classified as held-for-trading unless they are designated as effective hedging instruments.

Financial assets at FVTPL are carried in the statement of financial position at fair value with changes in fair value recognized in finance income or finance cost in the statement of comprehensive income.

3.5.2 Available-for-sale financial assets

Available-for-sale financial assets are defined as financial assets that are neither classified as held-to-maturity financial assets nor loans and financial assets held-for-trading, and that are also not financial assets designated at FVTPL. Available-for-sale financial assets are non-derivative financial assets that are designated upon initial recognition as available-for-sale financial assets. Available-for-sale financial assets are subsequently measured at fair value with gain or loss arising from a change in the fair value as other comprehensive income, except for foreign exchange or translation gain (loss) for monetary assets directly recognized as interest income, gain or loss based on EIR and impairment loss. However, equity instruments whose market price is not quoted from an active market and fair value cannot be reliably measured are stated at cost. Accumulated other comprehensive income previously recognized in equity is recognized in the statement of comprehensive income when the investment is disposed of or impairment loss for the investment is recognized. Dividends earned whilst holding available-for-sale financial assets are recognized in the statement of comprehensive income when the right of the payment has been established.

3.5.3 Held-to-maturity financial assets

Non-derivative financial assets with fixed or determinable payments and fixed maturities are classified as held-to-maturity when the Company has the positive intention and ability to hold them to maturity. From initial measurement, held-to-maturity financial assets are measured at amortized cost using the EIR, less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of comprehensive income. The losses arising from impairment are recognized in finance costs in the statement of comprehensive income.

3.5.4 Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial measurement, such financial assets are subsequently measured at amortized cost using the EIR, less impairment. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of comprehensive income except for short-term loans and receivables which the recognition of interest income is deemed immaterial.

The Company defers LOF/LOCs associated with originating loans and LOCs that have future economic benefits. Loan balances are reported net of these LOF/LOCs. The deferred LOF/LOCs are amortized based on the effective interest rate method with the amortization recognized as adjustments to interest income.

3.6 Derivative financial instruments and hedge accounting

Derivative financial instruments are classified as trading derivatives or hedging derivatives depending on whether hedge accounting is applied or not, and are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Any gains or losses arising from

3. Basis of preparation and significant accounting policies (cont'd)

3.6 Derivative financial instruments and hedge accounting (cont'd)

changes in fair value on derivatives are taken directly to the statement of comprehensive income, except for the effective portion of cash flow hedges or hedges of net investment in a foreign operation, which is recognized in other comprehensive income.

For the purpose of hedge accounting, hedges are classified as:

- Fair value hedges when hedging the exposure to changes in the fair value of a recognized asset or liability or an unrecognized firm commitment (except for foreign currency risk)
- Cash flow hedges when hedging exposure to variability in cash flows that is either attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction or also the foreign currency risk in an unrecognized firm commitment

At the inception of a hedge relationship, the Company formally designates and documents the hedge relationship to which the Company wishes to apply hedge accounting and the risk management objective and strategy for undertaking the hedge. The documentation includes identification of the hedging instrument, the hedged item or transaction, the nature of the risk being hedged and how the entity will assess the effectiveness of changes in the hedging instrument's fair value in offsetting the exposure to changes in the hedged item's fair value or cash flows attributable to the hedged risk. Such hedges are expected to be highly effective in achieving offsetting changes in fair value or cash flows and are assessed on an ongoing basis to determine that they actually have been highly effective throughout the financial reporting periods for which they were designated.

Hedges which meet the strict criteria for hedge accounting are accounted for as follows:

3.6.1 Fair value hedges

When fair value hedge accounting is applied, the unrealized gain or loss on hedged items that are attributable to a hedged risk and hedging instruments is symmetrically recognized in the consolidated statement of comprehensive income for the same reporting period to ensure that changes in the fair value of the hedged items are offset by changes in the fair value of the hedging instruments. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively. Any adjustment to the carrying amount of hedged items is amortized to profit or loss in the consolidated statement of comprehensive income over the remaining maturity using the effective interest rate method.

3.6.2 Cash flow hedges

When cash flow hedge accounting is applied, the effective portion of the unrealized gain or loss on the hedging instrument is directly recognized in other comprehensive income (loss) in the consolidated statement of financial position to ensure that changes in the cash flows of the hedged items are offset by changes in the cash flows of the hedging instruments while any ineffective portion is recognized immediately in the consolidated statement of comprehensive income. Amounts recognized as other comprehensive income are transferred to the consolidated statement of comprehensive income when the hedged transaction affects profit or loss. If an application of hedge accounting is no longer valid, the Company discontinues the hedge accounting prospectively and the cumulative gain or loss on the hedging instrument previously recognized in other comprehensive income are transferred to profit or loss in the consolidated statement of comprehensive income.

3.6.3 Hedge accounting of net investment in a foreign operation

When applying hedge accounting of net investment in a foreign operation, the effective portion of changes in fair value of the hedging instrument is recognized in other comprehensive income, and the ineffective portion of the hedge is recognized as current profit or loss in order to offset changes in the fair value of the hedged item caused by the hedging with changes in the fair value of the hedging instrument. The effective portion of hedge recognized in other comprehensive income will be re-classified from other comprehensive income to current

3. Basis of preparation and significant accounting policies (cont'd)

3.6 Derivative financial instruments and hedge accounting (cont'd)
3.6.3 Hedge accounting of net investment in a foreign operation (cont'd)

profit or loss in accordance with KIFRS 1021 'The Effects of Changes in Foreign Exchange Rates' at the time of disposal of a foreign operation or disposal of a portion of its foreign operations in the future

3.6.4 Embedded derivatives

Derivatives embedded in other financial instruments or other host contracts are accounted for as separate derivatives when their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVPTL.

3.6.5 'Day 1' profit or loss

In case of derivatives in level 3 (see Note 5), whose fair value is determined using data which is not observable from markets, the difference between the transaction price and fair value at initial recognition (a 'Day 1' profit or loss) is deferred and amortized over the life of the associated instrument using the straight-line method and the amortization is recognized in the statement of comprehensive income.

3.6.6 Credit risk valuation adjustment

When assessing derivatives at fair value, expected loss from credit risk is measured and deducted from derivative assets to reflect credit risk of counterparties.

3.7 Impairment of financial assets

The Company assesses at each reporting date whether there is any objective evidence that a financial asset or a group of financial assets is impaired. A financial asset or a group of financial assets is deemed to be impaired if, and only if, there is objective evidence of impairment as a result of one or more events that has occurred after the initial recognition of the asset (an incurred loss event) and if that loss event has an impact on the estimated future cash flows of the financial asset or the group of financial assets that can be reliably estimated. Evidence of impairment may include indications that the debtors or a group of debtors is experiencing significant financial difficulty, default or delinquency in interest or principal payments, the probability that they will enter bankruptcy or other financial reorganization and where observable data indicates that there is a measurable decrease in the estimated future cash flows, such as changes in arrears or economic conditions that correlate with defaults.

3.7.1 Available-for-sale financial assets

For available-for-sale financial assets, the Company assesses at each reporting date whether there is objective evidence that an asset is impaired. When there is evidence of impairment, the cumulative loss measured as the difference between the acquisition cost and the current fair value, less any impairment loss on that investment previously recognized in the statement of comprehensive income, is removed from other comprehensive income and recognized in the statement of comprehensive income.

In the case of equity investments classified as available-for-sale, objective evidence would include a 'significant' or 'prolonged' decline in the fair value of the investment below its cost. Impairment loss on equity investments is not reversed through the statement of comprehensive income; increases in their fair value after impairment are recognized directly in other comprehensive income. In the case of debt investments classified as available-for-sale, if, in a subsequent year, increases in the fair value because of an event occurring after the impairment were recognized, the previously recognized impairment is reversed.

3.7.2 Held-to-maturity financial assets

When objective evidence exists for the impairment of a particular held-to-maturity financial asset, the Company calculates the difference between the carrying amount and the present value of the estimated future cash flows

3. Basis of preparation and significant accounting policies (cont'd)

3.7 Impairment of financial assets (cont'd)

3.7.2 Held-to-maturity financial assets (cont'd)

using the EIR. If, in subsequent years, the amount of the estimated impairment loss decreases because of an event occurring after the impairment was recognized, the previously recognized impairment is reversed and reduced by adjusting the allowance account. If the carrying amount does not reflect the impairment at the initial recognition after the reversal, the amount cannot exceed the amortized cost at the date of the reversal recognition.

3.7.3 Loans and receivables

The Company first assesses individually whether objective evidence of impairment exists for financial assets that are individually significant or collectively for financial assets that are not individually significant. If the Company determines that no objective evidence of impairment exists for an individually assessed financial asset, whether significant or not, it includes the asset in a group of financial assets with similar credit risk characteristics and collectively assesses them for impairment. Assets that are individually assessed for impairment and for which an impairment loss is, or continues to be, recognized are not included in a collective assessment of impairment.

If there is objective evidence that an impairment loss has been incurred, the amount of the individual impairment loss is measured as the difference between the assets' carrying amount and the present value of estimated future cash flows (excluding future expected credit losses that have not yet been incurred). The carrying amount of the asset is reduced through the use of an allowance account and the amount of the individual impairment loss is recognized in the statement of comprehensive income. Interest income continues to be accrued on the reduced carrying amount and is accrued using the rate of interest used to discount the future cash flows for the purpose of measuring the amount of the individual impairment loss.

The present value of the estimated future cash flows is discounted at the financial assets original EIR. If a loan has a variable interest rate, the discount rate for measuring any impairment loss is the current EIR. The calculation of the present value of the estimated future cash flows of a collateralized financial asset reflects the cash flows that may result from foreclosure less costs for obtaining and selling the collateral, whether or not foreclosure is probable.

For the purpose of a collective evaluation of impairment, financial assets are grouped on the basis of the Company's internal credit grading system, that considers credit risk characteristics such as asset type, industry, geographical location, collateral type, past-due status and other relevant factors.

A collective evaluation of impairment is based on incurred loss model. The ratio of allowance for possible loan losses on credit by collective assessment is the incurred but not reported possibility of default (IBNR PD) times loss given default (LGD). IBNR PD is estimated by applying Loss Emergence Period (LEP) to Probability of default (PD) regulated by Basel II on the basis of historical loss experience for a group of loan receivables with similar credit risk characteristics. LGD is estimated by applying EIR of a group of loan receivables and reflecting types of products and collaterals.

3.8 Reclassification of financial assets

The Company may reclassify in rare circumstances, financial assets out of the 'held-for-trading' category and into the 'available-for-sale', 'loans and receivables', or 'held-to-maturity' categories. However, in non-rare cases the Company may reclassify financial assets at FVTPL out of the 'held-for-trading' category and into the 'loans and receivables' category if it meets the definition of loans and receivables and the Company has the intention and ability to hold the financial assets for the foreseeable future or until maturity.

The Company may reclassify financial assets out of the 'available-for-sale' category arising from being designated as available-for-sale financial assets and into the 'loans and receivables' category if it meets the definition of loans and receivables and the Company has the intention and ability to hold the financial assets for the foreseeable future or until maturity.

3. Basis of preparation and significant accounting policies (cont'd)

3.8 Reclassification of financial assets (cont'd)

The Company may reclassify financial assets out of the 'held-to-maturity' category and into the 'available-for-sale' category if the Company's intention or ability to hold the financial assets until maturity changes and it becomes no longer proper to classify the financial assets as 'held-to-maturity. However, all held-to-maturity financial assets the Company holds at the time of reclassification are reclassified into available-for-sale financial assets if the amounts of the reclassified financial assets are not insignificant.

3.9 Derecognition of financial assets

A financial asset (or, where applicable a part of a financial asset or part of a group of similar financial assets) is derecognized when:

- The rights to receive cash flows from the asset have expired.
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'Pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

When the Company has transferred its rights to receive cash flows from an asset or has entered into a pass-through arrangement, it evaluates if and to what extent it has retained the risks and rewards of ownership. When it has neither transferred nor retained substantially all the risks and rewards of the asset, nor transferred control of the asset, the asset is recognized to the extent of the Company's continuing involvement in the asset. In that case, the Company also recognizes an associated liability. The transferred asset and the associated liability are measured on a basis that reflects the rights and obligations that the Company has retained.

Continuing involvement that takes the form of a guarantee over the transferred asset is measured at the lower of the original carrying amount of the asset and the maximum amount of consideration that the Company could be required to repay.

3.10 Recognition and measurement of financial liabilities

All financial liabilities are classified as financial liabilities at FVTPL, borrowings or others and measured initially at their fair value plus transaction costs, except in the case of financial liabilities recorded at FVTPL.

3.10.1 Financial liabilities at FVTPL

Financial liabilities at fair value through profit or loss include financial liabilities held-for-trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held-for-trading if they are acquired for the purpose of selling in the near term. All financial liabilities including an embedded derivative separated from the host contract are reclassified as financial liabilities at fair value through profit or loss except for financial liabilities designated as effective hedging instruments or financial guarantee contracts. After initial recognition, the changes in the fair value of the financial liabilities at fair value through profit or loss and the related interest expenses are recognized as profit or loss.

The Company performs securities lending and borrowing classified to held-for-trading financial liabilities. When the Company borrows securities from Korea Securities Depository, securities borrowed are managed as memorandum value and when selling them, they are recorded as securities sold. At closing, the difference in the price securities are sold and the market price prevailing on the closing date is taken into account as valuation gain or loss on securities sold, and at the time of selling the securities, the difference in book value and the price securities are purchased is recorded as trading gain or loss on securities sold.

3. Basis of preparation and significant accounting policies (cont'd)

3.10 Recognition and measurement of financial liabilities (cont'd)

3.10.2 Deposits, borrowings, and debentures

After initial recognition, interest bearing deposits, borrowings and debentures are subsequently measured at amortized cost using the EIR. Gains and losses are recognized in the statement of comprehensive income when the liabilities are derecognized as well as through the EIR amortization process.

3.11 Derecognition of financial liabilities

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires.

When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a derecognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognized in the statement of comprehensive income.

3.12 Offsetting of financial assets and liabilities

Financial assets and financial liabilities are offset and the net amount reported in the statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the asset and settle the liability simultaneously.

3.13 Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. The provision is used only for expenditures for which the provision was originally recognized. If the effect of the time value of money is material, provisions are stated at present value.

Confirmed acceptances and guarantees, unconfirmed acceptances and guarantees and bills endorsed are not recognized on the statement of financial position, but are disclosed as off-statement financial position items in the notes to the financial statements. The Company provides a provision for such off-statement financial position items, applying a Cash Conversion Factor (Cash CF) and provision rates, and records the provision as a reserve for possible losses on acceptances and guarantees. The Company provides an allowance for possible losses on a certain portion of unused credit line. The Company records the provision for such unused balances as an allowance for possible losses on unused commitments which are calculated by applying a Credit Conversion Factor (CCF) and provision rates.

3.14 Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument and is measured at fair value on date of initial recognition. After initial recognition, the Company, as an issuer of such a contract, measures it at the higher of (i) the amount determined in accordance with KIFRS 1037 and (ii) the amount initially recognized less, when appropriate, cumulative amortization recognized in accordance with KIFRS 1018.

3.15 Bonds purchased under resale agreements and bonds sold under repurchase agreements

Bonds purchased under resale agreements and bonds sold under repurchase agreements are included in loans and borrowings, respectively, in the accompanying statement of financial position. Interest income and expenses from purchase or sale are recognized as interest income on loan receivables and interest expenses on borrowings.

3. Basis of preparation and significant accounting policies (cont'd)

3.16 Property and equipment

Property and equipment are stated at historical cost, less accumulated depreciation. Such cost includes an expenditure which has directly occurred for the acquisition of the asset.

The initial and subsequent costs are recognized as an asset when it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. The other maintenances and repairs are expensed in the year in which they are incurred and the carrying amount of certain parts that are replaced is derecognized.

Land is not depreciated. For depreciation of other assets, amount of acquisition cost less residual value is calculated on a straight-line basis over the following estimated useful life of the asset.

Classification	Depreciation method	Years
Buildings	Straight-line method	5 to 55
Leasehold improvements	Straight-line method	3 to 10
Equipment and vehicles	Declining balance method	3 to 20

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is immediately reduced to its recoverable amount. The residual value and economic useful life are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for if necessary. Any gain or loss arising on derecognition of the asset (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is recognized in 'other operating income' in the statement of comprehensive income in the year the asset is derecognized.

3.17 Investment properties

Investment properties are measured initially at cost, including transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met; and excludes the costs of day-to-day servicing of an investment property. Subsequent to initial recognition, investment properties are stated using the cost model.

Investment properties are derecognized when either they have been disposed of or when the investment property is permanently withdrawn from use and no future economic benefit is expected from its disposal. The difference between the net disposal proceeds and the carrying amount of the asset is recognized in the statement of comprehensive income in the period of derecognition, and transfers are made to or from investment property only when there is a change in use.

Depreciation method to measure buildings which are classified as investment properties is the straight-line method with useful lives ranging from 5 to 55 years.

3.18 Intangible assets

An intangible asset which comprises industrial property right, software, development costs and others is recognized as an asset only if it is probable that future economic benefits associated with the asset will flow to the Company and the costs of the asset can be measured reliably. Intangible assets acquired individually are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is its fair value as at the date of acquisition in accordance to KIFRS 1103 "Business Combination." Amortization of intangible assets with definite useful lives is calculated on the following amortization method over the estimated useful life of the assets.

Classification	Depreciation method	Years
Industrial property right, software, system development costs	Straight-line method	5
Other intangible assets	Straight-line method	1 to 7

3. Basis of preparation and significant accounting policies (cont'd)

3.18 Intangible assets (cont'd)

Intangible assets with indefinite useful lives are not amortized but are annually tested for impairment or whenever there is an indication that the intangible asset may be impaired. The assessment of indefinite life is reviewed annually to determine whether the indefinite life continues to be supportable.

3.19 Impairment of non-financial assets

The Company assesses at each reporting date whether there is an indication that an asset may be impaired. If any indication exists, or when annual impairment testing for an asset is required, the Company estimates the asset's recoverable amount. An asset's recoverable amount is the higher of an asset's or cash-generating unit's (CGU) fair value less costs to sell and its value in use. When the carrying amount of an asset or CGU exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount.

3.20 Net defined benefit liabilities

The Company calculates defined benefit liabilities and pension benefit expenses based on defined benefit plan and defined contribution plan when an employee retires in accordance to pension related regulations. For defined benefit plans, the cost of retirement benefits is measured by an actuary services company, using the projected unit credit method. The present value of defined benefit obligation is computed by discounting expected future cash outflows with market rate of return measured against the yield of high-graded corporate bond whose date of payment and maturity is similar to that of a defined benefit obligation. Actuarial gains and losses, incurred from the change in actuarial assumptions and the difference between the assumptions and the actual results, are recognized in other comprehensive income for the period. Past service cost is recognized immediately to the extent that the benefits are already vested and otherwise is amortized on a straight-line basis over the period until the benefits become vested.

The Company has entered into retirement trust fund and retirement pension plan agreements to pay retirement benefits to its employees. The retirement benefit obligation represents the present value of the defined benefit obligation as adjusted for unrecognized past service cost and as reduced by the fair value of plan assets. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

3.21 Share-based payment transactions

Employees (including senior executives) of the Company receive remuneration in the form of share-based payment transactions, whereby employees render services as consideration for equity instruments, or they are granted share appreciation rights, which can only be settled in cash. If the goods or services provided cannot be reliably measured, the endowed equity is indirectly estimated at fair value and the Company accounts for compensation costs and equity.

The cost of cash-settled transactions is measured initially at fair value at the grant date, taking into account the terms and conditions upon which the instruments were granted. This fair value is expensed over the period until vesting with recognition of a corresponding liability. The liability is remeasured to fair value at each reporting date up to and including the settlement date, which changes in fair value recognized in the statement of comprehensive income. Also, in the case of a selectable share-based payment transaction in which the employees have a choice between a cash-settled transaction and an equity-settled transaction, the Company records the amount depending on its materiality.

3.22 Employee benefits

3.22.1 Short-term employee benefits

When employees have rendered services to the Company during an accounting period, the Company recognizes the undiscounted amount of Short-term employee benefits. This amount is expected to be settled in whole before twelve months after the end of the reporting period, in exchange for those services.

3. Basis of preparation and significant accounting policies (cont'd)

3.22.2 Termination benefits

The Company recognizes an expenses for termination benefits when an employee accepts the offer or when a restriction on the Company's ability to withdraw the offer takes effect.

3.23 Income tax expenses and deferred tax assets and liabilities

Income taxes comprise of current and deferred taxes. All items related to taxes, other than those recognized directly in equity, are accounted for in the statement of comprehensive income. Accordingly, items recognized directly in equity and the related taxes are accounted for as other comprehensive income in the consolidated statements of comprehensive income. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted, by the reporting date, in the countries where the Company operates and generates taxable income. If the applied tax laws require an interpretation, the Company calculates income tax payable expected to be paid to the taxation authorities based on the opinion made when the taxes were reported.

Deferred tax is provided on temporary differences at the reporting date between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes. Deferred liabilities are recognized for all taxable temporary differences, except:

- When the deferred tax liability arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit loss.
- In respect of taxable temporary differences associated with investments in subsidiaries and associates, where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are recognized for all deductible temporary differences to the extent that taxable profit will be available against which the deductible temporary differences can be utilized.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the years when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

Deferred tax assets and deferred tax liabilities are offset if a legally enforceable right exists to set off current tax assets against current tax liabilities and the deferred taxes relate to the same taxable entity and taxation authority.

The Company offsets deferred assets and liabilities if, and only if (a) the Company has a legally enforceable right to set off current tax assets against current tax liabilities and, (b) the deferred tax assets and the deferred tax liabilities relate to income taxes levied by the same taxation authority on either on (i) the same taxable entity or (ii) different taxable entities which intend either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously, in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

3.24. Equity

3.24.1 Classification of equity

The Company classifies financial instruments at initial recognition as either financial liabilities or financial equity depending on the contractual materiality. In the case where it is possible to avoid the related contractual obligations, the financial item is classified as a financial equity. An equity is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities.

3.24.2 Stock issuance costs

New stock issuance costs or incremental costs related to the stock issuance for business combinations are recorded as a deduction from paid-in capital net of tax effects.

3. Basis of preparation and significant accounting policies (cont'd)

3.25 Earning per share

Basic and diluted earnings per share are computed by dividing net income by the weighted average number of shares of common stock outstanding during the year.

3.26 Accounting basis for trust accounts

The Company separately maintains the books of accounts and financial statements in connection with the trust operations (the "trust accounts") from those of the Bank's accounts in accordance with the Financial Investment Services and Capital Markets Act ("FSCMA"). When surplus funds are generated through the management of trust assets, such funds are deposited with the Bank and are recorded as due to trust accounts of the Bank's accounts. Also, the borrowings from the Bank's accounts are recorded as due from trust accounts of the Bank's accounts. The Company receives fees for operation and management of the trust business and accounts for them as fee and commission income from trust accounts.

With respect to certain trust account products, the Company guarantees the repayment of principal and interest of these trust accounts, in certain cases, with a fixed rate of return. If income from such trust accounts is insufficient to pay the guaranteed amount, such a deficiency is satisfied by using special reserves maintained in these trust accounts, offsetting trust fee payable to the Bank's accounts and receiving compensation contributions from the Bank's accounts. If the Company pays compensating contributions to the guaranteed return trusts to cover such deficiencies, these contributions are reflected as fee and commission expenses from trust accounts in the Company's consolidated statements of comprehensive income.

3.27 Accounting of leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases. Amounts due from lessees under finance leases are recognized as receivables at the amount of Company's net investment in the leases. Finance lease income is allocated to accounting period so as to reflect a constant periodic rate of return on the Company's net investment outstanding in respect of the leases.

3.28 Merchant banking account

As permitted by the Restructuring of Financial Institutions Act, the Bank may continue its merchant banking operations, including leasing business, until the existing contracts acquired from the Korea International Merchant Bank upon merger are terminated.

Significant accounting policies applied to the Bank's merchant banking operations are summarized as follows:

3.28.1 Revenue recognition on discounted notes

Interest income on discounted notes is accrued over the term of the notes. Income from the sale of discounted notes is recognized at the date of transaction based on the difference between the purchase prices and sales prices of the notes, adjusted for interest earned during the holding period.

3.28.2 Cash Management Accounts (CMA)

The Company recognizes interest income from CMA investments and interest expenses from CMA deposits as operating income and operating expenses, respectively.

3.29 Interest income and interest expense

Interest income and interest expenses are recognized over time using the effective interest method.

The effective interest method is a method of calculating the amortized cost of a financial asset or a financial liability and of allocating the interest income or interest expenses over the relevant period. The effective interest

3. Basis of preparation and significant accounting policies (cont'd)

3.29 Interest income and interest expense (cont'd)

rate is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument or, when appropriate, a shorter period to the net carrying amount of the financial asset or financial liability. When calculating the effective interest rate, the Company estimates cash flows considering all contractual terms of the financial instrument but does not consider future credit losses. Cash flows at the time of the calculation include all the fees and points paid to or received from parties to the contract that are an integral part of the effective interest rate, including transaction costs, and all other premiums or discounts.

If income recognition on an accrual basis is deemed inappropriate due to low possibility of realizing interest income, the interest income is recognized when interest is actually received. In case of individually impaired loans, recoverable amount as time passes are recognized as interest income.

3.30 Fees and commission income

The Company earns fee and commission income from a diverse range of services it provides to its customers. Fee income related to financial services is treated differently depending on the objective imposed by the related financial item. Fee income can be divided into the following categories:

- Fees and commission income are recognized using EIR in case they are main components of EIR of financial asset.
- Fees earned for the provision of services over a period of time are accrued over that period. Fees arising from negotiating or participating in the negotiation of a transaction for a third party are recognized upon completion of the underlying transaction.

3.31 Dividend income

Dividend income is recognized when the Company's right to receive the payment is established.

3.32 Transaction under common control

The Company conducted accounting treatment of transactions under common control based on book value. Therefore, the Company recognized (eliminated) asset, liability and capital as at merger and spinoff date as book value and didn't recognize transaction gain (loss).

4. Significant judgments and accounting estimates

In the application of the Company's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily observable from objective sources. The estimation and assumption are based on other factors that are related to historical experience. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods if the revision affects both current and future periods.

In the process of applying the Company's accounting policies, management has made the following judgments that have a significant effect on the amounts recognized in the consolidated financial statements:

4.1 Fair value of financial instruments

The fair value of financial instruments is determined by referencing quoted market prices in active markets in the first place. For financial instruments not traded in an active market, the fair value is determined using appropriate valuation techniques including (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models.

4. Significant judgments and accounting estimates (cont'd)

4.2 Impairment loss on equity securities classified as available-for-sale financial assets

The Company assesses its equity securities classified as available-for-sale assets at the end of each reporting period whether there is any indication that an asset may be impaired in accordance to KIFRS 1039 "Financial Instruments: Recognition and Measurement." The Company also records impairment charges on available-for-sale equity investments when there has been a significant or prolonged decline in the fair value below their cost. The determination of what is 'significant' or 'prolonged' requires judgment. In making this judgment, the Company evaluates the prospect and soundness of the investees' business, including duration and extent to which the fair value of an investment is less than its cost, sales performance, changes in techniques and cash flows of sales and investment.

When the fair value below the cost of available-for-sale equity instruments is significant (more than 30%) or prolonged (longer than 6 months), the Company recognizes additional impairment by replacing the evaluated amount of accumulated fair value of available-for-sale equity instruments previously recognized as equity with current gain or loss.

4.3 Impairment loss on loans

For a measurement of impairment loss of loans, the Company assesses individually and collectively whether loans are impaired. Recoverable amount for the allowance for individual impairment loss is measured by estimating future cash flows for which the Company considers its customers' business outlook and secured assets for loans. Probability of default, loss emergence period and loss given default for the allowance for collective impairment loss are measured based on the impairment loss experience in the past periods.

4.4 Provision for severance and retirement benefits

The cost of providing benefits under the defined benefit plans is determined using the actuarial valuation. Actuarial assumptions were made for the discount rate, and an increase in the future pay rate. Severance and retirement benefits include significant uncertainties in the estimates due to the long-term duration.

4.5 Impairment of non-financial assets

The Company assesses, at each reporting date, whether there is an indication that an asset may be impaired. Intangible asset with indefinite useful life is tested for impairment annually or tested whenever there is an indication that the intangible asset may be impaired. Other non-financial assets are tested for impairment whenever there is indication that the book value cannot be recovered. For the calculation of value in use, management estimates expected future cash flow incurred from the asset or cash generating unit (CGU). For the calculation of present value of the expected future cash flow, appropriate discount rate is selected.

4.6 Income taxes

Different taxation laws that the Company's foreign subsidiaries are exposed to require judgment in determining the amount of tax expenses that can be recognized. In addition, there has been various transactions and tax accounting methods which have made computing the final tax expenses for the period uncertain. The contingent liability from any future tax assessments is based on the estimates of the likelihood of additional taxes imposed and has been included in the Company's consolidated financial statements for the current period. When the finalized tax expenses assessments are different from the appropriated amounts, the differences, if any, are recognized in current deferred tax assets, liabilities, and expenses for the period.

5. Fair value measurement of financial assets and liabilities

The standards the Company applies when measuring fair values of financial assets and liabilities are described below:

A. Quoted market prices as at the settlement date in an active market are the best evidence of fair value and should be used when available.

5. Fair value measurement of financial assets and liabilities (cont'd)

B. If a market for a financial instrument is not active, the Company establishes fair value by using a valuation technique that makes maximum use of market inputs and includes (i) recent arm's length market transactions, (ii) reference to the current fair value of another instrument that is substantially the same, (iii) discounted cash flow analysis, and (iv) option pricing models. An acceptable valuation technique incorporates all factors that market participants would consider in setting a price and is consistent with accepted economic methodologies for pricing financial instruments.

C. When determining fair value using the valuation techniques, comparison with the current market transaction of another instrument that is substantially the same as the financial instrument needed to be objectively substantiated or inclusion of variables in the marketable data must be performed. Not all of the significant market variables are observable and in relevant cases, the reasonable estimates or assumptions are required to determine the fair value.

D. For an investment in equity instruments which quoted market price is not available in an active market or derivative linked to such instruments which fair values are not measured reliably, fair values are measured at cost.

5.1 Fair value hierarchy of financial instruments

Fair value hierarchy of financial instruments as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016 (*2)			
Classification	Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets at FVTPL				
Equity securities	₩ 45,728	₩ —	₩ —	₩ 45,728
Debt securities	1,151,715	1,128,164	—	2,279,879
Derivative assets held-for-trading	3	6,336,523	3,416	6,339,942
	1,197,446	7,464,687	3,416	8,665,549
Available-for-sale financial assets				
Equity securities (*1)	557,744	1,524,222	913,568	2,995,534
Debt securities	17,566,216	16,854,028	7,850	34,428,094
	18,123,960	18,378,250	921,418	37,423,628
Derivative assets used for hedging	—	24,661	1,164	25,825
	₩19,321,406	₩25,867,598	₩925,998	₩46,115,002
Financial liabilities				
Financial liabilities at FVTPL				
Derivative liabilities Held-for-trading	₩ 10	₩ 6,035,675	₩ 865	₩ 6,036,550
Financial liabilities designated at FVTPL	—	378,595	—	378,595
	10	6,414,270	865	6,415,145
Derivative liabilities used for hedging	—	98,974	—	98,974
	₩ 10	₩ 6,513,244	₩ 865	₩ 6,514,119

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Classification	December 31, 2015 (*2)			
	Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Financial assets at FVTPL				
Equity securities	₩ 32,569	₩ —	₩ —	₩ 32,569
Debt securities	126,045	474,016	—	600,061
Derivative assets held-for-trading	—	1,671,810	854	1,672,664
	158,614	2,145,826	854	2,305,294
Available-for-sale financial assets				
Equity securities (*1)	432,305	—	232,724	665,029
Debt securities	5,155,350	6,761,433	22,679	11,939,462
	5,587,655	6,761,433	263,426	12,612,514
Derivative assets used for hedging purposes	—	36,745	—	36,745
	₩5,746,269	₩8,944,004	₩264,280	₩14,954,553
Financial liabilities				
Financial liabilities at FVTPL				
Derivative liabilities held-for-trading	₩ 15	₩4,641,919	₩ 956	₩ 4,642,890
Financial liabilities designated at FVTPL	—	610,676	30,626	641,302
	15	5,252,595	31,582	5,284,192
Derivative liabilities used for hedging	—	40,109	—	40,109
	₩ 15	₩5,292,704	₩ 31,582	₩ 5,324,301

(*1) Included in available-for-sale financial assets, the equity securities amounting to ₩55,153 million and ₩34,457 million were valued at cost as at December 31, 2016 and 2015, respectively, since they don't have quoted market prices disclosed in active market and their fair values could not be reasonably estimated and they are included in Level 3 in the fair value hierarchy.
(*2) The Company recognizes transfers between levels at the beginning of each quarter when events or changes in circumstances causing the transfers between levels have occurred.

The Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation techniques:

- Level 1: Quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: Other techniques in which all significant inputs and significant value drivers are observable in active markets
- Level 3: Techniques, such as pricing models, discounted cash flow methodologies, or similar techniques based on significant unobservable inputs, as well as management judgments or estimates that are significant to valuation

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are measured at fair value as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Fair value December 31, 2016	Fair value December 31, 2015	Description of the valuation technique	Inputs used in the fair value measurement
Financial assets				
Financial assets at FVTPL				
Debt securities	₩ 1,128,164	₩ 972,174	DCF model	Discount rate
Derivative assets held-for-trading	6,336,523	4,698,851	Black-Scholes model, Black model and DCF model	Exchange rate, swap point, interest rate for each currency, implied volatility of exchange rate, stock (index) price, interest rate, dividend, implied volatility of stock (index) price
	7,464,687	5,671,025		
Available-for-sale financial assets				
Equity securities	1,524,222	2,812,390	Net asset value model	Underlying asset prices such as bond, stock, etc.
Debt securities	16,854,028	20,738,163	DCF model	Discount rate
	18,378,250	23,550,553		
Derivative assets used for hedging	24,661	61,119	Hull-White 1 factor model Black model	Exchange rate, swap point, interest rate for each currency
	₩25,867,598	₩29,282,697		
Financial liabilities				
Financial liabilities at FVTPL				
Derivative liabilities held-for-trading	6,035,675	4,641,919	Black-Scholes model Black model and DCF model	Exchange rate, swap point, interest rate for each currency, implied volatility of exchange rate, stock (index) price, interest rate, dividend, implied volatility of stock (index) price
Financial liabilities designated at FVTPL	378,595	610,676	Hull-white short-rate model	KRW interest swap yield curve, KRW swaption volatility
	6,414,270	5,252,595		
Derivative liabilities used for hedging	98,974	40,109	Hull-White 1 factor model Black model	Exchange rate, swap point, interest rate for each currency
	₩ 6,513,244	₩ 5,292,704		

5. Fair value measurement of financial assets and liabilities (cont'd)

5.1 Fair value hierarchy of financial instruments (cont'd)

Details of fair value, valuation technique, input to valuation, and significant unobservable inputs used to develop those measurements classified into level 3 assets and liabilities that are measured at fair value as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Fair value December 31, 2016	Fair value December 31, 2015	Description of the valuation technique	Inputs used in the fair value measurement	Significant unobservable inputs used in the fair value measurement	Range	The effect of changes in unobservable Inputs on fair value
Financial assets							
Financial asset sat FVTPL							
Derivative assets held-for-trading	₩ 3,416	₩ 2,821	Black model	Interest rate, implied volatility of interest rate, interest rate correlation	Correlation of underlying assets	0.94~0.95	Negative
Available-for-sale financial assets							
Equity securities	913,568	550,937	DCF model, comparison with similar business, net asset value model, utilization of past transaction, risk-adjusted discount rate model	Growth rate, discount rate	Growth rate	0.0~1.0	Positive
					Discount rate	8.28~18.50	Negative
Debt securities	7,850	7,662	DCF model	Discount rate, etc.	Discount rate, etc.	142.00	Negative
	921,418	558,599					
Derivative assets used for hedging	1,164	4,320	Hull-White 1 factor model	Interest rate, implied volatility of interest rate, correlation of interest rate, correlation between interest rate and exchange rate	Correlation of interest rate, correlation between interest rate and exchange rate	0.94~0.95	Positive
	₩925,998	₩565,740					
Financial liabilities							
Financial liabilities at FVTPL							
Derivative liabilities held-for-trading	865	956	Black model	Interest rate, implied volatility of interest rate, correlation of interest rate	Correlation of interest rate	0.94~0.95	Negative
Financial liabilities designated at FVTPL	—	30,626	Hull-White 1 factor model	Correlation between interest rates of KRW/USD interest rate swap	Correlation between interest rates of KRW/USD interest rate swap	0.44	Positive
				Correlation between interest rate of USD interest rate swap and KRW/USD exchange rate	Correlation between interest rate of USD interest rate swap and KRW/USD exchange rate	0.16	Negative
	₩ 865	₩ 31,582					

5. Fair value measurement of financial assets and liabilities (cont'd)

5.2 Changes in the fair value of financial instruments categorised as Level 3

Changes in the fair value of financial instruments categorized as Level 3 of the fair value hierarchy of financial instruments that are measured at fair value in the statement of financial position for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016				
	Available-for-sale financial assets		Financial liabilities at FVTPL	Net derivative instruments	
Classification	Equity securities	Debt securities		Held-for-trading	Used for hedging
January 1, 2016	₩550,937	₩7,662	₩(30,626)	₩1,865	₩ 4,320
From others to Level 3	4,947	—	—	—	—
From Level 3 to others	(26,345)	—	—	—	—
Total profit or loss					
Profit or loss	16,174	—	626	(257)	(3,156)
Other comprehensive income	(8,975)	(12)	—	—	—
Buy / issue	366,277	200	—	943	—
Sell / settlement	(92,221)	—	30,000	—	—
Reclassification from investments in associates to Level 3 financial assets and liabilities	102,774	—	—	—	—
December 31, 2016	₩913,568	₩7,850	₩ —	₩2,551	₩ 1,164

	2015				
	Available-for-sale financial assets		Financial liabilities at FVTPL	Net derivative instruments	
Classification	Equity securities	Debt securities		Held for trading	Used for hedging
January 1, 2015	₩240,747	₩ 22,679	₩ —	₩ (462)	₩ —
Business combination under common control	381,013	7,512	(50,482)	—	2,765
From others to Level 3	4,273	—	—	—	—
From Level 3 to Others	(42,701)	—	—	—	—
Total profit or loss					
Profit or loss	(2,358)	310	(447)	(428)	2,156
Other comprehensive income	(2,491)	(568)	—	—	—
Buy / issue	23,585	—	—	586	—
Sell / settlement	(51,132)	(22,270)	20,303	2,169	(601)
Reclassification from investments in associates to Level 3 financial assets and liabilities	1	(1)	—	—	—
December 31, 2015	₩550,937	₩ 7,662	₩(30,626)	₩1,865	₩4,320

5. Fair value measurement of financial assets and liabilities (cont'd)

5.3 Current gains or losses recognized from changes in level 3 financial instruments measured at fair value.

Current gains or losses recognized from changes in level 3 financial instruments measured at fair value for the years ended December 31, 2016 and 2015 are recorded in the statement of comprehensive income as follows (Korean won in millions):

Classification	2016 Profit or loss recognized during the reporting period	2016 Profit or loss recognized related to financial instruments held at the end of the reporting period	2015 Profit or loss recognized during the reporting period	2015 Profit or loss recognized related to financial instruments held at the end of the reporting period
Gain (loss) on financial instruments at FVTPL	₩ 369	₩ (257)	₩ (875)	₩ 1,727
Gain (loss) related to derivative instruments used for hedging	(3,156)	(1,399)	2,156	2,156
Other gain (loss) on financial instruments	24,374	22,700	1,536	—
Impairment loss on financial assets	(8,200)	(8,200)	(3,584)	(3,584)
	₩13,387	₩12,844	₩ (767)	₩ 299

5.4 Transfers between fair value hierarchy

The amount of transfers into or out of level 3 of the fair value hierarchy for the years ended December 31, 2016 and 2015 is as follows (Korean won in millions):

Classification	2016	2015
Transfers out of level 3 into level 1	₩26,345	₩42,701
Transfers out of level 1 into level 3	4,947	4,273

5.5 Sensitivity analysis

Sensitivity of the fair value measurement for the each level 3 financial instrument upon the changes in significant unobservable input, whose results are favorable and unfavorable changes in profit or loss or other comprehensive income as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016 Favorable changes	2016 Unfavorable changes
Financial assets		
Derivative assets held-for-trading (*1)	203	(192)
Available-for-sale financial assets		
Equity securities (*2)	13,580	(7,316)
Debt securities	200	(12)
Derivative assets used for hedging (*1)	77	(208)
	₩14,060	₩(7,728)
Financial liabilities		
Derivative liabilities held-for-trading	27	(31)
	₩ 27	₩ (31)

5. Fair value measurement of financial assets and liabilities (cont'd)

5.5 Sensitivity analysis (cont'd)

	2015	
Classification	Favorable changes	Unfavorable changes
Financial assets		
Derivative assets held-for-trading (*1)	119	(113)
Available-for-sale financial assets Equity securities (*2)	35,339	(19,603)
Derivative assets used for hedging (*1)	1,066	(1,026)
	₩36,524	₩(20,742)
Financial liabilities		
Derivative liabilities held-for-trading	105	(107)
Financial liabilities designated at FVTPL	23	(24)
	₩ 128	₩ (131)

(*1) 1) Correlation between rates of interest rate swap of KRW, 2) Correlation between interest rates of treasury, 3) Correlation between interest rate swap and interest rate of treasury, 4) Correlation between KRW-USD interest rate swap, 5) Favorable and unfavorable changes are calculated by taking 10% fluctuation of correlation between KRW/USD exchange rate and rate of USD interest rate swap.

(*2) Changes in fair value of equity securities are calculated by changing growth rate (0.0~1.0%) and discount rate, which are main unobservable inputs. Favorable changes and unfavorable changes in fair value of beneficiary securities are calculated by changing discount rate of lease cash flow (-1.0~1.0%) and growth rate of selling price of real estate (-1.0~1.0%), under limited circumstances when it is consisted of real estate. However it is impossible to calculate sensitivity of beneficiary securities based on changes in inputs.

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed

Fair value hierarchy of financial instruments measured at amortized cost as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016			
Classification	Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Cash and due from banks	₩2,129,539	₩25,422,031	₩ —	₩ 27,551,570
Held-to-maturity financial assets	382,155	3,888,039	—	4,270,194
Loans	—	—	208,525,871	208,525,871
Other financial assets	—	—	11,206,921	11,206,921
Merchant banking account assets	—	—	2,596,959	2,596,959
	₩2,511,694	₩29,310,070	₩222,329,751	₩254,151,515
Financial liabilities				
Deposits (*)	₩ —	₩31,139,418	₩190,375,607	₩221,515,025
Borrowings (*)	—	3,131,458	12,179,639	15,311,097
Debentures	—	19,348,493	—	19,348,493
Other financial liabilities	—	—	23,338,503	23,338,503
Merchant banking account liabilities	—	—	2,406,269	2,406,269
	₩ —	₩53,619,369	₩228,300,018	₩281,919,387

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Classification	December 31, 2015 Quoted market price (Level 1)	Observable input (Level 2)	Unobservable input (Level 3)	Total
Financial assets				
Cash and due from banks	₩2,246,853	₩ 14,778,760	₩ —	₩ 17,025,613
Held-to-maturity financial assets	1,518,946	3,844,362	—	5,363,308
Loans	—	—	210,174,090	210,174,090
Other financial assets	—	—	11,650,647	11,650,647
Merchant banking account assets	—	—	2,565,347	2,565,347
	₩3,765,799	₩ 18,623,122	₩224,390,084	₩246,779,005
Financial liabilities				
Deposits (*)	₩ —	₩128,121,537	₩ 76,981,226	₩205,102,763
Borrowings (*)	—	8,105,623	9,032,486	17,138,109
Debentures	—	18,789,087	—	18,789,087
Other financial liabilities	—	—	21,933,531	21,933,531
Merchant banking account liabilities	—	—	2,332,608	2,332,608
	₩ —	₩155,016,247	₩110,279,851	₩265,296,098

(*) The level of fair value for fixed-term deposits and others were reclassified as there were changes in calculation for fair value upon the system integration during the current year.

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 2 assets and liabilities that are not measured at fair value as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016 Fair value	Valuation technique	Inputs
Financial assets			
Cash and due from banks	₩25,422,031	DCF model	Discount rate
Held-to-maturity financial assets	3,888,039	DCF model	Discount rate
	29,310,070		
Financial liabilities			
Deposits	31,139,418	DCF model	Discount rate
Borrowings	3,131,458	DCF model	Discount rate
Debentures	19,348,493	DCF model	Discount rate
	₩53,619,369		

Classification	December 31, 2015 Fair value	Valuation technique	Inputs
Financial assets			
Cash and due from banks	₩ 14,778,760	DCF model	Discount rate
Held-to-maturity financial assets	3,844,362	DCF model	Discount rate
	18,623,122		
Financial liabilities			
Deposits	128,121,537	DCF model	Discount rate
Borrowings	8,105,623	DCF model	Discount rate
Debentures	18,789,087	DCF model	Discount rate
	₩155,016,247		

5. Fair value measurement of financial assets and liabilities (cont'd)

5.6 Financial instruments not measured at fair value in the statement of financial position but for which the fair value is disclosed (cont'd)

Details of fair value, valuation technique, and inputs used to develop those measurements classified into level 3 assets and liabilities disclosed but not measured at fair value as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016		
Classification	Fair value	Valuation technique	Inputs
Financial assets			
Loans	₩208,525,871	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets	11,206,921	(*)	
Merchant banking account assets	2,596,959	(*)	
	₩222,329,751		
Financial liabilities			
Deposits	₩190,375,607	DCF model	Other spread, rate of advanced redemption
Borrowings	12,179,639	DCF model	Other spread
Other financial liabilities	23,338,503	(*)	
Merchant banking account liabilities	2,406,269	(*)	
	₩228,300,018		

	December 31, 2015		
Classification	Fair value	Valuation technique	Inputs
Financial assets			
Loans	₩210,174,090	DCF model	Credit and other spread, rate of advanced redemption, etc.
Other financial assets	11,650,647	(*)	
Merchant banking account assets	2,565,347	DCF model	Discount rate
	₩224,390,084		
Financial liabilities			
Deposits	₩ 76,981,226	DCF model	Other spread, rate of advanced redemption
Borrowings	9,032,486	DCF model	Other spread
Other financial liabilities	21,933,531	(*)	
Merchant banking account liabilities	2,332,608	(*)	
	₩110,279,851		

(*) Other financial assets and liabilities are temporary accounts derived from various transactions. The book value of these assets and liabilities are regarded as their fair value without applying DCF method because their maturities are not fixed or short.

5. Fair value measurement of financial assets and liabilities (cont'd)

5.7 Gain and loss on deferred Day 1

Changes in gain (loss) on deferred Day 1 for years ended December 31, 2016 and 2015 are summarized as follows (Korean won in millions)

Classification	December 31, 2016	December 31, 2015
January 1	₩(750)	₩ —
Business combination under common control	—	(1,003)
Amounts recognized as current profit or loss	750	253
December 31	—	(750)

5.8 Transferred financial assets and related liabilities not eliminated as a whole as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016		2015	
Classification	Book value	Fair value	Book value	Fair value
Transferred assets				
Available-for-sale financial assets (*)	₩1,501,563	₩1,501,563	₩793,474	₩793,474
Held-to-maturity financial assets	42,574	47,686	70	71
Related liabilities				
Bonds sold under repurchase agreements	676,663	677,257	510,342	510,342

(*) Available-for-sale securities lent, of which related liabilities are not appropriated, amounting to ₩786,135 million and ₩190,653 million as at December 31, 2016 and 2015, respectively, are included.

6. Fair value of financial instruments

Fair values of financial instruments as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016		December 31, 2015	
Classification	Book value	Fair value	Book value	Fair value
Financial assets				
Cash and due from banks	₩ 27,551,570	₩ 27,551,570	₩ 17,025,613	₩ 17,025,613
Financial assets at FVTPL	8,665,549	8,665,549	6,936,965	6,936,965
Available-for-sale financial assets	37,423,628	37,423,628	35,014,060	35,014,060
Held-to-maturity financial assets	4,129,630	4,270,194	5,184,672	5,363,308
Loans	215,100,733	208,525,871	209,456,833	210,174,090
Derivative assets used for hedging	25,825	25,825	65,439	65,439
Other financial assets	11,207,541	11,206,921	11,646,687	11,650,647
Merchant banking account assets	2,596,959	2,596,959	2,565,619	2,565,347
	₩306,701,435	₩300,266,517	₩287,895,888	₩288,795,469
Financial liabilities				
Financial liabilities at FVTPL	₩ 6,415,145	₩ 6,415,145	₩ 5,284,192	₩ 5,284,192
Deposits	220,613,406	221,515,025	204,742,719	205,102,763
Borrowings	15,310,635	15,311,097	17,133,370	17,138,109
Debentures	19,310,873	19,348,493	18,484,475	18,789,087
Derivative liabilities used for hedging	98,974	98,974	40,109	40,109
Other financial liabilities	23,338,504	23,338,503	21,934,155	21,933,531
Merchant banking account liabilities	2,406,269	2,406,269	2,332,608	2,332,608
	₩287,493,806	₩288,433,506	₩269,951,628	₩270,620,399

6. Fair value of financial instruments (cont'd)

The following standards are applied in measuring the fair value of financial instruments.

A. Loans and receivable: Expected cash flows, current market interest rates and discount rates including borrowers' credit risks are factors to calculate the fair value of loans and receivables. For lines of credit and loans that have a short term maturity (less than three months), it is assumed that the carrying amounts approximate to their fair value.

B. Financial investment assets: The fair value of financial assets held-to-maturity are as stated by the market, broker, or by credible sources. If none of the information from these entities is usable, published market price of financial instruments with similar credit rating, maturity, and ROI is used to estimate the fair value.

C. Depository liabilities: For deposits without an explicit maturity period including deposits with no interests, deposits that have a short term maturity (less than three months), and deposits with a floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing deposits is based on discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

D. Borrowings: For borrowings that have a short term maturity (less than three months) and borrowings with floating rate readjustment period of less than three months, it is assumed that the carrying amounts approximate to their fair value. The estimated fair value of fixed interest bearing borrowings is based on and discounted cash flows using prevailing money-market interest rates for debts with similar credit risk and maturity.

E. Debentures: For quoted debt issued, the fair values are determined based on quoted market prices. For those notes issued where quoted market prices are not available, a discounted cash flow model is used based on a current interest rate yield curve appropriate for the remaining term to maturity and credit spreads.

7. Categories of financial assets and financial liabilities

7.1 The Company categorizes its financial assets as at December 31, 2016 and 2015 as follows (Korean won in millions):

	December 31, 2016					
	Financial instruments at FVTPL	Available-for-sale financial assets	Held-to-maturity investments	Loans	Derivatives for hedging	Total
Cash and due from banks	₩ —	₩ —	₩ —	₩ 27,551,570	₩ —	₩ 27,551,570
Financial assets at FVTPL	8,665,549	—	—	—	—	8,665,549
Available-for-sale financial assets	—	37,423,628	—	—	—	37,423,628
Held-to-maturity investments	—	—	4,129,630	—	—	4,129,630
Loans	—	—	—	215,100,733	—	215,100,733
Derivative assets used for hedging	—	—	—	—	25,825	25,825
Others	—	—	—	11,207,541	—	11,207,541
Merchant banking account assets	—	—	—	2,596,959	—	2,596,959
	₩8,665,549	₩37,423,628	₩4,129,630	₩256,456,803	₩25,825	₩306,701,435

7. Categories of financial assets and financial liabilities (cont'd)

	December 31, 2015					
	Financial instruments at FVTPL	Available-for-sale financial assets	Held-to-maturity investments	Loans	Derivatives for hedging	Total
Cash and due from banks	₩ —	₩ —	₩ —	₩ 17,025,613	₩ —	₩ 17,025,613
Financial assets at FVTPL	6,936,965	—	—	—	—	6,936,965
Available-for-sale financial assets	—	35,014,060	—	—	—	35,014,060
Held-to-maturity investments	—	—	5,184,672	—	—	5,184,672
Loans	—	—	—	209,456,833	—	209,456,833
Derivative assets used for hedging	—	—	—	—	65,439	65,439
Others	—	—	—	11,646,687	—	11,646,687
Merchant banking account assets	—	—	—	2,565,619	—	2,565,619
	₩6,936,965	₩35,014,060	₩5,184,672	₩240,694,752	₩65,439	₩287,895,888

7.2 The Company categorizes its financial liabilities as at December 31, 2016 and 2015 as follows (Korean won in millions):

	December 31, 2016				
	Financial liability at FVTPL				
Classification	Held-for-trading	Designated at FVTPL	Amortized cost or financial liabilities	Derivatives for hedging	Total
Financial liabilities at FVTPL	₩6,036,550	₩378,595	₩ —	₩ —	₩ 6,415,145
Deposits	—	—	220,613,406	—	220,613,406
Borrowings	—	—	15,310,635	—	15,310,635
Debentures	—	—	19,310,873	—	19,310,873
Derivative liabilities used for hedging	—	—	—	98,974	98,974
Others	—	—	23,338,504	—	23,338,504
Merchant banking account liabilities	—	—	2,406,269	—	2,406,269
	₩6,036,550	₩378,595	₩280,979,687	₩98,974	₩287,493,806

	December 31, 2015				
	Financial liability at FVTPL				
Classification	Held-for-trading	Designated at FVTPL	Amortized cost or financial liabilities	Derivatives for hedging	Total
Financial liabilities at FVTPL	₩4,642,890	₩641,302	₩ —	₩ —	₩ 5,284,192
Deposits	—	—	204,742,719	—	204,742,719
Borrowings	—	—	17,133,370	—	17,133,370
Debentures	—	—	18,484,475	—	18,484,475
Derivative liabilities used for hedging	—	—	—	40,109	40,109
Others	—	—	21,934,155	—	21,934,155
Merchant banking account liabilities	—	—	2,332,608	—	2,332,608
	₩4,642,890	₩641,302	₩264,627,327	₩40,109	₩269,951,628

8. Offsetting of financial assets and liabilities

8.1 Financial assets offset, the executable master netting arrangements and financial assets subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions):

	December 31, 2016					
				Related amounts not offset in the statement of financial position (*)		
Classification	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Financial instruments	Cash collateral received	Net amount
Derivatives	₩ 6,201,300	₩ —	₩ 6,201,300	₩ (3,945,066)	₩(63,957)	₩2,192,277
Securities lent	786,135	—	786,135	(786,135)	—	—
Bonds purchased under resale agreement	2,958,941	—	2,958,941	(2,958,941)	—	—
Unsettled spot exchanges	8,221,207	—	8,221,207	(8,216,813)	—	4,394
Domestic exchange settlement debit	22,438,496	21,464,016	974,480	—	—	974,480
Other accounts receivable	4,902	4,660	242	—	—	242
	₩40,610,981	₩21,468,676	₩19,142,305	₩(15,906,955)	₩(63,957)	₩3,171,393

	December 31, 2015					
				Related amounts not offset in the statement of financial position (*)		
Classification	Gross amounts of recognized financial assets	Gross amounts of recognized financial liabilities set off in the statement of financial position	Net amounts of financial assets presented in the statement of financial position	Financial instruments	Cash collateral received	Net amount
Derivatives	₩ 4,585,167	₩ —	₩ 4,585,167	₩ (3,124,367)	₩(7,549)	₩1,453,251
Securities lent	190,653	—	190,653	(190,653)	—	—
Bonds purchased under resale agreement	1,250,700	—	1,250,700	(1,250,700)	—	—
Unsettled spot exchanges	8,766,115	—	8,766,115	(8,763,567)	—	2,548
Domestic exchange settlement debit	24,762,460	23,874,112	888,348	—	—	888,348
Other accounts receivable	6,390	6,390	—	—	—	—
	₩39,561,485	₩23,880,502	₩15,680,983	₩(13,329,287)	₩(7,549)	₩2,344,147

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

8. Offsetting of financial assets and liabilities (cont'd)

8.2 Financial liabilities offset, the executable master netting arrangements and financial liabilities subject to a similar agreement at the end of the reporting period are as follows (Korean won in millions):

	December 31, 2016					
				Amounts related are not offset in the statement of financial position (*)		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Financial instruments	Cash collateral received	Net amount
Derivatives	₩ 5,725,604	₩ —	₩ 5,725,604	₩ (4,173,434)	₩(838,365)	₩ 713,805
Bonds sold under repurchase agreements	676,663	—	676,663	(676,663)	—	—
Unsettled spot exchanges	8,222,136	—	8,222,136	(8,216,813)	—	5,323
Domestic exchange settlement credit	26,584,073	21,464,016	5,120,057	—	—	5,120,057
Other accounts payable	4,660	4,660	—	—	—	—
	₩41,213,136	₩21,468,676	₩19,744,460	₩(13,066,910)	₩(838,365)	₩5,839,185

	December 31, 2015					
				Amounts related are not offset in the statement of financial position (*)		
Classification	Gross amounts of recognized financial liabilities	Gross amounts of recognized financial assets set off in the statement of financial position	Net amounts of financial liabilities presented in the statement of financial position	Financial instruments	Cash collateral received	Net amount
Derivatives	₩ 4,422,762	₩ —	₩ 4,422,762	₩ (4,130,133)	₩(191,725)	₩ 100,904
Bonds sold under repurchase agreements	510,342	—	510,342	(510,342)	—	—
Unsettled spot exchanges	8,767,909	—	8,767,909	(8,764,136)	—	3,773
Domestic exchange settlement credit	27,413,470	23,874,112	3,539,358	—	—	3,539,358
Other accounts payable	6,428	6,390	38	—	—	38
	₩41,120,911	₩23,880,502	₩17,240,409	₩(13,404,611)	₩(191,725)	₩3,644,073

(*) The rights to offset exist only in case of default, insolvency or bankruptcy. Accordingly, the amounts are not offset in the statement of financial position as they do not meet the criteria for offsetting.

9. Risk management

The Company is exposed to credit risk, liquidity risk, market risk and various operating risks. The objectives of risk management are to pursue economic benefits by managing the associated risk in the changing financial environment and to utilize capital efficiently.

The basic principles of risk management are as follows:

- Minimize the rapid fluctuation in profit by balancing the risks and the income.
- Maximize long-term shareholder value.
- Comply with procedures to ensure operating activities are confined to allowable risk limits.

9. Risk management (cont'd)

- Examine the type and size of risk in accordance with the changes in potential economic value of portfolios for the efficient use and distribution of assets and to establish risk management strategy.

The basic policies in order to realize the basic principles of risk management are as follows:

- Set and comply with allowable limits for each risk type.
- Establish an appropriate balance between income and associated risk.
- When a conflict between income and associated risk exists, the Company pursues income while complying with the allowable risk limits.
- Prioritize the distribution of risk in order to avoid risk concentration in certain areas.
- Analyse the effect of various market fluctuations on parts or the entire portfolio on a regular basis.
- Separate risk management segments, operational segments, and other segments which deal with trade confirmations and payments in order to maintain independence.

9.1. Strategy and procedure of risk management

The Company has built an organization-wide risk management system attributable to the new BIS standards in order to manage risks with advanced methodologies in the rapidly changing financial environment. The Company has used the Foundation Internal Ratings-Based Credit Risk Approach since November 2008 (revised in June 2016), Operational Risk Advanced Internal Ratings-Based Approach since November 2008 (revised in June 2016), and the Market Risk Internal Model since April 2008 (revised in August 2016 [retrospectively applied from June 2016]) upon the Financial Supervisory Board's approval.

The Company manages risk assets which is appropriate for the developed system and puts emphasis on the management of potential risk arising from changes in the business environment and risk management capacity strength of all personnel. For proactive and pre-emptive risk management, the Company applies Hana Financial Company's FLS ('Forward Looking Statements') based upon the outlook on economic and financial markets and experience on financial losses to risk management policies.

9.2. Organization and structure of risk management

The Risk Management Committee is responsible for setting the allowable limits for each risk type, and the Risk Management Operation Committee is responsible for the compliance to the limit and monitoring risk levels on a monthly basis. The Company has also established the Comprehensive Risk Management Committee, Credit Risk Management Committee, and Credit Rating Team composed of the risk office and each of these groups' reports to the middle office on a daily basis.

The Risk Management Committee is the top decision-making body within the Board of Directors for risk management. The committee examines credit risk, market risk, and various operating risks, in respect of the risk limits and other controls more than once half-year.

The Risk Management Operation Committee is the secondary decision-making body that manages the actual conditions of risk on a monthly basis. The Risk Management Committee has the overall responsibility of implementation of risk strategy.

The Risk Management Office consists of the Comprehensive Risk Management Department which manages the market risk, interest rate and liquidity risks, operational risk, and internal capital; the Credit Risk Management Department which manages the credit risk and the Credit Rating Team that deals with the corporate credit ratings and industry analysis. The Risk Management Office deals with monitoring of risks, measuring of risks and assets exposed to risks, and forecasting the changes of risks. It also mainly assists the complementary system which enables the middle office of each group to function as a member of the Risk Management Organization. The Risk Management Office is responsible for reporting the contents of middle office's works including the conditions related to the risks and management status to the Risk Management Committee, the Risk Management Operation Committee, as well as the management.

9. Risk management (cont'd)

9.3. Credit risk

Credit risk is a risk incurred when the Company faces a loss because its customers or counterparties fail to discharge their contractual obligations. Credit risk arises from on-balance and off-balance accounts including loans, derivatives, securities, financial guarantees, and acceptances and guarantees.

To determine the possibility of bankruptcy for its customers or counterparties, the Company uses various methods comprehensively. Risks pertaining to the retail sector compared to those pertaining to the corporate sector are relatively easy to predict but cyclical and seasonal factors may influence the outcomes. The frequency of impairment loss in the overall retail sector is relatively high but in terms of individual cases, the loss rate is lower than in the corporate sector. Based on these differences, the Company manages each segment differently in terms of credit rating, pricing and subsequent management.

As for the business customers, the branch managers and credit rating team carries out the credit risk assessment by using a detailed valuation model depending on the size and the nature of the industry. The corporate financial valuation model is further subdivided based on the characteristics of the loans and is a combination of statistical and expert valuation models. Also, the Loan Review team of the Credit Risk Management regularly performs the subsequent reviews in order to establish adequacy of the credit grading. As for the retail sector, a Credit Scoring System is used to compute the credit scores of the borrower. The system includes an Application Scoring Model which is used for the application of loans and a Behavioral Scoring Model which has been used after handling of the loans.

Expected loss is calculated using the expected default rate based upon the historical default rate and the estimated loss rate gives a rise to the default rate from a collection of historical information. A measured expected loss is reflected on the client's interest rate and allowances when applying or renewing a loan.

Unexpected loss takes into account the allowance for potential volatility in the actual loss. Unexpected loss is calculated using the inner Credit Metrics model with 99.9% of the confidence level and the measured figure is used as a credit risk reference value and is used as part of the unexpected loss when calculating interest rates.

Both retail and corporate sectors are developing and operating a credit risk management system appropriately designed for each sector. The Credit Risk Management Committee and Credit Rating Team measure and manage credit risks for the corporate sector; Credit Risk Management Committee and Personal Loans Committee measure and manage credit risks for the retail sector. The Company manages as well as controls the credit risk by setting the limits on the amount of risk willing to accept for individual counterparties and for geographical and industry concentration, and by monitoring exposures relating to such limits. The Company reviews on a monthly basis in accordance with the economic conditions and industry characteristics and examines the adequacy of the limits on a semi-annual basis. The Company continuously manages credit rating models for retail and corporate sectors and examines the adequacy of LGD (loss given default) and EAD (exposure at default), and any related information.

The Company annually performs a comprehensive analysis on economic conditions and changes in the economic environment in order to appropriately assess the credit quality of financial assets by setting credit limits on same entities, industries, countries, and financial instruments. In addition, for the unexpected loss management, the Company regularly sets, distributes and checks for the compliance maintenance of internal capital limits according to the corporate and household sectors and the size of clients through the risk management system.

The Company measures and manages the risk indicators such as delinquency rate, roll-rate, and vintage rate of each operating segment. Also, in order to assess the credit quality of the assets, the Company operates an early warning system and regularly examines companies whose credit rating is likely to degrade.

In order to separately evaluate the characteristics of clients in the corporate sector, the Company operates a detailed valuation model based on the external and non-external audit and is in the process of continuing the stability of the corporate credit rating system through the subsequent examinations and performance improvements. The Company operates a detailed valuation model based on the credit rating model and the activity rating model for the household sector in accordance with the client's characteristics. The Company

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

improves the efficiency of the model through the subsequent examinations and performance improvements. Credit rating on new clients as well as an automatic renewal and adjustments to the credit limits are managed by the household and SOHO credit extension system.

For a large amount of credit line, after the approval of credit extension, the Company regularly examines the borrower's credit status and the adequacy of the borrower's credit rating as in part of the subsequent management process. In addition, the Company significantly focuses on industries by increasing credit risks based on the analysis of the risk indicators and examines the sample for smaller credit extensions.

The Company obtains the collateral for the granted loans in order to reduce risks. The amount and type of the collateral required depends on an assessment of the credit risk of the counterparty. Guidelines are implemented regarding the acceptability of types of collateral and valuation parameters. The main types of the collateral obtained are as follows:

- For retail lending, mortgages over residential properties
- For commercial lending, charges over real estate properties, inventory and trade receivables
- For securities lending and reverse repurchase transactions, cash, or securities

The Company trades the debt securities above the Investment-Grade Status level in order to manage the credit risks and manage the exposure of credit ratings to maintain credit quality of the assets.

The credit risk arising from the derivative financial instruments is, at any time, limited to those with the positive fair values, as recorded on the statement of financial position. The Company manages the exposure as a part of the unused commitment of loans.

The maximum exposure to credit risk as at December 31, 2016 and 2015 are as follows. The following table shows the maximum exposure to credit risk for the components of the statement of financial position, including derivatives, by geography of counterparty and by industry before the effect of mitigation through the use of master netting and collateral agreements. Equity securities in financial assets at FVTPL and financial assets available-for-sale are excluded (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
On-balance-sheet items		
Due from banks	₩ 25,422,031	₩ 14,778,760
Financial assets at FVTPL		
Debt securities	2,279,879	2,212,066
Derivative assets held for trading	6,339,942	4,701,672
Available-for-sale financial assets	34,428,094	31,192,340
Held-to-maturity financial assets	4,129,630	5,184,672
Derivative assets used for hedging	25,825	65,439
Loans		
Household loans	96,314,639	88,778,987
Corporate loans		
Large-sized businesses	33,682,345	43,159,866
Small and medium-sized businesses	73,206,954	66,287,527
Public sector and others	11,896,795	11,230,453
	215,100,733	209,456,833
Others	11,207,541	11,646,687
Merchant banking account assets	2,596,959	2,565,619
	₩301,530,634	₩281,804,088
Off-balance-sheet items		
Financial guarantees	₩ 874,714	₩ 2,202,946
Guarantee contracts	17,647,612	19,652,636
Commitment	73,472,800	92,435,174
	₩ 91,995,126	₩114,290,756

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

Details of collateral management and credit risk mitigation as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016				
	Impaired loan		Not impaired loan		
Classification	Individual assessment	Collective assessment	Past due	Non past due	Total
Guarantees	₩211,244	₩ 58,707	₩ 98,170	₩ 27,156,045	₩ 27,524,166
Deposits	38,709	5,226	15,097	2,476,438	2,535,470
Movable assets	38,353	4,184	27,066	4,322,562	4,392,165
Real estate	499,729	172,143	328,880	103,777,682	104,778,434
Securities	295	651	53	3,097,641	3,098,640
Others	41,175	1,132	182	5,507,467	5,549,956
	₩829,505	₩242,043	₩469,448	₩146,337,835	₩147,878,831

	December 31, 2015				
	Impaired loan		Not impaired loan		
Classification	Individual assessment	Collective assessment	Past due	Non past due	Total
Guarantees	₩ 110,949	₩ 84,764	₩ 53,865	₩ 20,317,254	₩ 20,566,832
Deposits	40,978	13,452	16,038	2,580,553	2,651,021
Movable assets	22,342	669	16,775	2,315,398	2,355,184
Real estate	585,918	291,433	197,899	85,440,758	86,516,008
Securities	286,253	1,695	1,252	1,885,657	2,174,857
Others	594	2,010	—	274,034	276,638
	₩1,047,034	₩394,023	₩285,829	₩112,813,654	₩114,540,540

Details of delinquency rates on loans as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Neither past due nor impaired	₩95,672,202	₩33,343,971	₩72,609,032	₩11,899,277	₩213,524,482
Past due but not impaired	375,315	21,093	171,144	280	567,832
Impaired	179,926	1,021,906	1,013,108	10	2,214,950
	96,227,443	34,386,970	73,793,284	11,899,567	216,307,264
Plus (less)					
Deferred loan fees, net of expenses	213,903	(8,273)	48,918	1,865	256,413
Allowance for possible loan losses	(126,707)	(696,352)	(635,248)	(4,637)	(1,462,944)
	87,196	(704,625)	(586,330)	(2,772)	(1,206,531)
	₩96,314,639	₩33,682,345	₩73,206,954	₩11,896,795	₩215,100,733

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

	December 31, 2015				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Neither past due nor impaired	₩88,125,870	₩42,595,226	₩65,634,544	₩11,199,859	₩207,555,499
Past due but not impaired	214,936	22,200	141,010	8,795	386,941
Impaired	378,936	1,399,387	1,297,351	69,670	3,145,344
	88,719,742	44,016,813	67,072,905	11,278,324	211,087,784
Plus (less)					
Deferred loan fees, net of expenses	218,959	(16,979)	41,073	824	243,877
Allowance for possible loan losses	(159,714)	(839,968)	(826,451)	(48,695)	(1,874,828)
	59,245	(856,947)	(785,378)	(47,871)	(1,630,951)
	₩88,778,987	₩43,159,866	₩66,287,527	₩11,230,453	₩209,456,833

Delinquency in interest occurs when the counterparty is unable to make a principal and interest payment as at the due date. A financial item is deemed impaired if, and only if, there is objective evidence of impairment as a result of one or more events which have occurred after the initial recognition of the item (an incurred 'loss event') and that loss event (or events) has an impact on the estimated future cash flows, such as changes in arrears or economic conditions which correlate with defaults, delinquency in interest for more than 90 days, credit deterioration resulting in misleading information, damages incurred due to poor exposure and significant financial difficulty of the issuer or obligor.

Details on loans that are neither impaired nor overdue as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Grade 1	₩92,075,340	₩25,215,630	₩33,681,213	₩ 8,826,488	₩159,798,671
Grade 2	3,133,507	7,128,712	35,304,093	2,738,784	48,305,096
Grade 3	177,849	999,629	943,822	300,714	2,422,014
Others	285,506	—	2,679,904	33,291	2,998,701
	₩95,672,202	₩33,343,971	₩72,609,032	₩11,899,277	₩213,524,482

	December 31, 2015				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Grade 1	₩63,772,298	₩24,250,117	₩ 8,875,691	₩ 4,439,159	₩101,337,265
Grade 2	23,441,723	16,953,148	51,236,734	4,735,272	96,366,877
Grade 3	545,411	1,358,031	3,452,844	2,020,866	7,377,152
Others	366,438	33,930	2,069,275	4,562	2,474,205
	₩88,125,870	₩42,595,226	₩65,634,544	₩11,199,859	₩207,555,499

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

The Company classifies the grade of loan in accordance with the credit rating chart below, based on the credit worthiness of borrowers.

Classification	Household loans	Corporate loans	SOHO
Grade 1	Less or equal to 1.55% of PD	A1 ~ A7	Less or equal to 1.28% of PD
Grade 2	From 1.55% to 16.52% of PD	B1 ~ B6	From 1.28% to 14.30% of PD
Grade 3	From 16.52% to 100% of PD	C1 ~ C3	From 14.30% to 78.44% of PD

The Company regards loans overdue for less than 90 days as unimpaired in case there is no credit information indicating its loss event. Analysis of overdue time period of loans overdue but unimpaired by type as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Less than 30 days	₩314,538	₩ 9,921	₩ 6,882	₩—	₩331,341
30 to 59 days	41,839	—	137,163	—	179,002
60 to 89 days	18,833	11,172	26,715	280	57,000
Others	105	—	384	—	489
	₩375,315	₩21,093	₩171,144	₩280	₩567,832

	December 31, 2015				
		Corporate loans			
Classification	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Less than 30 days	₩ 8,047	₩10,565	₩ 23,228	₩8,519	₩ 50,359
30 to 59 days	184,050	11,635	78,533	249	274,467
60 to 89 days	22,586	—	37,609	27	60,222
Others	253	—	1,640	—	1,893
	₩214,936	₩22,200	₩141,010	₩8,795	₩386,941

Types of impaired loans as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016				
		Corporate loans			
	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Individual impairment					
Book value	₩ 9,106	₩ 983,852	₩ 751,719	₩—	₩1,744,677
Deferred loan fees, net of expenses	—	—	(364)	—	(364)
Allowance for possible loan losses	(2,598)	(486,362)	(235,430)	—	(724,390)
	₩ 6,508	₩ 497,490	515,925	—	₩1,019,923
Collective impairment					
Book value	₩170,820	₩ 38,054	₩ 261,389	₩ 10	₩ 470,273
Deferred loan fees, net of expenses	(2,170)	—	(6,804)	2	(8,972)
Allowance for possible loan losses	(44,552)	(5,713)	(83,019)	(8)	(133,292)
	124,098	32,341	171,566	4	328,009
	₩130,606	₩ 529,831	₩ 687,491	₩ 4	₩1,347,932

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

Classification	December 31, 2015				
		Corporate loans			
	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Individual impairment					
Book value	₩ 1,330	₩1,365,766	₩1,004,897	₩ 64,063	₩ 2,436,056
Deferred loan fees, net of expenses	—	(39)	33	29	23
Allowance for possible loan losses	(656)	(683,059)	(403,180)	(19,517)	(1,106,412)
	674	682,668	601,750	44,575	1,329,667
Collective impairment					
Book value	377,606	33,621	292,454	5,607	709,288
Deferred loan fees, net of expenses	561	—	69	—	630
Allowance for possible loan losses	(70,446)	(4,558)	(86,571)	(2,455)	(164,030)
	307,721	29,063	205,952	3,152	545,888
	₩308,395	₩ 711,731	₩ 807,702	₩ 47,727	₩ 1,875,555

Interest income on impaired loans for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016				
		Corporate loans			
	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Individual impairment	₩ 636	₩16,029	₩14,375	₩6,257	₩37,297
Collective impairment	6,630	684	5,819	1,818	14,951
	₩7,266	₩16,713	₩20,194	₩8,075	₩52,248

	2015				
		Corporate loans			
	Household loans	Large-sized businesses	Small and medium-sized businesses	Public institution and others	Total
Individual impairment	₩ 86	₩19,546	₩11,277	₩715	₩31,624
Collective impairment	5,177	1,921	4,264	231	11,593
	₩5,263	₩21,467	₩15,541	₩946	₩43,217

Overdue payments on debt securities as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016			
	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Neither past due nor impaired	₩2,279,879	₩34,420,444	₩4,129,630	₩40,829,953
Impaired	—	7,650	—	7,650
	₩2,279,879	₩34,428,094	₩4,129,630	₩40,837,603

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

	December 31, 2015			
Classification	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Neither past due nor impaired	₩2,212,066	₩31,184,678	₩5,184,672	₩38,581,416
Impaired	—	7,662	—	7,662
	₩2,212,066	₩31,192,340	₩5,184,672	₩38,589,078

Internal credit ratings of debt securities as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016			
Classification	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Grade 1	₩2,279,879	₩34,271,078	₩4,039,367	₩40,590,324
Grade 2	—	149,366	90,263	239,629
Others	—	7,650	—	7,650
	₩2,279,879	₩34,428,094	₩4,129,630	₩40,837,603

	December 31, 2015			
Classification	Financial assets at FVTPL	Available-for-sale financial assets	Held-to-maturity financial assets	Total
Grade 1	₩1,630,612	₩31,112,071	₩5,134,308	₩37,876,991
Grade 2	581,454	72,607	50,364	704,425
Others	—	7,662	—	7,662
	₩2,212,066	₩31,192,340	₩5,184,672	₩38,589,078

The credit rating classification of debt securities of the Company based on internal rating used by the Bank and credit rating by external rating agencies is as follows

			Overseas rating agencies		
Classification	Internal credit rating	Domestic rating agencies	Moody's	S&P	Fitch
Grade 1	A1+ ~ A3	AAA ~ A–	Aaa ~ Baa2	AAA ~ BBB	AAA ~ BBB
Grade 2	B1+ ~ B3	BBB+ ~ BB	Baa3 ~ B3	BBB– ~ B–	BBB– ~ B–
Grade 3	C1 ~ C3	BB– ~ B–	Caa1 ~ Caa3	CCC+ ~ CCC–	CCC+ ~ CCC–

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

Credit risk concentration in each major industry as at December 31, 2016 and 2015 are as follows (Korean won in millions):

		December 31, 2016			
				Total	
Classification	Industry	Korean won	Foreign currency	Amount	Ratio (%)
On balance sheet items					
Due from banks	Financial services	₩ 16,184,880	₩ 9,237,151	₩ 25,422,031	100.0
Financial assets at FVTPL	Financial services	847,581	—	847,581	37.2
	Manufacturing	171,575	—	171,575	7.5
	Public administration	1,240,595	—	1,240,595	54.4
	Wholesale & retail	20,128	—	20,128	0.9
		2,279,879	—	2,279,879	100.0
Available-for-sale financial assets	Financial services	13,404,823	4,783,740	18,188,563	52.8
	Manufacturing	109,368	36,937	146,305	0.4
	Public administration	14,170,700	717,594	14,888,294	43.2
	Construction	78,482	24,667	103,149	0.3
	Others	257,695	844,088	1,101,783	3.3
		28,021,068	6,407,026	34,428,094	100.0
Held-to-maturity financial assets	Financial services	1,832,374	598,714	2,431,088	58.9
	Public administration	866,401	275,701	1,142,102	27.7
	Construction	223,833	—	223,833	5.4
	Others	380,947	(48,340)	332,607	8.0
		3,303,555	826,075	4,129,630	100.0
Loans	Household loans	₩ 95,111,602	1,115,841	₩ 96,227,443	44.7
	Corporate loans				
	Financial services	3,786,861	7,534,995	11,321,856	5.3
	Manufacturing	22,759,281	13,564,826	36,324,107	16.9
	Construction	2,673,596	570,008	3,243,604	1.5
	Wholesale & retail	11,086,124	3,392,796	14,478,920	6.7
	Real estate rental	23,014,230	1,876,763	24,890,993	11.6
	Others	23,501,757	6,318,584	29,820,341	13.9
	Deferred loan fees and expenses	269,908	(13,495)	256,413	0.1
	Allowance for possible loan losses	(1,120,377)	(342,567)	(1,462,944)	(0.7)
		181,082,982	34,017,751	215,100,733	100.0
		₩230,872,364	₩50,488,003	₩281,360,367	
Off balance sheet items					
Financial guarantees	Manufacturing	271,598	77,371	348,969	39.9
	Construction	12,661	—	12,661	1.4
	Wholesale & retail	149,232	51,178	200,410	22.9
	Real estate rental	60,068	554	60,622	6.9
	Others	164,024	88,028	252,052	28.9
		657,583	217,131	874,714	100.0

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

Classification	Industry	December 31, 2016 Korean won	Foreign currency	Total Amount	Ratio (%)
Guarantee contracts	Manufacturing	571,348	7,318,611	7,889,959	44.7
	Construction	89,820	2,960,230	3,050,050	17.3
	Wholesale & retail	571,542	2,031,060	2,602,602	14.7
	Financial services	184,506	777,703	962,209	5.5
	Real estate rental	84,089	116,022	200,111	1.1
	Others	375,310	2,567,371	2,942,681	16.7
		1,876,615	15,770,997	17,647,612	100.0
Commitment	Manufacturing	14,450,729	15,746,447	30,197,176	41.1
	Construction	2,364,916	1,154,920	3,519,836	4.8
	Wholesale & retail	3,777,037	3,732,203	7,509,240	10.2
	Financial services	8,285,038	550,665	8,835,703	12.0
	Real estate rental	1,334,365	7,239	1,341,604	1.8
	Others	18,202,865	3,866,376	22,069,241	30.1
		48,414,950	25,057,850	73,472,800	100.0
		₩ 50,949,148	₩41,045,978	₩ 91,995,126	

Classification	Industry	December 31, 2015 Korean won	Foreign currency	Total Amount	Ratio (%)
On balance sheet items					
Due from banks	Financial services	₩ 6,597,451	₩7,767,595	₩14,365,046	97.2
	Public administration	—	1,542	1,542	0.0
	Others	36,604	375,568	412,172	2.8
		6,634,055	8,144,705	14,778,760	100.0
Financial assets at FVTPL	Financial services	851,892	—	851,892	38.5
	Manufacturing	130,323	—	130,323	5.9
	Public administration	1,219,824	—	1,219,824	55.1
	Others	10,027	—	10,027	0.5
		2,212,066	—	2,212,066	100.0
Available-for-sale financial assets	Financial services	11,473,593	3,308,492	14,782,085	47.4
	Manufacturing	70,896	7,181	78,077	0.3
	Public administration	13,831,796	759,159	14,590,955	46.8
	Construction	245,239	—	245,239	0.8
	Wholesale & retail	30,064	—	30,064	0.1
	Others	1,148,912	317,008	1,465,920	4.6
		26,800,500	4,391,840	31,192,340	100.0
Held-to-maturity financial assets	Financial services	2,884,210	131,406	3,015,616	58.2
	Manufacturing	49,968	—	49,968	1.0
	Public administration	1,314,791	107,524	1,422,315	27.4
	Construction	225,518	—	225,518	4.3
	Others	471,255	—	471,255	9.1
		4,945,742	238,930	5,184,672	100.0

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

		December 31, 2015			
				Total	
Classification	Industry	Korean won	Foreign currency	Amount	Ratio (%)
Loans	Household loans	₩ 87,723,385	996,357	₩ 88,719,742	42.4
	Corporate loans				
	Financial services	5,938,239	8,694,548	14,632,787	7.0
	Manufacturing	26,159,126	14,123,096	40,282,222	19.2
	Public administration	477,033	276,992	754,025	0.4
	Construction	3,122,282	549,402	3,671,684	1.8
	Wholesale & retail	11,141,097	3,973,280	15,114,377	7.2
	Real estate rental	19,878,820	1,376,447	21,255,267	10.1
	Others	20,632,041	6,025,639	26,657,680	12.7
	Deferred loan fees and expenses	253,040	(9,163)	243,877	0.1
	Allowance for possible loan losses	(1,471,029)	(403,799)	(1,874,828)	(0.9)
		173,854,034	35,602,799	209,456,833	100.0
		₩214,446,397	₩48,378,274	₩262,824,671	
Off balance sheet items					
Financial guarantees	Manufacturing	330,873	859,179	1,190,052	54.0
	Construction	18,954	68,152	87,106	4.0
	Wholesale & retail	139,344	276,077	415,421	18.9
	Real estate rental	60,005	16,982	76,987	3.5
	Others	214,251	219,129	433,380	19.6
		763,427	1,439,519	2,202,946	100.0
Guarantee contracts	Manufacturing	734,027	7,551,016	8,285,043	42.2
	Construction	95,891	3,495,000	3,590,891	18.3
	Wholesale & retail	574,424	1,941,834	2,516,258	12.8
	Financial services	7,568	1,043,946	1,051,514	5.4
	Real estate rental	38,523	36,842	75,365	0.4
	Others	708,166	3,425,399	4,133,565	20.9
		2,158,599	17,494,037	19,652,636	100.0
Commitment	Manufacturing	24,484,344	15,418,754	39,903,098	43.2
	Construction	2,335,904	1,444,879	3,780,783	4.1
	Wholesale & retail	6,132,017	5,104,907	11,236,924	12.2
	Financial services	6,736,089	205,202	6,941,291	7.5
	Real estate rental	2,004,970	13,153	2,018,123	2.2
	Others	25,796,589	2,758,366	28,554,955	30.8
		67,489,913	24,945,261	92,435,174	100.0
		₩ 70,411,939	₩43,878,817	₩114,290,756	

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

Credit risk concentration in each major country as at December 31, 2016 and 2015 are as follows (Korean won in millions, ratio in %):

		December 31, 2016			
				Total	
Classification	Country	Korean won	Foreign currency	Amount	Ratio (%)
On balance sheet items					
Due from banks	Korea	₩ 16,184,880	₩ 1,801,353	₩ 17,986,233	70.8
	China	—	2,511,884	2,511,884	9.9
	U.S	—	504,292	504,292	2.0
	Japan	—	1,236,798	1,236,798	4.9
	Hong Kong	—	6,265	6,265	—
	Others	—	3,176,559	3,176,559	12.4
		16,184,880	9,237,151	25,422,031	100.0
Financial assets at FVTPL	Korea	2,279,879	—	2,279,879	100.0
Available-for-sale financial assets	Korea	28,021,068	3,626,805	31,647,873	91.9
	China	—	722,156	722,156	2.1
	U.S	—	560,544	560,544	1.6
	Japan	—	119,481	119,481	0.3
	Hong Kong		6,140	6,140	—
	Singapore		154,151	154,151	0.4
	Others	—	1,217,749	1,217,749	3.7
		28,021,068	6,407,026	34,428,094	100.0
Held-to-maturity financial assets	Korea	3,303,555	22,081	3,325,636	80.5
	China	—	547,936	547,936	13.3
	U.S	—	30,302	30,302	0.7
	Others	—	225,756	225,756	5.5
		3,303,555	826,075	4,129,630	100.0
Loans	Korea	148,467,858	15,640,551	164,108,409	76.3
	China	100,000	4,362,306	4,462,306	2.1
	U.S	516	1,756,655	1,757,171	0.8
	Japan	—	747,125	747,125	0.3
	Hong Kong	—	2,366,624	2,366,624	1.1
	Others	33,365,077	9,500,552	42,865,629	19.9
		181,933,451	34,373,813	216,307,264	100.5
	Deferred loan fees and expenses	269,908	(13,495)	256,413	0.2
	Allowance for possible loan losses	(1,120,377)	(342,567)	(1,462,944)	(0.7)
		181,082,982	34,017,751	215,100,733	100.0
		₩230,872,364	₩50,488,003	₩281,360,367	
Off balance sheet items					
Financial guarantees	Korea	₩ 657,583	₩ 217,131	₩ 874,714	100.0
Guarantee contracts	Korea	1,872,744	12,761,741	14,634,485	82.9
	China	—	1,593,756	1,593,756	9.0
	U.S	350	60,476	60,826	0.3
	Japan	—	49,320	49,320	0.3
	Others	3,521	1,305,704	1,309,225	7.5
		1,876,615	15,770,997	17,647,612	100.0
Commitment	Korea	48,409,778	22,045,060	70,454,838	95.9
	China	196	1,220,363	1,220,559	1.7
	U.S	2,585	153,220	155,805	0.2
	Japan	20	81,988	82,008	0.1
	Others	2,371	1,557,219	1,559,590	2.1
		48,414,950	25,057,850	73,472,800	100.0
		₩ 50,949,148	₩41,045,978	₩ 91,995,126	

9. Risk management (cont'd)

9.3. Credit risk (cont'd)

Classification	Country	December 31, 2015 Korean won	Foreign currency	Total Amount	Total Ratio (%)
On balance sheet items					
Due from banks	Korea	₩ 6,634,055	₩ 1,533,175	₩ 8,167,230	55.8
	China	—	1,229,461	1,229,461	8.4
	U.S	—	2,950,895	2,950,895	20.2
	Japan	—	226,862	226,862	1.5
	Hong Kong	—	45,310	45,310	0.3
	Others	—	2,159,002	2,159,002	13.8
		6,634,055	8,144,705	14,778,760	100.0
Financial assets at FVTPL	Korea	2,212,066	—	2,212,066	100.0
Available-for-sale financial assets	Korea	26,800,500	2,800,203	29,600,703	94.9
	China	—	202,423	202,423	0.6
	U.S	—	244,267	244,267	0.8
	Japan	—	128,648	128,648	0.4
	Hong Kong	—	274,203	274,203	0.9
	Singapore	—	69,197	69,197	0.2
	Others	—	672,899	672,899	2.2
		26,800,500	4,391,840	31,192,340	100.0
Held-to-maturity financial assets	Korea	4,945,742	—	4,945,742	95.4
	China	—	55,068	55,068	1.1
	Hong Kong	—	21,827	21,827	0.4
	Brazil	—	14,630	14,630	0.3
	Others	—	147,405	147,405	2.8
		4,945,742	238,930	5,184,672	100.0
Loans	Korea	174,693,827	19,240,986	193,934,813	92.6
	China	18,429	4,908,454	4,926,883	2.4
	U.S	120,864	1,718,797	1,839,661	0.9
	Japan	17,391	341,145	358,536	0.2
	Hong Kong	4,845	1,423,971	1,428,816	0.7
	Others	216,667	8,382,408	8,599,075	4.1
		175,072,023	36,015,761	211,087,784	100.9
	Deferred loan fees and expenses	253,040	(9,163)	243,877	0.0
	Allowance for possible loan losses	(1,471,029)	(403,799)	(1,874,828)	(0.9)
		173,854,034	35,602,799	209,456,833	100.0
		₩214,446,397	₩48,378,274	₩262,824,671	
Off balance sheet items					
Financial guarantees	Korea	₩ 751,494	₩ 1,439,519	₩ 2,191,013	99.5
	Others	11,933	—	11,933	0.5
		763,427	1,439,519	2,202,946	100.0
Guarantee contracts	Korea	2,141,591	15,325,295	17,466,886	88.9
	China	—	1,304,144	1,304,144	6.6
	U.S	—	171,307	171,307	0.9
	Japan	—	56,625	56,625	0.3
	Others	17,008	636,666	653,674	3.3
		2,158,599	17,494,037	19,652,636	100.0
Commitment	Korea	67,487,385	22,741,549	90,228,934	97.6
	China	234	135,609	135,843	0.1
	U.S	1,838	207,170	209,008	0.2
	Japan	—	70,994	70,994	0.1
	Others	456	1,789,939	1,790,395	2.0
		67,489,913	24,945,261	92,435,174	100.0
		₩ 70,411,939	₩43,878,817	₩114,290,756	

9. Risk management (cont'd)

9.4 Liquidity risk

Liquidity risk is defined as the risk that the Company will encounter difficulty in meeting obligations associated with financial liabilities that are settled by delivering cash or another financial asset. Liquidity risk arises because of the possibility that the Company might be unable to meet its payment obligations when they fall due under both normal and stress circumstances.

The Company maintains a limit management indicator to measure the liquidity coverage ratio, loan to deposit ratio in Korean won, liquidity ratio in foreign currency, foreign currency maturity mismatch ratio, and long-term access to financing ratio in foreign currency in accordance with the guidelines and standards of the Financial Supervisory Service. In addition, the Company maintains a monitoring indicator to measure unbalance of funding, etc. to manage the liquidity risk, and manages early warning indicators in order to identify worsening trends in early stage to respond in a timely manner. At an early stage, the Company identifies factors affecting liquidity in order to manage liquidity risks and has achieved an adequate level of liquidity via performing a systematic management

The Company has the following basic principles for liquidity risk management:

- Set and comply an acceptable limit and early warning indicators for liquidity risks
- Regularly execute an analysis of stress tests and prepare an emergency procurement plan in case of illiquidity
- Focus on maintaining a diversified portfolio in order to avoid excessive concentrations of risks
- Evaluate and manage the effect of a large amount of money which is loaned out, invested, or procured on liquidity risks

In order to manage the liquidity risks, the Company is building the internal control systems for each department. In order to comply with Liquidity ratios and the maturity mismatch ratio set by the Financial Supervisory Service, the Comprehensive Risk Management monitors the ratios based on the calculated univariate liquidity ratio and maturity mismatch ratios. Liquidity risk status is reported to the Risk Management Operation Committee on a monthly basis and to the Risk Management Committee on a quarterly basis.

In order to maintain the liquidity risk management indicators to stay within the acceptable limits, the Treasury Department and the International Finance Department recommends the necessary measures in relation to the procurement and operation of the assets and liabilities traded in the capital market.

In addition, the emergency planning in stages has been established in order to respond to liquidity emergencies. Financial planning department has established a portfolio management strategy based on the internal and external liquidity risk management requirements, procurement, and an outlook on the operating markets.

The details of the remaining contractual maturities of financial liabilities are analyzed by the earliest maturity date when the Bank would be required to pay, based on the undiscounted cash outflows of the Bank's financial liabilities. In addition, financial liabilities at FVTPL and depository liabilities (payment on demand) are shown at fair value in the immediate payment column. All derivatives used for hedging purposes are interest rate swaps, and those are shown in net cash flows as all interest rate swaps are paid by the net amount.

9. Risk management (cont'd)

9.4 Liquidity risk (cont'd)

The remaining contractual maturities of financial liabilities as at December 31, 2016 and 2015 are summarized as follows (Korean won in millions):

Classification	December 31, 2016 On demand	Less than 1 month	1–3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities at FVTPL	₩ 6,036,550	₩ —	₩ —	₩ —	₩ —	₩ 542,625	₩ 6,579,175
Deposits	98,925,695	14,833,140	21,857,096	74,354,696	9,680,984	2,124,782	221,776,393
Borrowings	2,967,583	4,720,071	1,818,395	2,494,241	3,043,420	371,538	15,415,248
Debentures	52,657	200,000	650,233	5,958,596	8,681,695	4,693,871	20,237,052
Derivative liabilities used for hedging purposes	—	(1,017)	(974)	1,325	15,482	(79,248)	(64,432)
Other liabilities	5,313,074	16,321,882	3,599	63,740	8,231	—	21,710,526
Merchant banking account liabilities	750,812	1,654,674	—	—	—	—	2,405,486
	114,046,371	37,728,750	24,328,349	82,872,598	21,429,812	7,653,568	288,059,448
Off-balance sheet items							
Finance guarantee	874,714	—	—	—	—	—	874,714
Loan commitment	73,472,800	—	—	—	—	—	73,472,800
	74,347,514	—	—	—	—	—	74,347,514
	₩188,393,885	₩37,728,750	₩24,328,349	₩82,872,598	₩21,429,812	₩7,653,568	₩362,406,962

Classification	December 31, 2015 On demand	Less than 1 month	1–3 months	3 months – 1 year	1 year – 5 years	More than 5 years	Total
On-balance sheet items							
Financial liabilities at FVTPL	₩ 4,642,890	₩ —	₩ —	₩ —	₩ —	₩ 651,477	₩ 5,294,367
Deposits	89,225,660	15,836,761	27,644,154	63,533,627	8,936,704	1,933,679	207,110,585
Borrowings	2,218,510	4,545,294	2,395,663	4,489,140	3,481,125	558,353	17,688,085
Debentures	3,514	602,584	1,170,572	4,804,245	7,824,968	5,506,496	19,912,379
Derivative liabilities used for hedging purposes	—	(654)	(10,036)	(11,709)	(32,452)	(71,904)	(126,755)
Other liabilities	2,902,613	17,981,616	5,139	65,137	6,582	—	20,961,087
Merchant banking account liabilities	2,032,608	300,000	—	—	—	—	2,332,608
	101,025,795	39,265,601	31,205,492	72,880,440	20,216,927	8,578,101	273,172,356
Off-balance sheet items							
Finance guarantee	2,202,946	—	—	—	—	—	2,202,946
Loan commitment	92,435,174	—	—	—	—	—	92,435,174
	94,638,120	—	—	—	—	—	94,638,120
	₩195,663,195	₩39,265,601	₩31,205,492	₩72,880,440	₩20,216,927	₩8,578,101	₩367,810,476

9. Risk management (cont'd)

9.4 Liquidity risk (cont'd)

Assets available for use in carrying out unused loan commitments after redeeming all financial liabilities are cash and bank deposits, debt securities, equity securities, and loans. In addition, the Company is able to cope with unexpected cash flows through the sale of securities and the additional sources of funding, similar to the asset backed securitization.

9.5 Market risk

Market risk is risk incurred in assets and liabilities subject to management based on the changes in market prices such as interest rate, stocks and foreign exchange, etc.

The purpose of market risk management is to manage the loss of assets and liabilities incurred due to changes in market variables such as interest rates, foreign exchanges and equity prices to remain within the allowable limits in order to ensure the profitability and stability.

Market risk management targets include marketable securities, foreign currency net positions, derivatives and other assets and liabilities with embedded market risks. The Company classifies exposures to market risk into either trading or non-trading positions and manages each of those portfolios separately.

The targets of the market risk managements are marketable securities, foreign currency net position, derivatives and other assets and liabilities with embedded market risks. Assets and liabilities held are managed by separating trading position and non-trading position.

The trading position includes interest rate positions, equity price positions, commodity, positions, and all foreign exchange positions:

- Financial instruments for the purpose of acquiring the differences incurred due to short-term trading or price fluctuations.
- Financial instruments for the purpose of hedging risks
- Financial instruments for the purpose of acquiring arbitrages
- Derivatives which are not applied to fair value hedge accounting under K-IFRS
- All foreign exchange and gold positions in accordance with Regulations on Supervision of Banking Business Appendix 3-2

The Risk Management Committee divides capital, annual loss, exposure and VaR limit in relation to market risks of the trading position by business unit (division) annually. Within the given limit, the Risk Management Operation Committee further subdivides the limits by business units (divisions) and desks. The Risk Management Group provides information necessary for deliberation and review by the Committee, reports trading limits, and measures risks. The Middle Office performs the mark-to-market measures, monitors trade violations and compliance with the limits. The Middle Office has established regulations and policies of trading and comply with them. It measures market risks in relation to trading position and daily inspects for compliance of limits by risks. Moreover, it daily monitors changes in exposure subject to management, verifies for compliance of limits, performs expost facto verification and analyzes urgent situations and reports to the management

The Company regularly measures the degree of market risks and complies with the allowable limits set for the various areas of the trading position. In addition, the Company reviews the adequacy of the risk-reward ratio by evaluating risks and related profits and losses on a regular basis and complies with the established trading policy regulations. The Company separately examines and analyses the change in exposures with checking its compliance of the limits and emergency situations, and reports to the management on a daily basis.

Value at Risk (VaR) is a method that manages and measures the degree of market risks of the trading position subject to exposure. The Company calculates the VaR by applying Historical Simulation Method for 10 days in the 99% confidence level. Furthermore, the stress test is performed to measure the size of the loss in order to account for the method's limited use in extreme cases.

9. Risk management (cont'd)

9.5 Market risk (cont'd)

Back-testing is performed daily on trading units to verify the predictive power of the value-at risk calculations. When back-testing is performed, the Company compares the daily profits and losses with VaR of the previous day and reports the result of subsequent examinations separately to the director of the Risk Management Group. The Company analyses the result of subsequent examination and reports to the Financial Supervisory Service and management.

Details of market risk 10 Day VaR (including 10 Day Stressed VaR) by risk type as at December 31, 2016 and 2015 are summarized as follows (Korean won in millions):

	December 31, 2016	Average (*2)	Min (*2)	Max (*2)	December 31, 2015 (*3)
Interest rates risk	₩30,900	₩ 28,098	₩17,247	₩ 45,895	₩ 29,134
Foreign exchange rates risk	89,684	122,484	82,359	150,703	139,831
Stock price risk	15,727	19,516	6,676	30,248	7,949
Option risk	3,340	2,774	1,240	6,728	2,153
Total risk (*1)	₩98,678	₩124,297	₩83,607	₩160,393	₩139,868

(*1) The calculation of the total risk VaR takes into consideration the correlation and diversification effects between each risk factor and therefore, it is not the same as the total VaRs.
(*2) It is the amount for 10 day VaR (including 10 day stresses VaR) from January 1, 2016 to December 31, 2016. Before the system integration on June 4, 2016, it was the simple sum of VaR for (former) KEB and (former) Hana Bank. After the system integration, it is KEB Hana Bank's VaR.
(*3) VaR for December 31, 2015 was the simple total of VaR for (former) KEB and (former) Hana Bank.

Interest rate risk of non-trading position is a risk of losses in financial assets and liabilities with interest rates due to adverse changes in interest rates and is incurred when maturity structure does not match interest rate setting cycle of the related assets and liabilities. The Company manages the interest rate risks of non-trading position in order to maintain the stability of net interest income and net asset value based on changes in interest rates. The following is subject to the Company's management of interest rate risk.

- Financial assets with interest rates such as bank deposits, debt securities, and loans
- Financial liabilities with interest rates such as depository liabilities, borrowings, and debentures
- Interest-related financial derivatives such as interest rate swaps

Interest rate risk is calculated using the interest rate gaps. The interest rate risks measure the interest rate gap ratio as a primary indicator, and the interest rate EaR, VaR and duration are used as secondary indicators. The Risk Committee establishes the interest risk limits on an annual basis; the Risk Committee as well as the Risk Management Committee measures the interest rate risk indicators on a monthly basis and reports the compliance with the limits to management.

The interest rate VaR is an estimated maximum loss of net asset due to the adverse changes of the interest rate. Details of the interest rate VaR as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016	Average	Min	Max	December 31, 2015
Interest rate VaR	₩1,347,473	₩1,111,282	₩738,378	₩1,472,612	₩764,861

The interest rate VaR is calculated by using the maturity bucket reprising gap, the interest maturity bucket on modified duration, and the expected gap due to the interest rate fluctuation in accordance with BIS standards. Assets below the substandard and amounts in checking accounts are excluded from the calculated amount.

9. Risk management (cont'd)

9.5 Market risk (cont'd)

Equity price risk is a risk incurred when the fair value of equities results in changes in the level of related revenue and capital. Effects on capital due to the fluctuation in equity price risk as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016			
Classification	20% decline	10% decline	10% rise	20% rise
Equity price risk	₩(125,765)	₩(62,883)	₩62,883	₩125,765

The Company measures the equity price risk on domestic marketable available-for-sale equity securities only.

Currency risk is a risk incurred when the value of a financial instrument or future cash flows fluctuates due to the changes in foreign exchange rates. Currency risk arises from the financial instruments expressed in currencies other than the functional currency. Currency risk does not arise from the financial instruments expressed in the functional currency or in non-monetary items measured by using the historical foreign exchange rates. In order to establish the stop loss and limits, the Company manages the foreign exchange net exposure amount of the trading and non-trading positions by each currency.

Significant assets and liabilities denominated in foreign currencies as at December 31, 2016 and 2015 are as follows (Korean won in millions or U.S. dollar in thousands):

	December 31, 2016			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Assets				
Cash and due from bank	USD	3,211,131,681	US$ 3,211,132	₩ 3,880,653
	JPY	134,217,293,440	1,152,586	1,392,900
	EUR	1,001,228,069	1,014,143	1,225,592
	CNY	11,405,165,885	1,639,503	1,981,340
	IDR	2,366,628,129,021	175,857	212,523
	Others		1,002,509	1,211,532
			8,195,730	9,904,540
Financial assets at FVTPL	USD	112,246,368	112,246	135,650
	JPY	178,043,258	1,527	1,846
	EUR	2,075,749	2,177	2,631
	CNY	1,811,901	260	314
	Others		1,238	1,496
			117,448	141,937
Available-for-sale financial assets	USD	3,626,272,390	3,626,272	4,382,350
	JPY	3,308,250,000	28,383	34,300
	EUR	79,048,650	82,914	100,202
	CNY	2,802,523,059	402,649	486,601
	IDR	1,663,318,553,519	123,596	149,366
	Others		1,037,820	1,254,207
			US$ 5,301,634	₩ 6,407,026
Held-to-maturity financial assets	USD	78,522,394	US$ 78,522	₩ 94,894
	EUR	37,784,587	39,632	47,896
	CNY	3,153,590,000	453,402	547,936
	IDR	496,999,217,016	36,931	44,631
	Others		75,067	90,718
			683,554	826,075
Loans	USD	19,118,901,813	19,118,902	23,105,247
	JPY	115,970,298,595	994,945	1,202,392
	EUR	1,393,317,892	1,461,549	1,766,283
	CNY	27,006,014,921	3,871,794	4,679,062
	IDR	16,404,938,715,272	1,219,002	1,473,163
	Others		2,697,196	1,791,604
			29,363,388	34,017,751

9. Risk management (cont'd)

9.5 Market risk (cont'd)

	December 31, 2016			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Derivative assets used for hedging	USD	19,169,856	19,170	23,167
Others	USD	3,258,296,738	3,258,297	3,937,652
	JPY	16,204,955,574	139,027	168,015
	EUR	65,814,631	69,034	83,427
	CNY	4,314,401,828	618,897	747,937
	IDR	182,985,720,624	13,597	16,432
	Others		417,518	504,571
			4,516,370	5,458,034
			US$48,197,294	₩56,778,530
Liabilities				
Financial liabilities at FVTPL	USD	95,684,208	US$ 95,684	₩ 115,634
	JPY	55,727,118	478	578
	EUR	2,426,187	2,545	3,075
	IDR	1,741,758,000	129	157
	Others		2,072	2,504
			100,908	121,948
Deposits	USD	17,281,131,137	17,281,131	20,884,247
	JPY	173,177,372,191	1,486,760	1,796,750
	EUR	1,519,868,621	1,553,723	1,877,674
	CNY	32,273,933,832	4,639,575	5,606,926
	IDR	15,633,458,765,199	1,161,686	1,403,898
	Others		2,625,361	3,172,748
			US$28,748,236	₩34,742,243
Borrowings	USD	7,484,651,637	US$ 7,484,652	₩ 9,045,202
	JPY	26,641,361,899	228,565	276,220
	EUR	295,840,312	310,309	375,008
	CNY	2,028,385,635	291,478	352,251
	IDR	240,929,340,658	17,903	21,635
	Others		234,370	283,237
			8,567,277	10,353,553
Debentures	USD	4,424,555,809	4,424,556	5,347,076
	EUR	75,000,000	78,668	95,070
	CNY	1,266,857,776	181,627	219,496
	IDR	242,369,477,445	18,010	21,765
	Others		111,174	134,353
			4,814,035	5,817,760
Derivative liabilities used for hedging	USD	43,312,807	43,313	52,344
Others	USD	3,573,178,547	3,573,179	4,318,186
	JPY	17,566,464,539	150,708	182,131
	EUR	133,538,637	140,069	169,274
	CNY	4,138,952,098	593,393	717,115
	IDR	141,886,318,617	10,543	12,741
	Others		549,735	664,355
			5,017,627	6,063,802
			US$47,291,396	₩57,151,650

9. Risk management (cont'd)

9.5 Market risk (cont'd)

	December 31, 2015			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
Assets				
Cash and due from bank	USD	4,801,357,857	US$ 4,801,358	₩ 5,627,191
	JPY	33,510,232,906	278,079	325,908
	EUR	584,597,141	641,771	752,156
	CNY	6,390,911,514	983,802	1,153,016
	IDR	712,074,917,742	51,644	60,526
	Others		667,861	782,734
			7,424,515	8,701,531
Financial assets at FVTPL	USD	95,110,920	95,111	111,470
	JPY	168,882,824	1,401	1,642
	EUR	8,551,010	9,343	10,950
			US$ 105,855	₩ 124,062
Available-for-sale financial assets	USD	2,895,675,750	US$ 2,895,676	₩ 3,393,732
	JPY	999,400,000	8,289	9,714
	CNY	735,193,750	113,189	132,657
	IDR	854,197,661,129	61,951	72,607
	Others		668,200	783,130
			3,747,305	4,391,840
Held-to-maturity financial assets	USD	18,624,001	18,624	21,827
	EUR	28,529,043	31,171	36,532
	CNY	305,000,000	46,986	55,068
	IDR	359,755,373,353	26,091	30,579
	Others		80,993	94,924
			203,865	238,930
Loans	USD	21,452,788,860	21,452,788	25,142,669
	JPY	127,585,364,927	1,058,142	1,240,143
	EUR	1,393,713,860	1,522,775	1,784,692
	CNY	23,821,650,665	3,627,721	4,251,688
	IDR	11,912,720,923,771	863,977	1,012,581
	Others		1,852,410	2,171,026
			30,377,813	35,602,799
Derivative assets used for hedging	USD	48,839,830	48,840	57,240
Others	USD	2,865,027,346	2,865,028	3,357,812
	JPY	45,735,404,059	379,311	444,553
	EUR	79,554,506	86,922	101,872
	CNY	2,037,594,545	310,540	363,952
	IDR	522,894,929,106	37,923	44,446
	Others		1,138,168	558,545
			4,817,892	4,871,180
			US$46,726,085	₩53,987,582
Liabilities				
Financial liabilities at FVTPL	USD	136,661,798	US$ 136,662	₩ 160,167
	JPY	245,650,626	2,037	2,388
	EUR	4,804,617	5,250	6,152

9. Risk management (cont'd)

9.5 Market risk (cont'd)

	December 31, 2015			
Account	Currency	Amounts in foreign currencies in units	U.S. dollars (*)	Korean won equivalent
			143,949	168,707
Deposits	USD	16,869,468,285	16,869,468	19,771,017
	JPY	177,324,760,681	1,470,481	1,723,403
	EUR	1,238,912,850	1,356,322	1,589,609
	CNY	21,464,775,596	3,305,534	3,874,086
	IDR	7,554,794,993,263	547,916	642,158
	Others		2,672,713	3,132,428
			US$26,222,434	₩30,732,701
Borrowings	USD	8,235,364,692	US$ 8,235,365	₩ 9,651,846
	JPY	55,848,060,003	463,181	542,849
	EUR	424,482,717	463,791	543,563
	CNY	703,474,804	108,230	126,846
	IDR	1,362,107,983,027	98,788	115,779
	Others		124,887	146,368
			9,494,242	11,127,251
Debentures	USD	5,291,467,912	5,291,468	6,201,600
	EUR	88,000,000	96,149	112,687
	CNY	1,309,528,446	199,424	233,725
	Others		110,552	129,567
			5,697,593	6,677,579
Derivative liabilities used for hedging	USD	13,118,301	13,118	15,375
Others	USD	4,801,785,634	4,801,786	5,627,693
	JPY	18,862,723,468	156,440	183,348
	EUR	155,471,879	169,869	199,086
	CNY	2,477,322,637	378,390	443,474
	IDR	215,062,098,250	15,598	18,280
	Others		231,064	270,808
			5,753,147	6,742,689
			US$47,324,483	₩55,464,302

(*) All foreign currencies other than USD are expressed in USD amounts at the reporting date.

9.6 Operating risk

Operational risk is the risk of loss arising from system failure, human error, fraud or other external events. Risks related to legal or regulatory implications are identified as operational risks but risks related to the strategy of damaging reputation are excluded from operational risks. Operational risk includes non-financial risks related to losses due to internal operational problems and externalities such as natural disasters and terrorist attacks. Operational risk does not have a direct correlation with income and the Company needs to mitigate such risk through internal controls and insurance.

The Company calculates the operational risk capital using the Advanced Measurement Approach (AMA) and sets the amount as the basic indicator to manage the limits. Length of the period in which the AMA is in use is one year with a 99.9% confidence level. The Company uses the loss distribution approach to measure 9 different business units and 7 operational risk event types. In addition, the Company combines the loss distribution of the internal and external data on losses with results of the scenario analysis to calculate the amount of capital and takes into account business environment and changes in the controls in order to adjust the amount of capital and determine the total amount.

9. Risk management (cont'd)

9.6 Operating risk (cont'd)

The Risk Management Committee determines the operational risk limits. In case the capital amount is expected to exceed the internal capital limits, the management measures to be implemented in the future should be reported to the Risk Management Operation Committee, and if additional limits are given, an approval from the Risk Management Committee is needed beforehand. If under exceptional case where the limit is exceeded, an expost facto approval from the Risk Management Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

9.7 Capital management

The Company implements the BIS capital requirement system in order to secure the capital adequacy and comply with the supervisory regulations. By BIS (Bank for International Settlements) regulation, the Company keeps its BIS capital adequacy ratio (hereinafter BIS ratio) above the minimum BIS for risk-weighted assets. In addition, the Company performs a capital adequacy assessment in order to cope with an unexpected loss.

Risk-weighted assets which are calculated per each risk type when calculating BIS ratio are as follows:

- Risk-weighted assets of credit risk are calculated using the Advanced Internal Ratings-Based Approach (A-IRB). The Company intends to use the permanent Standardized Approach (SA) for governments, banks, and public institutes. The Company intends to apply the Foundation Internal Ratings-Based Approach (F-IRB) for households and non-profit organizations.
- Risk-weighted assets of market risk are calculated by adding higher of (1) the VaR measured on the previous business day and the average VaR measured in the last 60 business days times (3+multiplier) and (2) the sVaR measured on the previous business day under emergency and the average sVaR measured in the last 60 business days times (3+multiplier) under emergency, to the separate risk calculated by using a standardized model. The FSS provides multiplier to each bank based on the results of verification and the level of meeting the requirements.
- Risk-weighted assets of the operational risk are calculated by multiplying 12.5 to the amount of operational risk capital.

Regulatory capital in accordance with the Regulations on the Supervision of Banking Business for calculating BIS ratio is as follows:

- Common equity: Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments, retained earnings, accumulated other comprehensive income and other capital surplus, capital adjustments, non-controlling interest on common shares issued by banks, affiliated subsidiaries, etc.
- Other basic capital: The capital securities to meet accreditation requirements of other basic capital, capital surplus associated with the issuance of the other basic capital, non-qualifying capital securities and the accredited amount as other basic capital of a non-controlling interest on equity securities issued by a subsidiary, etc.
- Supplementary capital: The capital securities to meet supplementary capital accreditation requirements, capital surplus associated with the issuance of supplementary capital, the accredited amount of supplementary capital of non-qualifying capital securities, the accredited amount as supplementary capital of a non-controlling interest on equity securities issued by a subsidiary, eligible allowance for possible loan losses on "normal" or "precautionary" category assets, allowance for possible loan losses in excess of the total amount of expected losses, etc.

9. Risk management (cont'd)

9.7 Capital management (cont'd)

Regulatory capital and BIS ratios as of December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016	December 31, 2015
Common equity		
Capital incurred in connection with common stock issued to meet the eligible requirement, capital surplus and capital adjustments	₩ 5,359,410	₩ 5,359,356
Retained earnings	7,242,262	4,416,238
Accumulated other comprehensive income and other capital surplus, capital adjustments	9,242,968	9,662,023
Non-controlling interest on common shares issued by a bank, a consolidated subsidiary	23,419	17,665
Deduction	(1,138,472)	(600,829)
	20,729,587	18,854,453
Other basic capital		
Amount accredited as supplementary capital of non-qualifying capital securities	180,000	180,000
Amount accredited as other basic capital of a non-controlling interest on capital securities issued by a subsidiary	5,434	4,409
	185,434	184,409
Supplementary capital		
Equity securities satisfying the criteria of supplementary capital	1,525,100	1,303,200
Amount accredited as supplementary capital of non-qualifying capital securities	2,482,920	2,891,630
Amount accredited as supplementary capital of a non-controlling interest on equity securities issued by a subsidiary	18,743	5,047
Allowance for possible loan losses on assets categorized as "normal" or "critical"	153,744	441,957
Eligible allowance for possible loan losses in excess of the total amount of expected losses	—	614,675
	4,180,507	5,256,509
	₩ 25,095,528	₩ 24,295,371
Risk-weighted assets		
Credit risk-weighted assets (*)	₩143,657,625	₩149,701,041
Operational risk-weighted assets	8,178,864	8,116,848
Market risk-weighted assets	5,244,049	8,051,133
	₩157,080,538	₩165,869,022
BIS capital ratio		
Total capital ratio	15.98%	14.65%
Common equity ratio	13.20%	11.37%
Tier 1 capital ratio	13.31%	11.48%
Tier 2 capital ratio	2.66%	3.17%

(*) The equity below the lowest limit is presented in credit risk weighted assets.

Internal capital is the amount which allows for continuous operation of business while accounting for all risks. Internal capital is defined as the size of capital needed to cope with unexpected loss under a certain rate. The purpose of managing the internal capital is to compare the size of internal capital and available capital (Tier 1) and to serve as a measure of financial strength. Managing the internal capital also provides the amount of risk-adjusted capital and basic measurement. The indicators are composed of the risk appetite ratio as well as exhaustion ratio of foreign holding limits. The risk appetite ratio is an internal capital ratio established after

9. Risk management (cont'd)

9.7 Capital management (cont'd)

taking into consideration a capital buffer in Tier 1 capital. The exhaustion ratio of foreign holding limits is a ratio used to measure the amount of internal capital used against the internal capital limits.

Internal capital limits are established after accounting for the size of current and subsequent Tier 1 capital as well as the components, quality, risk appetite, target credit rating, operational strategy and business plans. The Risk Committee determines risk types and the internal capital limits for the Company more than once a year. In the case where new operations or the expansion of operations result in the amount exceeding the internal capital limits, an approval from the Risk Committee is needed beforehand. If such a situation occurs in cases outlined as exceptions, an approval from the Risk Committee is needed for the information on exceeded amount, post hoc results, as well as the subsequent plans.

10. Operating segment information

In order to set strategies to achieve goal and efficiently conduct performance assessment, the business sectors of the Bank are divided by the operations as follows.

A. Operating group segment: It consists of 4 groups (operating support group, Chungcheong, Yeong-nam, and Ho-nam). It offers household loans and deposit, retirement pension benefit, company loans and deposit, etc.,

B. Capital market segment: This segmentation offers investment and operation of securities, purchasing and selling of public bonds, development and operation of derivatives.

C. Others segment: It consists of overseas business segment, headquarter supporting segment, trust segment, risk segment, audit segment and after-management segment.

The Company reorganized the structure by integrating operating channels of six regional segments and dividing it into operating support group and three operating group segments to strengthen sales capacity as at January 2016. Therefore, the Company did not restate the segment information of previous period based on that of current period and restate the segment information of current period based on that of the previous period.

10.2 Profit or loss by operating segment

10.2.1 Details of net income by operating segments for years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016							
	Regional Sector				Finance sector and other sector	Subtotal	Adjustments	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Operating income								
Net interest income	₩ 2,603,680	₩ 300,738	₩ 441,849	₩134,689	₩ 830,631	₩ 4,311,587	₩ 17,102	₩ 4,328,689
Net fee and commission income (loss)	505,744	45,652	80,717	21,336	176,546	829,995	(221,342)	608,653
Net other operating income (loss)	(1,868,366)	(229,960)	(328,755)	(97,260)	(1,713,018)	(4,237,359)	1,063,128	(3,174,231)
Net segment profit (loss)	1,241,058	116,430	193,811	58,765	(705,841)	904,223	858,888	1,763,111
Income tax expenses (income)	300,336	28,176	46,902	14,221	(166,512)	223,123	159,817	382,940
Net segment income (loss)	₩ 940,722	₩ 88,254	₩ 146,909	₩ 44,544	₩ (539,329)	₩ 681,100	₩ 699,071	₩ 1,380,171

10. Operating segment information (cont'd)

10.2 Profit or loss by operating segment (cont'd)

10.2.1 Details of net income by operating segments for years ended December 31, 2016 and 2015 are as follows (Korean won in millions): (cont'd)

	2015									
	Regional Sector						Finance sector and other sector	Subtotal	Adjustments	Total
	East Seoul	West Seoul	Gyeonggi	Chungcheong	Yeongnam	Honam				
Operating income										
Net interest income (loss)	₩ 575,442	₩ 786,566	₩ 372,942	₩ 136,328	₩ 341,407	₩ 99,956	₩ 380,663	₩ 2,693,304	₩ (60,957)	₩ 2,632,347
Net fee and commission income (loss)	118,330	173,006	71,321	24,145	67,750	17,676	143,721	615,949	(144,047)	471,902
Net other operating loss	(368,367)	(526,533)	(245,556)	(113,411)	(219,654)	(57,825)	(774,408)	(2,305,754)	(315,998)	(2,621,752)
Net segment profit (loss)	325,405	433,039	198,707	47,062	189,503	59,807	(250,024)	1,003,499	(521,002)	482,497
Income tax expenses (income)	78,748	104,795	48,087	11,389	45,860	14,473	(53,609)	249,743	(200,280)	49,463
Net income (loss)	₩ 246,657	₩ 328,244	₩ 150,620	₩ 35,673	₩ 143,643	₩ 45,334	₩(196,415)	₩ 753,756	₩(320,722)	₩ 433,034

10.2.2 External customers by operating sector and revenue from transactions in each sector for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016							
	Regional sector				Finance sector and other sector	Subtotal	Adjustments	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Revenue from external customers	₩2,898,635	₩305,028	₩487,020	₩148,166	₩1,515,472	₩5,354,321	₩(47,358)	₩5,306,963

	2015									
	Regional sector						Finance sector and other sector	Subtotal	Adjustments	Total
	East Seoul	West Seoul	Gyeonggi	Chungcheong	Yeongnam	Honam				
Revenue from external customers	₩658,880	₩946,594	₩458,141	₩146,214	₩401,808	₩116,419	₩914,036	₩3,642,092	₩(196,516)	₩3,445,576

10.2.3 Significant non-cash transactions included in income of operating segments for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016							
	Regional sector				Finance sector and other sector	Subtotal	Adjustments	Total
	Operating support group	Chungcheong	Yeongnam	Honam				
Earnings from equity method investments	₩ —	₩ —	₩ —	₩ —	42,172	42,172	—	42,172
Depreciation and amortization	(24,519)	(12,911)	(5,116)	(1,779)	(139,006)	(183,331)	(16,790)	(200,121)
	₩(24,519)	₩(12,911)	₩(5,116)	₩(1,779)	(96,834)	(141,159)	(16,790)	(157,949)

	2015									
	Regional sector						Finance sector and other sector	Subtotal	Adjustments	Total
	East Seoul	West Seoul	Gyeonggi	Chungcheong	Yeongnam	Honam				
Earnings from equity method investments	₩ —	₩ —	₩ —	₩ —	₩ —	₩ —	₩ 75,386	₩ 75,386	₩ —	₩ 75,386
Depreciation and amortization	5,968	7,133	5,875	5,140	4,880	1,904	112,969	143,869	(5,638)	138,231
	₩5,968	₩7,133	₩5,875	₩5,140	₩4,880	₩1,904	₩188,355	₩219,255	₩(5,638)	₩213,617

10. Operating segment information (cont'd)

10.3 Information about regions

Revenue by region from the external customers for the years ended December 31, 2016 and 2015 and non-current assets by region as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Revenue from external customers (*1) 2016	Revenue from external customers (*1) 2015	Non-current assets (*2) December 31, 2016	Non-current assets (*2) December 31, 2015
Domestic	₩4,730,485	₩3,260,011	₩3,014,931	₩3,048,183
Foreign				
Hong Kong	118,600	57,932	801	4,867
Singapore	29,560	19,212	726	454
U.S	39,441	25,554	7,743	1,396
Japan	20,121	13,447	3,216	4,365
China	140,799	49,474	31,766	34,370
Indonesia	124,784	84,896	9,442	8,344
U.K	20,955	17,944	2,659	2,460
Canada	29,731	23,980	8,621	10,258
Others	99,845	89,642	11,785	5,685
	623,836	382,081	76,759	72,199
Adjustments	(47,358)	(196,516)	(535)	—
	₩5,306,963	₩3,445,576	₩3,091,155	₩3,120,382

(*1) Income from external customers is divided into categories of domestic and overseas based on the locations of operating branches.

(*2) Non-current assets consist of property and equipment, investment property, and intangible asset and are divided into categories of domestic and overseas based on the location of assets.

11. Cash and due from banks

11.1 Cash and due from banks as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Counterparty	Annual interest rate (%)	December 31, 2016	December 31, 2015
Cash		—	₩ 2,129,539	₩ 2,246,853
Due from banks in Korean won				
Reserve with central bank and others	Bank of Korea ("BOK")	—	11,006,860	5,332,495
Monetary stabilization account	BOK	1.27	4,800,000	910,000
Time deposits and others	Bank of Communications	1.32	100,000	—
Other deposits	Other financial institutions	—	278,020	391,560
			16,184,880	6,634,055
Due from banks in foreign currencies				
Due from foreign banks	BOK and other banks	0.00~1.25	4,619,193	4,987,392
Time deposits	Bayern LB, etc.	0.13~7.26	1,985,105	994,475
Other due from banks	Other financial institutions	—	2,632,853	2,162,838
			9,237,151	8,144,705
			₩27,551,570	₩17,025,613

11. Cash and due from banks (cont'd)

11.2 Restricted balances in due from banks as at December 31, 2016 and 2015 are summarized as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015	Restriction
Due from banks in Korean won			
Reserve with central bank	₩11,006,860	₩5,332,495	Required under the Bank Act and other related regulations.
Monetary stabilization account	4,800,000	910,000	Required by the Bank of Korea for the purpose of liquidity management.
Reserve for future trading	550	7,560	Deposits received for guarantees as margin for derivatives
Investor's deposits	142,399	232,996	Required under the Financial Investment Services and Capital Markets Act.
Other deposits	39,235	27,882	Pledge creation and etc.
	15,989,044	6,510,933	
Due from banks in foreign currencies			
Due from foreign banks	1,592,370	2,048,662	Reserve deposits required under the Banking Act and other related regulations
Other due from banks	884,094	1,286,781	Deposits received for guarantees as margin for derivatives.
	2,476,464	3,335,443	
	₩18,465,508	₩9,846,376	

12. Financial assets at fair value through profit or loss

12.1 Financial assets at fair value through profit or loss as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Interest rate (%)	Fair value (book value)	
		December 31, 2016	December 31, 2015
Stocks	—	₩ 45,728	₩ 23,227
Government and public bonds	1.50~5.50	1,215,234	1,179,669
Financial bonds	1.25~5.59	772,077	851,453
Corporate bonds and others	1.53~3.71	292,568	180,944
Derivative assets held for trading	—	6,339,942	4,701,672
		₩8,665,549	₩6,936,965

12. Financial assets at fair value through profit or loss (cont'd)

12.2 There are no financial assets designated at FVTPL held by the Company as at December 31, 2016.

13. Available-for-sale financial assets

Available-for-sale financial assets as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Counterparty	Annual interest rate (%)	Fair value (book value) December 31, 2016	Fair value (book value) December 31, 2015
Stocks	SK Hynix Inc., etc.	—	₩ 1,010,232	₩ 737,915
Investments in partnerships	United PF 1ST Corporate Financial Stability Private Equity Fund, etc.	—	140,913	172,375
Government and public bonds	Treasury bonds	1.00~5.75	10,003,502	8,538,044
	Housing bonds	1.25~3.00	3,676,520	2,359,212
	Other local bonds	1.29~1.32	39,555	413,648
			13,719,577	11,310,904
Finance bonds	Monetary stabilization securities	1.23~2.22	7,197,367	5,758,185
	Commercial bank bonds	1.29~5.43	768,974	475,159
	Small and medium industry finance bonds	1.32~1.81	367,041	890,499
	Industrial financial bonds	1.30~3.31	1,055,733	1,079,291
	Export-import credit bonds	1.28	79,908	190,121
			9,469,023	8,393,255
Corporate bonds and Others	State owned entity bonds	1.29~3.53	4,146,129	6,154,153
	Non-financial corporate bonds	1.35~3.53	686,139	—
	Others	8.00	200	942,188
			4,832,468	7,096,341
Beneficial Securities	Hana UBS Power PEF Invest Trust 21, etc.	—	1,509,813	2,886,014
Securities denominated in foreign currencies	Equity securities in foreign currencies	—	257,844	9,006
	Bonds in foreign currencies	0.31~11.30	6,407,026	4,391,840
	Investment in foreign currencies	—	10,310	16,410
	Beneficiary certificates securities in foreign currencies	—	65,063	—
			6,740,243	4,417,256
Others	Other securities	—	1,359	—
			₩37,423,628	₩35,014,060

14. Held-to-maturity financial assets

Held-to-maturity financial assets as at December 31, 2016 and 2015 consist of the following (Korean won in millions):

Classification	Category	Annual interest rate (%)	Book value December 31, 2016	Book value December 31, 2015
Government and public bonds	Treasury bonds	3.00~5.75	₩ 350,736	₩ 358,197
	Housing bonds	1.50~3.00	505,665	479,594
			856,401	837,791
Finance bonds	Monetary stabilization securities	—	—	1,121,050
	Commercial bank bonds	3.40~5.10	241,180	391,572
	Small and medium industry finance bonds	3.34~4.38	100,286	100,327
	Industrial financial debenture	3.42	10,000	10,000
			351,466	1,622,949
Corporate bonds and others	State owned entity bonds	1.69~6.53	1,995,599	657,051
	Non-financial corporate bonds	2.31~5.11	100,089	1,827,951
			2,095,688	2,485,002
Securities denominated in foreign currencies	Bonds in foreign currencies	1.00~8.75	826,075	238,930
			₩4,129,630	₩5,184,672

15. Pledged assets

Assets pledged as collateral as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Category	Book value December 31, 2016	Book value December 31, 2015
Available-for-sale financial assets	Intraday overdraft	₩ 541,725	₩ 286,742
	Foreign currency borrowing	489,620	571,859
	Securities lent	761,901	183,155
	Borrowings	1,346,194	1,800,551
	BOK payment	3,106,348	3,526,229
	Future	29,491	272,140
	Others	845,772	581,638
		7,121,051	7,222,314
Held-to-maturity financial assets	Future	278,398	100,101
	BOK payment	1,095,998	370,133
	Intraday overdraft	45,882	—
	Borrowings	390,991	419,981
	Client RP	—	250
	Foreign currency borrowing	42,252	9,712
	Others	74,760	4,382
		1,928,281	904,559
Loans	Borrowings	9,466	29,160
		₩9,058,798	₩8,156,033

16. Loans and receivables

16.1 Total loans and receivables as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Loans		
Loans in Korean won	₩177,781,410	₩170,854,247
Loans denominated in foreign currencies	21,859,135	22,616,733
Domestic import usance	3,441,151	3,648,048
Call loans	2,477,066	4,918,667
Bills purchased in Korean won	336,072	347,397
Bills purchased denominated in foreign currencies	5,844,073	5,617,001
Advance payments on acceptances and guarantees	25,394	54,485
Bonds purchased under resale agreement	2,958,941	1,250,700
Privately-placed corporate bonds	934,986	1,165,130
Others	649,036	615,376
	216,307,264	211,087,784
Plus (less)		
Deferred loan fees and expenses	256,413	243,877
Allowance for possible loan losses	(1,462,944)	(1,874,828)
	(1,206,531)	(1,630,951)
	₩215,100,733	₩209,456,833

16.2 Allocations of loans in Korean won and in foreign currencies by customer as at December 31, 2016 and 2015 are listed as follows (Korean won in millions):

	December 31, 2016		
Classification	Korean won	Foreign currencies	Total
Corporate loans			
Large-sized businesses	₩ 16,394,160	₩17,992,810	₩ 34,386,970
Small and medium-sized businesses	65,144,439	8,648,845	73,793,284
Public sector and others	5,283,250	6,616,317	11,899,567
	86,821,849	33,257,972	120,079,821
Household loans	95,111,602	1,115,841	96,227,443
	181,933,451	34,373,813	216,307,264
Plus (less)			
Deferred loan fees, net of expenses	269,908	(13,495)	256,413
Allowance for possible loan losses	(1,120,377)	(342,567)	(1,462,944)
	(850,469)	(356,062)	(1,206,531)
	₩181,082,982	₩34,017,751	₩215,100,733

16. Loans and receivables (cont'd)

Classification	Korean won	Foreign currencies	Total
	December 31, 2015		
Corporate loans			
Large-sized businesses	₩ 23,185,764	₩20,831,049	₩ 44,016,813
Small and medium-sized businesses	59,731,276	7,341,629	67,072,905
Public sector and others	4,431,598	6,846,726	11,278,324
	87,348,638	35,019,404	122,368,042
Household loans	87,723,385	996,357	88,719,742
	175,072,023	36,015,761	211,087,784
Plus (less)			
Deferred loan fees, net of expenses	253,040	(9,163)	243,877
Allowance for possible loan losses	(1,471,029)	(403,799)	(1,874,828)
	(1,217,989)	(412,962)	(1,630,951)
	₩173,854,034	₩35,602,799	₩209,456,833

16.3 Changes in allowance for possible loan losses for the years ended December 31, 2016 and 2015 are summarized as follows (Korean won in millions):

Classification	Loans in Korean won	Loans in foreign currencies	Advance payments on acceptances and guarantees	Bills purchased in foreign currencies	Privately -placed corporate bonds	Total
	2016					
As at January 1, 2016	₩1,446,146	₩ 329,548	₩ 9,769	₩ 64,387	₩ 24,978	₩1,874,828
Changes in scope of consolidation	—	4,942	—	—	—	4,942
Disposal of non-performing loans	(37,738)	(884)	(14,586)	—	—	(53,208)
Write-offs	(786,723)	(111,788)	(36,851)	(15,359)	(27,600)	(978,321)
Collection of loans written-off in prior periods	174,016	30,645	1,994	—	—	206,655
Debt-to-equity swap	(75,218)	—	—	—	—	(75,218)
Exchange rate fluctuation and others	2	(34,470)	(28)	1,597	59	(32,840)
Provisions of allowance of possible loan losses	399,799	70,983	43,782	6,536	29,902	551,002
Interest income from impaired loans	(29,640)	(3,610)	(335)	(792)	(519)	(34,896)
As at December 31, 2016	₩1,090,644	₩ 285,366	₩ 3,745	₩ 56,369	₩ 26,820	₩1,462,944

Classification	Loans in Korean won	Loans in foreign currencies	Advance payments on acceptances and guarantees	Bills purchased in foreign currencies	Privately -placed corporate bonds	Total
	2015					
As at January 1, 2015	₩ 522,686	₩ 87,051	₩ 3,132	₩57,750	₩ 6,277	₩ 676,896
Business combination under common control	903,774	148,854	14,690	4,796	6,826	1,078,940
Disposal of non-performing loans	(28,688)	—	(6)	—	—	(28,694)
Write-offs	(455,428)	(31,244)	(19,140)	—	(700)	(506,512)

16. Loans and receivables (cont'd)

Classification	2015 Loans in Korean won	Loans in foreign currencies	Advance payments on acceptances and guarantees	Bills purchased in foreign currencies	Privately-placed corporate bonds	Total
Collection of loans written-off in prior periods	95,346	7,468	6,064	—	—	108,878
Debt-to-equity swap	(10,100)	—	—	—	(836)	(10,936)
Exchange rate fluctuation and others	(1,651)	6,272	1	237	1	4,860
Provisions of allowance of possible loan losses	457,635	114,779	5,467	2,970	13,829	594,680
Interest income from impaired loans	(37,428)	(3,632)	(439)	(1,366)	(419)	(43,284)
As at December 31, 2015	₩1,446,146	₩329,548	₩ 9,769	₩64,387	₩24,978	₩1,874,828

16.4 Total leases investment and net lease investment of the financial lease loans included in loans as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016 Short-term	Long-term	Total
Present value of minimum lease payments	₩1,193	₩7,048	₩8,241
Net lease investment	1,193	7,048	8,241
Unrealized interest income	9	—	9
Total lease investment	₩1,202	₩7,048	₩8,250

Classification	December 31, 2015 Short-term	Long-term	Total
Present value of minimum lease payments	₩13,140	₩15,901	₩29,041
Net lease investment	13,140	15,901	29,041
Unrealized interest income	521	409	930
Total lease investment	₩13,661	₩16,310	₩29,971

16.5 Total leases investment and net lease investment of the financial lease loans by period as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016 Total lease investment	Net lease investment
Within 1 year	₩1,202	₩1,193
After 1 year but no later than 5 years	7,048	7,048
	₩8,250	₩8,241

Classification	December 31, 2015 Total lease investment	Net lease investment
Within 1 year	₩13,661	₩13,140
After 1 year but no later than 5 years	16,310	15,901
	₩29,971	₩29,041

17. Derivative instruments

17.1 Details of amounts of the unsettled derivative contract and fair value of derivatives held by the Company as at December 31, 2016 and 2015 are as follows:

Classification	Amounts of unsettled contract December 31, 2016	Amounts of unsettled contract December 31, 2015	December 31, 2016 Assets	December 31, 2016 Liabilities	December 31, 2015 Assets	December 31, 2015 Liabilities
Currency						
Forward	₩177,127,851	₩156,669,824	₩4,062,916	₩3,452,400	₩2,290,196	₩1,817,022
Swap	51,819,818	53,968,982	1,582,573	1,832,848	1,415,765	1,746,730
Options purchased	678,022	1,733,390	12,137	—	29,734	—
Options sold	610,310	1,766,431	—	8,727	—	32,944
Futures	2,112,071	858,994	—	—	—	—
	232,348,072	214,997,621	5,657,626	5,293,975	3,735,695	3,596,696
Interest						
Swap	85,416,041	102,812,858	668,066	657,806	950,017	948,479
Options purchased	1,160,500	1,150,500	30,944	—	29,067	—
Options sold	4,191,437	4,572,440	—	83,631	—	95,166
Futures	16,436	1,457,544	—	—	—	—
	90,784,414	109,993,342	699,010	741,437	979,084	1,043,645
Stock						
Options purchased	82,668	12,764	184	—	2,821	—
Options sold	25,628	95,156	—	273	—	1,593
Futures	1,950	4,005	—	—	—	—
	110,246	111,925	184	273	2,821	1,593
Others						
Other derivatives	86,659	6,400	3,416	865	—	956
Credit risk adjustment	—	—	(20,294)	—	(15,928)	—
	86,659	6,400	(16,878)	865	(15,928)	956
	₩323,329,391	₩325,109,288	₩6,339,942	₩6,036,550	₩4,701,672	₩4,642,890

17.2 Details of valuation gain (loss) of the derivatives for the years ended December 31, 2016 and 2015 are as follows:

Classification	2016 Gain	2016 Loss	2015 Gain	2015 Loss
Currency				
Forward	₩3,560,230	₩3,248,931	₩1,460,637	₩1,165,455
Swap	900,389	978,495	567,489	826,258
Options purchased	10,602	—	11,468	4,243
Options sold	—	6,718	3,410	4,010
	4,471,221	4,234,144	2,043,004	1,999,966
Interest				
Swap	229,054	188,093	217,021	214,349
Options purchased	4,503	—	6,430	870
Options sold	—	7,984	1,021	11,578
	233,557	196,077	224,472	226,797

17. Derivative instruments (cont'd)

Classification	2016 Gain	2016 Loss	2015 Gain	2015 Loss
Stock				
Options purchased	26	—	1,775	—
Options sold	—	20	70	387
	26	20	1,845	387
Others				
Other derivatives	308	3,591	—	421
Credit risk adjustment	5	4,371	3,997	—
Bid-ask spread adjustment	—	—	13,657	—
	313	7,962	17,654	421
	₩4,705,117	₩4,438,203	₩2,286,975	₩2,227,571

17.3 Derivative instruments used for hedging purposes edging and related assets and liabilities as at December 31, 2016 and 2015 are as follows. And valuation of fair value and gain and loss on valuation for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016 Unsettled contract amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Currency swaps	₩ 294,231	₩ 670	₩22,033	₩ —	₩46,097
Interest rate swaps	5,803,695	1,353	67,013	25,825	52,877
	₩6,097,926	₩2,023	₩89,046	₩25,825	₩98,974

Classification	December 31, 2015 Unsettled contract amounts	Net valuation gain	Net valuation loss	Assets	Liabilities
Currency swaps	₩ 25,003	₩ 167	₩ 9,633	₩ —	₩24,734
Interest rate swaps	6,672,880	17,296	25,271	65,439	15,375
	₩6,697,883	₩17,463	₩34,904	₩65,439	₩40,109

Derivative transactions of which purchase and sale incur simultaneously like foreign exchange forward transaction, currency futures and currency swap, do not distinguish purchase contract amount from sale contract amount. For a derivative transaction involving both Korean won and foreign currencies, the contract amount based on foreign currencies is denominated using a fair exchange rate prevailing at the end of reporting period. For a derivative transaction involving only foreign currencies, the contract amount based on foreign currencies purchased are denominated using a fair exchange rate prevailing at the end of reporting period.

17.4 Gain or loss on valuation of hedged items for years December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016 Net valuation gain	2016 Net valuation loss	2015 Net valuation gain	2015 Net valuation loss
Finance debentures	₩53,157	₩2,617	₩28,026	₩14,923
Depository liabilities	18,959	—	1,939	2,040
Available-for-sale financial assets	22,700	—	—	—
	₩94,816	2,617	₩29,965	₩16,963

As at December 31, 2016, interest rate swap or currency swap is designated as hedging instrument and fair value hedge accounting is applied in order to hedge fair value fluctuation risk incurred due to interest rate fluctuation and foreign exchange rate fluctuation in finance debentures issued and depository liabilities.

17. Derivative instruments (cont'd)

17.5 Details of the amount of exchange rate differences reflected on transaction of foreign operations with reference to hedge accounting of the net investment in the foreign operation for the year ended December 31, 2016 is as follows (Korean won in millions):

Classification	2016 Gain	2016 Loss	2015 Gain	2015 Loss
Hedged items				
Exchange differences on translation of foreign operations (branches and subsidiaries)	₩14,369	₩ —	₩11,521	₩ —
Hedging instruments				
Debentures denominated in foreign currencies	—	17,965	—	284
Borrowings denominated in foreign currencies	3,596	—	—	11,237
	3,596	17,965	—	11,521
	₩17,965	₩17,965	₩11,521	₩11,521

18. Investments in associates

18.1 Details of investments in associates as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Country	Reporting date	Industry	Ownership (%) Dec 31, 2016	Ownership (%) Dec 31, 2015	Book value December 31, 2016	Book value December 31, 2015
Bank of Jilin (*1)	China	December 31	Bank	16.98	16.98	₩639,369	₩625,760
UAMCO., Ltd. (*1)	Korea	December 31	Other financial services	—	17.50	—	126,346
Hana First Private Equity Fund	Korea	December 31	Other financial services	29.97	29.97	23,812	64,387
Korea Credit Bureau (*1)	Korea	December 31	Credit investigation and Collection agency	9.00	9.00	5,398	5,026
Darby Hana Infrastructure Fund Management (*1)	Korea	December 31	Asset Management Company	9.90	9.90	1,084	928
CM International financing leases	China	December 31	Other financial services	25.00	25.00	211,928	141,792
Somesevit Corporation (*1) (*2)	Korea	December 31	Construction	1.92	1.92	—	—
Midan City Development Co., Ltd. (*1)	Korea	December 31	Construction	2.17	2.17	226	226
Masan Marine New Town Co., Ltd. (*1)	Korea	December 31	Construction	10.00	10.00	101	101
Hyundai Cement Co., Ltd.	Korea	September 30	Manufacturing	—	24.43	—	23,493
Company K startup winwin fund	Korea	December 31	Investment	23.81	23.81	9,585	8,722
KEB Mirae Asset First Securitization Specialty Co., Ltd. (*2)	Korea	December 31	Asset securitization	40.00	40.00	—	1,243

18. Investments in associates (cont'd)

Classification	Country	Reporting date	Industry	Ownership (%) Dec 31, 2016	Ownership (%) Dec 31, 2015	Book value December 31, 2016	Book value December 31, 2015
KEB Mirae Asset Second Securitization Specialty Co., Ltd. (*2)	Korea	December 31	Asset securitization	45.00	45.00	—	—
PT Sinarmas Hana Finance	Indonesia	December 31	Financial services	30.00	30.00	3,832	3,867
						₩895,335	₩1,001,891

(*1) These companies are included in investment in associates as the Company exercises a significant influence on the investee's Board of Directors.
(*2) The equity method is no longer appropriate because current balance for investment is below "0"

18. Investments in associates (cont'd)

18.2 Condensed financial statements as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016						
Classification	Assets	Liabilities	Equity (deficit)	Operating income	Net income (loss)	Comprehensive income (loss)	Dividends
Bank of Jilin	₩73,278,605	₩69,602,185	₩3,676,420	₩5,622,873	₩498,867	₩340,216	₩20,998
Hana First Private Equity Fund	102,616	23,166	79,450	1,128	(51,866)	(70,706)	—
Korea Credit Bureau	71,245	17,322	53,923	59,868	3,517	3,517	135
Darby Hana Infrastructure Fund Management	12,575	1,629	10,946	4,408	1,471	1,471	—
CM International financing leases	5,193,459	4,345,746	847,713	219,628	41,445	41,445	—
Somesevit Corporation	84,811	128,457	(43,646)	10,390	(3,220)	(3,209)	—
Midan City Development Co., Ltd.	744,855	724,981	19,874	8,936	10,651	10,651	—
Masan Marine New Town Co., Ltd	134,975	133,968	1,007	477	3	3	—
Company K startup winwin fund	40,471	214	40,257	288	(572)	(572)	—
KEB Mirae Asset First Securitization Specialty Co., Ltd.	12,424	13,549	(1,125)	995	(4,232)	(4,232)	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	25,481	30,978	(5,497)	860	(4,610)	(4,610)	—
PT Sinarmas Hana Finance	31,846	19,311	12,535	2,688	(1,051)	(1,051)	—

	December 31, 2015						
Classification	Assets	Liabilities	Equity (deficit)	Operating income	Net income (loss)	Comprehensive income (loss)	Dividends
Bank of Jilin	₩62,967,673	₩59,207,164	₩3,760,509	₩6,515,249	₩459,675	₩521,658	₩ —
UAMCO., Ltd.	4,068,354	3,331,647	736,707	452,759	68,078	67,802	—
Hana First Private Equity Fund	243,081	28,232	214,849	32	32,360	66,395	8,574
Korea Credit Bureau	63,960	13,076	50,884	53,184	2,005	2,005	—
Darby Hana Infrastructure Fund Management	10,834	1,457	9,377	3,913	1,294	1,294	—
CM International financing leases	1,614,812	1,049,246	565,566	59,160	25,484	25,484	—
Somesevit Corporation	89,833	130,270	(40,437)	10,395	(2,971)	(2,971)	—
Midan City Development Co., Ltd.	949,277	938,865	10,412	6,495	(18,238)	(18,238)	—
Masan Marine New Town Co., Ltd	135,027	134,023	1,004	509	5	5	—
Hyundai Cement Co., Ltd.	479,985	522,033	(42,048)	262,998	(91,103)	(97,966)	—
Company K Startup winwin fund	36,634	—	36,634	29	(823)	(823)	—
KEB Mirae Asset First Securitization Specialty Co., Ltd.	22,953	19,846	3,107	3,421	1,149	1,149	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	42,005	42,892	(887)	4,636	(634)	(634)	—
PT Sinarmas Hana Finance	12,907	15	12,892	5	140	140	—

18. Investments in associates (cont'd)

18.3 Changes in the investment in an associate for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016										
						Equity method valuation					
Classification	Owner ship (%)	Beginning balance	Acquisition, and others	Dividend	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Disposal	Ending balance
Bank of Jilin	16.98	₩ 625,760	₩ —	₩(20,998)	₩ 604,762	₩ 84,710	₩ —	₩(50,103)	₩—	₩ —	₩639,369
UAMCO., Ltd.	—	126,346	—	(26,960)	99,386	4,216	—	(70)	—	(103,532)	—
Hana First Private Equity Fund	29.97	64,387	—	—	64,387	(15,542)	—	(5,545)	—	(19,488)	23,812
Korea Credit Bureau	9.00	5,026	—	(135)	4,891	408	—	99	—	—	5,398
Darby Hana Infrastructure Fund Management	9.90	928	—	—	928	156	—	—	—	—	1,084
CM International financing leases	25.00	141,792	66,968	—	208,760	10,361	—	(7,193)	—	—	211,928
Somesevit Corporation	1.92	—	—	—	—	—	—	—	—	—	—
Midan City Development Co., Ltd.	2.17	226	—	—	226	—	—	—	—	—	226
Masan Marine New Town Co., Ltd.	10.00	101	—	—	101	—	—	—	—	—	101
Hyundai Cement Co., Ltd.	—	23,493	—	—	23,493	(40,515)	26,494	3,152	—	(12,624)	—
Company K startup winwin fund	23.81	8,722	1,000	—	9,722	(137)	—	—	—	—	9,585
KEB Mirae Asset First Securitization Specialty Co., Ltd.	40.00	1,243	—	—	1,243	(1,243)	—	—	—	—	—
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	45.00	—	—	—	—	—	—	—	—	—	—
PT Sinarmas Hana Finance	30.00	3,867	—	—	3,867	(242)	—	—	207	—	3,832
		₩1,001,891	₩67,968	₩(48,093)	₩1,021,766	₩ 42,172	₩26,494	₩(59,660)	₩207	₩(135,644)	₩895,335

18. Investments in associates (cont'd)

	2015									
						Equity method valuation				
Classification	Owner ship (%)	Beginning balance	Acquisition, disposal and others	Business combination under common control	Book value before valuation	Earnings (loss)	Impairment of equity method	Changes in equity	Others	Ending balance
Bank of Jilin	16.98	₩ —	₩ —	₩ 602,478	₩602,478	₩23,665	₩ —	₩ (383)	₩—	₩ 625,760
UAMCO., Ltd.	17.50	—	—	121,132	121,132	5,261	—	(47)	—	126,346
Hana First Private Equity Fund	29.97	—	(21,423)	63,539	42,116	11,031	—	11,240	—	64,387
Korea Credit Bureau	9.00	—	—	4,744	4,744	282	—	—	—	5,026
Darby Hana Infrastructure Fund Management	9.90	—	—	839	839	89	—	—	—	928
CM International financing leases	25.00	—	26,726	110,106	136,832	6,361	—	(1,401)	—	141,792
Hana Bank (China) Co., Ltd.	43.30	361,620	—	(383,762)	(22,142)	9,560	—	12,582	—	—
Somesevit Corporation	1.92	—	—	—	—	—	—	—	—	—
Midan City Development Co., Ltd.	2.17	460	—	—	460	(234)	—	—	—	226
Masan Marine New Town Co., Ltd.	10.00	23	—	—	23	78	—	—	—	101
Hyundai Cement Co., Ltd.	24.43	—	—	32,637	32,637	19,069	(26,494)	(1,719)	—	23,493
Company K startup winwin fund	23.81	—	—	9,000	9,000	(278)	—	—	—	8,722
KEB Mirae Asset First Securitization Specialty Co., Ltd.	40.00	783	—	—	783	460	—	—	—	1,243
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	45.00	—	—	—	—	—	—	—	—	—
PT Sinarmas Hana Finance	30.00	—	3,663	—	3,663	42	—	—	162	3,867
		₩362,886	₩ 8,966	₩ 560,713	₩932,565	₩75,386	₩(26,494)	₩20,272	₩162	₩1,001,891

18. Investments in associates (cont'd)

The Company discontinued recognizing its losses in shares since the balance of investments in associates was "0" and the losses which are accumulated for the current year and before the current year are as follows (Korean won in millions):

	2016		
Company	Amount for the current year	Accumulated amount before the current year	Total
Somesevit Corporation	₩ (60)	₩ (778)	₩ (838)
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	(1,804)	(399)	(2,203)
KEB Mirae Asset First Securitization Specialty Co., Ltd.	(450)	—	(450)
	₩(2,314)	₩(1,177)	₩(3,491)

	2015		
Company	Amount for the current year	Accumulated amount before the current year	Total
Somesevit Corporation	₩ (57)	₩(721)	₩ (778)
KEB Mirae Asset Second Securitization Specialty Co., Ltd.	(285)	(114)	(399)
	₩(342)	₩(835)	₩(1,177)

19. Property and equipment

19.1 Property and equipment as at December 31, 2016 and 2015 consist of the following (Korean won in millions):

	December 31, 2016			
Classification	Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩1,353,181	₩ —	₩ —	₩1,353,181
Buildings	862,408	(300,013)	(80)	562,315
Leasehold improvements	425,719	(350,940)	(130)	74,649
Equipment and vehicles	962,692	(815,025)	—	147,667
Construction in progress	91,664	—	—	91,664
Others	71,796	—	—	71,796
	₩3,767,460	₩(1,465,978)	₩(210)	₩2,301,272

	December 31, 2015			
Classification	Acquisition cost	Accumulated depreciation	Government grants	Book value
Land	₩1,501,611	₩ —	₩ —	₩1,501,611
Buildings	907,570	(284,900)	(132)	622,538
Leasehold improvements	403,311	(328,430)	(205)	74,676
Equipment and vehicles	1,059,278	(878,559)	—	180,719
Construction in progress	33,985	—	—	33,985
Others	77,952	—	—	77,952
	₩3,983,707	₩(1,491,889)	₩(337)	₩2,491,481

19. Property and equipment (cont'd)

19.2 Changes in property and equipment for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016							
Classification	January 1, 2015	Changes in scope of consolidation	Additions	Disposal	Depreciation	Transfer out	Others	December 31, 2015
Land	₩1,501,611	₩1,187	₩ 101	₩ (79,949)	₩ —	₩(69,871)	₩ 102	₩1,353,181
Buildings	622,538	1,572	8,551	(23,476)	(24,001)	(22,852)	(17)	562,315
Leasehold improvements	74,676	2,527	19,402	(662)	(27,018)	—	5,724	74,649
Equipment and vehicles	180,719	1,364	55,683	(1,899)	(83,392)	86	(4,894)	147,667
Construction in progress	33,985	—	57,793	—	—	(86)	(28)	91,664
Others	77,952	—	—	(6,156)	—	—	—	71,796
	₩2,491,481	₩6,650	₩141,530	₩(112,142)	₩(134,411)	₩(92,723)	₩ 887	₩2,301,272

	2015							
Classification	January 1, 2015	Business combination under common control	Acquisition	Disposal	Depreciation	Transfer out	Others (*)	December 31, 2015
Land	₩ 778,480	₩ 783,823	₩ 2,411	₩(13,701)	₩ —	₩(26,821)	₩(22,581)	₩1,501,611
Buildings	263,807	359,899	28,472	(3,744)	(17,069)	(8,015)	(812)	622,538
Leasehold improvements	44,305	27,449	23,349	(111)	(20,086)	—	(230)	74,676
Equipment and vehicles	79,878	79,433	86,912	(407)	(65,413)	—	316	180,719
Construction in progress	—	25,846	7,259	—	—	—	880	33,985
Others	—	77,952	—	—	—	—	—	77,952
	₩1,166,470	₩1,354,402	₩148,403	₩(17,963)	₩(102,568)	₩(34,836)	₩(22,427)	₩2,491,481

(*) Variation amounting to ₩22,648 million caused by error in modification of land revaluation is included.

20. Investment properties

20.1 Details of investment property as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016			
Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩415,344	₩ —	₩ (2)	₩415,342
Buildings	227,232	(86,696)	(645)	139,891
	₩642,576	₩(86,696)	₩(647)	₩555,233

	December 31, 2015			
Classification	Acquisition cost	Accumulated depreciation	Accumulated impairment loss	Book value
Land	₩345,473	₩ —	₩ (2)	₩345,471
Buildings	206,239	(85,102)	(30)	121,107
	₩551,712	₩(85,102)	₩(32)	₩466,578

20. Investment properties (cont'd)

20.2 Changes in investment property for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016					
Classification	January 1, 2016	Changes in scope of consolidation	Depreciation	Transfer (*)	Others	December 31, 2016
Land	₩345,471	₩ —	₩ —	₩69,871	₩—	₩415,342
Buildings	121,107	1,461	(5,894)	22,852	365	139,891
	₩466,578	₩1,461	₩(5,894)	₩92,723	₩365	₩555,233

	2015					
Classification	January 1, 2015	Business combination under common control	Disposal	Depreciation	Transfer (*)	December 31, 2015
Land	₩152,899	₩167,391	₩(1,640)	₩ —	₩26,821	₩345,471
Buildings	77,481	39,753	—	(4,142)	8,015	121,107
	₩230,380	₩207,144	₩(1,640)	₩(4,142)	₩34,836	₩466,578

(*) Due to the changes in the ratio of the leased investment properties.

Fair values of investment property are in the amount of ₩568,600 million and ₩449,867 million as at December 31, 2016 and 2015, respectively, which were measured by external independent agencies. They fall under level 3 of fair value hierarchy.

20.3 Rental income and operating expenses arising from the Company's investment properties for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Rental income	₩11,168	₩5,336

21. Intangible assets

21.1 Intangible assets as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016			
Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ —	₩ —	₩ 892
Industrial proprietary rights	1,018	(402)	—	616
Core deposits	4,980	(1,227)	—	3,753
Software	147,706	(102,060)	—	45,646
Systems development costs	695,801	(573,229)	(442)	122,130
Memberships	26,282	—	(3,414)	22,868
Others	109,996	(71,222)	(29)	38,745
	₩986,675	₩(748,140)	₩(3,885)	₩234,650

21. Intangible assets (cont'd)

	December 31, 2015			
Classification	Acquisition cost	Accumulated amortization	Accumulated impairment loss	Book value
Goodwill	₩ 892	₩ —	₩ —	₩ 892
Industrial proprietary rights	408	(285)	—	123
Software	127,521	(88,948)	—	38,573
Systems development costs	613,018	(541,165)	—	71,853
Memberships	37,755	(365)	(8,529)	28,861
Others	81,580	(59,530)	(29)	22,021
	₩861,174	₩(690,293)	₩(8,558)	₩162,323

22. Non-current assets held for sale

There is 12 collateral acquired for the purpose of loan repayment for tangible assets of non-business use appropriated as non-current assets held-for-sale as at December 31, 2016. It was classified as non-current asset held-for-sale based on the management's decision and it is not disposed as at December 31, 2016.

Details of non-current assets held-for-sale as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Acquisition cost	₩21,326	₩416
Book value	21,326	416

23. Other assets and merchant banking account assets

23.1 Details of other assets as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Guarantee deposits paid	₩ 1,026,022	₩ 1,108,519
Accounts receivable	8,354,411	8,915,107
Accrued income	734,443	702,950
Prepaid expenses	98,929	135,274
Suspense payments	14,906	39,049
Expenditures	1,193	1,476
Deposit money to court	9,644	12,846
Domestic exchange settlement debit	974,480	888,348
Other miscellaneous assets	15,484	129,380
Allowance for possible loan losses for other assets	(14,193)	(12,793)
	₩11,215,319	₩11,920,156

23. Other assets and merchant banking account assets (cont'd)

23.2 Changes in the allowance for possible losses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Beginning balance	₩12,793	₩ 7,730
Business combination under common control	—	5,176
Write-offs	(8,090)	(9,392)
Disposal of non-performing loans	(840)	—
Collection of loans written-off in prior period	(1,036)	(4)
Provision of allowance of possible losses	11,662	9,481
Interest income on impaired assets	(19)	(198)
Exchange rate fluctuation and others	(277)	—
Ending balance	₩14,193	₩12,793

23.3 Details of merchant banking account assets as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Merchant banking account loans	₩ 49,000	₩ 120,000
Merchant banking account trading bonds	1,845,462	1,885,828
CMA assets		
Loans	4,000	10,000
Trading bonds	698,575	549,829
	702,575	559,829
Allowance for possible loan losses	(78)	(38)
	₩2,596,959	₩2,565,619

24. Deposits

24.1 Deposit liabilities as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Demand deposits		
Demand deposits in Korean won	₩ 8,781,464	₩ 7,982,814
Demand deposits in foreign currency	22,357,953	20,006,464
	31,139,417	27,989,278
Time and savings deposits		
Time and savings deposits in Korean won	175,107,829	163,759,467
Time and savings deposits in foreign currency	12,384,290	10,726,237
	187,492,119	174,485,704
Certificate of deposits	1,981,870	2,267,737
	₩220,613,406	₩204,742,719

24. Deposits (cont'd)

24.2 Classification of deposits by customers as at December 31, 2016 and 2015 are listed as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Individuals	₩ 82,214,700	₩ 74,840,779
Corporations	66,703,164	56,854,283
Other banks	12,792,227	6,732,502
Public institutions	4,650,621	3,953,405
Other financial institutions	33,207,717	30,740,875
Government	5,410,856	6,009,535
Non–profit corporations	8,615,913	10,094,691
Foreign corporations	2,117,887	7,445,467
Others	4,900,321	8,071,182
	₩220,613,406	₩204,742,719

25. Financial liabilities at FVTPL

25.1 Details of financial liabilities held-for-trading as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Derivative liabilities held-for-trading	₩6,036,550	₩4,642,890

25.2 In order to eliminate or significantly reduce the inconsistencies between the recognized and measured amounts, the financial liabilities designated at FVTPL has been categorized accordingly. Details of financial liabilities at FVTPL as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Deposits	₩378,595	₩539,855
Debentures	—	100,698
Deferred Day 1 profit	—	749
	₩378,595	₩641,302

25.3 Differences between the book value and maturity amount of the financial liabilities designated at FVTPL as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Book value	₩378,595	₩641,302
Maturity amount	390,000	640,000
Difference	₩ (11,405)	₩ 1,302

26. Borrowings

Borrowings as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Lender	Annual interest rate (%)	December 31, 2016	December 31, 2015
Borrowings in Korean won				
BOK borrowings	BOK	0.50~0.75	₩ 1,579,178	₩ 2,072,068
Government borrowings	Korea Energy Management Corporation, etc.	0.49~2.10	1,569,444	2,473,379
Other borrowings	Small & Medium Business Corporation, etc.	0.00~5.03	1,777,607	1,337,154
			4,926,229	5,882,601
Borrowings denominated in foreign currencies				
Bank overdrafts	Foreign banks, etc.	1.00~12.75	516,494	97,003
Other borrowings	Exim Bank of Korea, etc.	0.00~10.50	6,293,960	8,413,807
			6,810,454	8,510,810
Call money				
Call money in foreign currencies	KB bank, etc.	0.01~9.00	2,866,675	2,106,331
Bonds sold under repurchase agreements				
Bonds sold under repurchase agreements in Korean won	General customers	0.00~0.80	239	232
Bonds sold under repurchase agreements in foreign currencies	Nomura International, etc.	0.09~3.83	676,424	510,110
			676,663	510,342
Others				
Bills sold	General customers	0.00~1.54	30,614	123,286
			₩15,310,635	₩17,133,370

27. Debentures

Debentures as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	Lenders	Annual interest rate (%)	December 31, 2016	December 31, 2015
Debentures in Korean won				
Debentures	Institutions	1.28~3.41	₩ 9,230,000	₩ 7,180,000
Subordinated bonds	Institutions and general customers	2.45~8.00	4,280,926	4,651,898
Net loss on fair value hedges (current year)			—	(1,941)
Net loss on fair value hedges (prior years)			364	3,555
Less present value discount			(18,177)	(26,616)
			13,493,113	11,806,896
Debentures denominated in foreign currencies				
Debentures	Institutions	1.75~5.04	4,849,629	5,716,999
Subordinated bonds	Institutions	2.79~9.95	1,003,567	937,600
Net loss on fair value hedges (current year)			(50,540)	(11,162)
Net loss on fair value hedges (prior years)			34,842	54,173
Less present value discount			(19,738)	(20,031)
			5,817,760	6,677,579
			₩19,310,873	₩18,484,475

28. Net defined benefit liability

28.1 Details of net defined benefit liability

Details of net defined benefit liability as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Present value of defined benefit obligation deposited to plan assets	₩ 1,296,492	₩ 1,223,738
Fair value of plan assets	(1,261,246)	(1,092,449)
	35,246	131,289
Present value of defined benefit obligation not deposited to plan assets	8,742	10,205
Net defined benefit liability	₩ 43,988	₩ 141,494

28. Net defined benefit liability (cont'd)

28.2 Defined benefit obligations

28.2.1 Changes in present value of defined benefit obligation

Changes in present value of defined benefit obligation for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Beginning balance	₩1,233,943	₩ 434,094
Business combination under common control	—	754,447
Current service cost	124,467	82,895
Past service cost	7,206	16,308
Interest cost	28,976	19,345
Remeasurements of the net defined benefit liability	54,705	39,146
Benefits paid	(142,980)	(109,750)
Changes due to transference between affiliates	(1,518)	211
Others	435	(2,753)
	₩1,305,234	₩1,233,943

28.2.2 Total costs recognized in accordance to defined benefit plans

Total costs occurred in operating defined benefit pension plan for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Current service cost	₩124,467	₩ 82,895
Past service cost	7,206	16,308
Interest cost	28,976	19,345
Interest income on plan assets	(24,896)	(16,505)
Actuarial losses	(1,174)	(7,014)
	₩134,579	₩ 95,029

28.3 Actuarial assumptions

28.3.1 Principal assumptions for actuarial valuation method as at December 31, 2016 and 2015 are as follows:

	2016	
	Rate (%)	Content
Demographic assumptions		
Death rate	0.004~0.080	Korea Insurance Development Institute
Retirement rate	6.50	
Financial assumptions		
Wage growth rate	5.50	Average of past 5 years
Discounting rate	2.50	Return rate of AAA corporate bond

	2015	
	Rate (%)	Content
Demographic assumptions		
Death rate	0.004~0.080	Korea Insurance Development Institute
Retirement rate	5.50	
Financial assumptions		
Wage growth rate	5.25	Average of past 5 years
Discounting rate	2.30~2.60	Return rate of AAA corporate bond

28. Net defined benefit liability (cont'd)

28.3 Actuarial assumptions (cont'd)

28.3.2 Changes in the present values of defined benefit liability due to changes in the principal actuarial assumptions as at December 31, 2016 are as follows (Korean won in millions):

1) Discounting rate

	December 31, 2016	1%p Increase	1%p Decrease
Present value of defined benefit liability	₩1,305,234	₩1,183,506	₩1,412,666

2) Wage growth rate

	December 31, 2016	1%p Increase	1%p Decrease
Present value of defined benefit liability	₩1,305,234	₩1,408,251	₩1,184,968

28.4 Plan assets

28.4.1 Details of changes in the value of plan assets

Changes in the fair value of plan assets for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Beginning balance	₩1,092,449	₩ 368,069
Acquisition due to business combination	—	660,050
Employer contributions	289,330	160,255
Interest income on plan assets	24,896	17,777
Remeasurements of the net defined benefit liability	(5,410)	(4,042)
Benefit provided	(138,880)	(105,434)
Changes due to transference between affiliates	(69)	(1,272)
Others	(1,070)	(2,954)
	₩1,261,246	₩1,092,449

28.4.2 Details of plan assets

Details of plan assets as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Time deposits	₩1,180,509	₩ 564,362
Others	80,737	528,087
	₩1,261,246	₩1,092,449

28. Net defined benefit liability (cont'd)

28.4 Plan assets (cont'd)

28.4.3 The Bank expects to contribute ₩128,000 million in 2017, in relation to the defined benefit plan.

28.5 Remeasurements of the net defined benefit liability

Remeasurements of the net defined benefit liability as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016	2015
Actuarial gains and losses		
Effects on changing financial assumptions	₩(17,620)	₩(52,184)
Effects on changing demographic assumptions	2,221	(3,200)
Others	(40,480)	9,224
	(55,879)	(46,160)
The return on plan assets		
The actual return on plan assets	20,328	13,735
The amount included in net interest of net defined benefit liability	(25,738)	(17,777)
	(5,410)	(4,042)
	₩(61,289)	₩(50,202)

29. Contingent liabilities, agreements, and provisions

29.1 Details of provisions as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Provisions on acceptances and guarantees		
Financial guarantee contracts (*)	₩ 912	₩ 8,436
Non-financial guarantee contracts	81,788	73,077
Bills endorsed	222	238
	82,922	81,751
Provisions for unused commitments	70,429	61,650
Other provisions		
Provisions for asset retirement obligation	52,619	37,449
Provisions for lawsuits	95,446	51,795
Others	8,233	21,528
	156,298	110,772
	₩309,649	₩254,173

(*) The Company recognizes the amount exceeding the unamortized amount of the initial fair value at subsequent measurement of the financial guarantee contract as provisions for acceptances and guarantees. The Company recognizes ₩18,173 million and ₩24,893 million of unamortized amount as financial guarantee contract liabilities in other liabilities as at December 31, 2016 and 2015, respectively.

29. Contingent liabilities, agreements, and provisions (cont'd)

29.2 Changes in provisions for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016					
Classification	January 1, 2016	Changes in scope of consolidation	Provision for allowance	Allowance used	Others	December 31, 2016
Provisions on acceptances and guarantees	₩ 81,751	₩—	₩ 61	₩ —	₩1,110	₩ 82,922
Provisions for unused commitments	61,650	57	8,800	—	(78)	70,429
Other provisions		—	—	—	—	
Provisions for asset retirement obligation	37,449	—	10,404	(2,901)	7,667	52,619
Provisions for lawsuits	51,795	—	45,530	(1,910)	31	95,446
Others	21,528	—	6,882	(21,047)	870	8,233
	110,772	—	62,816	(25,858)	8,568	156,298
	₩254,173	₩ 57	₩71,677	₩(25,858)	₩9,600	₩309,649

	2015					
Classification	January 1, 2015	Business combination under common control	Provision for (reversal of) allowance	Allowance used	Others	December 31, 2015
Provisions on acceptances and guarantees	₩ 31,819	₩ 22,771	₩26,286	₩ —	₩ 875	₩ 81,751
Provisions for unused commitments	34,769	30,973	(5,536)	—	1,444	61,650
Other provisions						
Provisions for asset retirement obligation	18,115	20,256	(369)	(385)	(168)	37,449
Provisions for lawsuits	49,336	25,241	22,215	(45,992)	995	51,795
Others	13,347	3,284	22,325	(15,096)	(2,332)	21,528
	80,798	48,781	44,171	(61,473)	(1,505)	110,772
	₩147,386	₩102,525	₩64,921	₩(61,473)	₩ 814	₩254,173

29.3 Details of guarantees and acceptances as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Acceptances and guarantees		
Financial guarantees in Korean won		
Collateral for loans	₩ 99,667	₩ 108,761
Purchasing loans	557,916	642,090
Others	—	12,576
	657,583	763,427
Financial guarantees in foreign currencies		
Local financial acceptances and guarantees	217,131	1,439,519

29. Contingent liabilities, agreements, and provisions (cont'd)

29.3 Details of guarantees and acceptances as at December 31, 2016 and 2015 are as follows (Korean won in millions): (cont'd)

Classification	December 31, 2016	December 31, 2015
Confirmed acceptance and guarantees in Korean won	₩ 1,847,362	₩ 2,085,206
Confirmed acceptance and guarantees in foreign currencies		
Acceptance on letter of credit	431,957	843,495
Acceptance on letter of guarantees	126,175	120,008
Others	11,712,387	12,763,402
	12,270,519	13,726,905
Contingent acceptance and guarantees		
Letters of credit	3,202,590	3,205,036
Others	281,138	595,272
	3,483,728	3,800,308
Bills endorsed	46,003	40,217
	₩18,522,326	₩21,855,582

29.4 Commitments

Details of unused commitments as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Commitments on loans in Korean won	₩45,655,445	₩65,464,180
Commitments on loans in foreign currencies	25,052,483	24,945,547
Commitments on purchase of asset-backed commercial papers	303,100	49,900
Commitments on credit lines on asset-backed securities	1,229,674	1,252,796
Commitments on purchase of securities	1,232,098	722,751
	₩73,472,800	₩92,435,174

29.5 Lawsuits

As at December 31, 2016, the Company is involved in 228 lawsuits as a plaintiff and 177 lawsuits as a defendant. The aggregate amounts of claims as plaintiff and defendant are ₩400,878 million and ₩352,545 million, respectively. The Company's major lawsuits in progress as a defendant are summarized as follows (Korean won in millions):

		Status of lawsuit		
Plaintiff	Amount	First trial	On appeal	Content
Individual	₩57,015	In-progress	—	Return of deposits
Fairfield Sentry Limited Bankruptcy administrator	40,597	In-progress	—	Return of an illicit gain
Emirates and 4 others	36,230	In-progress	—	Return of deposits
Shinhan Bank	31,701	Partially lost	In-progress	Return of a prepayment
Dongah Construction Industrial, Co., Ltd.	15,169	Lost	In-progress	Return of deposits

30. Other liabilities and merchant banking account liabilities

30.1 Details of other liabilities as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Borrowing from trust accounts	₩ 5,127,806	₩ 4,639,177
Foreign exchanges settlement credits	637,021	493,024
Domestic exchange settlement credits	5,120,057	3,539,358
Accounts payables	9,169,043	9,309,474
Accrued expenses payables	1,403,708	1,537,972
Income in advance	56,982	73,160
Deferred income	987	1,961
Deposits for letter of guarantees and others	256,442	204,294
Suspense receipt	271,101	97,691
Withholding taxes	56,814	66,945
Security deposits received	28,061	71,729
Accounts for agency businesses	158,411	248,068
Liability incurred by agency relationship	1,452,871	1,854,830
Financial acceptance and guarantees	9,466	24,893
Other liabilities	13,982	10,650
	₩23,762,752	₩22,173,226

30.2 Details of merchant banking account liabilities as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Merchant banking account deposits	₩2,405,487	₩2,331,991
Others		
Provision for unused commitments	273	562
Other liabilities (*)	509	748
	782	1,310
	₩2,406,269	₩2,333,301

(*) Including accrued expenses, unearned income and others.

31. Capital stock and other paid-in capital

31.1 Issued capital as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Number of shares authorized (*)	2,000,000,000	2,000,000,000
Par value per share (Korean won)	₩ 5,000	₩ 5,000
Number of shares issued (*)	1,071,915,717	1,071,915,717
Common stock (*)	₩ 5,359,578	₩ 5,359,578

(*) With reference to business combinations of Hana Bank and Korea Exchange Bank under common control, original shareholders listed on the roster of shareholders of Hana Bank, the extinct corporation, as at the merger date (September 1, 2015) received 2.5250728 ordinary shares (par value at KRW 5,000) of KEB, the surviving corporation, per one ordinary share (par value at KRW 5,000) of Hana Bank.

31. Capital stock and other paid-in capital (cont'd)

31.2 Other paid-in capital as at December 31, 2016 and 2015 are as follows (Korea won in millions):

Classification	December 31, 2016	December 31, 2015
Capital surplus (*1)	₩9,668,897	₩9,667,965
Hybrid securities (*2)	179,737	179,737
Capital adjustments		
Stock option	(395)	2,178
Others	(30,390)	(27,312)
	(30,785)	(25,134)
	₩9,817,849	₩9,822,568

(*1) The appropriated amount of other capital surplus as at December 31, 2016 is replaced with the amount recognized in business combinations under common control and stock options that were extinguished (not exercised) and accounted for as capital adjustments.

(*2) There is expiry date of hybrid securities but the Company has the right to continuously extend the maturity and accordingly, the requirements for capital are fulfilled.

32. Accumulated other comprehensive income

Changes in accumulated other comprehensive income for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

	2016				
Classification	January 1, 2016	Increase and decrease	Reclassification	Tax effects	December 31, 2016
Available-for-sale financial assets	₩ 429,411	₩ (76,700)	₩(382,940)	₩111,233	₩ 81,004
Exchange differences on translation of foreign operations	(187,605)	52,986	—	(12,823)	(147,442)
Changes in equities of investments in associates	14,513	(56,579)	(3,081)	14,438	(30,709)
Gain (loss) on valuation of net investment hedges of foreign operations	(15,346)	(18,957)	—	4,588	(29,715)
Remeasurement of the net defined benefit plan	(222,004)	(61,289)	—	14,832	(268,461)
	₩ 18,969	₩(160,539)	₩(386,021)	₩132,268	₩(395,323)

	2015					
Classification	January 1, 2015	Business combination under common control	Increase and decrease	Reclassification	Tax effects	December 31, 2015
Available-for-sale financial assets	₩ 312,567	₩ 257,932	₩(14,008)	₩(172,124)	₩45,044	₩ 429,411
Exchange differences on translation of foreign operations	(155,708)	12,358	(44,255)	—	—	(187,605)
Changes in equities of investments in associates	—	(5,759)	26,744	—	(6,472)	14,513
Gain (loss) on valuation of net investment hedges of foreign operations	—	(3,825)	(15,199)	—	3,678	(15,346)
Remeasurement of the net defined benefit plan	(44,799)	(139,152)	(50,202)	—	12,149	(222,004)
	₩ 112,060	₩ 121,554	₩(96,920)	₩(172,124)	₩54,399	₩ 18,969

33. Retained earnings

33.1 Details of retained earnings as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Legal reserve		
Earned surplus reserve (*1)	₩ 904,400	₩ 862,400
Voluntary reserve		
Revaluation reserves on tangible assets (*2)	414,709	414,709
Other reserves (*3)	137,490	84,310
Regulatory reserve for bad debts (*4)	1,881,607	679,004
Other voluntary reserves	2,338,670	—
	4,772,476	1,178,023
Unappropriated retained earnings	1,565,386	₩4,258,915
	₩7,242,262	6,299,338

(*1) The Korean Banking Law requires the Bank to appropriate at least 10% of net income after income tax to legal reserve, until such reserve equals 100% of its paid-in capital. This reserve is not restricted to the payment of cash dividends; however, it can be used to reduce deficit or be transferred to capital.

(*2) The Bank records gains from revaluation of property and equipment previously recognized as other comprehensive income to the voluntary reserve, as it applies the revaluation amount as deemed cost at the first-time adoption of KIFRS. The reserve is recognized in distributable retained earnings when the relevant property and equipment are disposed.

(*3) Relevant Japanese regulations require the Bank's overseas branches located in Japan to appropriate a minimum of 10% of net income for the period as a legal reserve, until the reserve equals ¥2,000 million. This reserve is restricted to be used upon liquidation of the Japanese branches. Singapore, Hong Kong and Hanoi branches' statutory reserves are included in other reserves in accordance to their regulations.

(*4) The Bank has provided allowances for possible loan losses in accordance with KIFRS. The difference in this amount and the provision of allowance accumulated in accordance to the minimum accumulation ratio required by FSS is reserved as regulatory reserve for bad debts.

33.2 Changes in appropriated retained earnings for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Beginning balance	₩6,299,338	₩6,051,930
Appropriation of other capital adjustments to retained earnings	—	(228)
Net income for the year	1,372,737	421,001
Dividends	(420,000)	(146,384)
Dividends on hybrid securities	(9,813)	(9,814)
Others (*)	—	(17,167)
Ending balance	₩7,242,262	₩6,299,338

(*) For the year ended December 31, 2015, revaluation reserve of tangible assets decreased by ₩17,167 million due to error in modification of land revaluation.

33. Retained earnings (cont'd)

33.3 Dividends

Details of calculation on common stock dividends for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions and shares in units):

	2016 (*1)	2015
Number of shares	1,071,915,717	1,071,915,717
Par value per share (Korean won)	₩ 5,000	₩ 5,000
Dividend ratio	11.20%	7.84%
Dividend per share (Korean won)	559.93	391.82
Dividends	₩ 600,200	₩ 420,000
Net income (*2)	₩ 1,372,737	₩ 421,001
Dividend pay-out ratio based on net income	43.72%	99.76%
Adjusted income after deducting provisions for bad debt reserve (*2)	₩ 1,339,311	₩ 424,326
Dividends pay-out ratio based on adjusted income after deducting provisions for bad debt	44.81%	98.98%

(*1) The dividend for 2016 will be presented at the annual general meeting of shareholders, which is scheduled on March 16, 2017.

(*2) Net income before deducting provisions for bad debt and adjusted income after deducting provisions for bad debt is calculated on the basis of the controlling company's shares.

34. Regulatory reserve for bad debts

Regulatory reserve for bad debts is computed and presented under article 29-1 and 29-2 of the regulation on Supervision of Banking Business of the Republic of Korea.

34.1 Details of regulatory reserve for bad debts as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Beginning balance (*)	₩1,881,607	₩ 679,004
Planned provision for bad debts	33,426	1,202,603
Ending balance	₩1,915,033	₩1,881,607

(*) Before merger, previous reserve for bad loan disposed as retained earnings in merged corporation amounted to ₩1,205,928 million. However, due to the merger during the prior year, it was replaced with capital surplus and it is indicated that there is no reserve for bad loan.

34.2 Provisions for bad debt reserve and income adjusted for deductions of provisions for bad debt for the years ended December 31, 2016 and 2015 are as follows:

Classification	2016	2015
Net income attributable to equity holders of the parent before deducting provisions for bad debt	₩1,372,737	₩421,001
Reversal of (provisions for) bad debt reserve	(33,426)	3,325
Adjusted income after deducting provisions for bad debt	1,339,311	424,326
Basic earnings per share adjusted after reflecting reserve for bad debt (*1) (Korean won)	1,240	590
Diluted earnings per share adjusted after reflecting reserve for bad debt (*2) (Korean won)	1,240	590

(*1) The dividend on hybrid equity securities in the amount of ₩9,813 million and ₩9,814 million for the years ended December 31, 2016 and 2015 were deducted from the adjusted income after reflecting the bad debt reserve for the calculation of earnings per share after reflecting reserve for bad debt for each period.

(*2) Because it does not have dilutive potential ordinary stock, basic earnings per share is the same as diluted earnings per share.

35. Operating income and operating expenses

35.1 Operating income for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Interest income	₩ 7,582,570	₩ 4,648,516
Fees and commission income	801,964	618,129
Gains on financial instruments at FVTPL	16,564,133	8,658,055
Gains on derivative instruments used for hedging	90,810	53,339
Gains on financial instruments available-for-sale	414,594	298,878
Other operating income	3,859,133	2,874,479
	₩29,313,204	₩17,151,396

35.2 Operating expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Interest expenses	₩ 3,253,881	₩ 2,016,169
Fees and commission expenses	193,311	146,227
Losses on financial instruments at FVTPL	16,049,069	8,504,061
Losses on derivative instruments used for hedging	106,897	57,675
Losses on financial instruments available-for-sale	31,995	9,984
Impairment loss of financial instruments	599,774	639,798
General and administrative expenses	3,161,220	2,423,989
Other operating expenses	4,371,088	2,971,703
	₩27,767,235	₩16,769,606

36. Net interest income

36.1 Interest income for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Interest income on due from banks	₩ 85,928	₩ 68,240
Interest income on available-for-sale financial assets	601,382	398,202
Interest income on held-to-maturity financial assets	148,980	93,565
Interest income on financial assets at FVTPL	42,425	26,947
Interest income on loans	6,703,855	4,061,562
	₩7,582,570	₩4,648,516

36. Net interest income (cont'd)

36.2 Interest expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Interest expenses on deposit liabilities	₩2,405,297	₩1,528,860
Interest expenses on borrowings	183,094	134,866
Interest expenses on financial liabilities at FVTPL	13,593	7,443
Interest expenses of debentures	494,049	249,684
Others	157,848	95,316
	₩3,253,881	₩2,016,169

37. Net fees and commission income

37.1 Fees and commission income for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Commissions received from loans and others	₩507,356	₩360,633
Commissions received on guarantee	74,940	61,018
Commissions related foreign exchange	219,668	196,478
	₩801,964	₩618,129

37.2 Fees and commission expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Commissions paid borrowings and others	₩147,404	₩ 98,657
Commissions related foreign exchange	45,907	47,570
	₩193,311	₩146,227

38. Net gain (loss) from financial instruments at fair value through profit or loss

38.1 Details of gain (loss) on financial assets and liabilities at FVTPL for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Gain from financial instruments at FVTPL		
Financial instruments held-for-trading		
Gain on valuation	₩ 3,423	₩ 742
Gain on disposal	29,117	25,658
Gain on redemption	—	31
	32,540	26,431
Derivatives instruments held-for-trading		
Gain on valuation of derivatives		
Currency related derivatives	4,471,221	2,043,004
Interest related derivatives	233,557	224,472
Stock related derivatives	26	1,845
Others	314	17,654
	4,705,118	2,286,975
Gain on transaction of derivatives		
Currency related derivatives	10,662,412	5,830,453
Interest related derivatives	1,145,471	498,321
Stock related derivatives	5,361	5,426
Others	7	7,462
	11,813,251	6,341,662
Gain on securities sold	48	19
	₩16,550,957	₩8,655,087
Loss from financial instruments at FVTPL		
Financial instruments held-for-trading		
Loss on valuation	₩ 3,179	₩ 1,519
Loss on disposal	26,518	16,801
Loss on redemption	19	110
Others	—	60
	29,716	18,490
Derivatives instruments held-for-trading		
Loss on valuation of derivatives		
Currency related derivatives	4,234,144	1,999,966
Interest related derivatives	196,077	226,797
Stock related derivatives	20	387
Others	7,962	421
	4,438,203	2,227,571
Loss on transaction of derivatives		
Currency related derivatives	10,409,179	5,716,563
Interest related derivatives	1,166,472	522,325
Stock related derivatives	4,507	6,403
Others	1	7,295
	11,580,159	6,252,586
Loss on securities sold	523	250
	16,048,601	8,498,897
	₩ 502,356	₩ 156,190

38. Net gain (loss) from financial instruments at fair value through profit or loss (cont'd)

38.2 Details of gain (loss) on financial assets and liabilities designated at FVTPL for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Gain on financial assets and liabilities designated at FVTPL		
Deposits		
Gain on valuation	₩11,098	₩ 684
Gain on disposal	1,380	2,284
	12,478	2,968
Borrowings		
Gain on disposal	698	—
	13,176	2,968
Loss on financial assets and liabilities designated at FVTPL		
Deposits		
Loss on valuation	—	2,696
Loss on disposal	468	1,770
	468	4,466
Borrowings		
Loss on valuation	—	698
	468	5,164
	₩12,708	₩(2,196)

39. Gain (loss) from derivative financial instruments used for hedging

Gain (loss) from derivative instruments used for hedging for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Gain from derivative instruments used for hedging		
Hedged item		
Gain on valuation		
Gain on valuation of debentures	₩ 53,157	₩28,026
Gain on valuation of deposits	18,959	1,939
	72,116	29,965
Gain on transaction		
Gain on transaction of debentures	8,790	3,509
Derivative instruments used for hedging		
Gain on valuation of derivatives		
Gain on valuation of currency related derivatives	670	167
Gain on valuation of interest related derivatives	1,353	17,296
	2,023	17,463
Gain on transaction of derivatives		
Gain on transaction of currency related derivatives	1,775	702
Gain on transaction of interest related derivatives	6,106	1,700
	7,881	2,402
	90,810	53,339
Loss from derivative instruments used for hedging		
Hedged item		
Loss on valuation		
Gain on valuation of debentures	2,617	14,923
Gain on valuation of deposits	—	2,040
	2,617	16,963
Loss on transaction		
Loss on transaction of deposits	6,106	1,017
Derivative instruments used for hedging		
Loss on valuation of derivatives		
Loss on valuation of currency related derivatives	22,033	9,633
Loss on valuation of interest related derivatives	67,013	25,271
	89,046	34,904
Loss on transaction of derivatives		
Loss on transaction of currency related derivatives	333	605
Loss on transaction of interest related derivatives	8,795	4,186
	9,128	4,791
	106,897	57,675
	₩(16,087)	₩(4,336)

40. Gain on available-for-sale financial assets and liabilities

Net income on other financial instruments for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Gain on disposal of available-for-sale financial assets	₩414,594	₩298,878
Loss on disposal of available-for-sale financial assets	31,995	9,984
	₩382,599	₩288,894

41. Impairment loss on financial assets

Impairment loss on financial assets for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Impairment loss of available-for-sale financial assets	₩ 37,110	₩ 35,637
Provision for possible loan losses	551,002	594,680
Provision for possible other asset losses	11,662	9,481
	₩599,774	₩639,798

42. General and administrative expenses

General and administrative expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Salaries	₩1,505,100	₩1,083,683
Retirement benefits	134,579	95,029
Termination benefits	296,441	295,840
Employee welfare benefits	92,500	61,767
Depreciation	140,305	106,710
Amortization	59,816	31,521
Rental expenses	286,579	198,516
Entertainment expenses	24,179	18,024
Taxes and dues	101,447	146,411
Advertising expenses	88,569	71,898
Others	431,705	314,590
	₩3,161,220	₩2,423,989

43. Other operating income

Other operating income for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Gain on disposal of loans	₩ 64,878	₩ 73,004
Reversal of allowances for unused commitments	—	5,536
Trust commissions	113,986	71,918
Gain on foreign exchange transaction	3,567,181	2,630,680
Gain on merchant banking accounts (*)	37,311	50,835
Dividends	54,544	30,307
Others	21,233	12,199
	₩3,859,133	₩2,874,479

43. Other operating income (cont'd)

(*) Details of gain on merchant banking accounts for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Interest income	₩25,956	₩35,491
Fee and commission income	590	964
Gain on disposal of trading bonds	1,033	3,043
Gain on valuation of trading bonds	—	6
Gain on valuation of CMA securities	3	6
Gain on disposal of bills	9,510	11,289
Reversal of impairment loss on loans	—	36
Reversal of provisions for unused commitments	219	—
	₩37,311	₩50,835

44. Other operating expenses

Other operating expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Loss on disposal of loans	₩ 9,721	₩ 25,754
Provision of allowances for acceptance and guarantees transferred	61	26,286
Provision of unused commitments transferred	8,800	—
Other provisions transferred	62,816	44,171
Contribution to Korea Credit Guarantee Fund	278,149	196,421
Insurance fee on deposit	294,801	158,038
Loss on foreign exchange transaction	3,677,106	2,476,745
Loss on merchant banking accounts (*)	25,678	37,827
Others	13,956	6,461
	₩4,371,088	₩2,971,703

(*) Details of loss on merchant banking accounts for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Interest expenses	₩25,459	₩38,068
Impairment on loans	24	—
Reversal of provision for unused commitments	—	(402)
Others	195	161
	₩25,678	₩37,827

45. Other non-operating income

Other non-operating income for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Rental fee income	₩ 11,168	₩ 5,336
Gain on disposal of property and equipment	90,933	7,103
Gain on disposal of intangible asset	165	157
Reversal of impairment loss on intangible asset	—	19
Gain on disposal of investments in associates	65,428	8,672
Gain on equity method	59,094	75,898
Reversal of impairment loss on investments in associates	26,494	—
Others	72,684	70,962
	₩325,966	₩168,147

46. Other non-operating expenses

Other non-operating expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Loss on disposal of property and equipment	₩ 8,866	₩ 2,344
Loss on disposal of intangible asset	172	468
Loss on equity method	16,922	512
Collection expenses for written-off claims	2,029	749
Collection commissions for written-off claims	3,630	1,681
Loss on disposal of investments in associates	22,958	—
Impairment loss on investments in associates	—	26,494
Donations	17,971	21,989
Others	36,276	13,203
	₩108,824	₩67,440

47. Income tax expenses

47.1 The components of income tax expenses for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Current income taxes		
Income taxes	₩281,719	₩ 39,152
Additional refund of prior year's income tax	(25,349)	(39,675)
Changes in deferred income tax assets	29,114	26,248
Current and deferred income taxes recognized directly to equity	144,180	63,182
Tax effect of consolidated tax returns	(46,724)	(39,444)
Income tax expenses	₩382,940	₩ 49,463

47. Income tax expenses (cont'd)

47.2 Reconciliations of income tax expenses applicable to the net income before income tax expenses at the Korea statutory tax rate to income tax expenses at the effective income tax rate of the Company for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Net income before income tax expenses	₩1,763,111	₩482,497
Tax at domestic statutory income tax rate (*)	426,211	116,302
Non-taxable income	(5,271)	(3,363)
Expenses not deductible for tax purposes	6,719	3,705
Tax credit	(13,317)	(17,163)
Income tax expenses of foreign branches and subsidiaries	33,002	6,270
Tax effect of consolidated tax return	(46,724)	(39,444)
Additional refund of prior year's income tax	(25,349)	(39,675)
Others	7,669	22,831
Income tax expenses	₩ 382,940	₩ 49,463
Effective income tax rate (%)	21.72	10.25

(*) 11% is applied to income under ₩200 million, 22% is applied to income exceeding ₩200 million and under ₩20 billion, and 24.2% is applied to income above ₩20 billion.

47.3 Temporary differences and deferred income tax assets (liabilities) as of December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016	
Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 712,522	₩ 172,454
Impairment loss on securities	7,688	1,691
Valuation of investment in associates	(340,138)	(82,313)
Gain on valuation of derivatives	(369,414)	(89,398)
Deemed dividends	29,631	7,171
Deferred loan fees, net of expenses	(265,486)	(64,248)
Accrued interest income	(216,148)	(52,308)
Accrued expenses	122,121	29,552
Provisions on acceptance and guarantees	81,048	19,614
Severance and retirement insurance	(1,172,918)	(283,846)
Severance and retirement benefit liabilities	1,173,013	283,867
Other provisions	190,062	45,995
Loans written-off	348,321	83,781
Depreciation	(23,016)	(5,570)
Fair value valuation resulting from merger	32	8
Dormant deposits	17,795	4,306
Allowance for advanced depreciation	(180,315)	(43,636)
Deemed cost for property and equipment	(1,003,274)	(242,792)
Available-for-sale securities	(160,278)	(38,787)
Net loss carried over	102,427	22,534
Financial guarantee contract	(3,302)	(799)
Deferred reward points income	987	239
Others	(95,466)	(23,101)
	₩(1,044,108)	₩(255,586)
Domestic deferred income tax assets (*1)		28,310
Domestic deferred income tax liabilities (*1)		(283,896)
Foreign deferred income tax assets (*2)		33,755
Foreign deferred income tax liabilities (*2)		(4,672)
		₩(226,503)

47. Income tax expenses (cont'd)

47.3 Temporary differences and deferred income tax assets (liabilities) as of December 31, 2016 and 2015 are as follows (Korean won in millions): (cont'd)

	December 31, 2015	
Classification	Deductible (taxable) temporary differences	Deferred income tax assets (liabilities)
Gain or loss on valuation of securities	₩ 220,611	₩ 53,420
Impairment loss on securities	483,617	116,896
Valuation of Investment in associates	(256,040)	(61,962)
Gain on valuation of derivatives	(126,900)	(30,710)
Deemed dividends	6,503	1,574
Deferred loan fees, net of expenses	(250,701)	(60,670)
Accrued interest income	(222,334)	(53,805)
Accrued expenses	110,524	26,747
Provisions of acceptance and guarantees	80,064	19,375
Deposit for severance and retirement benefits	(1,069,327)	(258,777)
Severance and retirement benefit liabilities	1,141,833	276,324
Allowance for other losses	150,204	36,349
Loans written-off	315,404	75,466
Depreciation	63,035	15,254
Fair value valuation resulting from merger	(15,880)	(3,843)
Dormant deposits	9,074	2,196
Allowance for advanced depreciation	(180,315)	(43,636)
Deemed cost for property and equipment	(582,787)	(141,034)
Available-for-sale financial assets	(569,087)	(137,719)
Net loss carried over	84,119	18,506
Investment in kind at KEB China	18,479	4,472
Financial guarantee contract	22,966	5,558
Deferred reward points income	1,961	474
Others	(344,713)	(83,436)
	₩ (909,690)	₩(222,981)
Domestic deferred income tax assets (*1)		28,360
Domestic deferred income tax liabilities (*1)		(251,341)
Foreign deferred income tax assets (*2)		28,256
Foreign deferred income tax liabilities (*2)		(2,664)
		₩(197,389)

(*1) Deferred income tax asset is from domestic subsidiaries excluded from the consolidated tax return and overseas branches. It was not offset with deferred income tax liability as the tax authorities differ between subsidiaries.
(*2) Deferred income tax assets of foreign branches are not offset against the deferred income tax liabilities due to the differences in tax jurisdictions.

The effective income tax rate of 24.2% as at December 31, 2016, is applied when calculating deferred income tax assets or liabilities. Also, deferred income tax assets are recognized when it is foreseeable that future taxable income will be incurred and that future tax credits will be realized.

47. Income tax expenses (cont'd)

47.4 Details of deferred income taxes charged (credited) directly to equity as of December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016 Before tax amounts	December 31, 2016 Deferred income tax assets (liabilities)
Gain (loss) on valuation of available-for-sale financial assets	₩ 106,865	₩(25,862)
Changes in equity in equity method	(40,514)	9,805
Exchange differences on translation of foreign operations	(194,513)	47,072
	₩(128,162)	₩ 31,015

Classification	December 31, 2015 Before tax amounts	December 31, 2015 Deferred income tax assets (liabilities)
Gain (loss) on valuation of available-for-sale financial assets	₩566,505	₩(137,094)
Remeasurement of the net defined benefit liability	(98,880)	23,929
	₩467,625	₩(113,165)

48. Earnings per share

48.1 Weighted-average number of ordinary shares for the years ended December 31, 2016 and 2015 are as follows (shares in units):

Classification	2016	2015
Beginning	1,071,915,717	516,873,174
Share exchange	—	39,844
New issue of stock	—	185,509,821
Ending	1,071,915,717	702,422,839

Since the Company does not have dilutive potential ordinary stock, the weighted average number of shares of ordinary stock outstanding per basic share is the same as the weighted average number of shares of ordinary stock outstanding per diluted share.

48.2 The Company's basic earnings per share for the years ended December 31, 2016 and 2015 are calculated as follows (Korean won in millions and per share amounts in units):

Classification	2016	2015
Net income attributable to equity holders of the parent for the year	₩ 1,372,737	₩ 421,001
Dividends on hybrid equity securities	(9,813)	(9,814)
Net income attributable to common stock	1,362,924	411,187
Weighted-average number of shares of ordinary stocks outstanding	1,071,915,717	702,422,839
Basic earnings per share (Korean won) (*)	1,271	585

(*) Basic earnings per share (EPS) are the same as diluted EPSs for the years ended December 31, 2016 and 2015.

49. Share-based payment

When the stock options are exercised, the Company has the option to settle either through issuance of new shares or treasury stock or through payment of cash equivalents to the difference between the market price and the exercise price. The number of exercisable stock option is determined in accordance with management performance and the calculation criteria for the number of exercisable shares. Also, the Company granted the equity-linked special incentive (Rose Bonus and\or Rose Share) to employees for the purpose of motivation to improve long-term performance. The equity-linked special incentive is settled in cash. It can be exercised from 1 to 3 years after the grant date for the following 3 to 4 years.

Details of the share-based payment as at December 31, 2016 are as follows.

Stock options are measured at fair value based on Black-Scholes model (in Korean won and share in units):

Grant date	Exercise period	Risk-free rate	Expected service period	Volatility of the underlying stock price	Expected dividends	Stock price at grant date	Fair value
2010-03-10	2013-03-11 ~ 2017-03-10	1.16%	7.01	23.01%	₩630	₩13,450	₩—
2010-03-30	2013-03-31 ~ 2017-03-30	1.16%	7.01	25.51%	630	13,600	—
2010-08-04	2013-08-05 ~ 2017-08-04	1.16%	7.01	29.14%	630	12,300	—
2010-09-29	2013-09-29 ~ 2017-09-28	1.16%	7.01	29.83%	630	13,550	—
2011-08-10	2014-08-11 ~ 2018-08-10	1.59%	7.01	29.67%	630	8,060	164
2011-08-26	2014-08-27 ~ 2018-08-26	1.59%	7.01	29.85%	630	7,720	239
2011-09-02	2014-09-03 ~ 2018-09-02	1.59%	7.01	30.41%	630	7,930	268

Changes in shares of stock options for the year ended December 31, 2016 are as follows (Korean won and share):

Grant date	Shares at the beginning	Exercise	Divesture	Extinction at maturity	Shares at the end	Stock option outstanding	Exercise price
2009-03-12	252,705	—	(252,705)	—	—	—	₩ —
2009-08-04	415,610	—	(415,610)	—	—	—	—
2010-03-10	312,350	—	—	—	312,350	312,350	13,200
2010-03-30	237,140	—	—	—	237,140	237,140	13,500
2010-08-04	251,890	—	—	—	251,890	251,890	12,400
2010-09-29	17,810	—	—	—	17,810	17,810	13,500
2011-08-10	333,000	—	—	—	333,000	333,000	9,100
2011-08-26	42,290	—	—	—	42,290	42,290	8,500
2011-09-02	11,250	—	—	—	11,250	11,250	8,400
	1,874,045	—	(668,315)	—	1,205,730	1,205,730	

There is no exercise of the stock options for the year ended December 31, 2016.

Weighted average residual expiration of exercisable stock options is 0.75 years as at December 31, 2016.

49. Share-based payment (cont'd)

Equity-linked special incentives are measured at fair value based on the binomial model and become exercisable from 1 to 3 years after the grant date for the following 3 to 4 years. Details of the equity-linked special incentives as at December 31, 2016 are as follows (shares in units):

Classification	Grant date	Exercise period	Payment date	Stock options outstanding
Rose share 8-1	2012-02-21	2013-02-22~2017-02-21	2013-02-22	1,685
Rose share 8-2	2012-02-21	2014-02-22~2017-02-21	2014-02-22	3,935
Rose share 9-1	2012-02-21	2013-02-22~2017-02-21	2013-02-22	715
Rose share 9-2	2012-02-21	2014-02-22~2017-02-21	2014-02-22	19,095
				25,430

Changes in shares of equity linked special incentives for the years ended December 31, 2016 and 2015 are as follows (shares in units):

Classification	Number of shares 2016	2015
Beginning	132,645	244,505
Divesture	(1,290)	(6,540)
Number of shares exercised	(105,925)	(105,320)
Ending	25,430	132,645

Weighted average stock price of equity linked special incentives at the exercise date is in the amount of ₩4,782 for the year ended December 31, 2016.

Weighted average residual maturity of equity linked is 0.14 years as at December 31, 2016.

Hana Financial Group (HFG) provided the Company's employees with stock rights and stock grants linked to performance and computed the compensation costs by applying the fair value approach. Details of share-based payment arrangement and share-based payment linked to performance as at December 31, 2016 are as follows:

Classification	4th	5th	6th
Grant date	2014-01-01	2015-01-01	2016-01-01
Grant method	Either share or cash settlement selected by HFG		
Grant period	2014-01-01~2016-12-31	2015-01-01~2017-12-31	2016-01-01~2018-12-31
Payment date	2016-12-31	2017-12-31	2018-12-31
Shares at settlement date (*)	253,322	261,160	174,230

(*) The maximum number of shares to be compensated is pre-determined before the grant date, and vested shares are determined by performance measures. The performance assessment consists of the group performance assessment (relative shareholder return) constituting 40% and the business unit performance assessment (unit ROE, ROIC) constituting 60% of the total performance scorecard.

Details of liabilities related to share-based payment and total intrinsic value of rights accounted for as accounts payable in case that option holders achieve rights to receive cash or other assets as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Book value of liabilities related to share-based payment		
Stock options	₩ 68	₩ 20
Equity-linked special incentives (granted by the Bank)	481	1,967
Equity-linked special incentives (granted by HFG)	22,955	9,405
	₩23,504	₩11,392

49. Share-based payment (cont'd)

The compensation costs for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Costs recognized due to share-based payment		
Stock options	₩ 48	₩ (176)
Equity-linked special incentive (granted by the Bank)	94	6
Equity-linked special incentive (granted by HFG)	14,399	3,375
	₩14,541	₩3,205

50. Cash flow information

50.1 Details of cash and cash equivalents as at December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	December 31, 2016	December 31, 2015
Cash	₩ 2,129,539	₩ 2,246,853
Due from banks in Korean won	16,184,880	6,634,055
Due from banks In foreign currencies	9,237,151	8,144,705
	27,551,570	17,025,613
Less: restricted balances Restricted due from bank	18,465,507	9,846,375
Due from bank which have a maturity period of three months or above	472,267	308,002
	₩ 8,613,796	₩ 6,871,236

50.2 Significant non–cash transactions for the years ended December 31, 2016 and 2015 are as follows (Korean won in millions):

Classification	2016	2015
Unrealized loss on valuation of available-for-sale financial assets	₩(459,640)	₩(186,132)
Transfer from property and equipment to investment properties	92,723	34,836
Transfer from loans to available-for-sale financial assets resulting from debt-to-equity swap	204,506	50,405

51. Related parties

51.1 Equity interests among the Company and its affiliates as at December 31, 2016 are summarized as follows (shares in units):

Type	Related Parties
Controlling company	HFG
Investment in an associate	Bank of Jilin
	Hana First Private Equity Fund
	Korea Credit Bureau
	Darby Hana Infrastructure Fund Management
	CM International financing leases
	Somesevit Corporation
	Midan City Development Co., Ltd.
	Masan Marine New Town Co., Ltd.
	Company K Startup winwin fund
	KEB Mirae Asset First Securitization Specialty Co., Ltd.
	KEB Mirae Asset Second Securitization Specialty Co., Ltd.
	PT Sinarmas Hana Finance

51. Related parties (cont'd)

51.1 Equity interests among the Company and its affiliates as at December 31, 2016 are summarized as follows (shares in units): (cont'd)

Type	Related Parties
Entity under common control	Hana Financial Investment Co., Ltd.
	Hana Card Co., Ltd. (formerly, Hana SK Card Co., Ltd.)
	Hana Capital Co., Ltd.
	Hana Asset Trust Co., Ltd.
	Hana Asset Management Co., Ltd.
	Hana I&S Co., Ltd.
	Hana Institute of Finance
	Hana Life Insurance Co., Ltd.
	Hana Savings Bank
	Hana Investors Services Company
	Hana Futures Co., Ltd.
Other related parties	Odin2 LLC.
	Jungbu BIO Energy Co., Ltd.
	Advanced&Different Credit Information Co., Ltd.
	Mirae Credit Information Services Corp.
	UBS Hana Asset Management Co., Ltd.
	Plakor Co., Ltd.
	F&U Credit Information
	Hana Lantern Energy Factory Private Equity Fund
	Hana AIM Co., Ltd.
	HN housing Co., Ltd.
	The hue Company Ltd.

51.2 Transactions with related parties for the years ended December 31, 2016 and 2015 are summarized as follows (Korean won in millions):

	2016						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company							
HFG	₩—	₩ 5,584	₩ 2,196	₩—	₩ 22	₩ —	₩ 12
Investment in associates							
UAMCO., Ltd.	—	1	—	—	—	—	—
Korea Credit Bureau	—	—	—	—	16	—	—
Darby Hana Infrastructure Fund Management	—	—	431	—	149	—	—
Hyundai Cement Co., Ltd.	—	17	—	—	6	—	—
Hana First Private Equity Fund	—	13	—	—	33	—	—
Masan Marine New Town Co., Ltd.	95	10	—	3	4	—	—
Midan City Development Co., Ltd.	—	—	—	—	400	—	—
Company K startup winwin fund	—	—	—	—	16	—	—
	95	41	431	3	624	—	—
Entities under common control							
Hana Financial Investment Co., Ltd.	27	1,547	19,441	—	807	—	14,607
Hana Card Co., Ltd.	4	71,583	391	—	1,978	3,337	511
Hana Capital Co., Ltd.	3	326	178	16	81	—	33
Hana Asset Trust Co., Ltd.	—	16	—	—	379	—	—
Hana Asset Management Co., Ltd.	—	1	—	—	157	—	—
Hana I&S Co., Ltd.	—	—	19	—	137	44,407	—
Hana Institute of Finance	—	—	—	—	10	6,196	—
Hana Life Insurance Co., Ltd.	—	12,830	102	—	—	—	20
Hana Investors Services Company	—	—	71	—	104	—	51
	₩ 34	₩86,303	₩20,202	₩ 16	₩3,653	₩53,940	₩15,222

51. Related parties (cont'd)

51.2 Transactions with related parties for the years ended December 31, 2016 and 2015 are summarized as follows (Korean won in millions): (cont'd)

	2016						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties							
Odin2 LLC.	₩123	₩ 1	₩ —	₩25,973	₩ —	₩ —	₩ —
Jungbu BIO Energy Co., Ltd.	—	—	—	—	25	—	—
Advanced&Different Credit Information Co., Ltd.	—	—	—	—	13	—	—
Finnq Co., Ltd.	—	—	—	—	3	—	—
Mirae Credit Information Services Corp.	—	10	—	—	122	718	—
UBS Hana Asset Management Co., Ltd.	—	1	—	—	18	1	359
Plakor Co., Ltd.	304	17	—	20	226	—	—
F&U Credit Information	—	3	—	—	—	—	—
Hana Lantern Energy Factory Private Equity Fund	—	1	—	—	—	—	—
HN housing Co., Ltd.	20	—	—	7	6	—	—
Thehue Company Ltd.	307	2	—	50	—	—	—
	754	35	—	26,050	413	719	359
	₩883	₩91,963	₩22,829	₩26,069	₩4,712	₩54,659	₩15,593

	2015						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Controlling company							
HFG	₩—	₩ —	₩ 3,201	₩ —	₩ 40	₩ —	₩ 25
Investment in associates							
UAMCO, Ltd.	—	36	—	—	—	—	9
Korea Travels Co., Ltd.	—	31	—	—	17	—	—
Korea Credit Bureau	—	—	—	—	25	—	—
Darby Hana Infrastructure Fund Management	—	—	—	—	50	—	—
Hyundai Cement Co., Ltd.	42	4	62	(422)	8	—	—
Hana the First PEF	—	—	—	—	9	—	—
Masan Marine New Town Co., Ltd.	85	81	2	(4)	7	—	—
Midan City Development Co., Ltd.	—	25	—	—	50	—	—
	127	177	64	(426)	166	—	9
Entities under common control							
Hana Financial Investment Co., Ltd.	15	1,515	27,928	—	5,402	—	12,180
Hana Card Co., Ltd.	42	49,031	31,872	—	2,582	—	196
Hana Capital Co., Ltd.	32	7	301	(49)	100	—	11
Hana Asset Trust	—	—	2	—	882	—	—
Hana Asset Management	—	—	—	—	141	—	—
Hana I&S Co., Ltd.	—	—	206	—	17	33,637	—
Hana Institute of Finance	—	—	12	—	15	4,654	—
Hana Savings Bank	—	—	40	—	—	—	17
Hana Life Insurance	—	4,186	17,243	—	544	—	6
Hana Bancorp.	—	—	—	—	—	151	—
	89	54,739	77,604	(49)	9,683	38,442	12,410

51. Related parties (cont'd)

51.2 Transactions with related parties for the years ended December 31, 2016 and 2015 are summarized as follows (Korean won in millions): (cont'd)

	2015						
	Income			Expense			
Classification	Interest income	Fee and commission income	Other income	Bad debt expense	Interest expenses	Fee and commission expenses	Other expenses
Other related parties							
Warden 1 SPC Ltd.	—	—	—	—	23	—	—
Radian 1 SPC Co., Ltd.	1	—	—	—	—	—	—
Saenggakdaero T 17th Securitization Specialty Co., Ltd.	—	6	—	—	268	—	—
Odin2 LLC.	372	3	—	12	—	—	—
Doosan Capital Co., Ltd.	125	—	—	(31)	6	—	—
Mirae Credit Information Services Corp.	—	—	—	—	110	208	—
UBS Hana Asset Management Co., Ltd.	90	—	—	—	14	—	—
Plakor Co., Ltd.	130	3	—	(2)	88	—	—
LIG Nex1 Co., Ltd.	2	82	—	(1)	—	—	9
Sambo Moters Co., Ltd.	34	—	—	—	—	—	—
AJ Rent a Car Co., Ltd.	174	62	—	(6)	—	—	—
	928	156	—	(28)	509	208	9
	₩1,144	₩55,072	₩80,869	₩340	₩10,537	₩38,650	₩12,453

51.3 Details of fund transactions for the year ended December 31, 2016 are as follows (Korean won in millions):

Type	Related parties	Loan transaction	Borrowing transaction	Investment in cash
Controlling company	HFG	₩ —	₩ 14,218	₩ —
Investment in associates	UAMCO., Ltd.	—	(3)	—
	Korea Credit Bureau	—	97	—
	Darby Hana Infrastructure Fund Management	—	1,614	—
	CM International financing leases	—	—	66,968
	Hyundai Cement Co., Ltd.	—	206	—
	Hana First Private Equity Fund	—	1,054	—
	Masan Marine New Town Co., Ltd.	—	(2)	—
	Midan City Development Co., Ltd.	—	5,037	—
	Company K Startup winwin fund	—	900	1,000
		—	8,903	67,968
Entities under common control	Hana Financial Investment Co., Ltd.	—	(950,973)	—
	Hana Card Co., Ltd.	—	18,035	—
	Hana Capital Co., Ltd.	(10,000)	(2,818)	—
	Hana Asset Trust Co., Ltd.	—	(612,201)	—
	Hana Asset Management Co., Ltd.	—	(1,257)	—
	Hana I&S Co., Ltd.	—	14,323	—
	Hana Institute of Finance	—	(218)	—
	Hana Life Insurance Co., Ltd.	—	(11)	—
	Hana Investors Services Company	—	8,882	—
		₩(10,000)	₩(1,526,238)	₩ —

51. Related parties (cont'd)

51.3 Details of fund transactions for the year ended December 31, 2016 are as follows (Korean won in millions): (cont'd)

Type	Related parties	Loan transaction	Borrowing transaction	Investment in cash
Other related parties	Warden 1 SPC Ltd.	₩ —	₩ 4	₩ —
	Radian1SPC Co., Ltd.	—	187	—
	Hana Financial Investment Co., Ltd.	—	(4,394)	—
	Odin2 LLC.	(25,151)	—	—
	Doosan Capital Co., Ltd.	—	108	—
	Mirae Credit Information Services Corp	—	6,771	—
	UBS Hana Asset Management Co., Ltd.	—	1,000	—
	Plakor Co., Ltd.	—	82	—
	Mirae Credit Information Services Corp.	—	1,768	—
	UBS Hana Asset Management Co., Ltd.	—	(5,589)	—
	Plakor Co., Ltd.	(1,475)	613	—
	Hana Lantern Energy Factory private Equity Fund	—	76	—
	Hana AIM Co., Ltd.	—	56	—
	HN housing Co., Ltd.	1,700	728	—
	Thehue Company Ltd.	6,244	15	—
		(18,682)	1,425	—
Key management personnel		1,861	9,743	—
		₩(26,821)	₩(1,491,949)	₩67,968

51.4 Outstanding balances with related parties arising from the above transactions as at December 31, 2016 and 2015 are summarized as follows (Korean won in millions):

		December 31, 2016				
Type	Related parties	Loans	Others bonds	Allowance for possible loan losses	Deposit	Others liabilities
Controlling company	HFG	₩ —	₩19,047	₩—	₩21,980	₩104,589
Investment in associates	Korea Credit Bureau	—	—	—	2,114	—
	Darby Hana Infrastructure Fund Management	—	11,581	—	10,275	—
	Hyundai Cement Co., Ltd.	—	—	—	959	—
	Hana First Private Equity Fund	—	—	—	1,252	—
	Masan Marine New Town Co., Ltd.	1,513	—	—	761	—
	Midan City Development Co., Ltd.	—	—	—	22,644	—
	Company K startup winwin fund	—	—	—	900	—
		1,513	11,581	—	38,905	—

51. Related parties (cont'd)

51.4 Outstanding balances with related parties arising from the above transactions as at December 31, 2016 and 2015 are summarized as follows (Korean won in millions): (cont'd)

		December 31, 2016				
Type	Related parties	Loans	Others bonds	Allowance for possible loan losses	Deposit	Others liabilities
Entities under common control	Hana Financial Investment Co., Ltd.	—	29,247	—	213,695	11,123
	Hana Card Co., Ltd.	—	85	—	209,377	72,934
	Hana Capital Co., Ltd.	—	—	—	12,075	3,980
	Hana Asset Trust., Ltd.	—	—	—	35,399	86
	Hana Asset Management Co., Ltd.	—	—	—	14,093	26
	Hana I&S Co., Ltd.	—	—	—	20,694	3
	Hana Institute of Finance	—	—	—	2,178	490
	Hana Life Insurance Co., Ltd.	—	964	—	—	1,569
	Hana Investors Services Company	—	—	—	8,885	5,369
		—	30,296	—	516,396	95,580
Other related parties	Warden 1 SPC Ltd.	—	—	—	4	—
	Radian1SPC Co., Ltd.	—	—	—	195	—
	Odin2 LLC.	2,237	—	111	—	—
	Doosan Capital Co., Ltd.	—	—	—	141	—
	Jungbu BIO Energy Co., Ltd.	—	—	—	6,771	—
	Advanced&Different Credit Information Co., Ltd.	—	—	—	1,000	—
	Finnq Co., Ltd.	—	—	—	82	—
	Mirae Credit Information Services Corp	—	—	—	9,725	—
	UBS Hana Asset Management Co., Ltd.	—	—	—	226	—
	Hana Lantern Energy Factory Private Equity Fund	—	—	—	76	—
	Hana AIM Co., Ltd.	—	—	—	56	300
	HN housing Co., Ltd.	1,700	—	7	728	—
	Thehue Company Ltd.	6,244	—	97	15	—
		10,181	—	215	19,019	300
Key management personnel		4,803	—	—	11,896	—
		₩16,497	₩60,924	₩215	₩608,196	₩200,469

51. Related parties (cont'd)

51.4 Outstanding balances with related parties arising from the above transactions as at December 31, 2016 and 2015 are summarized as follows (Korean won in millions): (cont'd)

		December 31, 2015				
Type	Related parties	Loans	Others bonds	Allowance for possible loan losses	Deposit	Others liabilities
Controlling company	HFG	₩ —	₩65,662	₩—	₩ 7,762	₩ 27,915
Investment in associates	UAMCO., Ltd.	—	—	—	3	—
	Korea Travels Co., Ltd.	—	—	—	5,753	—
	Korea Credit Bureau	—	—	—	2,018	—
	Darby Hana Infrastructure Fund Management	—	9,413	—	8,660	—
	Hyundai Cement Co., Ltd.	—	—	—	753	—
	Hana Equity Partners I, L.P	—	—	—	198	—
	Masan Marine New Town Co., Ltd.	1,513	8	(3)	763	19
	Midan City Development Co., Ltd.	—	—	—	17,608	—
		1,513	9,421	(3)	35,756	19
Entities under common control	Hana Financial Investment Co., Ltd.	—	21,700	—	1,172,807	2,369
	Hana Card Co., Ltd.	—	83	—	191,343	43,839
	Hana Capital Co., Ltd.	10,000	—	16	14,893	499
	Hana Asset Trust Co., Ltd.	—	—	—	647,600	11
	Hana Asset Management Co., Ltd.	—	—	—	15,350	—
	Hana I&S Co., Ltd.	—	—	—	6,371	—
	Hana Institute of Finance	—	—	—	2,396	—
	Hana Savings Bank	—	—	—	—	930
	Hana Life Insurance Co., Ltd.	—	1,116	—	12	19,535
		10,000	22,899	16	2,050,772	67,183
Other related parties	Warden 1 SPC Ltd.	—	—	—	29	—
	Radian 1 SPC Co., Ltd	—	—	—	9	—
	Odin2 LLC.	27,388	1	300	—	—
	Doosan Capital Co., Ltd.	—	—	—	33	—
	Mirae Credit Information Services Corp.	—	—	—	7,958	—
	UBS Hana Asset Management Co., Ltd.	—	—	—	5,816	—
	Plakor Co., Ltd.	11,125	—	45	251	12,125
	Najeon Co., Ltd.	—	—	—	248	—
	Sambo Moters Co., Ltd.	3,000	—	17	—	—
	AJ Rent a Car Co., Ltd.	20,833	—	34	198	—
		62,346	1	396	14,542	12,125
Key management personnel		2,941	—	—	2,153	—
		₩76,800	₩97,983	₩415	₩2,110,985	₩107,242

51. Related parties (cont'd)

51.5 Guarantees and acceptances and collateral provided between controlling company and subsidiaries as at December 31, 2016 and 2015 are as follows (Korean won in millions):

	December 31, 2016		
Company	Classification	Limit	Counterparty
KEB Hana Bank	Guarantees and acceptances denominated in foreign currencies	₩ 2,417	Hana Card Co., Ltd.
Hana Capital Co., Ltd.	Collateral provided	365,231	KEB Hana Bank
KEB Hana Card Co., Ltd.	Collateral provided	3,000	KEB Hana Bank

	December 31, 2015		
Company	Classification	Limit	Counterparty
KEB Hana Bank	Guarantees and acceptances denominated in foreign currencies	₩ 2,344	Hana Card Co., Ltd.
KEB Hana Bank	Guarantees and acceptances denominated in Korean won	1,000	Plakor Co., Ltd.
Hana Capital Co., Ltd.	Collateral provided	365,118	KEB Hana Bank
KEB Hana Card Co., Ltd.	Collateral provided	3,275	KEB Hana Bank

51.6 Details of compensation for standing directors and executive officers for the years ended December 31, 2016 and 2015 are summarized as follows (Korean won in millions of people in units):

Classification	2016	2015
Short-term employee payment	₩ 7,002	₩9,881
Severance payment	797	2,374
Stock options	13,559	923

52. Merger of (former) Hana bank and (former) KEB

Hana Bank and KEB agreed on the merger at the Board of Director's meeting on October 29, 2014. The merger date is September 1, 2015, and KEB became the surviving corporation, and changed the corporate name from KEB to Hana Bank.

With reference to business combinations of Hana Bank and Korea Exchange Bank under common control, the original shareholders listed on the roster of shareholders of Hana Bank, the extinct corporation, as at the merger date (September 1, 2015) received 2.5250728 ordinary shares (par value at KRW 5,000) of KEB, the surviving corporation, per one ordinary share (par value at KRW 5,000) of Hana Bank.

52.1 Accounting treatment after merger

With reference to business combinations of Hana Bank and Korea Exchange Bank under common control, the accounting treatment is conducted using book values of assets and liabilities from the ultimate controlling company's consolidated financial statement.

52.2 Summary of financial information of the merged corporation (Korean won in millions):

	Assets	Liabilities	Equity	Revenue	Net income	Comprehensive income
(former) Hana Bank	₩183,247,615	₩170,190,497	₩13,057,118	₩757,240	₩641,317	₩553,407

INDEX OF DEFINED TERMS

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