



## GLOBAL PROJECT BONDS MARKET OVERVIEW

### Recently closed transactions

#### ENERGY

- **Northern Courier Pipeline (NCPLP):** C\$1,000MM in 23-year senior secured notes backing the 90km pipeline system that connects the Fort Hills oil sands site and Suncor Energy's bitumen / diluent storage terminal located in Fort McMurray, Alberta. The notes priced at a 3.365% coupon. NCPLP holds a 25-year pipeline transportation services agreement with Fort Hills Energy, which is a partnership between Suncor Energy, Total and Teck Resources. (Sponsor: TransCanada Pipelines)
- **Casalduni Onshore Wind Farm:** €13MM in 7-year senior secured notes to finance the construction of a 36MW grid-parity onshore wind located near Benevento in the south of Italy. The assets are managed by Renexia, the renewables subsidiary of Italian EPC firm Toto Holdings. The bonds priced at a 8.250% coupon and are listed on the Vienna Stock Exchange. (Sponsor: Renexia)
- **Ergon Peru S.A.C. (-- / BBB / --):** \$222MM in 15-year 4(a)(2) senior secured green bonds were issued to refinance the installation of 172,890 solar and storage systems for residential consumers, schools and health facilities in Peruvian off-grid rural areas as well as to finance the installation of 40,551 additional systems. The notes priced at a 4.870% coupon. (Sponsors: Tozzi Green and Gardini)
- **Northfield Mountain (-- / BBB / --):** \$650MM in 15-year senior secured notes backing the 1,168MW Northfield Mountain hydro power plant located in Massachusetts. The bullet notes priced at a 4.500% coupon. (Sponsor: Public Sector Pension Investments Board (PSP)) **Crédit Agricole CIB acted as Co-placement Agent.**
- **Glennmont Partners' Renewable Energy Backed Security (REBS):** €51MM in asset-backed security (ABS) monetizing a portfolio of project finance loans related to 14 wind and solar projects in Italy with a total capacity of 67MW. The transaction included a €41.8MM floating rate senior notes issuance and a €9.6MM floating rate and variable return junior notes issuance. (Sponsor: Glennmont Partners)
- **Niigata Solar:** ¥16,000MM in 20-year green senior secured notes backed by 45MW Niigata solar farm located in north-eastern Japan. The proceeds of the notes will be used to refinance previous project finance loans. The notes priced at a 1.200% coupon. The Niigata solar farm holds a 18-year power purchase agreement with Tohoku Electric Power. (Sponsor: Etrion)
- **Jackson Generation CCGT Plant:** \$100MM in senior secured notes issued within the total hybrid financing of \$790MM backing the construction of the 1.2GW Jackson Generation CCGT located in Will County, Illinois. \$690MM was composed of bank loans. The project has a five-year revenue put provided by J. Aron, the commodities arm of Goldman Sachs. Capital structure for the project implies a 50:50 debt-to-equity ratio. (Sponsor: J-Power)

#### INFRASTRUCTURE

- **East Midlands Housing Group:** £100MM in senior secured private placement loan to finance the construction of 2,600 affordable properties in the United Kingdom. The transaction was issued in three tranches with: 33, 35 and 40 years tenor. The funds were provided by Pension Insurance Corporation, that has already invested over £1.5BN in social housing. (Sponsor: East Midlands Housing Group)
- **CDG Express PPP:** €170MM in 21-year senior secured private placement bond to finance the construction of a 32km rolling stock PPP connecting central Paris to Charles de Gaulle Airport. The concession contract for the CDG Express PPP was signed between the French government and the concessionaire, a 50-50 joint venture Keolis (70% owned by SNCF and 30% by CDPQ) and RATP Dev. The deal priced at around 1.900% for the construction phase, and 1.700% during the operational phase. (Sponsors: Keolis and RATP Dev)
- **Forth Ports Ltd:** £283MM in senior secured notes to refinance UK port owner and operator Forth Ports. The transaction entails three maturities of 10, 12 and 18-years in GBP (10-year, 12-year and 18-year) and USD (10-year) and a delayed funding for each GBP tranches in July 2020. The tranches respectively priced at 2.970%, 3.030%, 3.130%, 3.780%, 3.070%, 3.130% and 3.290%. (Sponsor: PSP)
- **Ascendi PT:** €75MM in 11-year senior secured notes to refinance Ardian Infrastructure's Portuguese toll road assets. The assets, which span across more than 850km, represents Portugal's second largest motorway network and are managed by Ascendi PT, which is owned by Ardian. The notes priced at a 3.210% coupon. (Sponsor: Ardian)
- **TCR:** €120MM in 12-year private placement bonds to provide the Belgian airport ground support equipment lessor with more funds for growth following the acquisition of competitor Aerolima. DWS and 3i acquired Brussels-based TCR for €776MM in 2016 and the deal is similar to the previous one, which had 10- and 12-year tranches, with coupons between 2.700% and 3.500%. (Sponsors: 3i and DWS)
- **Link Group:** £50MM in 20-year senior secured notes to finance the construction of 1,800 new affordable homes in Scotland. The private notes were sold to Canada Life and pricing was in the range of 100-150bps. (Sponsor: East Midlands Housing Group)
- **Cityfast Project:** €125MM in 20-year senior secured private placement loan to finance the rolling out and operation of a Fiber to the Home network covering 3.4 million premises in France's Very Dense Areas. (Sponsors: Axione, Bouygues Telecom and Mirova). **Crédit Agricole CIB acted as Sole Placement Agent.**
- **Red de Carreteras de Occidente (RCO) (-- / BBB+ / BBB):** MXN 9.8BN (\$511MM) in senior secured notes to refinance four toll roads in Mexico. The transaction entails two maturities of 19 and 21-years. The 19-year tranche priced at a 9.670% coupon, while the 21-year tranche priced at a coupon of 6.000% that is linked to inflation (Udibono). (Sponsor: Goldman Sachs Infrastructure Partners)
- **Beacon Rail:** €700MM in 10-year senior secured private placement bonds to refinance existing facilities and fund continued expansion of the business. The private placement fixed interest loans are denominated in EUR and GBP, comprise tranches of between 10 and 20 years and priced at around 150bps. (Sponsor: JP Morgan AM)

\* Source: Crédit Agricole Corporate & Investment Bank, PFI, IJGlobal, Sparksread



## GLOBAL PROJECT BONDS MARKET OVERVIEW

### EMEA TRANSACTION SPOTLIGHT:

#### CityFast Project

- **The Issuer:** Cityfast project is a joint-venture developed by Axione, Bouygues Telecom and Mirova.
  - ✓ While Bouygues Telecom sells to CityFast its existing fiber optic infrastructure in Very Dense Areas, it will design and deploy the future CityFast Fiber to the Home (FTTH) network. CityFast, on the other hand, guarantees to Bouygues Telecom access to its fiber optic network for a period of 30 years.
  - ✓ Axione will provide for the account of CityFast the operation, maintenance and marketing of the network.
  - ✓ This new contract, based on an unprecedented model in France, is part of a strategy of diversification and long-term investment for Axione and Mirova but can perfectly become an international reference.
  - ✓ Proceeds from this issuance will be used to finance the construction and operation of a FTTH network covering 3.4 million premises in France's Very Dense Areas.
- **The Transaction:** The transaction was placed to both banks and institutional investors under the two separate tranches. The institutional tranche amounts to €125MM with a fully amortizing profile and a 20 years maturity. **Crédit Agricole CIB acted as Sole Placement Agent.**

### AMERICAS TRANSACTION SPOTLIGHT:

#### Ergon Peru S.A.C.

- **The Issuer:** Ergon Peru S.A.C. is a developer / operator of solar PVs in rural areas in of Peru.
  - ✓ This one of the world's largest rural electrification project involving the installation of 213,441 solar kits consisting of PV panels, batteries and light bulbs in off-grid rural areas.
  - ✓ The issuer is ultimately owned by Tozzi Green, one of Italy's leading renewable energy groups.
  - ✓ The Issuer was awarded 15-year contract with the Peruvian Ministry of Energy in 2015.
  - ✓ The project benefits from annual remuneration made by a social compensation fund contributed by payment of a tariff by electricity customers of the Peruvian utilities. The government act as a grantor.
- **The Transaction:** \$222MM in 15-year 4(a)(2) fully amortizing senior secured bonds priced at a 4.870% coupon.
  - ✓ Proceeds of bonds are used to repay existing bank loan of \$143MM and to finance expansion from 172,890 solar and storage systems to 213,441.
  - ✓ The notes due in 2034 were rated BBB by S&P and received a Green Evaluation score of E1, the highest score on their scale.

FY 2018 Global Project Bond League Tables  
(Source: PFI)

| #  | Lead Manager        | (\$MM) | # deals |
|----|---------------------|--------|---------|
| 1  | Citigroup           | 7,882  | 28      |
| 2  | MUFG                | 3,681  | 17      |
| 3  | Bank of America     | 2,868  | 14      |
| 4  | JP Morgan           | 2,544  | 12      |
| 5  | Crédit Agricole     | 2,171  | 14      |
| 6  | SMBC                | 1,973  | 16      |
| 7  | HSBC                | 1,741  | 10      |
| 8  | Societe Generale    | 1,656  | 8       |
| 9  | BNP Paribas         | 1,547  | 10      |
| 10 | RBC Capital Markets | 1,393  | 9       |

FY 2018 Global Project Bond League Tables  
(Source: IJGlobal)

| #  | Lead Manager     | (\$MM) | # deals |
|----|------------------|--------|---------|
| 1  | Citigroup        | 4,705  | 18      |
| 2  | JP Morgan        | 2,776  | 11      |
| 3  | MUFG             | 2,463  | 14      |
| 4  | HSBC             | 2,007  | 13      |
| 5  | Crédit Agricole  | 1,917  | 15      |
| 6  | Societe Generale | 1,831  | 10      |
| 7  | RBC              | 1,811  | 10      |
| 8  | Bank of America  | 1,636  | 5       |
| 9  | Sumitomo         | 1,494  | 16      |
| 10 | Santander        | 1,441  | 17      |

\* Source: Crédit Agricole Corporate & Investment Bank, PFI, IJGlobal, Sparksread



## GLOBAL PROJECT BONDS MARKET OVERVIEW (cont'd)

### Primary Issuances

| ENERGY                                      |           |          |           |        |             |     |         |                    |                                 |  |
|---|-----------|----------|-----------|--------|-------------|-----|---------|--------------------|---------------------------------|--|
| Issuer                                      | Geography | Currency | Size (MM) | Date   | Tenor       | WAL | Pricing | Spread at Issuance | Ratings (Moody's / S&P / Fitch) |  |
| Northern Courier Pipeline, LP               | NAm       | CAD      | 1,000     | 19-Jul | 23          | 11  | 3.365%  | 177bps             | NAIC-1                          |  |
| Casalduni Onshore Wind Farm                 | EMEA      | EUR      | 13        | 19-Jul | 7           | --  | 8.250%  | --                 | --                              |  |
| Ergon Peru, S.A.C.                          | LatAm     | USD      | 222       | 19-Jul | 15          | --  | 4.870%  | --                 | -- / BBB / --                   |  |
| Northfield Mountain, LLC                    | NAm       | USD      | 650       | 19-Jul | 15          | 15  | 4.500%  | --                 | -- / BBB / --                   |  |
| Glennmont Partners REBS                     | EMEA      | EUR      | 42        | 19-Jul | --          | --  | --      | --                 | --                              |  |
| Niigata Solar                               | APac      | JPY      | 16,000    | 19-Jul | 20          | --  | 1.200%  | --                 | --                              |  |
| Jackson Generation CCGT Plant               | NAm       | USD      | 100       | 19-Jun | 5           | --  | --      | --                 | --                              |  |
| Renewable Japan                             | APac      | YEN      | 5.71      | 19-Jun | 21          | --  | --      | --                 | BBB (Japan)                     |  |
| Izcalli Investments Spanish Solar Portfolio | EMEA      | EUR      | 207       | 19-Jun | 19          | --  | --      | --                 | -- / AA / --                    |  |
| JSC's Polish Solar Portfolio                | EMEA      | EUR      | 30        | 19-Jun | --          | --  | --      | --                 | --                              |  |
| CAAB Energia Italian Solar Portfolio        | EMEA      | EUR      | 8         | 19-Jun | 14          | --  | 4.970%  | --                 | --                              |  |
| Adani Green Energy Solar Portfolio          | APac      | USD      | 500       | 19-Jun | 6           | --  | 6.250%  | --                 | --                              |  |
| La Bufa Wind                                | LatAm     | USD      | 225       | 19-May | 18          | 12  | 5.770%  | --                 | --                              |  |
| Archimede Sicily CSP Plant                  | EMEA      | EUR      | 5         | 19-May | 23          | --  | 6.070%  | --                 | --                              |  |
| FLNG Liquefaction 2, LLC                    | Nam       | USD      | 865       | 19-May | 20          | 12  | 4.390%  | 190bps             | -- / BBB / BBB                  |  |
| Tablares Wind Farm                          | EMEA      | EUR      | --        | 19-May | --          | --  | --      | --                 | --                              |  |
| Niles Energy Center                         | NAm       | USD      | 150       | 19-Apr | 8           | --  | 6.750%  | --                 | --                              |  |
| Shady Hills Energy Center                   | NAm       | USD      | 422       | 19-Apr | 33          | 25  | --      | 195bps             | --                              |  |
| Andali Energia                              | EMEA      | EUR      | 20 / 10   | 19-Apr | 2           | --  | 8.000%  | --                 | --                              |  |
| APLNG                                       | APac      | USD      | 600       | 19-Apr | 6 / 14 / 19 | --  | --      | --                 | --                              |  |
| Springbok 3                                 | NAm       | USD      | --        | 19-Apr | --          | --  | --      | --                 | --                              |  |
| ERG S.P.A.                                  | EMEA      | EUR      | 500       | 19-Apr | 6           | 6   | 1.875%  | 190bps             | - / - / BBB-                    |  |

| INFRASTRUCTURE                                 |           |           |   |        |                             |     |  |  |                                 |  |
|--|-----------|-----------|---|--------|-----------------------------|-----|--|--|---------------------------------|--|
| Issuer   | Geography | Currency  | Size (MM)   | Date   | Tenor                       | WAL | Pricing  | Spread at Issuance   | Ratings (Moody's / S&P / Fitch) |  |
| East Midlands Housing Group                    | EMEA      | GBP       | 100   | 19-Jul | 33 / 35 / 40                | --  | --   | --   | --                              |  |
| CDG Express PPP                                | EMEA      | EUR       | 170   | 19-Jul | 21                          | --  | 1.900%   | --   | --                              |  |
| Forth Ports Ltd                                | EMEA      | GBP / USD | 45 / 58 / 90 / 5(20-Jul) / 55(20-Jul) / 30(20-Jul) / 21 (USD) | 19-Jul | 10 / 12 / 18 / 10 (USD)     | --  | 2.97% / 3.03% / 3.19% / 3.07% / 3.13% / 3.29% / 3.78%(USD) | G+224bps / G+217bps / G+192bps / G+234bps / G+227bps / G+202bps / T+170bps | NAIC-2                          |  |
| Ascendi PT                                     | EMEA      | EUR       | 75  | 19-Jul | 11                          | --  | 3.210%   | --   | --                              |  |
| TCR  | EMEA      | EUR       | 120   | 19-Jul | 12                          | --  | --   | --   | --                              |  |
| Link Group Social Housing Portfolio            | EMEA      | GBP       | 50  | 19-Jul | 20                          | --  | --   | --   | --                              |  |
| CityFast Project                               | EMEA      | EUR       | 125   | 19-Jun | 20                          | --  | --   | --   | --                              |  |
| Red de Carreteras de Occidente ("RCO")         | LatAm     | MXN       | 2,800 / 7,000   | 19-Jun | 19 / 21                     | --  | 9.670% / 6.000%  | -- / Udidono+310bps  | -- / BBB+ / BBB                 |  |
| Beacon Rail                                    | EMEA      | EUR       | 700   | 19-Jun | 10 / 20                     | --  | --   | 150 bps  | --                              |  |
| Perth Airport Pty Ltd                          | Apac      | USD       | 225   | 19-Jun | 10 / 15                     | --  | 3.450% / 3.700%  | 135bps / 160bps  | Baa2 / BBB / --                 |  |
| Brussels Airport                               | EMEA      | EUR       | 500   | 19-Jun | 15 / 20 / 30                | --  | --   | --   | Baa1 / -- / BBB+                |  |
| Corredor Bioceánico Highway                    | LatAm     | USD       | 732   | 19-May | 15                          | 9   | 5.375%   | --   | Ba1 / BB / --                   |  |
| Ravenhall Finance Co Pty                       | Apac      | AUD       | 462   | 19-May | 23                          | --  | 4.230%   | --   | --                              |  |
| Autopistas Metropolitanas de Puerto Rico, PR22 | LatAm     | USD       | 120   | 19-May | 20                          | 15  | 7.000%   | --   | -- / BBB- / --                  |  |
| Terminal Investment Ltd                        | EMEA      | USD / EUR | 100 / 100 / 70 / 110  | 19-May | 10 / 15 / 12(EUR) / 7(EUR)  | --  | 4.470% / 4.730% / 2.270% / 1.830%                          | 195bps / 210bps / MS+160bps / MS+160bps                                    | NAIC-2                          |  |
| Brisbane Airport                               | Apac      | USD / AUD | 107 / 108 / 26(AUD) / 24(AUD)                                 | 19-May | 10 / 12 / 10(AUD) / 12(AUD) | --  | 3.620% / 3.720% / 3.480% / 3.660%                          | 115bps / 125bps / 120bps / 130bps  | Baa2 / BBB / --                 |  |
| Milan Metro Line 5                             | EMEA      | EUR       | 144   | 19-May | 17                          | --  | --   | --   | --                              |  |
| Axione Infrastructures                         | EMEA      | EUR       | 250   | 19-Apr | 23                          | --  | --   | --   | --                              |  |
| Attero Waste                                   | EMEA      | EUR       | 52 / 198 / 113  | 19-Apr | 9 / 10 / 15                 | --  | --   | MS+193bps / MS+195bps / MS+205bps  | NAIC-2 (BBB)                    |  |
| GMR Hyderabad International Airport            | APac      | USD       | 300   | 19-Apr | 5                           | --  | 5.375%   | --   | Ba1 / BB+ / BB+                 |  |

\* Source: Crédit Agricole Corporate & Investment Bank, PFI, IJGlobal, Sparksread



## GLOBAL BOND MARKET OVERVIEW

### Market update June 2019

#### EUR Bond Corporate Market

- On July 25th, President Mario Draghi set the stage for the European Central Bank to deliver another round of monetary stimulus as soon as September to combat the Euro Zone's severe economic slowdown. He stated that while there are still signs of strength in the economy, "this outlook is getting worse and worse". The ECB also adjusted its pledge on interest rates -- already at record lows -- to signal there could be deeper cuts at the next September meeting and that it will restart buying bonds if needed. Finally, Draghi also noted that consumer price growth remains well short of the ECB's goal of just under 2% potentially encouraging policy makers to pursue monetary stimulus for longer.
- Due to the beginning of summer and to issuers entering in their blackout periods, activity is slowing in the primary market: €15BN have been priced for the month of July. On a year-to-year comparison, corporate primary issuance volumes amounted to €206BN YTD, representing a 27% increase from last year's €162BN. Following the same trend, investors' appetite improved in a comparison over last year, with an average oversubscription of 3.7x YTD vs 2.6x in 2018.

#### Key recent transactions

- July represented a remarkably positive month for Italian issuers: 4 transactions for €2.2BN total size and order books of €9.65BN, (on average 4.4x oversubscribed):
  - On July 4th, state-owned rail company Ferrovie dello Stato Italiane S.p.A. (BBB) launched its €700MM 7yr transaction. IPTs were released at MS+140-145bps area. The final terms were eventually set at MS+128bps with an order book of €2.4BN. **Crédit Agricole CIB acted as a joint bookrunner.**
  - On July 8th, utilities company A2A (Baa2/BBB) issued a new 10yr €400MM transaction. IPTs started at MS+140bps and final terms set at MS+105bps with an impressive 8.5x oversubscription.
  - On July 17th, utilities company Italgas (Baa2/BBB+) hit the market with a €500MM (exp) single tranche transaction Short 11yr, launched at IPTs of MS+105-110bps. With a strong order book of €2.9BN, the company finally set its final terms at MS+78bps for a size of €600MM.
  - On July 18th, utilities company Terna Rete Elettrica Nazionale S.p.A. (Baa2/BBB/BBB+) issued a new €500MM (no grow) 6yr transaction starting at MS+70bps area at IPTs. The spreads were finally set at the tight-end of guidance at MS+45bps with an order books of €1.8BN.

#### US Investment Grade Public Corporate Bond Market

- About \$75BN have been issued in investment grade corporate bonds in July, what is flat compared to last month but about \$20BN more than last year. \$28.6BN in new supply priced last week, in a fairly even split between financial/corporate issuance as more domestic corporates exited self-imposed earnings blackout.
- The YTD primary market volume stands at \$680BN what is approx. 10% behind last year's pace. The manageable calendar combined with continued fund inflows and robust secondary trading has contributed to a good technical backdrop for potential borrowers.
- With order books averaging over 3.8x oversubscribed, new issue concessions were limited to ~2bps on average.
- Recent issues continue to perform well in the secondary market generally trading 1-7bps tighter vs re-offer.
- Lipper reported YTD net fund flows of approx. \$61BN.
- The CDX saw tightening again last week after a brief widening spree the previous week.
- Corporate spreads tightened 4bps on-the-week to a new YTD low with the ICE BAML Corporate Index closing at +112bps on Friday, representing a level 46bps tighter on the year.

|                  | Statistics (LTM) |         |         |         |            |
|------------------|------------------|---------|---------|---------|------------|
|                  | Min              | Max     | Average | Current | Δ 01/01/19 |
| <b>IG Index</b>  | 110 bps          | 161 bps | 126 bps | 112 bps | -46 bps    |
| <b>A Index</b>   | 85 bps           | 126 bps | 98 bps  | 85 bps  | -38 bps    |
| <b>BBB Index</b> | 140 bps          | 205 bps | 162 bps | 145 bps | -56 bps    |

#### USPP Market Highlight

- About \$7.2BN USPP have been issued in July, a 72% increase vs. last year.
- YTD issuances volume is equivalent to last year at \$36.9BN.
- A closer look at issuance by region shows the cross border issuance for YTD 2019 at 60%, while FY 2018 ended at 49%.
- Energy and Infrastructure (including transportation) issuances have been accounting for 59% of the total issuance YTD accounting for 32% and 27% respectively.



## EMEA BOND MARKET OVERVIEW

### EMEA market – Public Secondary Levels

Sources: Crédit Agricole CIB, Bloomberg

| ENERGY       |                              |         |         |      |          |       |        |              |         |  |
|--------------|------------------------------|---------|---------|------|----------|-------|--------|--------------|---------|--|
| Pricing date | Issuer                       | Country | Moody's | S&P  | Maturity | Size  | Coupon | Bid I Spread | Bid YTM |  |
| 21/02/2017   | 2i Rete Gas                  | Italy   | Baa2    | BBB  | 2026     | 435   | 1.750% | 144          | 1.67    |  |
| 24/10/2017   | 2i Rete Gas                  | Italy   | Baa2    | BBB  | 2027     | 550   | 1.608% | 143          | 1.80    |  |
| 04/09/2018   | 2i Rete Gas                  | Italy   | Baa2    | BBB  | 2025     | 500   | 2.195% | 138          | 1.51    |  |
| 09/03/2017   | A2A                          | Italy   | Baa3    | BBB  | 2024     | 300   | 1.250% | 80           | 0.82    |  |
| 10/12/2013   | Elenia Finance               | Finland | NR      | BBB  | 2020     | 500   | 2.875% | 23           | 0.02    |  |
| 31/03/2017   | Elia                         | Belgium | NR      | BBB+ | 2027     | 250   | 1.375% | 83           | 1.12    |  |
| 20/11/2014   | Fluxys Belgium               | Belgium | NR      | NR   | 2034     | 100   | 3.250% | 110          | 1.95    |  |
| 20/11/2014   | Fluxys Belgium               | Belgium | NR      | NR   | 2029     | 250   | 2.750% | 139          | 1.92    |  |
| 28/09/2017   | Fluxys Belgium               | Belgium | NR      | NR   | 2032     | 50    | 2.375% | 122          | 1.96    |  |
| 28/09/2017   | Fluxys Belgium               | Belgium | NR      | NR   | 2027     | 300   | 1.750% | 121          | 1.55    |  |
| 22/11/2013   | Madrilena Red de Gas Finance | Spain   | NR      | BBB  | 2023     | 275   | 4.500% | 61           | 0.61    |  |
| 05/04/2017   | Madrilena Red de Gas Finance | Spain   | NR      | BBB  | 2029     | 300   | 2.250% | 113          | 1.61    |  |
| 05/04/2017   | Madrilena Red de Gas Finance | Spain   | NR      | BBB  | 2025     | 300   | 1.375% | 86           | 0.95    |  |
| 05/07/2017   | National Grid                | UK      | Baa1    | BBB+ | 2024     | 500   | 1.000% | 48           | 0.54    |  |
| 21/09/2017   | NorteGas                     | Spain   | NR      | BBB- | 2027     | 750   | 2.065% | 156          | 1.89    |  |
| 21/09/2017   | NorteGas                     | Spain   | NR      | BBB- | 2022     | 550   | 0.918% | 73           | 0.62    |  |
| 24/03/2014   | Redexis Gas                  | Spain   | Baa3    | BBB  | 2021     | 650   | 2.750% | 67           | 0.47    |  |
| 20/09/2018   | RTE                          | France  | NR      | A    | 2038     | 500   | 2.125% | 52           | 1.51    |  |
| 20/09/2018   | RTE                          | France  | NR      | A    | 2030     | 500   | 1.500% | 34           | 0.94    |  |
| 30/08/2017   | SSE                          | UK      | A3      | A-   | 2025     | 600   | 0.875% | 74           | 0.87    |  |
| 28/08/2018   | SSE                          | UK      | A3      | A-   | 2027     | 650   | 1.375% | 82           | 1.15    |  |
| 13/03/2017   | Statkraft                    | Norway  | Baa1    | A-   | 2025     | 500   | 1.125% | 36           | 0.45    |  |
| 19/07/2017   | Terna                        | Italy   | Baa1    | BBB  | 2027     | 1 000 | 1.375% | 89           | 1.23    |  |
| 03/06/2013   | Vier Gas Transport           | Germany | NR      | BBB+ | 2025     | 750   | 2.875% | 25           | 0.38    |  |
| 03/06/2013   | Vier Gas Transport           | Germany | NR      | A-   | 2020     | 750   | 2.000% | 0            | -0.22   |  |
| 01/07/2013   | Vier Gas Transport           | Germany | NR      | A-   | 2023     | 750   | 3.125% | 10           | 0.07    |  |
| 17/09/2018   | Vier Gas Transport           | Germany | NR      | A-   | 2028     | 500   | 1.500% | 33           | 0.76    |  |
| 20/11/2015   | Viesgo (IE2 Holdco)          | Spain   | NR      | BBB- | 2023     | 500   | 2.375% | 88           | 0.85    |  |
| 23/05/2016   | Viesgo (IE2 Holdco)          | Spain   | NR      | BBB- | 2026     | 550   | 2.875% | 146          | 1.67    |  |

| INFRASTRUCTURE AND TRANSPORTATION |                     |            |         |      |          |       |        |              |         |  |
|-----------------------------------|---------------------|------------|---------|------|----------|-------|--------|--------------|---------|--|
| Pricing date                      | Issuer              | Country    | Moody's | S&P  | Maturity | Size  | Coupon | Bid I Spread | Bid YTM |  |
| 10/05/2016                        | Abertis             | Spain      | NR      | BBB  | 2026     | 1 150 | 1.375% | 144          | 1.66    |  |
| 02/11/2016                        | Abertis             | Spain      | NR      | BBB  | 2027     | 500   | 1.000% | 153          | 1.83    |  |
| 05/12/2013                        | Aeroporti Di Roma   | Italy      | Baa1    | BBB+ | 2021     | 600   | 3.250% | 61           | 0.41    |  |
| 01/06/2017                        | Aeroporti Di Roma   | Italy      | Baa1    | BBB+ | 2027     | 500   | 1.625% | 129          | 1.62    |  |
| 28/05/2013                        | Aeroports de Paris  | France     | NR      | A+   | 2028     | 600   | 2.750% | 43           | 0.86    |  |
| 01/10/2014                        | Aeroports de Paris  | France     | NR      | A+   | 2025     | 500   | 1.500% | 24           | 0.34    |  |
| 15/07/2015                        | Aeroports de Paris  | France     | NR      | A+   | 2023     | 500   | 1.500% | 6            | 0.01    |  |
| 06/12/2017                        | Aeroports de Paris  | France     | NR      | A+   | 2027     | 500   | 1.000% | 28           | 0.64    |  |
| 04/10/2018                        | Aeroports de Paris  | France     | NR      | A+   | 2038     | 500   | 2.125% | 47           | 1.46    |  |
| 18/03/2015                        | Alpha Trains        | Luxembourg | Baa2    | NR   | 2025     | 350   | 2.064% | 102          | 1.16    |  |
| 01/06/2016                        | APRR                | France     | Baa2    | A-   | 2026     | 700   | 1.125% | 29           | 0.46    |  |
| 16/11/2016                        | APRR                | France     | Baa2    | A-   | 2031     | 500   | 1.875% | 45           | 1.07    |  |
| 16/11/2016                        | APRR                | France     | Baa2    | A-   | 2027     | 500   | 1.250% | 26           | 0.52    |  |
| 31/05/2017                        | APRR                | France     | Baa2    | A-   | 2032     | 500   | 1.625% | 52           | 1.21    |  |
| 06/11/2017                        | APRR                | France     | NR      | A-   | 2033     | 700   | 1.500% | 53           | 1.28    |  |
| 04/05/2016                        | ASF                 | France     | A3      | A-   | 2026     | 500   | 1.000% | 34           | 0.55    |  |
| 05/01/2017                        | ASF                 | France     | A3      | A-   | 2027     | 1 000 | 1.250% | 34           | 0.61    |  |
| 05/04/2017                        | ASF                 | France     | A3      | A-   | 2026     | 500   | 1.125% | 31           | 0.51    |  |
| 10/01/2018                        | ASF                 | France     | A3      | A-   | 2030     | 1 000 | 1.375% | 52           | 1.07    |  |
| 21/06/2018                        | ASF                 | France     | A3      | A-   | 2028     | 700   | 1.375% | 39           | 0.80    |  |
| 26/01/2017                        | Atlantia            | Italy      | Baa2    | BBB  | 2025     | 750   | 1.625% | 203          | 2.13    |  |
| 06/07/2017                        | Atlantia            | Italy      | Baa2    | BBB  | 2027     | 1 000 | 1.875% | 214          | 2.47    |  |
| 18/09/2017                        | Autostrade          | Italy      | Baa1    | BBB+ | 2029     | 700   | 1.875% | 217          | 2.71    |  |
| 03/05/2017                        | Brisa               | Portugal   | Baa3    | NR   | 2027     | 300   | 2.375% | 89           | 1.21    |  |
| 25/06/2013                        | Brussels Airport    | Belgium    | Baa1    | NR   | 2020     | 500   | 3.250% | -3           | -0.24   |  |
| 26/04/2017                        | Brussels Airport    | Belgium    | Aa1     | NR   | 2024     | 300   | 1.000% | 38           | 0.41    |  |
| 03/02/2014                        | Heathrow Funding    | UK         | NR      | A-   | 2030     | 750   | 1.500% | 74           | 1.31    |  |
| 13/05/2014                        | Heathrow Funding    | UK         | NR      | A-   | 2022     | 600   | 1.875% | 31           | 0.19    |  |
| 28/06/2017                        | Heathrow Funding    | UK         | NR      | A-   | 2032     | 500   | 1.875% | 75           | 1.49    |  |
| 17/11/2017                        | HIT                 | France     | Baa3    | NR   | 2027     | 500   | 1.625% | 130          | 1.67    |  |
| 17/11/2017                        | HIT                 | France     | Baa3    | NR   | 2023     | 500   | 0.625% | 93           | 0.87    |  |
| 09/10/2014                        | Infra Park (Indigo) | France     | NR      | BBB  | 2025     | 650   | 2.125% | 73           | 0.83    |  |
| 12/07/2017                        | Infra Park (Indigo) | France     | NR      | BBB  | 2037     | 125   | 2.951% | 138          | 2.32    |  |
| 19/07/2013                        | SANEF               | France     | Baa1    | NR   | 2019     | 300   | 2.500% | 3            | -0.20   |  |
| 06/11/2015                        | SANEF               | France     | Baa1    | NR   | 2026     | 600   | 1.875% | 66           | 0.85    |  |
| 11/10/2016                        | SANEF               | France     | Baa1    | NR   | 2028     | 300   | 0.950% | 76           | 1.21    |  |
| 17/04/2018                        | Sydney Airport      | Australia  | Baa1    | BBB+ | 2028     | 500   | 1.750% | 76           | 1.15    |  |
| 01/12/2017                        | Tank & Rast         | Germany    | Baa3    | BBB- | 2027     | 300   | 2.375% | 198          | 2.36    |  |
| 01/12/2017                        | Tank & Rast         | Germany    | Baa3    | BBB- | 2024     | 300   | 1.625% | 177          | 1.86    |  |
| 06/09/2017                        | Transurban          | Australia  | Baa1    | BBB+ | 2028     | 500   | 1.750% | 92           | 1.30    |  |
| 20/01/2015                        | VTG Finance         | Luxembourg | NR      | NR   | Perp     | 250   | 5.000% | 94           | 0.71    |  |



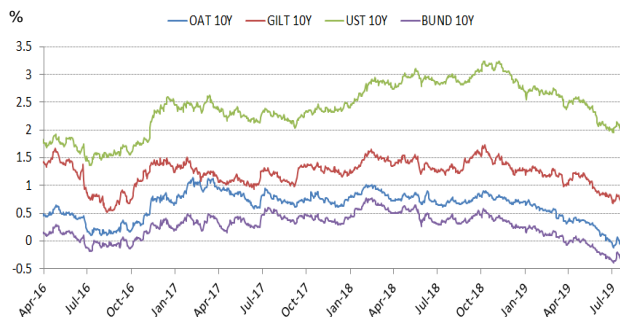
## MACROECONOMIC ENVIRONMENT

- In the United States, 2Q GDP growth came in stronger than expected at 2.1% vs. 1.8% expected, suggesting a healthy US economy. Despite of this, the Federal Reserve on July 31th lowered interest rates by 25bps. It is the first rate cut since the Great Recession in 2008 in an effort to sustain the country's longest economic expansion in history and to help stave off the possibility of an economic downturn. Trade tensions risks have been back on investor's radar after Donald Trump's threats to impose new tariffs on another \$325BN of Chinese goods. The situation also worsened between Iran and USA as the Americans shot down two Iranian drones. Oil prices remain sensitive to Middle Eastern geopolitics but beyond that the contagion is limited.
- In Europe, investors will be monitoring the political developments in Spain in the weeks to come. In fact, the Spanish new parliament declined to grant socialist leader Pedro Sanchez (PSOE) a second term as prime minister on July 23. Pedro Sanchez has emerged as a winner of the 28 April 2019 election but has been struggling to form a parliamentary majority with other parties. If Sanchez is not sworn in within two months, fresh elections will have to be called in November.
- Markets were however reassured by some positive news. First, now IMF's former president Christine Lagarde was appointed by the European Council as the new president of the ECB, which was also validated by the central bank's governing council. The nomination increased the expectations of a fresh stimulus package to support the ailing Euro Zone's economy. Additionally, Germany's former Defense Minister Ursula von der Leyen was elected the new European Commission President. She won by the thin majority of 383 vs 327, thus avoiding a potential political crisis in the European Union. She will succeed Jean-Claude Juncker on November 1st.
- Still about Europe, a Bloomberg report suggested that the ECB staff was studying a potential revamp of inflation goal and more symmetry in the inflation target. CACIB's research thinks that ECB might move towards a target of inflation 'at 2%' over the medium term, instead of 'below, but close to, 2%'. This would mean that the ECB would accept inflation to overshoot the 2% threshold without tightening its monetary policy. This preparatory work and more importantly the fact that the ECB leaked it to press suggests that the ECB is readying a new round of accommodation and that it intends to remain very accommodative for a very long time.
- In the United Kingdom, Brexit risk has continued to simmer away in recent weeks but financial markets, GBP aside, have been largely willing to overlook recent headlines on the topic. Boris Johnson was appointed new UK Prime Minister. With financial markets unsure over his exact position, Sterling had the worst month since October 2016 as new cabinet members stepped up preparations for a no-deal Brexit with just about three months left until the UK exits the European Union.

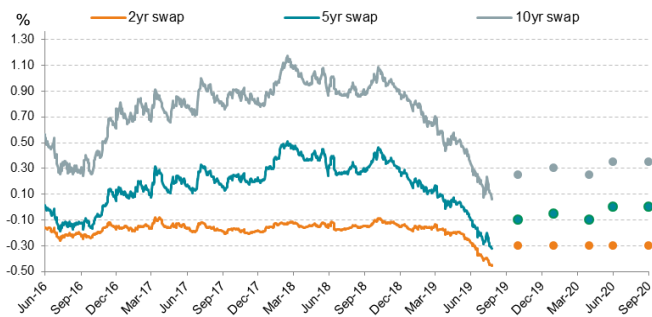
### Swap rates (as of July 26th, 2019)

|     | EUR    | MtM Var (%) | USD   | MtM Var (%) | GBP   | MtM Var (%) |
|-----|--------|-------------|-------|-------------|-------|-------------|
| 3Y  | -0.42% | 26.0%       | 1.83% | 6.1%        | 0.71% | -15.8%      |
| 5Y  | -0.31% | 53.9%       | 1.83% | 4.3%        | 0.76% | -15.0%      |
| 7Y  | -0.17% | 316.5%      | 1.89% | 3.1%        | 0.82% | -13.5%      |
| 10Y | 0.06%  | -69.6%      | 2.00% | 2.1%        | 0.92% | -11.3%      |
| 12Y | 0.20%  | -43.8%      | 2.07% | 1.7%        | 0.98% | -10.3%      |
| 15Y | 0.36%  | -30.1%      | 2.14% | 1.5%        | 1.04% | -9.2%       |
| 20Y | 0.52%  | -22.5%      | 2.21% | 1.4%        | 1.10% | -8.5%       |

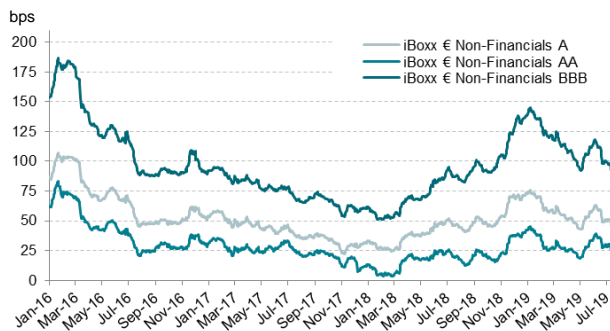
### Treasury yields (10Y)



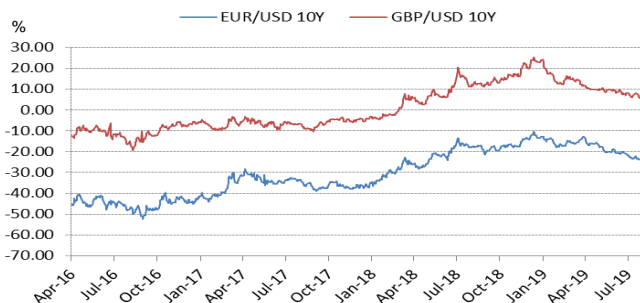
### EUR swap rates (historic and forward levels)



### Credit spread evolutions (EUR)



### 10Y basis swap evolution



### Main upcoming events

|         | Events / Data        | Expected impact                                       |
|---------|----------------------|---|
| 12-Sept | ECB Monetary Meeting | To cap long term EUR rates, reduce peripheral spreads |
| 18-Sept | Fed Meeting          | Cap USD rates, weaker USD                             |
| 24-Oct  | ECB Monetary Meeting | N/A   |

iBoxx™ bond indices offer broad benchmarking and liquid tradable index solutions that track bond markets globally. Fuelled by multi-source pricing, iBoxx provides transparency to bond market performance.

Sources: Bloomberg, Crédit Agricole CIB



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