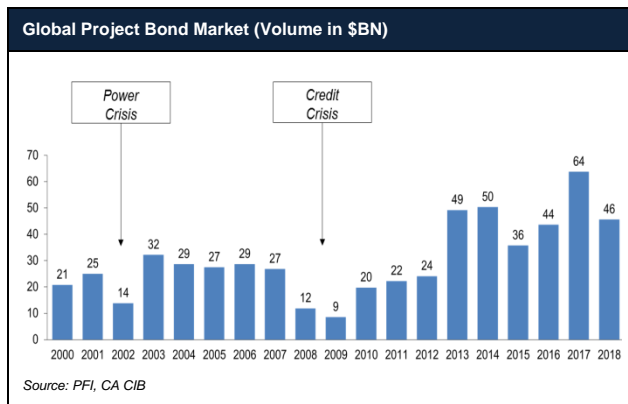




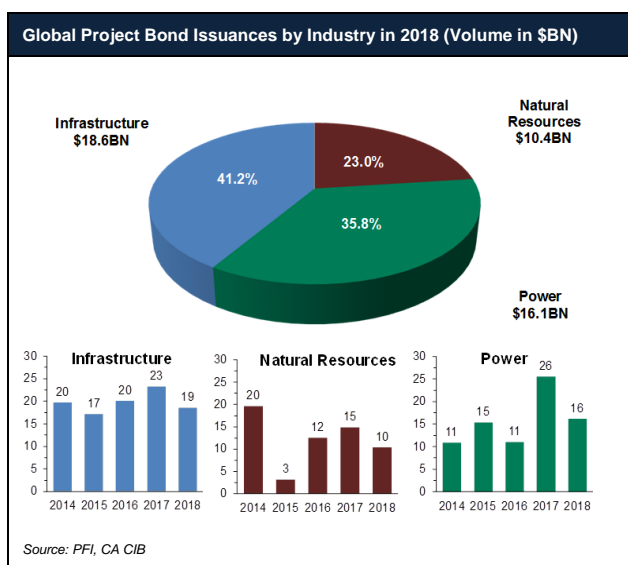
Project Bond Fundamentals

The Global Project Bond Market

The institutional debt market is an established source of funding for project finance, and an attractive alternative to bank loans. After a record year in 2017, the pace of Project Bond issuance slowed down to reach \$45.6BN in 2018. The overall market grew at a 11% CAGR in the 2010-2018 period.



The decreasing trend in Project Bond issuances in 2018 was reflected in every sector. Infrastructure was the largest sector by volume with \$18.6BN, driven by transportation transactions (\$14.2BN). Power was the second largest sector reaching its second highest record with \$16.1BN. Natural Resources Project Bond volumes, mainly consisting of Oil & Gas issuances, represented \$10.4BN in 2018.



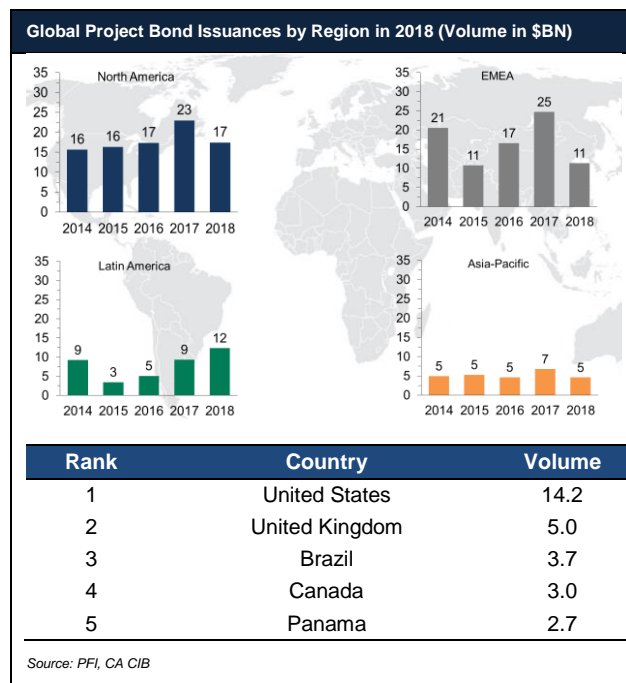
The US continues to lead the way globally by Project Bond volume, with \$14.2BN of issuance in 2018. A total of \$3.0BN in Project Bonds was done in Canada, bringing

the total for North America to \$17.4BN down from \$23.0BN in 2016.

The Latin American region continued to grow and reached a record high with \$12.3BN of issuance in 2018 vs. \$9.3BN in 2017 (+33%). It became the second largest market after the Americas (significantly driven by Brazilian issuers) for the first time and was ahead of the EMEA region.

EMEA issuance levels dropped to \$11.3BN in 2018, down from \$24.7BN in 2017 driven by a decrease in issuance from the United Kingdom (-\$3.8BN vs. 2017 (-43%)), UAE (-\$3.4BN vs. 2017 (-100%)), Italy (-\$2.5BN vs. 2017 (-94%)), Germany (-\$1.4BN vs. 2017 (-82%)), Sweden (-\$1.1BN vs. 2017 (-100%)), and Spain (-\$1.0BN vs. 2017 (-49%)).

In the Asia-Pacific region, the Project Bond market reached \$4.6BN in issuances in 2018, pushed by large issuances in Australia and Malaysia.



Project Bond investors continue to favor long-term offtake agreements such as power purchase agreements or availability-based contracts with investment grade counterparties to ensure stable and predictable cash flows. Nevertheless, investors also demonstrate comfort with transactions that partly include revenues exposed to demand and price risk, such as merchant cash flows in power transactions, or traffic risk in transport offerings as reflected in select recent precedent transactions.

Why Project Bonds?

A Capital Markets transaction offers some distinct advantages to issuers when compared to a bank loan.

Fixed pricing: Project Bonds allow issuers to lock their financing cost for the entire term of the financing. Unlike bank loans, which typically include step-ups and require executing an interest rate swap for at least a portion of the financing, Project Bonds are fixed-rated instruments. A fixed coupon is appealing to sponsors seeking to “lock-in” equity returns on their project with no financing cost volatility.

Maximize tenor: Investors in the Project Bond market are looking for long-term investment opportunities and transactions with maturities beyond twenty years are accepted in this market. For example, when a power purchase agreement (“PPA”) has been executed with a creditworthy counterparty, investors are usually comfortable with bond maturities matching the full tenor of the PPA. Bank lenders on the other hand, usually require a tail of up to five years with the underlying contract.

Diversify sources of financing: Capital Markets participants have developed expertise in a wide range of asset types and a large number of market participants will support transactions from \$50MM to multi-billion projects. Insurance companies and pension funds are looking at long-term investments to match their long-term liabilities and offer a knowledgeable and resilient source of financing. In the context of higher capital requirements for commercial and investment banks, it is important for issuers to diversify their sources of financing and rely on a broader universe of market participants. Tapping the Capital Markets preserves bank capacity.

Light covenants: Covenant packages are usually lighter for Project Bonds than for bank loans, resulting in less day-to-day oversight. In particular, covenants for Project Bonds tend to be more incurrence-based than maintenance based, providing more flexibility to sponsors.

Flexibility in amortization profile: Project Bonds offer flexibility in amortization schedule with the possibility of extended grace periods. Most transactions are structured around an amortization profile that matches the actual revenue profile of the project. Fully amortizing structures tend to dominate the Project Bond market but depending on the asset, a partially amortizing profile with a balloon at maturity or a bullet structure can be considered.

Rapid execution: Issuers can expect fast execution with a potential time frame of eight to twelve weeks. Even if the transaction requires one or more ratings from rating agencies, the rating process can be executed within this timeframe.

When considering financing alternatives, issuers should keep in mind some of the limitations of a Project Bond transaction.

Ratings: Depending on the format and the size of the offering, one, two, or three ratings may be recommended for optimal execution. However, it should be noted that the rating process is largely handled by the underwriter(s) or placement agent(s).

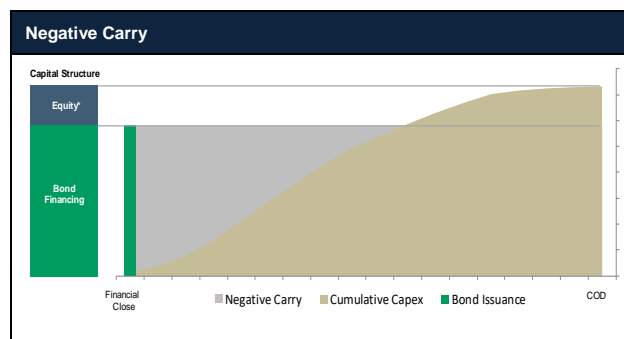
Make-whole provision: Investors will request make-whole provisions for early prepayment of the Project Bond which would make refinancing expensive for the issuer.

Negative carry: For greenfield projects, negative carry exists from receiving proceeds at closing while capital expenditure is incurred over time. As explained in the following section, there are alternative structures to mitigate negative carry.

Addressing Negative Carry

Negative carry arising from receiving all the proceeds upfront, while the capital expenditure is incurred over a construction period of a few years, is a recurrent argument against Project Bonds for greenfield projects.

A traditional Project Bond issuance yields an immediate influx of cash in the form of bond proceeds. Negative carry therefore exists as the issuer pays interests on the entire amount of the Project Bond, even though funds are only needed in later months.



Issuers should be aware of alternative structures available for their offerings that greatly reduce negative carry.

Delayed Draws: The first possibility for issuers is to structure the Project Bond with a delayed draw mechanism, where funds are made available overtime with multiple draws. For example, proceeds can be received on a quarterly basis over a period of eighteen months and each quarterly draw is sized based on the construction needs over the following three months. Draws can be of different sizes in order to match the capital expenditure profile of the asset.

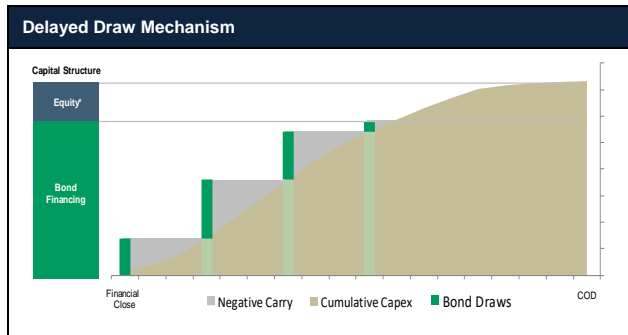
No commitment fees are paid on the undrawn amount of the Project Bond and negative carry is greatly reduced as

Project Bond Focus

Project Bond Fundamentals

the quarterly draws better mirror capital expenditure requirements.

The US Private Placement market can accommodate a delayed draw mechanism for up to eighteen months for 4(a)(2) issuances. This mechanism, however, would not be available for 144A issuances. Furthermore, the European and local Latin American markets can accommodate longer periods, for example three years or more, but some commitment fees may need to be paid.

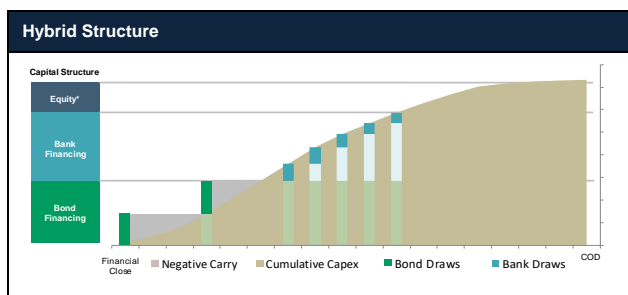


Hybrid Financing: A second possibility for issuers is to combine a bank facility and a Project Bond with delayed draws.

In this case, the Project Bond is sized to cover the first three to six months of construction costs. The Project Bond will be issued first and the bank facility will be drawn once the proceeds of the Project Bond have been used.

In order to minimize negative carry and depending on the capital expenditure profile, the Project Bond proceeds can be funded in multiple draws.

In the example below, the two quarterly draws are sized to cover the first six months of capital expenditure. Once the proceeds from the Project Bond have been used, the sponsor will draw every month on the bank facility.



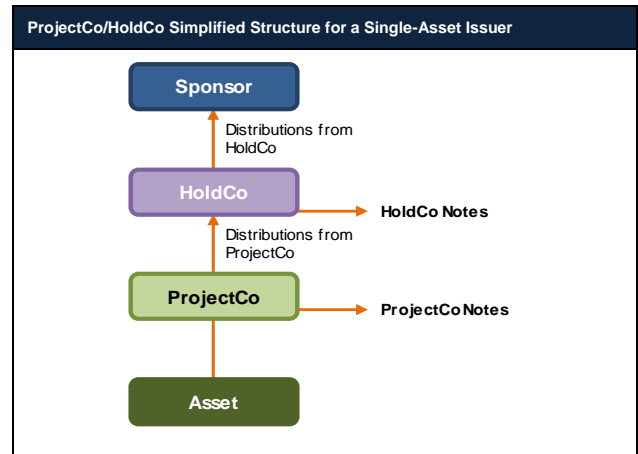
(Illustrations in this section assume that equity contributions are back-ended for illustrative purposes. Pro-rata or upfront contributions may be applicable)

Optimizing Leverage

Below we discuss two structural approaches that depart from the typical single-asset ProjectCo-level issuance. Both of these structures have many successful precedents.

ProjectCo/HoldCo Structure for a Single-Asset Issuer

In the ProjectCo/HoldCo configuration, senior secured notes are issued by two distinct SPVs, a ProjectCo and a HoldCo.



Each of the ProjectCo and HoldCo will issue distinct notes. The ProjectCo Notes are typically sized to meet investment grade criteria and are rated by one or more rating agencies. For example, the ProjectCo Notes are sized to achieve investment grade metrics, with a 1.40x minimum and average consolidated DSCR. The residual cash after the ProjectCo debt service is then transferred to the HoldCo as distributions, usually subject to a negotiated distributed test.

The HoldCo Notes are sized to meet sub-investment grade levels and, depending on the issue size, may not be rated. For example, the HoldCo Notes can be sized with a 1.10x minimum and average DSCR. The residual cash flows after the HoldCo debt service has been paid are then distributed to the sponsor, subject to a negotiated distribution test.

The ProjectCo/HoldCo configuration is different from a Senior/Subordinated debt approach within one unique SPV. In particular, investors in the HoldCo Notes are secured by interests in the ProjectCo, not by a second lien on the asset.

There are a few distinctive characteristics of HoldCo Notes that should be underlined. First, given the sub-investment grade profile, HoldCo Notes typically have a shorter weighted average life, capped around seven to eight years. In addition, while ProjectCo-level debt benefits from the flexibility in DSRA funding methods (i.e. 6-months

Project Bond Focus

Project Bond Fundamentals

DSRA backed by a letter of credit or through cash-funding), the HoldCo's DSRA is restricted to a cash-funding only option.

HoldCo Notes have an applicable pricing spread derived from the ProjectCo spread by adding a structural premium which can range from 75bps to 150bps. The resulting pricing for the HoldCo Notes is equal to the HoldCo Notes spread plus the interpolated US treasury rate that matches the HoldCo Notes weighted average life.

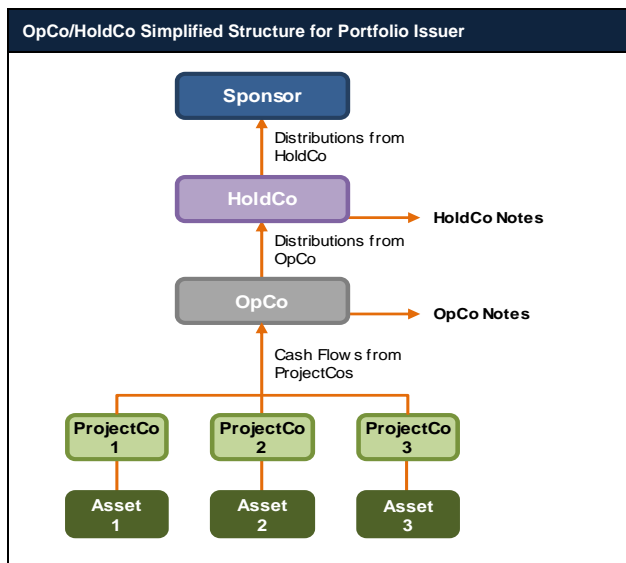
From a marketing perspective, the HoldCo Notes are typically offered to the same investors that are purchasing the ProjectCo Notes. It allows them to pick up additional yield while being structurally subordinated to themselves.

OpCo/HoldCo Structure for Multiple Assets

Similar to the ProjectCo/HoldCo structure, a multitude of assets can be pooled from various ProjectCos into one SPV, an OpCo, in order to issue a single debt offering. A HoldCo issuance can then supplement the OpCo Notes offering to provide additional leverage.

The pooling of assets does not have to be restricted to one asset class. For instance, the OpCo can pool solar and wind assets simultaneously. The main consideration in pooling assets is that they should share the same sponsor(s).

Once the cash flows are pooled from the ProjectCos to the OpCo, the structural mechanics are identical to that of the ProjectCo/HoldCo described previously.



Investor Base for Project Bonds

Insurance Companies

Insurance companies constitute the primary investor base for Project Bond offerings. There are as many as 30 to 40 insurance companies globally that can invest in project finance. They are buy-and-hold investors and find Project Bonds to be an attractive investment class to manage their long-term asset and liabilities matching requirements.

Insurance companies typically invest with ticket sizes of \$25MM to \$200MM and tend to price the offering on a relative value basis to other recent and relevant project comparables.

Insurance companies have developed a deep expertise in evaluating Project Bond transactions and are comfortable with less traditional structures. For instance, insurance companies can provide delayed draw mechanisms as described in the previous section.

Asset Managers

Asset managers are the second major investor group in Project Bonds. There are more than 100 investors globally who buy structured paper with a goal of achieving higher yields than on traditional corporate bonds. Asset managers tend to have a lighter diligence process than insurance companies and are able to respond quickly to new offerings. These investors tend to be less sensitive to project specific attributes and price an investment based on a spread pick-up to a comparable corporate or sovereign benchmark.

This pool of investors is important for larger issuances. Involving a greater number of investors allows issuers to secure a larger debt amount as well as tighter pricing due to increased demand. Of note, Japanese, Korean and Chinese investors have developed expertise internally to invest in Project Bond transactions globally, and represent a growing investor base.

These investors are also more focused on liquidity and would expect to be able to trade their investment as needed.

Infrastructure Debt Funds

In recent years, more than 10 infrastructure debt funds have been created by leading asset managers to allow smaller market participants to invest in infrastructure transactions. By pooling assets from multiple investors, these funds can execute sizeable orders or even act as sole investor in a Project Bond offering.

These funds can usually invest in both Project Bonds and loan products, and while some of them have an

international mandate, most of their investments are currently in developed countries.

Local Investors

For transactions in emerging markets, local investors may be relied upon to take substantial and lead investment roles. These investors usually require a longer process to examine projects and roadshow timelines need to be adjusted accordingly.

For example in Latin America, local investors in Chile, Peru and Mexico are active in buying USD-denominated and local currency structured bonds in either local or Reg S issuances. These investors can invest with ticket sizes from \$10MM to \$100MM and sometimes express preference for inflation-linked products.

- In Mexico, there are approximately 10 Mexican pension funds (called “Administradoras de Fondos para el Retiro” or “Afores”) that can invest in Reg S transactions. Chilean and Peruvian pension funds (referred as “Administradoras de Fondos de Pensiones”) are other examples of investors able to support local transactions.
- In Brazil, 10 pension funds, 50 asset managers and about 30 family offices can invest in Project Bonds. Issuances of up to R\$1.0BN (\$300MM) can be absorbed by these local investors who prefer highly-rated inflation-linked offerings. Recent regulation to support investment in infrastructure projects in Brazil has also supported issuances volumes.

Pricing the Offering

When appraising investment opportunities in Project Bonds, investors usually leverage a few different approaches to assess the appropriate pricing.

Investors will evaluate the project risk based on recent comparable transactions. They will derive pricing expectations from pricing at closing of recent transactions and secondary trading levels when available. From these levels, they will make adjustments to account for differences between transactions recently executed and the contemplated offering. Differences in asset types, credit ratings, geographies and average lives are all examples of factors calling for pricing adjustments.

For projects that benefit from robust offtake contracts, investors also often price the offering relative to a spread pick-up from the contract counterparty’s bond benchmark. This spread pick-up reflects the fact that the Project Bond represents a credit-derivative exposure to the contract counterparty.

Types of Issuances in the US Project Bond Market

Issuers in the US Project Bond market rely on two possible formats: 4(a)(2) / Reg D US Private Placement and 144A / Reg S offering.

Both formats can be used by US or international investors to finance projects globally as there is no restriction on the type of asset or its location.

Section 5 of the Securities Act of 1933 requires all offers and sales of securities to be registered with the Securities Exchange Commission (SEC) unless a registration exemption exists. Since the registration of securities can be time consuming, expensive, and requires a high level of disclosure, an important private placement market has developed for US and international issuers that relies on these registration exemptions. While a large number of registration exemptions exists, Project Bonds are issued under the following two:

4(a)(2) / Reg D Private Placement

Section 4(a)(2) of the Securities Act exempts the issuer from registering the securities sold, if the sale does not involve a public offering. The offer should therefore be limited to Qualified Institutional Buyers (“QIB”), a category that regroups most institutional investors with \$100MM or more in investable assets and a limited number of accredited investors. Using this section also prevents general solicitation and general advertising.

Issuers rely on both the exemptions provided by Section 4(a)(2) and Regulation D (Reg D), which provides additional guidance on how to conduct private placements. Under this format, resale of the securities is restricted, which limits the investor base. This format is therefore preferred for smaller issues placed with insurance companies. While not required, issuances under this format are usually executed with at least one rating from a rating agency.

144A / Reg S issue

The Rule 144A exemption provides a “safe harbor” from registration requirements for certain securities sold to QIB. No required public disclosure of the financing or sensitive information relating to the project is among the advantages of this format. Another major benefit is the possibility offered to QIBs to freely trade the Project Bond after a minimum holding period. This specific feature allows issuers to address a larger investor base and potentially tighten pricing.

Project Bond Focus

Project Bond Fundamentals

144A offerings are often executed side-by-side with an offering targeting foreign investors, in reliance on Regulation S. (Reg S). In this case, Project Bonds are generally assigned two separate sets of securities identification codes. Typically, Reg S Project Bonds obtain a common code and an International Securities Identification Number (“ISIN”) and are generally accepted for clearance through the Clearstream, Luxembourg and Euroclear systems. 144A Project Bonds get a Committee on Uniform Security Identification Procedures (CUSIP) number and an “ISIN” and are generally accepted for clearance through the DTC system. This combination allows issuers to execute a multinational offering. Typically, two ratings are required for this offering format.

Project Bond Execution

The execution timeframe for a Project Bond is between eight and twelve weeks. To assist them with the execution, issuers will select one or more bookrunners.

The execution can be divided in three phases:

- First Stage – Due Diligence (2 to 3 weeks)
- Second Stage – Drafting and Rating Process (4 to 5 weeks)
- Third Stage – Marketing and Closing (2 to 4 weeks)

The due diligence process starts with the selection of counsel, independent consultants and rating agencies, when needed. During this two to three-week period, the sponsor and the bookrunner(s) draft the preliminary term-sheet and prepare the materials for the rating agencies, including a fully updated financial model.

During the second stage, following a face-to-face meeting and presentation, rating agencies review the transaction and information provided, conduct an independent analysis, and go to credit committee to determine the rating. The technical consultant report, resource report,

market report (as applicable), and insurance report are also finalized. In the meantime, the sponsor and bookrunner(s) prepare the Offering Circular or Confidential Information Memorandum as well as marketing materials to be used during the roadshow.

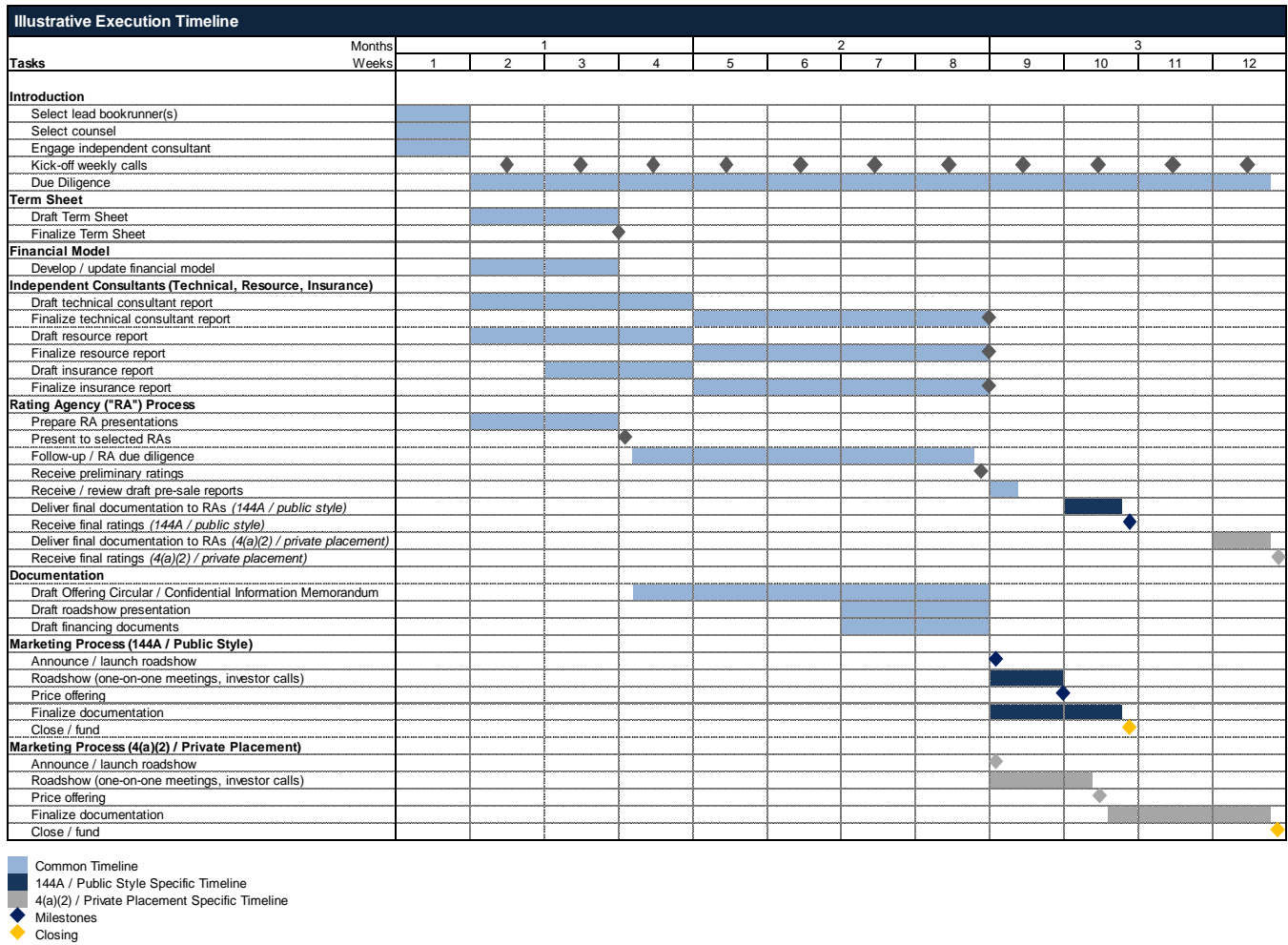
Once a preliminary rating is received and third-party reports are delivered, the marketing phase can start. Depending on the size of the offering and the targeted investor base, the marketing process will take between one and two weeks. It will start with the distribution of marketing materials via electronic platforms followed by a roadshow with meetings between management and selected investors. Over the following days, bookrunner(s) release price guidance to generate momentum in the order book. As the book builds and feedback from investors is received, pricing is adjusted and the issue is priced. Documentation is then finalized with the help of legal counsel and the transaction finally closes.

Regarding the choice of one or more rating agencies, a number of rating agencies can be considered. For 144A / public style offerings, ratings from Moody’s, Standard and Poor’s, and Fitch are typically preferred. For 4(a)(2) / private placement issuances, in addition to these agencies, issuers also consider Kroll and DBRS that have experience in rating Project Bonds.

Issuers should also keep in mind the difference in due diligence between a 4(a)(2) / private placement and 144A / public style issuances. With a 4(a)(2) / private Placement, the duty of due diligence resides with the investors. For this reason, they will have access to all reports, project documents, contracts, counsel, etc. With a 144A / public style issuance, issuers and bookrunner(s) have the responsibility for due diligence and they will summarize their findings in the Offering Circular. Investors will only have access to the Offering Circular and not to the actual project documents. For this particular reason, investors will require more time to evaluate the investment opportunity under a 4(a)(2) / private placement format.

Project Bond Focus

Project Bond Fundamentals



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