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ICMA International Capital Market Association

Guide to infrastructure financing

Bank loans, debt private placements and public bonds – smoothing the pathway for effective funding

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Foreword

On behalf of AFME and ICMA, we are delighted to introduce this 'Guide to infrastructure financing – Bank loans, debt private placements and public bonds'. This Guide is addressed to public authorities, project sponsors, project promoters and issuers seeking to raise finance for European infrastructure projects. It is designed to provide practical guidance on raising debt finance through banks and the capital markets, taking account of the impact of planning and procurement issues on the transaction process.

This Guide is one of a number of AFME and ICMA initiatives in support of the European growth agenda. AFME's report entitled 'Bridging the growth gap: Investor views on European and US capital markets and how they drive investment and economic growth' highlighted a number of roadblocks to European infrastructure investment, including investor concerns about political and legal uncertainty and lack of access for smaller funds, which we hope this guide will help to address. AFME and ICMA are strongly supportive of the European Commission's Investment Plan for Europe and the €315bn European Fund for Strategic Investments (EFSI). We believe that this guide can contribute to the work of EFSI by facilitating the raising of private sector finance for the infrastructure projects in which EFSI invests.

We would like to thank the members of the AFME-ICMA Infrastructure Working Group, comprising banks, investors, law firms, rating agencies and other market participants, for the time and effort they have devoted to creating this guide, as well as the many trade associations and public sector organisations who have contributed their views and advice.

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Guide to infrastructure financing

1. Introduction and executive summary

The global financial crisis has brought changes in the bank lending market that may, in time, make some global banks view the long-term lending typically required for infrastructure projects as less attractive. However, there is increasing interest in, and appetite for, private sector infrastructure financing. Indeed, the 2015 European Commission and European Investment Bank (EIB) proposal for a €315 billion European Fund for Strategic Investments (EFSI) depends heavily on private sector investment (see section 3). At the same time, capital markets investors have considerable untapped financial firepower committed to investing in the asset class.

This Guide aims to unlock the potential for infrastructure financing by informing public sector authorities – as grantors of various types of public concessions/contracts – first time sponsors and project companies interested in raising debt for infrastructure projects[1]. In particular, it focuses on the debt component of financing, rather than equity (which is outside of the scope of this Guide), and describes the relative merits of the bond markets and bank financing and particular considerations to be taken into account by public procurement authorities and private sector entities, as well as considerations relevant to procurement and planning. While not primarily written for investors, this Guide also sets out key credit considerations for project bond investors.

The Association for Financial Markets in Europe (AFME)[2] and the International Capital Market Association (ICMA)[3], each of which represents a variety of capital market participants, are committed to supporting the expansion of capital markets financing for all types of infrastructure projects, in line with the European Commission's goal of bolstering economic growth through long-term financing. It is with this common goal in mind that AFME and ICMA have produced this Guide.

Four key considerations

Underlying this Guide are four key considerations that should be taken into account early in the financing and planning process. The potential assessment and impact of these considerations should ease the path to efficient and competitive financing, while balancing the interests of the relevant parties – vital if the full potential of competitive private sector financing is to be realised:

1. Tailoring of financing choice to project needs: The debt component of infrastructure projects may be financed in a variety of ways, including by way of the bank loan market, the debt private placement market and the public institutional investor capital markets. As each market has different inherent features, they may be more or less suitable for any particular infrastructure project. However, no one particular market is necessarily optimal for financing infrastructure projects while fulfilling all the project's requirements, so consideration of the relative merits, and priority weighting, should be given to a variety of influential factors. These include the flexibility to accommodate changes to circumstances over the life of the project, the degree to which the tenors and interest rate structures offered by finance parties lending through each type of financing best suit the requirements of the project's revenues and debt profile, the nature of the transaction risk and the risk appetite of the target investors, confidentiality, all-in cost effectiveness and economics of the method chosen and consequent value-for-money, all of which are explored further in this Guide.

For instance, a loan from a small group of relationship banks or a private placement with a small number of investors may offer flexibility in terms of drawdown schedules, confidentiality and a simple process for amendments and waivers to the financing terms. A debt private placement or public markets transaction might offer a longer tenor than a bank loan and, therefore, lower refinancing risk, which could improve the overall economics. The broad investor base and the visibility

1 While public sector authorities may not be raising finance themselves, they may be awarding concessions and/or contracts to a private sector sponsor. The sponsor may utilise a special purpose vehicle (SPV) to raise finance based on the contractual cash-flows from the public sector authority or from users pursuant to the concession. The cost of funding will usually have an impact on the amounts payable by the public sector authority or the end users under the relevant concessions and/or contracts, so competitive financing terms are important.

2 See further www.afme.eu.

3 See further www.icmagroup.org.

offered by a public markets transaction may offer better value-for-money, although it is potentially more burdensome to make amendments to terms during the life of the transaction.

2. Anticipate likely credit enhancement and any ratings required by lenders or investors: An investment grade rating helps to broaden the investor base, as many institutional investors have a mandate to invest in investment grade assets. Public guarantees and/or credit enhancement – partial or full – may be used to upgrade the rating of a transaction that might otherwise be less acceptable to investors from a credit risk perspective. However, a balance needs to be struck between using guarantees and/or credit enhancement to improve the quality of projects that are already investment grade, and deterring or 'crowding-out' potential bond investors who prefer the additional yield of an un-enhanced debt product. Credit enhancement, for example through the EIB Project Bond Credit Enhancement Programme (PBCE), can be helpful for projects that face challenges in long-term financing, or might otherwise not be financeable at all. Credit enhancement is also useful for large projects where liquidity may be an issue, and to possibly lower the cost of financing for the project, thereby enhancing value-for-money.

3. Anticipate the need for usage guarantees: Some transactions are financeable if the usage or demand risks are either short-term in nature, or alternatively, quantifiable, well-proven and appropriately assessed and measured. While not guaranteeing the success of a project *per se*, some transactions may not be financeable without some level of public sector usage guarantee. If a public authority is unwilling to retain some level of volume or usage risk – on a new toll road for example – financing the project is likely to be more difficult. A fairly-balanced risk sharing mechanism will encourage investors who may be willing to take *some* risks between an agreed minimum or maximum level of usage, but are unlikely to be prepared to take *all* of the risk.

4. Consider any adverse impact of post-closing changes in law and regulations, including tariff reductions, and the appropriate compensation mechanisms in the case of any such changes: Regulators and public sector authorities should maintain transparency as well as consistency with regards to tariff-setting, monitoring regulatory controls and/or relevant laws post-financial close of a transaction. A review of regulators' and public sector authorities' past practice of tariff reviews, including retrospective changes to tariffs against a variety of asset classes/projects, and appropriate compensation in the case of regulatory or contractual changes, could help to assuage investors' concerns over certain regulatory and legal risk associated with the underlying revenues of the project.

Scope of the Guide

While regulated utility companies and other large corporate entities often issue bonds to finance infrastructure, they are not the subject of this Guide. Instead, it focuses on project finance loans and bonds, defined as financings based on single project assets typically structured as Public Private Partnerships (PPPs). PPPs are transactions where a public sector entity contracts with the private sector through concession contracts of various types, or service contracts where a significant portion of financing is provided by the private sector. Such financings are generally without recourse – or with very limited recourse – to the sponsors and shareholders.

Differentiating between loans and bonds

How sponsors or procurement authorities choose the most efficient financing depends on a variety of factors. Deciding whether a bank loan, debt private placement or project bond finance in the capital markets is more attractive for a specific project depends on factors such as: the size of the transaction, its complexity, the type of the transaction, bank and capital market conditions at the relevant time, issuance and swap costs, the need for special terms such as any non-standard covenants, the time available for the marketing, preparation of the financial documentation, strategic considerations such as investor diversification and public visibility and whether staged drawdowns of funds are available and if not, the expected costs of negative carry.

In some cases, the rules of public authority bidding procedures require certainty of financing, which may limit the choice to a degree. In certain jurisdictions, the choice of financing for public authorities may also be shaped by practice rather than by law. For instance, France's public procurement rules oblige the public authority to agree on a total cost of the project at an early stage – a behaviour generated by practice rather than law, which may steer the transaction towards bank financing and private placements to a certain extent, and away from the public bond market. This is because in a public bond issue, the price is set at the 'pricing' stage (a few days before issuance), thereby creating uncertainty in the exact total cost of the

project[4]. In order to help eliminate any potential uncertainty in price between the bid stage and the time of the pricing of the bonds, a risk-sharing mechanism between the public authority and the private partner should be discussed with bidders at an early stage of the procurement process, whereby the risk of any such price fluctuations are allocated between the parties, thereby enabling a firm financing commitment to be made upfront. Even 'certain financing' from banks may be subject to some conditions, although margins may be fixed, and overall pricing may well depend on prevailing swap rates at the time of financial close.

The financing implementation processes for bank loan and bond market finance differ in certain respects. These can include: the participants, the issuance process and timing, the transaction pricing process, credit review processes, documentation and key terms (including covenants), all-in costs, and the use of official credit support programmes (such as from the EIB, Member State and/or other public sector entities, including sub-sovereign institutions).

For project bond issuances, this Guide also illustrates the various considerations applying to the two basic categories of infrastructure projects:

a) greenfield (ground-breaking and construction), and

b) brownfield or operational.

However, within the so-called brownfield category, there may be a further distinction to the extent that a project requires significant improvements, upgrades or expansion – any of which could negate or diminish the underlying revenue stream (also called 'yellowfield' assets).

Within these categories, transactions can be further analysed based on the type of credit enhancement provided and investors' exposure to volume/usage and other risks.

It is important to note that many large project financing transactions include both commercial bank facilities and project bond financing. This multi-source approach may be used for a variety of reasons, including the diversification of financing sources, the use of bank financing as a temporary bridge while awaiting optimal capital market financing conditions and the need for revolving working capital finance, which realistically can only be provided by banks.

Standardisation

Generally, the creation of a common framework for upfront and ongoing reporting of transaction information and performance by the project company to the investors should make investment in infrastructure more efficient and accessible. The European Financial Services Round Table (EFR) has developed a useful framework for, among other things, standardised infrastructure disclosure, reporting and documentation, all as further described in this Guide.

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In some cases, the rules of public authority bidding procedures require certainty of financing, which may limit the choice to a degree.
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Marketing

In addition, this Guide focuses on the project bond marketing process, profiling different investors and their capacities for investing in particular types of project bonds or loans.

For reference purposes, the appendices include: detailed examples of transactions completed, implementation timetable, documentation requirements, EIB programmes, a high-level overview of various relevant regulations, a glossary of terms and further resources available.

4 http://www.eib.org/epec/resources/publications/epec_financement_obligataire_des_PPP_en_France_fr.pdf

2. Overview of the bank loan and project bond markets

Europe's sources of infrastructure finance are changing. While banks remain the dominant lenders to infrastructure projects, capital markets investors are starting to make significant inroads into the marketplace as pension and insurance monies look for long-dated investments backed by stable cash flow characteristics. Over time, this trend is expected to continue, giving sponsors a greater diversity of finance sources.

Project companies, like any businesses, require equity financing to, *inter alia*, provide first loss support to debt investors. However, project companies are normally highly leveraged and, while there is no strict rule, they generally require only around 25% of total capital to be in the form of equity, with the balance of the total capital requirement coming from various debt instruments. The deleveraging and shrinking of many European banks' balance sheets – together with changes in banks' lending policies as a result of regulations (including the Basel III requirements for increased bank capital and liquidity) – have led some global banks to reduce project finance lending commitments. At the same time, capital market investors such as insurers, specialist fund managers, pension funds and sovereign wealth funds have increased their capacity to invest in project bonds and equity. Insurance companies and pension funds are, in fact, 'natural' investors in infrastructure assets, since the long maturity and fixed rate nature of project bonds are a good match to their long-term liabilities.

The form of investment can affect its appeal to investors due to regulatory or commercial restrictions contained in their mandates regarding, for example, listing, credit ratings and security. Project bonds can either be listed on a stock exchange, or issued on an unlisted basis. Listing and public credit ratings have the advantage of potentially expanding a transaction's investor base and enhancing liquidity, but at the cost of requiring the issuer (which may be the project company, or a sister company which issues the bonds and on-lends the proceeds to the project company) to comply with various listing-related regulations and information requirements. That said, this may be seen as an advantage, given that the transaction then benefits from the confirmation that the disclosure has complied with the relevant listing rules or rating agency requirements. A 'public' transaction is almost always likely to require a listing and a credit rating, while a privately placed transaction can be listed or unlisted, and while a public credit rating is often preferred, it may not always be required.

Growth in the project bond market

As the following tables illustrate, while bank loan finance remains the predominant form of project financing, bond financing is increasing as a percentage of total infrastructure financing. In 2014, bond financing in Europe comprised 23% of European project finance debt issuance by value (€15.1 billion) and 27% or €11.8 billion in 2013 – substantially higher than just 3% in 2008 (source: PFI Thomson Reuters, converted into Euro as at the end of each fiscal year).

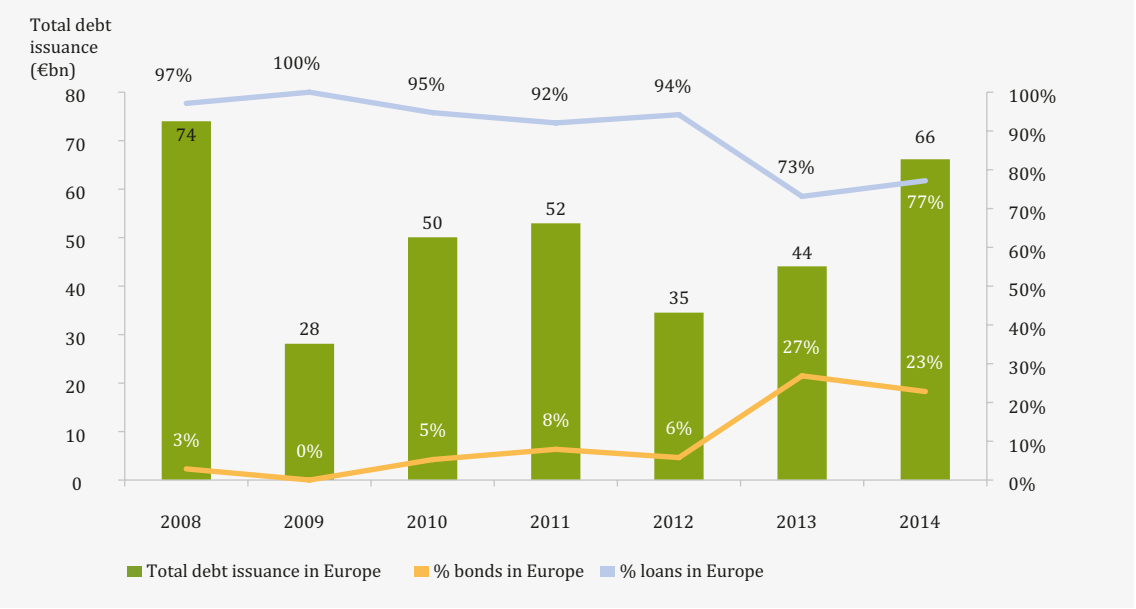
On a global basis, European project bonds accounted for approximately 36% of global project bond issuance in 2014 as against 33% in 2013. Project bonds have been used to finance oil and gas projects, infrastructure (such as rail, roads, ports, telecoms) and power projects.

Figure 1: **Global and European issuance of project bonds and loans**

	Global	
*in €m**	2014	2013
Loans	215,019	148,021
Bonds	41,584	35,735
% Bonds	*16%*	*19%*
Total	**256,604**	**183,755**

	Europe	
*in €m**	2014	2013
Loans	51,064	32,238
Bonds	15,100	11,842
% Bonds	*23%*	*27%*
Total	**66,164**	**44,080**

Figure 2: **European bonds and loans issuance**



Source: PFI Thomson Reuters, Financial League Tables
http://www.ifre.com/?&m=0&src=http://www.ifre.com/hybrid.asp?typeCode=68&pubCode=1&navcode=386

Figure 3: **Regional composition of project finance**

	Loans (€m)		Bonds (€m)		% Bonds vs. Loans	
	2014	**2013**	**2014**	**2013**	**2014**	**2013**
North America	62,720	29,143	15,565	15,402	20%	35%
Europe	51,064	32,238	15,100	11,842	23%	27%
Latin America	13,763	8,162	4,931	3,870	26%	32%
Asia Pacific	60,306	51,843	4,091	2,166	6%	4%
Middle East Africa	27,166	26,637	1,899	2,454	7%	8%
Total	**215,019**	**148,021**	**41,584**	**35,735**	**16%**	**19%**

Source: PFI Thomson Reuters, Financial League Tables
http://www.ifre.com/?&m=0&src=http://www.ifre.com/hybrid.asp?typeCode=68&pubCode=1&navcode=386

Figure 4: **Sector composition of projects financed by bonds – global in 2014**

Sector	€m	%
Oil & Gas	15,000	36%
Infrastructure	14,952	36%
Power	9,047	22%
Social Infrastructure	1,212	3%
Petrochemicals	1,188	3%
Telecoms	186	0%
Total	**41,584**	

Source: PFI Thomson Reuters, Financial League Tables
http://www.ifre.com/?&m=0&src=http://www.ifre.com/hybrid.asp?typeCode=68&pubCode=1&navcode=386

*The data in these tables, published by PFI Thomson Reuters, is compiled from submissions sent in from commercial banks and financial advisers. Only transactions that are limited or non-recourse are included. The data includes issuance of syndicated loans and public bond transactions; notably, it does not include bilateral loans or private placements. Data was converted from USD to EUR with the currency rate as of end of each fiscal year.

The European PPP Market

Public Private Partnership (PPP) transactions are described in section 4. In 2014, European PPP transactions represented an aggregate value of €18.7bn across 82 transactions compared to €16.3bn for 80 transactions in 2013. The vast majority of the PPP transactions occurred in the transport sector (63%) and were availability based (85%)[5].

Figure 5: **European PPP market**

	2008	2009	2010	2011	2012	2013	2014
Aggregate value of PPP transactions (€bn)	24.2	15.7	18.3	17.9	11.7	16.3	18.7
Number of transactions	115	118	112	84	66	80	82

Source: European PPP Expertise Centre (EPEC), http://www.eib.org/epec/

Figure 6: **Sector composition of PPP volumes in Europe (€m)**

Sector	2014	%
Transport	11,800	63%
Healthcare	2,200	12%
Environment	1,900	10%
Other	2,800	15%
Total	**18,700**	

Source: European PPP Expertise Centre (EPEC), http://www.eib.org/epec/

5 The PPP data in this section comes from the European PPP Expertise Centre (EPEC). The data covers transactions of a value of at least €10 million (comprising external financing requirements – debt and equity – and excluding public capital contributions) in 28 countries including Turkey and countries of the Western Balkans region (i.e. Albania, Bosnia-Herzegovina, Former Yugoslav Republic of Macedonia, Kosovo, Montenegro and Serbia). The transactions are structured as design-build-finance-operate (DBFO) or design-build-finance-maintain (DBFM) or concession arrangements which feature a construction element, the provision of a public service and genuine risk sharing between the public and the private sector.

3. Highlights of EFSI – the European Fund for Strategic Investments

The European Commission – An Investment Plan for Europe (published on 23 November 2014):

The European Commission, EU governments and the EIB have been concerned that, despite high levels of liquidity available in Europe and a clear need to improve and extend Europe's economic and social infrastructure, it may prove difficult to persuade the private sector to absorb certain types of risks and long-term and other higher risk project debt. The 'Investment Plan for Europe' is an attempt to overcome what is seen as a 'market failure' building on initiatives such as PBCE.

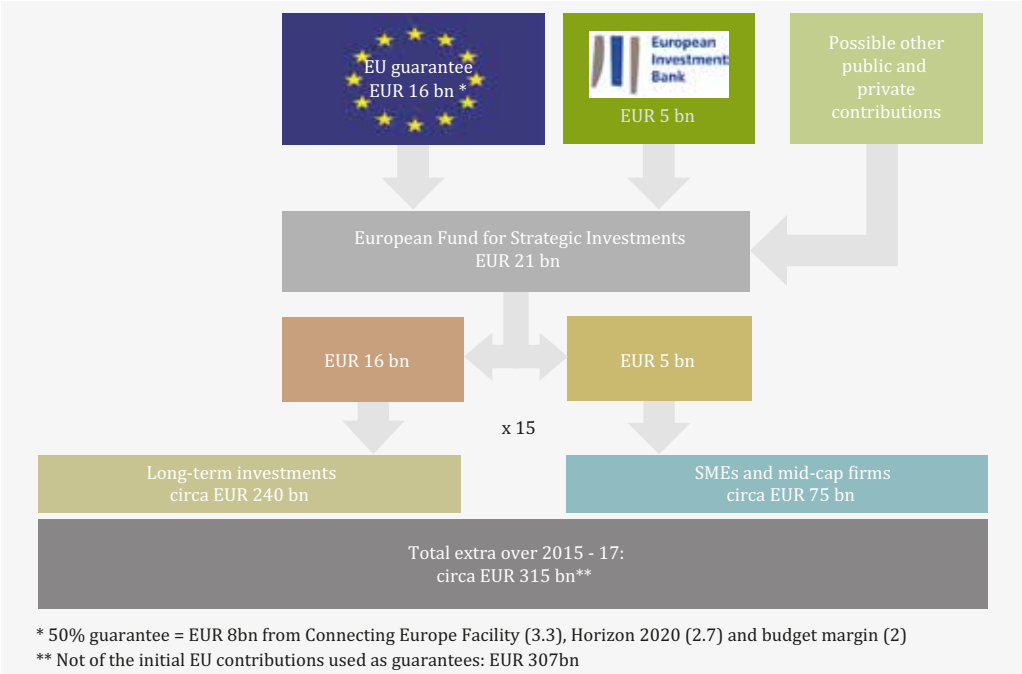
The European Commission's plan is to mobilise at least €315 billion of additional investment over three years. For this to happen, parts of the EU budget would be used differently, at both EU and national level, to provide greater risk-bearing capacity through public money in order to encourage project promoters and to attract private finance to viable investment projects. This will make the best use of EU public resources because it will involve support to the EIB to leverage other financing.

The EU will establish a new European Fund for Strategic Investments (EFSI) to provide risk support for long-term investments. The EFSI will be set up jointly by the European Commission and the EIB, giving it access to the EIB's well-established expertise.

At the core of the EFSI is a €16 billion guarantee taken from the EU budget. The EIB will commit an additional €5 billion. In order to reach its €315 billion target, the EFSI will leverage these funds, giving it significant firepower. The EIB intends to leverage this €21 billion of equity by approximately three times, which should result in approximately €63 billion of credit enhancement available. As the EIB is only permitted to provide credit enhancement on 20% of a transaction's assets, this results in an additional five times leverage. On a pool of €315 billion of assets, this means that the EIB can provide up to approximately €63 billion of credit enhancement (in funded or unfunded form) to support approximately €252 billion of funding provided by the private sector. Over time, it will be able to expand its activities further. Member States, directly or through their national public banks or similar bodies, and private investors will also have the opportunity to contribute to the EFSI in the form of capital.

The fund will support higher risk investments to complement the EIB's traditional lending activity. This financing by the EIB is intended to support projects that otherwise would not be financed.

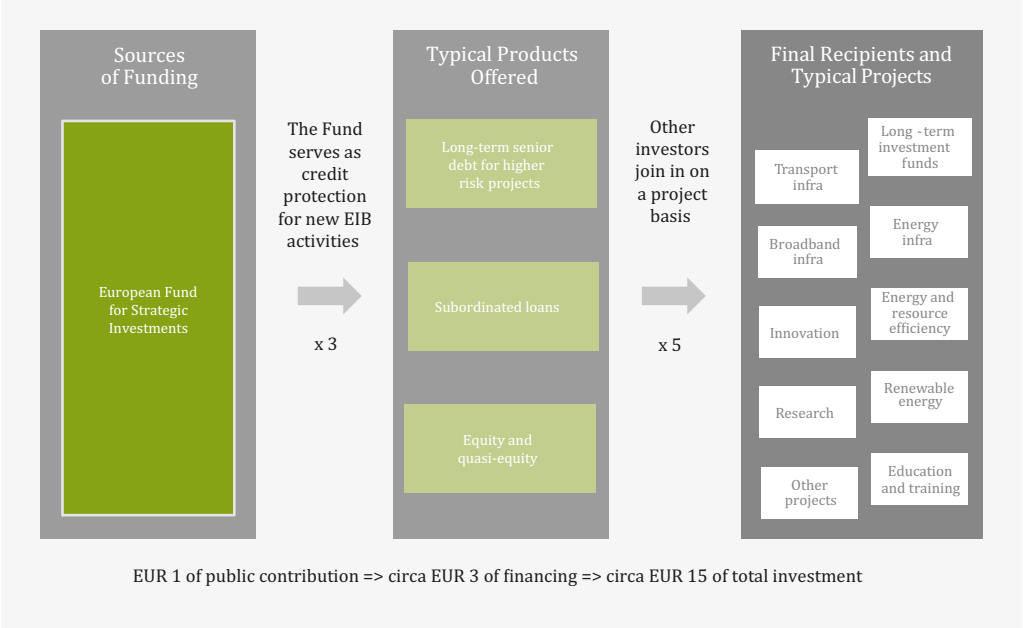
Figure 7: **The new European Fund for Strategic Investments (EFSI)**



* 50% guarantee = EUR 8bn from Connecting Europe Facility (3.3), Horizon 2020 (2.7) and budget margin (2)
** Not of the initial EU contributions used as guarantees: EUR 307bn

Source: An Investment Plan for Europe, November 2014

Figure 8: **How the EFSI will work in the case of long-term investments**



Source: An Investment Plan for Europe, November 2014
http://ec.europa.eu/priorities/jobs-growth-investment/plan/docs/an-investment-plan-for-europe_com_2014_903_en.pdf

As well as putting forward the above proposals for improving the ability of the public sector to bear risk, the 'Investment Plan for Europe' also proposes a number of improvements to other aspects of PPP projects which have caused private sector investors difficulty in the past. In particular, the split of risk bearing between the public and private sector in the case of projects such as toll roads where there is traffic risk (and hence revenue risk) is being reviewed. To date, the private sector in some countries has been expected to bear not only construction risk, expropriation risk and regulatory risk but also all revenue risk throughout the life of the project.

Other possibilities for improving the risk-bearing landscape include: partial guarantees for demand risk; minimum volume guarantees; cap and floor (collar) structures; banded payment mechanisms for toll roads that reduce marginal revenue per vehicle at higher volumes and first loss structures.

Clarity at Member State level of the debt holders' position would help to reduce – or at least highlight – risks to the private sector surrounding, for instance, the ability of a Member State to abandon a project (and any relevant compensation provisions if they do so), and potential losses to debt holders on the failure of a sponsor or a contractor during the construction of projects. [6]

6 http://ec.europa.eu/priorities/jobs-growth-investment/plan/docs/an-investment-plan-for-europe_com_2014_903_en.pdf

4. Project structures, procurement and planning process

Projects can be purely private (such as power stations, oil and gas development, pipelines or minerals), may involve a partnership between the public and private sectors (PPPs), or may be built and operated completely in the public sector.

Private projects (for example, combined (gas) cycle electricity generators where a gas turbine generator generates electricity) generally have long-term contracts for their output (for example, electricity) and feedstock input (for example, gas). Alternatively, they may have some means of linking input and output prices in order to minimise price risk.

Generally, PPPs are long-term contracts (typically 20-35 years) under which the private sector constructs the project's assets (for example, a road) for the public sector, and raises the required finance, usually on a project finance basis. This model gives the private sector an exclusive right to operate, maintain and provide the necessary investment in a public utility for a given number of years, and the public sector either pays for the availability of the asset (typically called 'availability-based' contracts) or the private sector charges end-users to use the asset (typically called 'user-pay' concessions or contracts).

In some countries, this activity is called a Private Finance Initiative (PFI). There are also other types of PPP, such as joint ventures, concessions and information and communication technology (ICT) PPPs. However, in certain civil law countries, concessions are distinct from PPP – they are contracts where the private sector provides a service to the public sector under 'Build-Operate-Transfer' (BOT) contracts, but keeps the associated risks to completion. In contrast, PPPs are BOT contracts where the public sector transfers the project and associated risks before completion to the private sector for a fee.

Therefore, the project company may receive revenue from the public sector based on the availability of the asset, or the project company may be required to take revenue risk (for example, by a toll road concession operator receiving payment from users, or from the public sector (based on usage)). In determining the form of contract, the procurement authority will need, amongst other things, to consider value-for-money, as in all cases, allocation of the risks has a cost implication for both the public and the private sector.

Introduction to EU procurement processes

Although procurement practices can vary widely throughout the Member States of the EU, public procurement law regulates the purchasing by public sector bodies through contracts for goods, works or services. Unlike contracts awarded which are entirely within the private sector, PPPs are subject to a number of very specific regulations[7].

EU regulations apply to a 'Contracting Authority' – which includes central government, local authorities and other 'bodies governed by public law', universities and housing associations and other entities (including private sector entities) which are under public sector influence – where the contract is for public works, public services or public supplies. In addition, in some sectors entities with special or exclusive rights and public undertakings are subject to the so-called utilities procurement regime outlined below, which in some cases provides certain flexibilities only to utilities. Subsidised contracts may also be brought within this regime[8].

On 28 March 2014, the following three new European Union (EU) public procurement directives were published in the Official Journal of the European Union (OJEU):

- Directive 2014/23/EU on the award of concession contracts;
- Directive 2014/24/EU on public procurement; and
- Directive 2014/25/EU on procurement by entities operating in the water, energy, transport and postal services sectors.

Public contracts falling within the scope of the directives total €425 billion annually, or 3.4% of the EU's GDP (2011 figures).

7 See further www.eib.org/epec for more information.

8 For more information see Out-Law.com 'Public procurement law: the basics' http://www.out-law.com/page-5964

Project finance concessions

Public contracts, such as concessions as described above, have traditionally been used by public authorities to procure supplies, works or services. Concession notices must be published in the OJEU if the value of the concession is equal to, or greater than, €5 million.

Under a PPP transaction, the project company enters into contracts to construct, operate and maintain the project. Often these contracts are with affiliates of the sponsors.

The stages of project finance concession contracts

The process of identifying, creating, building, licensing and (in some cases) negotiating a concession contract to provide services, whether by the public sector or by the private sector, involves the following stages:

1. **1.** Project selection
2. **2.** Project preparation
3. **3.** Procurement
4. **4.** Project construction
5. **5.** Project operation

Specifically, procurement authorities planning PPPs must take a risk-based perspective in order to minimise the project's lifetime cost and achieve value-for-money. To achieve this outcome, the procurement authority must bear in mind the risk appetite of the sponsors (as shareholders), contractors and private investors (banks and institutional investors). By taking this approach, the procurement authority can reduce the 'cost of risk' by allocating it to the party best able to control it, or absorb it within a portfolio of diverse risks. It follows that appropriate risk allocation is one of the key ways to achieve value-for-money.

This forward-looking approach involves procurement authorities and sponsors anticipating possible adverse scenarios and their implications for private sector investors. These risks could range from construction-related issues such as engineering, geological or archaeological risks, to more operational issues such as the economic impact of lower than anticipated project usage, which may, depending on the nature of the asset, cause revenues to the procurement authority or the private sector partner to be lower than projected.

Revenue risk is particularly sensitive, and for projects with high demand risk, the PPP's value-for-money process should include careful consideration of whether the private or public sector should bear this risk, or whether and how it should be shared.

In the EU, as a rule, the procurement process starts with the publication of a notice in the OJEU. The notice normally invites interested parties to provide a pre-qualification submission to the procurement authority. Pre-qualified parties then ask potential lenders to give indicative terms and pricing for bank loans, private placements or public bond issues to finance the transaction – while not the same as a firm bid, this process may assist with evaluations, or may give clarity to the transaction parameters (structure, terms and conditions), or for the purposes of shortlisting a smaller group of bidding financial entities. A firm bid – usually including a financing bid – will ultimately be sought.

Issues for public procurement authorities with bond financing

The following describes the issues to be considered by procurement authorities with respect to bond financing, all of which are important factors when it comes to deliverability and value-for-money, as referenced in the EPEC 'Financing PPPs with project bonds issues for public procuring authorities' published in 2013.[9]

9 See further http://www.eib.org/epec/resources/publications/financing_ppps_with_project_bonds_en_11_11_2013.pdf

Understanding bond financing bids

Procurement authorities may have to compare bond proposals from several bidders. They will therefore need to be able to assess differences in placement capability, pricing levels, pricing features and means of managing the pricing risk – a process which is more complicated in bond financing as the pricing of bonds is only confirmed upon issuance (i.e. at financial close).

However, in order to ease the comparison process, a procurement authority procuring a PPP should, in the tender documents, require bidders to submit an explanation of the pricing methodology used for any proposed bond solution (detailing the various pricing components), perhaps by reference to market prices for similar bond issues or baskets of bond issues. When seeking final offers, the procurement authority may consider providing indicative bond pricing data which bidders should use to derive the price of their offer. Such pricing data could break down information according to different rating outcomes and other key features of the financing (e.g. interest structures and maturity).

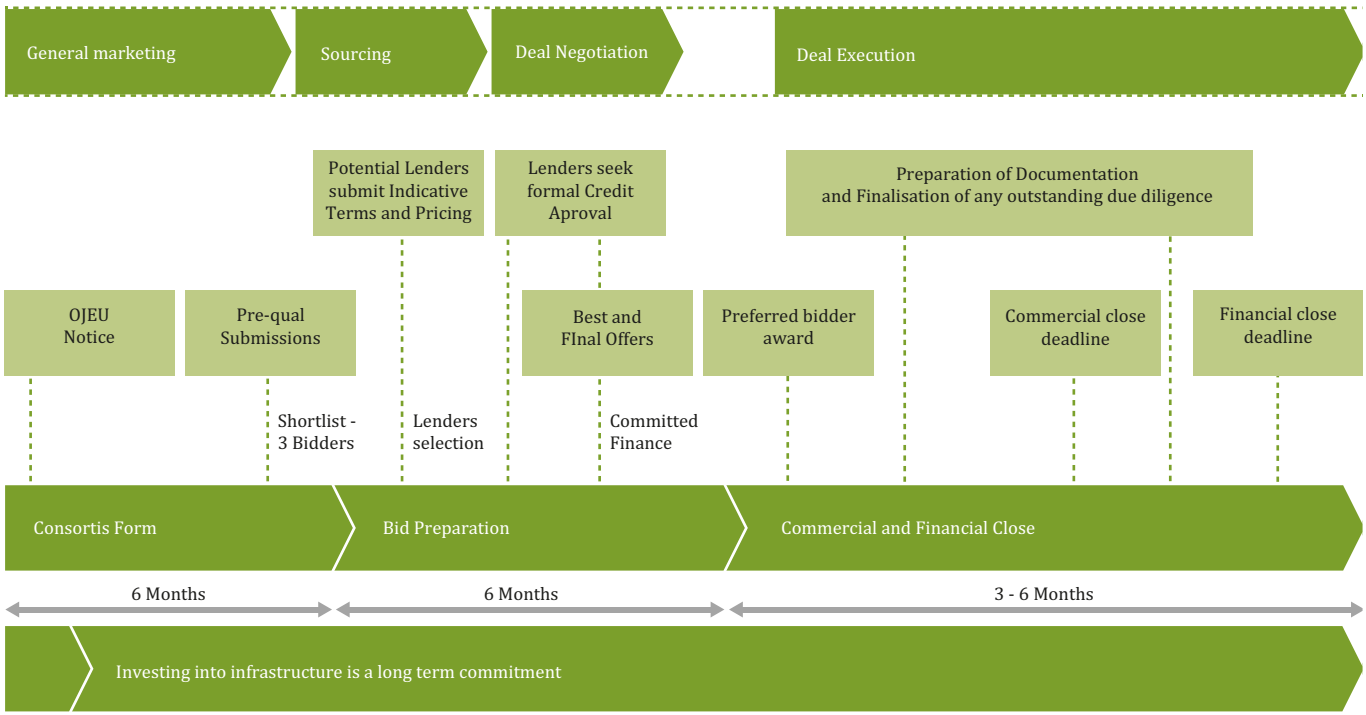
Risk of fluctuations in bond pricing

As final public bond pricing is largely market-driven, there is a risk of price fluctuation between final offers and financial close. However, it is important from the point of view of deliverability of funding, as well as to be able to ascertain relative value-for-money, that the procurement authority secures committed financing at final offer stage, which may be a requirement in some jurisdictions. As a result, a risk-sharing mechanism should be discussed at an early stage of the procurement process; depending on the jurisdiction, this will often result in bidders providing a firm upfront commitment, notwithstanding any such potential fluctuations, with the fluctuation risk being assumed by all or a combination of the sponsor, the bidder, the investors and the procurement authority, as agreed.

Ratings/timing issues

To inform its financing strategy, the project company may hire one or more credit rating agencies to provide indicative ratings, which can be provided in advance of a bid submission. While this will almost always be the case for bond financing, depending on the particular bank a credit rating agency may be engaged to give a view on the credit even if a bank-only solution is contemplated, or for purposes of assessing whether a refinancing in the public bond market could be made in the future. Procurement authorities should ensure that the PPP procurement timetable caters for the credit rating agency process, which can take some time to prepare, as well as factoring in time for preparation of documents, marketing and meeting regulatory requirements, as more fully described later in this Guide.

Figure 9: **Typical procurement timeline**



Source: Allianz Global Investors.

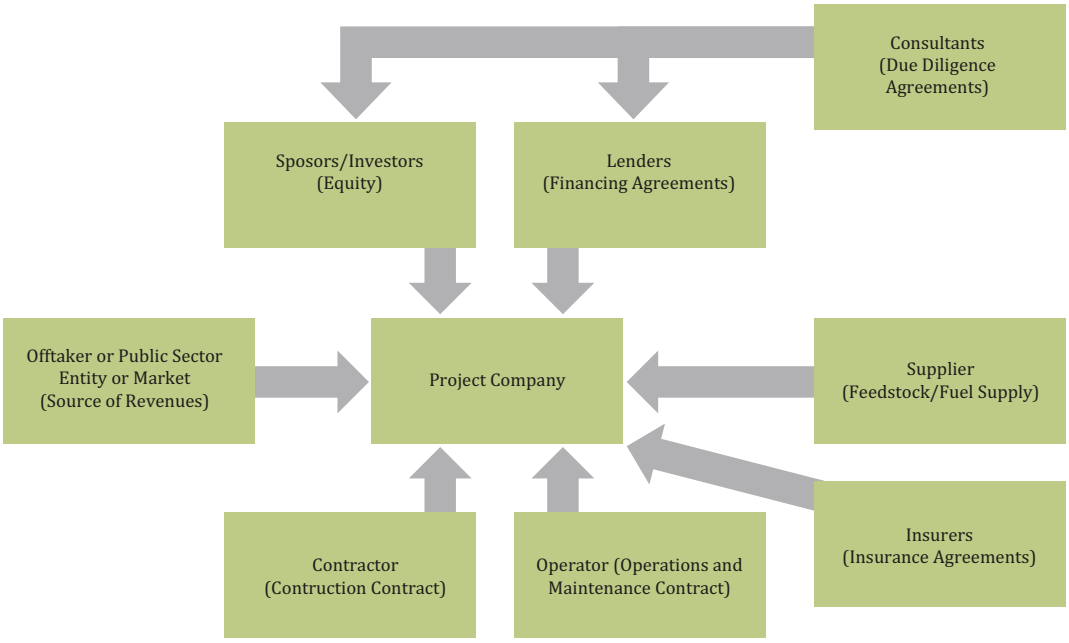
The procurement model employed by the procurement authority should specify how the best tender is to be selected before the bids are put in. Once the preferred bidder has been selected, the whole process can then move towards financial close.

The preferred bidder/sponsors and the arrangers of the financing (whether bank or bond) undertake appropriate due diligence, which will be updated (by way of 'bring-down due diligence') before the financing documentation is finalised.

To have reached this stage, each side has to be satisfied that the various aspects of the proposed venture are sound from the engineering/technical, environmental, legal and economic perspectives, and that the level of risk they are assuming in each of these and other areas of the project is acceptable.

The chart below shows the structure of a typical project financing (with a bias towards energy rather than infrastructure types of transactions).

Figure 10: **Structure of a typical project financing**



Source: Moody's Generic Project Finance Methodology, December, 2010
https://www.moodys.com/researchdocumentcontentpage.aspx?docid=PBC_127446

Pipeline

At the time of writing, other than publication in the OJEU, there is no pan-European centralised hub that collects and makes available information on the upcoming pipeline of infrastructure transactions, and when they are expected to come to market (although certain national initiatives exist)[10]. However, in January 2015, the European Commission and EIB announced an initiative to develop a pan-European transactions pipeline report as part of the EFSI initiative.

10 For instance, the Dutch website http://www.government.nl/issues/public-private-partnership-ppp-in-central-government/ppp-infrastructure-projects lists potential, current and completed PPP projects. See also http://www.nlii.nl/, which aims to create a better match between the supply and demand of long-term financing in the Netherlands.

5. Debt financing choices: corporate finance or project finance, loan finance or bond finance

When deciding how to finance the debt component of an infrastructure project, the choice by a sponsor of the optimal financing route depends on a number of factors, as described below.

Corporate financing or project financing

The first choice is between project financing and on-balance sheet financing ('corporate financing'). The differences between the two have important implications for the project.

Corporate financing

In a corporate financing (or in order to make it a viable option), the corporate entity issuing the debt will often have multiple operating assets already generating revenue. As a result, that corporate entity is likely to have permanent equity, together with a historic reinvestment and dividend policy. Based on a credit evaluation which focuses on balance sheet and existing cash flows, the corporate entity will deploy a number of diverse financing tools, including bank loans, hedging and unsecured and secured public and private bullet bonds (which do not amortise during their life but are redeemed at maturity) of varying maturities but usually with standardised structures and documentation. If the corporate entity chooses to finance investment in an asset through on-balance sheet corporate financing, the lenders or investors in the relevant financing will have recourse to the whole corporate entity, and not just to the specific asset being financed. Depending on the size of the corporate entity relative to the size of the investment in question, the lenders or investors may be more or less concerned with the asset itself, as compared with the performance of the corporate entity as a whole.

Project financing

A project finance company, on the other hand, depends on cash flows generated by a single asset which the project company has the right to operate for a finite period or which it owns but which has a limited lifespan. These cash flows typically begin only when the asset starts operating and, generally, the capital structure does not anticipate reinvestment. For this reason, the financing of a non-recourse project will be carried out through a bankruptcy-remote special purpose vehicle (SPV), whose assets are primarily, or exclusively, the project assets, while the liabilities are primarily, or exclusively, the project debt and the sponsor equity within the SPV.

The major source of project finance will, generally, be long-term amortising bank loans and bonds (with bespoke documentation) in addition to equity. Both loans and bonds are likely to be secured against the project company's assets, including the project contracts entered into by the project company. Credit evaluations are, however, based principally on the project's future cash flow (as in many cases there is no history to review), although the value of the assets themselves may also be considered from the point of view of debt recovery in the event of a forced sale of the business, or can play an important part in the credit assessment of some transactions, in particular, concessions.

In a project financing, the lenders or investors do not have recourse to the sponsors beyond the equity (and subordinated debt) which the sponsors agree to invest in the project, and any other rights they may have against such sponsors in other capacities (such as construction contractor or off-taker). Often there are contingent obligations on the sponsors, albeit capped and for pre-identified events. Sponsors generally prefer non-recourse financing in order to limit their exposure to a project's risks and also for consolidation purposes, but will balance this against the cost and complexity of project financing as compared to a corporate financing.

Many projects have multiple sponsors, which makes non-recourse financing more suitable. These sponsors may be companies that have bid successfully for the project as a consortium, generally including the construction company, sometimes a key equipment supplying company (for example, a turbine supplier) and the operator that will manage the operations after construction. Often specialist financial investors, generally private equity firms or other specialist infrastructure funds, are involved to provide additional equity finance. Infrastructure funds are generally unable to provide guarantees on projects for a variety of legal and risk reasons, so they too have a preference for non-recourse financing. The sponsors, as owners of the equity in the project company, will expect to receive distributions of surplus cash throughout the life of the project (which repays their equity (and any subordinated debt) and also provides a return on that equity).

While there may not be recourse to sponsors on a project financing, their ongoing role and expertise will be vital for the long-term success of a project and, in particular, the project's ability to reach completion. While such sponsors may be contractually committed to the project through entering into construction or operations contracts, they may also be restricted from selling their equity stake for a period, often at least until after commencement of operations. It is most common for the debt providers to require protection against a 'change of control' which obliges certain or all of sponsors to maintain control of the ownership, decision making and voting rights in the project company. A change of control would typically result in either an event of default or a mandatory prepayment of the debt.

The amount of equity capital which investors and lenders require as a proportion of the project cost varies dependent on perceived risk. For projects perceived as being higher risk, such as those with specific inherent development or technology risks or those in emerging market regions (which often carry higher levels of perceived political and economic risk), higher levels of equity may be required and debt investors may prefer that a well recognised equity sponsor retains more than 50% of the equity. In addition, sponsors can provide support through the risk taken by them as counterparty to the engineering, procurement and construction contract, in order to minimise completion risk for the project company.

From a governance standpoint, the main shareholders will normally appoint the directors of the project company. The financing documents will contain various covenants, including for example covenants that restrict certain actions of the project company without lender/investor consent.

Fundamental differences between bank loans and project bonds

Bank loans and project bonds may have different features due to the differing nature and requirements, respectively, of banks and bond investors. A bank has an ongoing relationship with a client which can include providing treasury, foreign exchange, current account and advisory services. Banks also employ staff who are experts in credit evaluation – specifically in project finance – with the skills to make appropriate decisions when a borrower's circumstances change.

Capital market transactions (at least, public capital market transactions), on the other hand, are usually less relationship-based. Bond investors generally make their investment decisions based on a project bond's merits and credit rating relative to other investment opportunities. Bank and bond investors, in theory, are likely to have similar credit review processes, and therefore need to receive similar types of financial information on an ongoing basis. However, in practice, some require more information than others. In addition, there may be disclosure requirements imposed by regulation in relation to publicly listed bonds. As some sponsors avoid certain types of disclosure and covenants, this may influence their choice of bank or public bond financing.

In terms of liquidity, traditionally, infrastructure loans and bonds trade less often than corporate bonds. The same can be said for equity, the trading of which may be constrained to an extent by 'change of control' provisions, as described above.

Key features of bank loan and bond finance

Differences in tenor

In most cases, banks will lend for a term that is shorter than the life of a concession. For example, in a recent transaction a major bank provided a 15-year loan for a 30-year concession, thus leaving the project company and sponsors with refinancing risk after 15 years. While some banks are able to provide more long-term financing, whether they will or not is largely a function of, among other things, regulatory and credit restrictions and market conditions. Certain lenders are willing to lend for relatively long tenors of up to 25 years, but usually for lower exposure amounts and only in certain countries where the project assets are of very high quality and cash flows are highly predictable.

In many other cases, banks provide loans for much shorter maturities of three, five or seven years. Loans with such short maturities, usually known as 'mini-perms' – meaning not a permanent financing – create a material refinancing risk at some point before the loan must be repaid. The possibility that refinancing might not be available when needed (or might be unacceptably expensive) could give rise to material cash flow strain that increases the risk that the project could default on its principal and interest payment obligations.

While banks are likely to face increasing restrictions in the tenor of the loans they can offer for a variety of regulatory reasons, non-bank lenders have fewer restrictions (though Solvency II regulations which come into force in 2016 may have an impact on insurer investment in infrastructure assets). A good example of how a non-bank lender views tenor comes from a major investor who notes that:

"....we are targeting investments with a final maturity typically between 20 and 35 years, and weighted-average maturities of 10 to 25 years (based on a mortgage annuity style repayment profile, i.e. broadly level principal + interest payments)."

Longer tenor project bonds ensure financing costs that are fixed for the life of the project, thereby avoiding refinancing risk. The longer payment profile extends the debt service payments over a longer term, which reduces each payment, making the project more affordable for the authority or the end users. For a given revenue stream, this may have the effect of bringing forward cash surpluses available for distribution to the project company shareholders.

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Bank loans and project bonds may have different features due to the differing nature and requirements, respectively, of banks and bond investors.
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Bank finance may be combined with bond finance using 'bridge to bond' financing. In this type of structure, the bank will lend for a period shorter than the project life on the explicit assumption that the project company or issuer will refinance, normally in the bond market, as soon as practicable (often after the commencement of operations). This can provide cost-effective financing, but sponsors (or procurement authorities) need to be prepared to bear the associated refinancing risk.

Fixed rate versus floating rate with swap

In order to avoid exposing the project to future fluctuations of interest rates, borrowing is either arranged at a fixed rate of interest, or exposure to floating rate interest rate risk is mitigated by entering into appropriate hedging arrangements.

As per current market practice, typically where a project is financed by a bank loan on a floating rate basis, it would be normal practice to accompany it with an interest rate swap to convert payments to a fixed rate, the term of which should mirror the term of the loan to mitigate that risk as far as possible. However, the sponsors may prefer to hedge this risk only until operations are steady-state (after the construction period plus 1-3 years of operation) and markets create an opportunity to refinance at a lower cost. For asset/liability hedging reasons, such flexibility is likely to only be provided if: a) project remuneration can be adjusted upwards in case of an interest rate increase (which is the case for regulated assets); or, b) there is such a long tail after the final maturity date of the financing but before the end of the revenue stream, as well as generous cover ratios, that the project is deemed to have sufficient cushion to accommodate the negative impact of an interest rate increase.

The procurement authority will compare the overall cost of different projects based on various reference rate and swap scenarios. However, this may leave the financing exposed to the variability of the reference rate and the swap market between the date of the offer and the pricing of the loan, although this can be eliminated with an appropriate risk-allocation mechanism agreed upfront.

In some cases, the interest rate risk may remain unhedged in anticipation of a future decrease in interest rates and/or fall of future RPI/CPI index. Certain projects whose revenue stream is directly linked to inflation may find it more appropriate to issue an index-linked bond, or to hedge with an index-linked swap. Where different investors in a project have preferences for fixed or floating rate debt, tranches of financing can be created to match their requirements.

Amortisation

Where debt amortises over the lifetime of the asset from cash flows, refinancing risk is avoided. The final amortisation payment will be before the end of the term of the PPP in order to provide a cash flow 'tail', which gives some breathing space in the event of a cash flow problem. Both project finance bank loans (except for mini-perms) and project bonds may amortise, either by equal installments of debt service, rising debt service payments, sculpted debt service profile and/or a 'balloon' (larger) principal repayment at final maturity.

Prepayment

If the project has become less risky, for example because it has moved to the operational phase, the project company may choose to prepay the debt and refinance by different means and/or at a lower spread or longer tenor.

In most cases, bank loans are pre-payable without a prepayment fee (particularly in the European bank loan market). Currently, bank prepayment fees, if any, would generally be lower than a bond prepayment fee, although any related hedging breakage costs must also be considered (if relevant).

In the case of a fixed rate bond, a fall in bond yields might suggest that prepayment and refinancing would be in the project company's interest. However, this voluntary redemption of the bonds may not be permitted, or permitted only with the payment of a 'make-whole' amount. This is calculated on the basis of the amount which the prepaid investor would need to invest at a risk-free or low-risk rate (such as the Bund rate, the UK Gilt rate, a mid-swaps rate or any of the foregoing plus a premium) to achieve the same return as the bond, over what would have been the life of the bond[11]. Various other prepayment issues are covered in a paper by the European PPP Expertise Centre (EPEC)[12].

Cash drawdown issues

A key issue in greenfield transactions is the timing of cash drawdowns. A project company would not normally require the full amount of the financing at the time of financial close, but rather in a stream over time as construction of the project starts, evolves and moves towards completion.

Without staged drawdown to match capital investment needs, surplus funds received under the financing at financial close will need to be held in a bank account or otherwise invested until required. The yield on the bank account will almost certainly be well below the interest rate of the financing, leading to what is known as 'negative carry'.

Banks loans can be disbursed to the project company according to a pre-determined schedule, although banks do charge commitment fees (a percentage of the margin) on available, but undrawn, facilities. Bond investors, however, generally require the borrower to draw down the whole amount of the issue at financial close. This decreases the attraction of bond financing since it reduces equity return. Yet a counterbalancing factor is the normally longer maturity of bond financing relative to bank financing (as noted earlier). Extending debt service payments over a longer period brings forward cash surpluses available for distribution to the project company shareholders. In this way, it potentially increases the equity return.

Some investors may agree to a staged drawdown on a project bond, but in return for this provision they may demand a higher coupon to compensate them for their potential opportunity cost – they cannot invest the funds at the same rate of return while holding them available for the project company. In addition, should interest rates rise during the construction period, investors would not benefit from this potentially higher return.

From the point of view of the project company, a staged drawdown approach exposes the project to the credit quality of the investors (or the banks, in the case of a bank financing), since the investors (or banks) are required to provide funds over what may be a long period (for example, three years is not uncommon). Staged drawdowns may also reduce the competitive price tension in the financing because traditionally, only a limited number of investors are willing to consider it, although this situation seems to be changing.

Therefore, it is common to fund the project during the construction period via bank loans and then to refinance the debt in the bond market post completion once cash flow is being generated. This obviously imposes less risk for the bond investors and can improve the issuance cost and conditions for the project company. Although this situation is changing, investors are more likely to invest in projects where the financing is fully drawn-down (which would mean that they are likely to have passed the construction risk phase), rather than committed, as with staged drawdowns.

11 Such prepayment amount, when referencing the UK Gilt rate, is referred to as 'Spens'.

12 See further http://www.allenovery.com/SiteCollectionDocuments/Termination_Report.pdf

Examples of staged drawdown project bonds include the Scots Road Partnership Finance Ltd, the A7 project, and Via A11 NV, each of which are described in Appendix A. A staged drawdown bond is still a relatively new solution to reducing drawdown costs..

Other

A further practical distinction between loan and bond formats is that, for accounting and regulatory purposes, bonds, unlike loans, need to be 'marked-to-market' by the investor (or 'marked-to-model' if a market price is not available).

As regards documentation, bonds generally require a form of offering memorandum or, if admitted to listing and trading on a stock exchange, a prospectus. A bank loan if syndicated more widely by the arrangers and underwriters will also require an information memorandum not too dissimilar to a bond prospectus[13]. In relation to post-closing decision making, although the modification of terms is potentially a more onerous process for bonds, certain elements of subjectivity will generally be minimised (for example, a bank covenant package might refer to 'the reasonable opinion of the Majority Lenders' or 'the Majority Lenders (acting reasonably)', with no equivalent for bonds. In addition, although investor decision making mechanisms have now been introduced on a number of bond transactions).

13 See further Appendix F

6. Mechanics of issuance of debt – parties, roles and tasks

While the time taken between making a debt financing decision and receiving funds varies, typically raising a project finance loan or issuing a bond can take between three to four months, which is included as part of the overall longer transaction timeframe of 12-15 months or more. The exact timing depends on a range of issues and due diligence requirements, such as how long the bank's in-house credit assessment team takes to evaluate the credit risk (if relevant), the time required for credit review by rating agencies and investors, preparation of disclosure documents such as an offering memorandum or prospectus, the listing process, the opening of bank accounts, planning and implementation of a roadshow marketing process and preparation of final transaction documentation.

However, notwithstanding the financing element, it is difficult to specify the exact time needed for the overall transaction. Some greenfield projects can take up to two years to arrange (or even more in certain countries), from the point when the tender process starts. By contrast, the process of acquiring brownfield assets might be completed in just three months from the point of award of preferred bidder status.

Public bond issuance process – summary

Public bonds may be issued either by the project company, or by a separate (usually sister) company incorporated to issue the bonds and on-lend the proceeds to the project company. For the avoidance of doubt, in this section and in section 7 below, a reference to the 'issuer' is to the project company as the issuer of the bonds, or its sister company incorporated for such purposes.

When issuing, the first steps are to check compliance with the issuer's constitutional documents, obtain all relevant and required internal and external authorisations, and check compliance with local regulations and relevant EU legislation. After the decision to proceed has been made, the issuance process can broadly be described in five steps:

1. Selecting transaction participants, agreeing a timeline and preparing an estimate of all-in costs (described in this section),
2. Structuring the transaction and preparing documents, including deciding whether credit enhancement and/or a guarantee are needed (see section 10 and Appendix E),
3. Preparing for credit review and due diligence by bank, investors and credit ratings agencies (see section 11 and Appendix D),
4. Preparing for investor road show (see section 7), and
5. Preparing for ongoing reporting to bank, investor and credit ratings agencies (see section 8 and Appendix D).

Selection of key people/transaction participants – advisors and distributors

Sponsors, issuers and procurement authorities typically hire one or more advisors to help them make the necessary bank loan or project bond decisions as to the financing alternatives available, estimates of all-in costs, recommended transaction participants, how to structure the transaction, compliance with relevant local and EU regulations and, if project bond financing is selected, advising on distribution strategy and marketing of the bonds to investors. The advisor is likely to be a bank, an investment bank or a consulting firm. Participants can vary somewhat from EU country to country based on specific national legal and regulatory requirements.

When raising a bank loan, deciding which bank to mandate as lead arranger usually depends on criteria such as existing and prior relationships, financing capacity, product expertise, local expertise (if needed), pricing, terms, and ability to provide related products such as swaps, payment services and trustee/custodian services.

For project bonds, similar criteria are considered when appointing one or more investment banks as arrangers. Additional deciding factors might include an investment bank's experience in structuring a transaction, its investor distribution network, execution capabilities and other services.

An issuer may choose to distribute its project bonds through either the arranger or a syndicate of banks (see section 7). An arranger (or syndicate) may distribute the bonds in one of two ways:

1. As a 'placement', where the arranger serves as an advisor, structures the transaction, and acts as a placement agent pursuant to a placement agreement, locating investors but not committing to subscribing for any bonds.

2. As an 'underwriting', where the arranger serves as an advisor, structures the transaction, and subscribes for the bonds pursuant to a subscription agreement or underwriting agreement. In practice however, the arranger will only enter into the agreement to subscribe for the bonds a few days prior to the closing date, and prior to doing so the arranger will have entered into back-to-back arrangements with investors whereby investors commit to buying the bonds from the arranger. If this arrangement is not honoured by the investor, the arranger remains bound to subscribe for (or underwrite) the bonds pursuant to the terms of the subscription (or underwriting) agreement.

Bond issues – Paying agent, fiscal agent and trustee

A paying agent is required to make the payments of principal and interest to investors (some, but not all, investment banks offer this service). Where no trustee is appointed, a fiscal agent may also be appointed to keep records and track bond proceeds (in addition to paying agent duties). A fiscal agent is the issuer's agent and has no contractual duty to the bondholders.

A trustee will generally be appointed by the issuer[14]. The trustee owes its principal duty as trustee to the bondholders and acts as fiduciary for bondholders in the event of a default. The trustee would normally hold the security and/or collateral supporting a bond issue. The trustee has a contractual relationship through the trust deed to the issuer, but also has a relationship with the bondholders – the beneficiaries. In a trustee structure, the holder of the bond is bound by the terms and conditions of that bond and the relevant trust deed, including that legal action can only be taken by the trustee and not by individual bond holders.

Monitoring advisor

A monitoring advisor (MA) may be appointed on a variety of projects, both simple and complex, but its use is still not common. Typically appointed by the issuer to act on behalf of the investors, the MA is an infrastructure expert who monitors ongoing compliance with financial performance, as well as ratio and covenant compliance. The MA advises investors if it agrees with the issuer's categorisation of a required decision (for example, material, moderately material or heavily material) and may also have to take less important decisions. The MA also advises investors on how they should vote, and generally tried to build a consensus among investors.

Lawyers

Both the issuer and the arrangers (or, on certain deals, the investors) will be represented by their own legal counsel, who will help to negotiate and draft project bond documentation. As a condition precedent to financing, each set of lawyers may be required to give the arrangers (or investors) a legal opinion in both the jurisdiction of the governing law of the documents and the jurisdiction of incorporation of the issuer. This opinion would, typically, cover points such as: due incorporation of the issuer, the authority of the issuer to enter into the bond transaction, and the validity, binding nature and enforceability of the obligations under the transaction documents. In many cases, investors will rely on the same legal advisor as the placement agent/arranger.

Auditors

The role of auditors will generally be two fold in infrastructure financing in the capital markets. As a condition precedent to financing, and as part of the due diligence process, the issuer's auditors may be required to give arrangers a 'comfort letter', the scope and limitations of which will be agreed between the parties in an arrangement letter, pursuant to which the auditors will be required to review the audited and management accounts (if any) of the issuer, and carry out certain agreed non-audit procedures. These procedures are designed to ensure the accuracy of certain financial information contained in the offering memorandum or prospectus, and to confirm there are no material adverse changes, based on the agreed procedures. In addition, auditors will audit the ongoing financial statements of the issuer.

Registrar

For bonds in registered (not bearer) form (the distinction between the two is outside the scope of this Guide), a bank or trust company is appointed as the issuer's registrar. The registrar maintains a register of the names of the depositories which hold the bonds on behalf of owners, and records any change in ownership when bonds are sold. It is worth noting that for bonds held in a clearing system (which is usually the case for public bonds), the registered owner will be a nominee of the clearing system and this will not change for the life of the bond (but rather beneficial ownership of the bonds will transfer through clearing system accounts).

14 The concept of trustee is not recognised under all laws.

Listing agent

If project bonds are listed and admitted to trading on a stock exchange, a listing agent will often be required to liaise with the relevant stock exchange. Listing on an exchange may bring the issuer within the scope of regulatory regimes such as the Prospectus Directive, which has substantial disclosure and reporting rules.[15]

All-in cost estimate

As one of its first tasks, a financial advisor typically prepares a comprehensive estimate of the all-in costs of a loan and/or project bond transaction. These costs, as set out in the pro-forma template immediately below, will include both upfront as well as annual fees incurred over the life of a transaction. The estimate provides the issuer with an annualised all-in cost, as adjusted for the amortisation of upfront fees over the life of the transaction. These costs would typically include the fixed or floating rate of interest payable and the cost of any interest rate swaps. Additionally, they will encompass the upfront and/or ongoing fees for: arrangement, subscription/underwriting and placement, credit enhancement, auditors, legal and advisory services, credit rating, trustee, fiscal and paying agent, listing agent, printing (in some limited cases), SPV management (if used), monitoring advisor (if used), technical agents, environmental consultants and insurance consultants[16].

Figure 11: **Illustrative all-in cost template**

	Bank loan		Project Bond	
	Upfront	Ongoing bp per annum	Upfront	Ongoing bp per annum
Loan or bond coupon		✓		✓
Interest rate swap		✓		✓
Net fixed rate		✓		✓
Arrangement, placement/ subscription/underwriting fee	✓		✓	
Credit enhancement fee	✓	✓	✓	✓
Other agency, advisory or consulting fees	✓		✓	
Issuers' legal advisors' fee	✓		✓	
Arranger and investors' /trustee legal advisors' fee	✓		✓	
Accounting comfort letter and ongoing audit costs	✓	✓	✓	✓
Credit rating agencies	✓	✓	✓	✓
SPV management fee		✓		✓
Trustee/agent/custodian's fee	✓	✓	✓	✓
Miscellaneous fees and disbursements, including printing (if needed)	✓		✓	
Monitoring advisor's fee		✓		✓
Total upfront fees (in bppa)	✓		✓	
Total ongoing fees		✓		✓
All-in cost, including amortisation of upfront fees and ongoing fees		✓		✓

15 See further Appendix F for legislation related to bonds which are listed and admitted to trading on a stock exchange.

16 In some cases, parties will require two sets of relevant experts, acting for the issuer and investor, respectively. Excludes other fees payable, including any fees of the sponsor.

Debt private placement issuance process – summary

Although in some ways the steps required to issue a debt private placement are similar to a public bond in terms of internal and external compliance and authorisations, the issuance process is more straightforward. While it may still be prudent to hire an advisor bank, it will usually be in an agency (rather than an underwriting) capacity. No syndicate of banks will be required as the debt will be privately placed to a small number of select investors. The level of due diligence, as well as the contractual terms and conditions (including financial covenants and conditions precedent), are negotiable between the issuer and the investors, making the whole process more akin to the negotiation process for a bank loan. An agent will still be required to carry out administrative tasks, such as making the payments of principal and interest to investors.

Investors will be represented by their own legal counsel, who will help to negotiate and draft the documentation, and may be required to give the investors a legal opinion in both the jurisdiction of the governing law of the documents and the jurisdiction of incorporation of the issuer. The issuer's auditors may be required to give investors a 'comfort letter', as described above.

7. Marketing, pricing and issuance process

In the case of a bank loan, each bank undertakes credit risk assessment and makes a lending decision just as is the case with investors looking to invest in a project bond. Both may depend upon analysis undertaken by due diligence providers and technical consultants to the transaction. Lending or investment criteria may include minimum rating levels from designated credit rating agencies. Once this phase has been completed, the arranging bank will then finalise the terms and conditions, and set the pricing based on investor feedback.

Preparation of offering memorandum or prospectus

The issuer must prepare an offer document – an offering memorandum or a full prospectus (in the case of a listed bond)[17]. As well as being a marketing tool, the offer document should contain all information and disclosure which an investor needs to make an informed investment decision. The issuer is responsible and liable for the accuracy of this document. The offer document sets out risk factors as well as the bond's terms and conditions, and financial information on the project company. It also discloses the role and business of the project company and the contracts it has to mitigate risks such as offtake agreements. For a PPP transaction, it discloses the nature of the contract the project company has with the relevant public body.

Roadshow

The arranging bank and project company representatives usually go on an investor roadshow at which they will present the issuer, the project, the management of the project company, the proposed financing and the risk mitigation features, and give the investors the opportunity to ask for more information. In the case of a private placement, a similar but more targeted process aimed at individual investors would take place. At the project company's request, a provisional rating (denoted by a [P] in front of the rating) may be provided by one or more rating agencies to facilitate the roadshow phase. Typically, each rating agency would also publish a 'pre-sale report', setting out its rating rationale for the project. A definitive rating is typically assigned once the bonds have been issued and following the agency's review of final documentation.

Pricing

From a pricing standpoint, in the case of a bank loan, the reference rate is normally 3-month or 6-month LIBOR or EURIBOR, to which the loan margin is added. A commitment fee (as a percentage of the margin) is charged for undrawn commitments given that the latter will also incur regulatory capital charges for the banks. In the case of a bond issue, the underlying rate (reference rate) is the sovereign yield on a fixed rate bond of similar maturity and/or the swap curve. A credit spread reflecting the perceived risk is added. For a bank loan, the bank syndicate agrees the loan margin before financial close, although interest rate risk remains unhedged until financial close, or possibly even later in certain countries. On some privately placed transactions, institutional investors have been abke to fix spreads until financial close. In the case of a public bond issue, which is priced on the day of issue, the likely spread can only be locked in when most or all of the bonds have been placed (subject to limited exceptions), depending on whether the transaction is a best-efforts placement or rather an underwritten transaction. However, in order to ensure deliverability of funding, an appropriate risk-allocation mechanism can be agreed upfront, which may result in the sponsor, the bidder, the investors or the procurement authority (or a combination thereof) assuming the risk of any price fluctuations.

Syndication, book building and allocations

Typically, international public bonds are issued on a syndicated, book-building basis. A similar process takes place for private placements, but more targeted towards selected investors. An issuer may choose, with the guidance of the arranger, to distribute its bonds through just the arranger or, more typically, a syndicate of banks and/or investment banks, which may include relationship banks, banks that provide certain geographical coverage or are required for local legal or regulatory purposes. If a syndicate of banks is appointed, the arranger in this context becomes the 'lead manager' or 'lead arranger'. There is a prestige factor for banks being included in a syndicate (if a distribution syndicate is created). While there is no prescribed maximum, in most cases only a small number of syndicate banks should be required to ensure competent execution, collection of bond orders and allocations. Issuers should set very careful engagement rules when appointing syndicate banks in terms of establishing roles and responsibilities, overall accountability and fees.

17 See further Appendix F

In terms of constructing the investor order book ('book-building') and deciding upon allocations to investors, following the financial crisis there has been a marked increase in demand for bond issues that has not been matched by an increase in available supply. This has resulted in order books for new issues being frequently heavily oversubscribed, with scores and sometimes hundreds of investors placing orders before order books close. Lead managers allocate new bonds on the basis of any specific issuer priorities (for instance, trying to expand the investor base into new sectors or geographical regions), as well as according to their own internal allocation policies and procedures. Issuers often invest considerable time and effort in investor relations and, where there has been a roadshow, may be keen to see to what extent that has led to actual orders.

When deciding how to allocate the bonds in response to the investors' orders, specific considerations include early, proactive and useful investor feedback on what the transaction size/yield could be, track record of investing in the issuer (if appropriate), sector or type of issue concerned, likely holding horizon, and available explanation of unusual order sizes (in order to identify and avoid order inflation which can skew the allocations). Such factors need to be considered in the context of constantly changing market dynamics, often involving subjective judgments.

Timeline

The arranger prepares a timeline of the transaction marketing process. This is likely to include a timeline for the rating process, which must be substantially completed prior to starting the marketing process, to ensure that provisional ratings can be assigned at the time when the marketing phase launches. Rating agencies typically need a four to six week window to undertake a provisional rating engagement. However, they can start well in advance of financial close by working with draft project documents, mature finance term sheets, pre-audit financial models and draft reports from advisors.

Typically, the issue process for a syndicated bond is as follows:

Closing date minus 50 days:
Provisional ratings received from credit rating agencies. Documentation is drafted.

Closing date minus 15-25 days:
Lead manager distributes the offering memorandum or draft prospectus and marketing materials to potential investors, and sets up group and individual meetings as appropriate.

Closing date minus 15 days:
After receiving investor feedback, the lead manager proposes 'price talk' to the issuer, with the official bond marketing process to commence immediately afterwards. Investors confirm orders at a specific price. Price talk will typically be in the form of an agreed spread over an agreed benchmark reference rate such as a Treasury bond.

Closing date minus 5 days:
The bond is 'launched': marketing process stops; transaction size, issue price and coupon are finalised. Book-building takes place and allocations are made to investors.

Documentation is finalised, conditions precedent documents and certifications are prepared by the issuer.

Transaction documents are then signed, conditions precedent documents are delivered and due diligence processes are completed.

Closing date:
Final, 'bring-down' conditions precedent documents are delivered. Due diligence processes are updated. Funds from investors are transferred to the issuing and paying agent, for later transfer to the issuer. Bonds are released to investors through a depositary, which holds bonds on behalf of investors.

8. Project bond investor base

An understanding of what types of institutional investor invest in infrastructure, and their respective needs, is helpful when attempting to raise funds.

Non-bank institutions such as insurers, fund managers and pension funds that do not rely on borrowings to finance investment (often called 'real money' investors) have investment strategies that differ significantly across countries and by type of investor. Their asset allocation is influenced by a variety of factors such as market trends, investment beliefs, regulation, risk appetite, liability considerations, cultural factors, governance structures, tax issues and, ultimately, domestically available assets.

Each investor has a different skill set and investment mandate. For example, many require an investment to have a particular credit rating or security, or can invest only in listed securities, while others do not. Some investors can only invest in bonds with investment grade credit ratings (or their unrated equivalent) while others can hold non-investment grade or unrated paper. Some of the largest institutions with experienced credit staff are able to serve as lead investors; a bespoke transaction can be designed to fit their specific investment requirements. From a relative value standpoint, institutional investors review various investment opportunities. They will expect additional return for certain features of investments, such as illiquidity of the issuance. Some, however, will simply not invest if certain risks cannot be mitigated to their satisfaction.

A key difference between bank lenders and institutional investors is the willingness of the former to be actively involved with the issuer and the project company, and to deal with the ongoing issues of the greenfield construction phase, in particular engineering, procurement and construction risks, albeit with notable and ever more numerous exceptions. While less active than banks, bondholders may need to deal with such issues, which means holding project bonds requires more resources than holding sovereign or corporate bonds.

Main types of infrastructure investors

Insurance companies: Many of the institutions which invest directly are large insurers. These large insurers may also manage third-party money as well as managing collective investment funds. While these investors may be comfortable holding long-term bonds, such bonds are issued not only by project companies but also by sovereigns and corporate entities and thus project bonds must compete with these other assets in terms of relative value or yield, liquidity, and features such as early redemption provisions.

Insurers have to hold substantial reserves against their liabilities. Some of these liabilities are long-term, against which long maturity project bonds are a good match. They may also invest in long maturity sovereign and corporate bonds.

Pension funds: Pension funds have long-term liabilities (future pension payments) and so are attracted to long-term bonds that yield a higher income than sovereign bonds. Traditionally, however, some have preferred to invest in project equity rather than project debt.

Specialist infrastructure funds: Some specialist funds are established solely to invest in infrastructure. For smaller pension funds and other 'real money' funds, infrastructure debt funds may be the most cost effective means of entering the infrastructure investment space. Large specialised debt funds may purchase higher risk greenfield project bonds, as their large portfolios diversify the idiosyncratic risk on such bonds.

Sovereign wealth funds: Also known as future generation funds, sovereign wealth funds have liabilities of uncertain duration since it is not generally known when they will have to make payments to support the nations that own them. To date they have not been particularly active in investing in infrastructure debt but rather in infrastructure equity.

Government & official agencies and EIB: Government funds finance some infrastructure assets entirely. But governments (and lower-tier public authorities) also provide partial financing and guarantees, alongside private sector financiers. Export credit agencies (ECAs) are also active providers of funds for projects which benefit domestic companies. Indeed, on some large projects, the ECAs may be the lead investor. Furthermore, multilateral lending agencies such as the EIB provide financing, as well as credit support.

The following tables provide examples of fixed income and equity investors that have participated in recent infrastructure financing transactions. These are global lists, so not all investors will invest in European transactions.

Figure 12: **Examples of fixed income investors in global infrastructure projects**

Aegon Investment Management	Edmond de Rothschild	MUNICH ERGO Asset Management
Abu Dhabi Investment Authority	Fidelity	Munich Re
Aerzteleversorgung Westfalen Lippe	Generali	PGGM
Ageas	Goldman Sachs Asset Management	Pictet Asset Management
AIG	Government Pension Fund (Norway)	Pioneer Investment Management
Allianz Global Investors	Hastings	Pramerica
Amundi	HSBC Asset Management	Private Wealth Management London
APG	IFM Investors	R&V Inv Frankfurt
Aviva investors	Insight Investment Management	Rivage
AXA Investment Management	JPMorgan Asset Management	SCOR
Blackrock	Korea Investment Corporation	Sequoia Investment Management
BlueBay Asset Management	La Banque Postale AM	Standard Life
Brookfield Asset Management	Legal & General	Swiss Re
BWVA	MACSF	Temasek Holdings
Carmignac Gestion	Macquarie IM	Union Invest
Deka Investment	Metlife	Westbourne
Deutsche Asset & Wealth Management	M&G	Zurich Re

Source: AFME/ICMA members.

Figure 13 shows examples of global infrastructure equity investors. Some of these investors might not be active in Europe. However, the list shows the broad range of investors active in this market globally.

Figure 13: **Examples of equity investors in global infrastructure projects**

3i	British Columbia Investment Management Corp	J.P. Morgan Asset Management
Abu Dhabi Investment Authority (ADIA)	Brookfield Asset Management	Kohlberg Kravis Roberts
Alberta Investment Management Corp	Canada Pension Plan Investment Board	La Caisse de Dépôt et placement du Québec
Alinda Capital Partners	Colonial First State	Macquarie Infrastructure and Real Assets
Amey	DIF	Meridiam
Antin Infrastructure Partners	Energy Capital Partners	Morgan Stanley Infrastructure Fund
AMP Capital	Energy Investors Funds	OMERS
APG Asset Management	Future Fund	Ontario Teachers Pension Plan
Arc Light Capital Partners	Government of Singapore Investment Corporation (GIC)	QIC
Arcus Infrastructure Partners	Goldman Sachs Infrastructure Partners	RREEF Infrastructure
ARDIAN	Global Infrastructure Partners	SteelRiver Infrastructure Partners
Bilfinger	Highstar Capital	UBS Global Asset Management
Blackstone	Industry Funds Management	Universities Superannuation Scheme
Borealis	InfraRed	

Source: Infrastructure Investor and AFME/ICMA members.

In addition to financial investors, construction companies may have a subsidiary which may invest in projects. Examples of these types of investors include Cintra, Globalvia, Iridium, Bouygues Construction and Vinci Concessions.

Ongoing investor relations

Generally, in addition to the initial roadshow marketing process described in section 7, investors will encourage as much regular contact as possible between the issuer, the project company and themselves, including non-deal roadshows, deal roadshows, conferences, direct updates and equity communications. Reporting typically includes: liquidity profile, debt facility usage, business operations, strategy, business evolution, outlook, ratings, targets and commitments. The issuer, however, must take care not to make the investor an 'insider'.[18]

Although the investor relations process takes time, the information gathered can be used to update the investors' models on long-term risks, credit, strategy, industry trends, forecasts, models and, ultimately, investment recommendations. The consequences might lead an investor to maintain, increase or reduce its holdings. Additionally, it might encourage secondary market activity and help with new issue processes.

18 See further Appendix F for details of 'inside information' under the Market Abuse Directive.

9. Key considerations for investors

Investment in project finance debt can present potentially attractive investment returns to institutional investors if sufficient resources are available to analyse the various risks and rewards, as well as to monitor the ongoing performance of transactions. Included on any investors checklist should be:

- Key risks (including usage, cash flow, legal, environmental, regulatory, political)
- Early redemption features
- Relative value/pricing as against other similar investments
- Any secondary market liquidity requirements
- If needed, ability to obtain a periodic market valuation of the bonds for accounting, regulatory or internal purposes

One of the most material risk factors in project finance debt from the point of view of both banks and project bond investors is revenue risk, or the risk that either expected volume and/or price will not be achieved going forward. In some instances, oil and gas as well as power generation plants may mitigate this risk by way of off-take agreements, although this may reduce expected returns to shareholders. In the case of a PPP project, this risk can be mitigated through an availability-based payment contract. However, if a public authority is unwilling to provide an availability contract, or to retain some level of volume or usage risk – on a new toll road for example – financing the project is likely to be more difficult. Investors may be willing to take some risks between an agreed minimum or maximum level of usage, but they are unlikely to be prepared to take all of the risk. Public authorities can, for example, guarantee minimum revenue payments to project companies through 'cap and collar' agreements. These guarantee a minimum revenue commitment to the project company (a floor), which is offset by a cap agreement by which revenue above the cap accrues to the public authority.

Of the risks directly related to regulatory and political issues, the key concern for investors is the risk of project tariff revenues declining significantly after the financing of the transaction has closed. This will, of course, adversely impact the credit risk as well as the market value of their investment. A move towards transparency – as well as consistency – on the part of regulators and public sector authorities with regards to maintaining tariff-setting and/or regulatory controls post-financial close of a transaction, as well as a review of their past practice of tariff reviews, including retrospective changes to tariffs against a variety of asset classes/projects, would help to assuage investors' concerns over the regulatory risk associated with the underlying revenues of the project. It should be noted that many, but not all concession documents include some relevant protections (for example, provisions regarding changes in law).

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One of the most material risk factors in project finance debt from the point of view of both banks and project bond investors is revenue risk.
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Other regulatory or political risks include events that could have a materially negative impact on the viability of the project, such as an aggressive interpretation of the terms of the concession agreement by the public sector authority, or their ability to defer or amend the termination payments agreed under the contract in the event of termination or cancellation of the project.

From a credit risk evaluation standpoint, although many (if not most) transactions are rated by a credit rating agency, investors should also have staff who have familiarity with project finance transactions so they can complete their own due diligence and credit review processes.

Bank for International Settlements project finance factors

The five factors suggested by the Bank for International Settlements (BIS) for consideration by investors in project finance (infrastructure) debt – a type of debt that they classify as 'specialised lending' – are listed below. While this list is primarily intended for banks evaluating the risks of project finance loans, it also offers a useful framework for infrastructure investors.[19]

The first BIS factor is *financial strength.* This factor depends on market conditions (competitive and market strength of the project company), the financial ratios including Debt Service Coverage Ratio, and stress analysis to determine if the project can meet its financial obligations under adverse economic or sector specific conditions. It then considers the financial structure of the project company and, in particular, the duration of its borrowing relative to the project life and the amortisation schedule.

The second factor is *political and legal environment.* This factor includes political risk, force majeure risk, the degree of government support and the project's importance for the country, the stability of the legal and regulatory environment (risk of change in law), and enforceability of contracts etc.

The third factor is *transaction characteristics.* This factor includes design and technology risks, completion guarantees and track record of the contractor. It also includes operating risk, off-take risk and supply risk.

The fourth factor is *strength of sponsor.* This factor depends on the sponsor's track record and also the extent of sponsor support.

The fifth factor is the *security package.* This factor covers assignment of contracts and accounts, pledge of assets, cash sweeps, escrow accounts, covenant package, dividend restrictions, reserve funds etc.

19 Annex 6 of the Basel Committee on Banking Supervision's International Convergence of Capital Measurement and Capital Standards provides further detail of the rating grades for each of the five factors (http://www.bis.org/publ/bcbs128.pdf).

10. Credit enhancement alternatives

Structuring a bond or bank loan to achieve a higher credit rating is likely to broaden the investor base, which in turn should lower the overall transaction costs for the project company and enhance value-for-money considerations.

While capital markets investors have differing risk appetites, many only invest in investment grade transactions (in most cases, based on a rating provided by a credit rating agency, but also as may be judged independently by the investor). The size of the investor market for investment grade debt is much larger than for high yield/non-investment grade debt – and within investment grade the investor market for single A debt is larger than for BBB-rated debt.

The rating of the debt can be improved by support provided in respect of the obligations of counterparties to the project. For example, constructors and operators may provide corporate instruments or guarantees from creditworthy entities, bank letters of credit, adjudication bonds or performance bonds to support their obligations under the project documents. The providers of such support instruments will have recourse to the relevant contractor, and not to the project company. Similarly, sponsor commitments to provide contingent equity if certain of the assumptions in the base case fail to be met, or in other clearly defined circumstances, would also be credit positive.

As described below, credit enhancement for senior debt can also be provided through the use of subordinated debt in the capital structure of the project. In addition, credit enhancement may be provided by external parties who are, directly or indirectly, taking project risk and would have a claim on the project company if they are required to pay out.

Credit enhancement through the capital structure

The addition of layers of subordinated capital can enhance the credit rating of the senior debt. For example, if there were 25% equity (1st loss), 15% subordinated debt (2nd loss) and 60% senior debt in the capital structure, 40% of the initial capital could be eroded before the senior debt suffered any loss. In this way, one part of the capital structure provides credit support for another. There are now two classes of debt with different risk/return profiles.

External credit enhancement

External credit enhancement typically reduces the risk that a project company defaults during its construction phase and/or during its operations phase. This can be achieved in the following ways, all of which involve paying a fee to a third party:

1. **Bank liquidity:** A bank may provide a liquidity facility (which could be in the form of a letter of credit, although these are not as widely available as in the past). In return for a fee, the bank will fund temporary shortfalls in cash flow, up to a certain amount or percentage of project value. A letter of credit protects creditors from temporary cash shortfalls, so mitigating the risk of a default from cash flow shortfall. Repayment of such facilities, if drawn, may be super-senior (i.e. ranking above senior debt).

2. **Private Sector Guarantees:** A guarantee enhances a credit obligation by offering the guarantor's credit profile in addition to the obligor's, or instead of it. This lifts the project company's credit rating because the guarantor tends to be a more creditworthy entity. Credit substitution (as distinct from enhancement) can result from unambiguously worded guarantees, which oblige the guarantor unconditionally and irrevocably to pay or perform on a full and timely basis, without the ability to defend its liability. A guarantee might be provided by a monoline financial insurer, a sponsor (if it has a suitably high credit rating), a bank, a multilateral agency such as the EIB or a sovereign government. While in practice it is similar to a letter of credit in terms of providing credit enhancement, it is documented differently.

   A 'wrap' is the provision of insurance by a highly rated private sector financial guarantor (often a 'monoline' insurer), insuring the underlying principal and interest payments on a bond. Monoline insurers provide credit enhancement for a fee. Certain investors are drawn to their standardised documents and monitoring processes. Relatively few monoline insurers still operate in Europe since many of them were adversely impacted by losses in structured finance (CLOs of CLOs, US subprime losses, etc.). Today such financial insurance is only likely to be offered (where it is available at all) on quite low-risk projects such as housing/accommodation projects. However, private sector insurance exposes debt holders to counterparty risk because the rating of the bonds will be linked to the rating of the monoline insurer.

3. **Sovereign Guarantees:** Guarantees or letters of credit, although rare for greenfield PPPs in Europe, may be available from national governments (or sub-national authorities) in return for a fee. As with private sector guarantees, the project company pays an annual premium for credit enhancement and, therefore, a ratings uplift. If the resulting average cost of debt including the payment of the premium is lower than without the guarantee, it clearly provides an economic advantage to the project company and also enhances the marketability of the bonds.

   A government guarantee on all of the debt may confer credit substitution, with the resulting debt becoming effectively sovereign debt. It would be likely to trade at a small (yield) premium to actual sovereign debt, if only to reflect possibly lower liquidity.

4. **EIB credit enhancement:** As a means to provide support for capital markets financing of infrastructure and to broaden the investor base for infrastructure projects, the EIB and the European Commission have initiated the Project Bond Credit Enhancement (PBCE) programme. PBCE at the time of writing is in a pilot phase and, therefore, the types of projects that are eligible and the terms of the enhancement may change, although PBCE projects will need to meet EIB's normal eligibility criteria[20]. It is currently targeted at projects in parts of the trans-European network (TEN) programme, transport and energy. It also covers broadband/information and communication technology. The purpose of the pilot phase is to test out the PBCE concept before the next financial framework period (2014-2020), which is expected to allow a continuing roll-out of the initiative by the EIB.

   PBCE can be provided by two means. The first is structural subordination of cash flows through a funded subordinated instrument as part of the capital structure. The second is to use a letter of credit to provide additional liquidity to the project in times of stress, and thus reduce credit risk and/or, in a termination or default situation, to reduce the losses incurred by the senior debt.

As of March 2015, six PBCE transactions have been completed, all of which have involved the issue of a subordinated letter of credit (LC), with an aggregate LC amount of approximately €500 million, supporting almost €3 billion of bonds. These are:

- Castor Gas Storage Project in Spain, with a maximum LC amount of €200 million, which supported €1,400 million of bonds[21];
- Greater Gabbard offshore transmission operators (OFTO) project in the UK, with a maximum LC amount of £46 million, supporting £305 million of bonds;
- A11 Motorway in Belgium, with a maximum LC amount of €115.58 million, supporting €578 million of bonds;
- Axione Infrastructures project to deliver broadband network services in rural France, with a maximum LC amount of €38 million, supporting €189 million of bonds;
- Autobahn A-7 PPP in Germany, with a maximum LC amount of €86 million, supporting €429 million of bonds; and
- Gwynt y Mor offshore transmission operator (OFTO) project in the UK, with a maximum LC amount of £51 million, supporting approximately £340 million of bonds.

A full description of the EIB Project Bond Credit Enhancement Programme appears in Appendix E.

20 A description of the EIB's process for determining eligibility is available at: http://www.eib.org/attachments/documents/project_bonds_guide_en.pdf

21 The bonds issued for this transaction have been redeemed.

11. Credit review processes

Credit committees of banks, investors and credit rating agencies all need to carry out comprehensive assessments of an infrastructure project's credit risks, performing extensive due diligence and undertaking credit reviews. In doing so, they generally require more information than that included in an offering memorandum or prospectus. One or more credit rating agencies may be engaged to rate a project.

It should be noted that banks, credit rating agencies and investors have a different perspective to the sponsor when evaluating transactions. While the sponsor's management typically focuses on the project's upside potential, debt providers do not benefit from upside performance, and hence banks, credit rating agencies and investors focus on the project's downside risk.

Credit rating agency considerations

Ratings are intended to exhibit stability within normal economic cycles rather than reflect short-term changes to macroeconomic conditions. Credit rating agencies consider the project's risk profile throughout its whole life, and the 'weakest link' in the project may limit its rating.

In general terms, credit analysis will include consideration of construction phase risks and operational phase risks, and factors that will affect an issuer's long-term ability to meet debt payments such as major economic downturns or major regulatory developments.

More specifically, assessing a project's credit risk involves analysing the potential risks that may impact a project throughout its life; the contractual arrangements that allocate risks to the various project and finance parties and the ability and willingness of those parties to perform their obligations; the nature of residual risks retained by the project company and structural features including any credit enhancements that might mitigate those retained risks; and any other relevant considerations, including areas of subjective judgment.

For an operational project, the main potential problems in any project are, firstly, technology and operations issues (cost overrun, a failure of technology, operational underperformance) and, secondly, problems in the input and output markets in which the project company operates (hedge mis-matches in areas such as fuel costs and market exposure in the form of volume risk or price risk). It will also be necessary to review possible structural risks (the demise of a parent company or counterparty) and counterparty/regulation factors (for example, off-taker problems, failures of government to support a project contrary to expectations, tariff regulation changes, emissions regulation impositions or changes).

For projects exposed to construction risk, relevant credit considerations will also include project construction complexity, constructor/consortium experience and project readiness, resilience of the constructor to cost overruns, and the resilience of the project to construction schedule overruns.

In a PPP project, the allocation of construction risks between the private sector and the public sector is a central issue. An important analytical focus is understanding the drivers of cash flow generation and, in particular, the predictability and sustainability of cash flow in the event of an economic downturn. Naturally, construction phase risks can be very different from the operational phase's risks. In the construction phase, the risks relate to technology, design, construction and adequacy of financing. In the operational phase, the greatest risks are performance risk, market risk, country risk and refinancing risk.

Credit rating agency methodology

Credit rating agencies publish rating methodologies/criteria that provide guidance on the relevant agency's rating approach for project finance and infrastructure transactions, and must assign credit ratings in accordance with those published rating methodologies/criteria. Different rating agencies have different rating methodologies/criteria, including the use of notching adjustments and relevant terminology. These publications are freely available on agency websites, and rating agencies are typically very willing to discuss their rating approach for potential transactions and to illustrate their views with reference to relevant rated precedents.

As an example, Moody's Generic Project Finance Rating Methodology considers as key rating factors: (1) long-term commercial viability and competitive position, (2) stability of net cash flows, (3) exposure to event risk, and (4) key financial metrics. This methodology incorporates notching factors to reflect a project's relative strengths or weaknesses in relation to

liquidity arrangements, project finance structural features, and exposure to refinancing risk. The methodology also provides guidance on how construction risk and ramp-up risk (which may affect revenues following construction completion but before the project has established steady-state operations) will be considered.

Sovereign-related considerations are also relevant but tend to be discussed in separate rating methodologies/criteria given their relevance to a wider range of rated entities and sectors.

Credit rating agency oversight

Since the global financial crisis, the regulatory oversight of credit rating agencies has increased worldwide. In the EU, the agencies must register with, and are supervised by, the European Securities and Markets Authority (ESMA), in compliance with Regulation (EC) No 1060/2009 of 16 September 2009 on credit rating agencies, as amended (the CRA Regulation). The CRA Regulation includes requirements relating to the business conduct of credit rating agencies and measures to avoid conflicts of interest, so safeguarding the independence and quality of credit ratings and rating methodologies. The CRA Regulation includes measures concerning over-reliance on credit ratings, potential conflicts of interest in relation to shareholders and the conduct of sovereign debt ratings.

A summary of the main rating agencies' credit scales follows:

Figure 14: **Main rating agencies credit grades**

Fitch	S&P	Moody's	DBRS	Rating grade description (Moody's)	
AAA	AAA	Aaa	AAA	Investment grade	Minimal credit risk
AA+ AA AA-	AA+ AA AA-	Aa1 Aa2 Aa3	AA high AA AA low		Very low credit risk
A+ A A-	A+ A A-	A1 A2 A3	A high A A low		Low credit risk
BBB+ BBB BBB-	BBB+ BBB BBB-	Baa1 Baa1 Baa3	BBB high BBB BBB low		Moderate credit risk
BB+ BB BB-	BB+ BB BB-	Ba1 Ba2 Ba3	BB high BB BB low	Speculative grade	Substantial credit risk
B+ B B-	B+ B B-	B1 B2 B3	B high B B low		High credit risk
CCC+ CCC CCC-	CCC+ CCC CCC-	Caa1 Caa2 Caa3	CCC high CCC CCC low		Very high credit risk
CC C	CC C	Ca	CC C		In or near default, with possibility of recovery
DDD DD D	SD D	C	D		In default, with little chance of recovery

Credit review checklist

A summary of typical credit review considerations used by banks, investors and credit ratings agency is provided in Appendix D.

12. Disclosure and reporting best practice: EFR proposed standardised guidelines

After a transaction is priced and all of the documentation signed and closed, every funder and credit rating agency will want to receive regular reports on the subsequent performance of certain aspects of the transaction. Some banks, investors and credit rating agencies will have developed their own templates for reporting, while others will not. The European Financial Services Roundtable (EFR) launched a constructive new initiative in 2014 to support the standardising of disclosure and reporting requirements across Europe. In broad terms, the initiative proposes greater transparency into, and harmonisation of, project pipelines, structures, financing and performance all of which should improve efficiency and help to make infrastructure more accessible as an asset class.

The details of the EFR proposals are set out below; more details are available at www.efr.be.

Disclosure and reporting requirements:

- An industry standard disclosure template providing an overview of initial disclosure and reporting requirements on an initial and semi-annual basis, which should also be used for industry performance data aggregation and analysis including:
  - Event-based disclosures: Non-payment of interest or principal, breach of contractual obligations related to all involved parties (i.e. bond covenants), illegality, default of a major contract counterparty, insolvency event, regulatory/policy changes, construction delays, significant deviation from projected costs and cash flows, sudden increase in costs (e.g. related to inflation) or 'force majeure' that affect the economic value of the project.[22]
  - Public disclosure of compliance certificates.

Debt terms and documentation:

- A common governing standard for infrastructure debt (loans and bonds) would help to harmonise contract terms across jurisdictions. A template prospectus/offer document should be developed with the disclosure requirements.[23]

Administration and arbitration:

- Project monitoring: Information on administrative responsibilities such as creditor decision making, cash flow and collateral management.

- Arbitration mechanism: Information on any international arbitration court, collective action clauses (CACs), and potential compensation payments related to unforeseen events (such as regulatory changes) that negatively impact the economic viability of the (project) trust.

Third-party advisors:

- A common standard for the engagement, liability and disclosure requirements for third-party advisors such as technical advisors, consultants and auditors.

22 Mindful in all cases of, *inter alia*, the scope of disclosure requirements in the financing documents, and taking into account applicable grace periods and the possibility of events which are capable of remedy being remedied before becoming a default.

23 However, finance documentation for project finance is by necessity largely bespoke, and some aspects may lend themselves to more standardisation then others.

Appendices

Appendix A: Examples of European Infrastructure Project Bonds Transactions 2013/14

Following are examples of the two main categories of transactions – greenfield and brownfield/operating (also referred to as secondary stage/asset refinancing stages). Included within each of these three categories are further classifications, including type of credit enhancement, and also whether investors faced material project concession/ demand risk. Details of the transactions are included below the table.

	Greenfield	Brownfield/Operational
Credit Enhancement Type		
PBCE (EIB)	Via A11	Watercraft Capital (Castor)
	Via Solutions Nord (A7)	Axione Infrastructures
UK Treasury (IUK) Guarantee	Merseylink	Ineos Grangemouth
	University of Northampton	
	Speyside Renewable Energy Finance	
Monoline insurance guaranty	Holyrood Student Accommodation	
	Solutions 4 Brunswick Limited (S4B)	
	Solutions 4 North Tyneside	
Subordination	FHW Dalmore Salford	
	Pi2 (Zaanstad prison)	
Availability-based Projects		
	Aberdeen Roads	Amey Lagan Roads Financial
	PoortCentraal BV (Rijnstraat-8)	R1 Expressway
	University Hospital of Schleswig-Holstein	
	Scot Roads Partnership	
	Poort van Noord (N33)	
	Société de la Rocade L2 de Marseille	
	Paris Music City PPP	
		Redexis
Demand Risk Type		
Toll road demand		Autoroutes Paris-Rhin-Rhône (APRR)
Wind sector		Arise
Solar		Foresight Solar
Student accommodation demand risk	UPP Bond Issuer No. 1	
	Garden Hall Residences	

Examples of greenfield transactions

Via A11 NV

Credit Enhancement Type – EIB Project Bond Credit Enhancement Programme

The Via A11 in Belgium was the first greenfield transaction using the EIB's Project Bond Enhancement Programme which enhanced the credit rating of the bond issue from Baa3 to A3. This project also had a staged drawdown structure, meaning that the funds are drawn as required for construction which minimises the cost of carry associated with the bond.

Issuer	Via A11 NV
Project Description	Design, build, operation and maintenance of a road and associated civil engineering structures
Sector	Road
Country	Belgium
Project Type	Greenfield
Issue Type	EIB Project Bond Credit Enhancement
Issue Ratings	A3
Amount	€558m
Maturity	2045
Coupon	4.5%
Spread	n/a
Issue price	100%
Listing	Luxembourg Stock Exchange

Merseylink plc

Credit Enhancement Type – UK Government Guarantee

The project bond issued by Merseylink plc was the first publicly distributed project bond to be supported by the UK Guarantee Scheme, an unconditional and irrevocable guarantee programme, providing full credit substitution for the bonds.

Issuer	Merseylink plc
Guarantor	The Lords Commissioners of Her Majesty's Treasury
Project Description	Designing, building, financing, maintaining, and operating of 1km of tolled bridge
Sector	Road
Country	United Kingdom
Project Type	Greenfield
Issue Type	Guaranteed, senior secured
Issue Ratings	Aa1
Amount	GBP 257.2 million
Maturity	March 2043, fully amortising
Coupon	3.842%
Spread	UKT 4.75% 12/38 +42 bps
Issue price	100%
Listing	Irish Stock Exchange

Holyrood Student Accommodation PLC

Credit Enhancement Types – Monoline Guarantee

For this greenfield transaction, the issuer had a monoline guarantee from Assured Guaranty (Europe) Ltd. and Assured Guaranty Municipal Corp. which underpins the bond rating of A2 (the underlying rating of Baa3 ignores the benefit of the monoline guarantee). The rating reflected several points such as the complexity of the construction, the experience of the constructor, the potential additional cost due to an optimistic deadline and the strong compensation on termination provision.

Issuer	Holyrood Student Accommodation plc
Project Description	Designing, building and maintaining student accommodation
Sector	Social
Country	United Kingdom
Project Type	Greenfield
Issue Type	Monoline guarantee
Issue Ratings	A2 / AA-
Amount	£31.5m senior secured fixed-rate bonds and £31.5m senior secured index-linked bonds
Maturity	35 years
Coupon	2.15%
Spread	Gilt + 190bps
Issue price	100%
Listing	Irish Stock Exchange

FHW Dalmore/ Salford Pendeleton social housing

Credit Enhancement Type – internal subordination

This transaction was the first unwrapped two-tranche (internal credit enhancement listed) bond structure for a new Private Finance Initiative project in the UK. The financing involved issuing £71.7m of Class A senior secured notes at 5.414 % and £10.9 million of Class B junior secured notes at 8.35 %. The two-tranche approach involved subordinated Class B loan notes offering protection to Class A note investors, with the debt on-lent to the borrower as a single loan at a blended margin, with a standard project finance covenant package.

Issuer	FHW Dalmore (Salford Pendleton Housing) plc
Project Description	Refurbishment and management of social housing
Sector	Social
Country	United Kingdom
Project Type	Greenfield
Issue Type	Internal subordination of the Class B Notes
Issue Ratings	None
Amount	Class A: £71.7m Class B: £10.9m
Maturity	29 years
Coupon	Class A: 5.41% Class B: 8.35%
Spread	n/a
Issue Price	100%
Listing	Irish Stock Exchange

Examples of greenfield transactions with demand risk

UPP Bond 1 Issuer plc

Student accommodation projects have high business risk both in terms of volumes and prices. UPP Bond 1 Issuer plc restrained the demand risk thanks to a business model involving contracts with a number of universities that would provide students to rent rooms built by the issuer.

Issuer	UPP Bond 1 Issuer plc
Project Description	University accommodations
Sector	Social Infrastructure
Country	United Kingdom
Project Type	Greenfield
Issue Type	Senior Secured Notes
Issue Ratings	Baa1 / A-
Amount	£382m
Maturity	2040
Coupon	4.902%
Spread	n/a
Issue price	n/a
Listing	Irish Stock Exchange

Scot Roads Partnership Finance Ltd

This is an example of toll road traffic risk, and was the first ever publicly listed project bond to be issued with staged drawdown throughout the construction period, thus minimising negative carry. The bond was fully amortised through a custom semi-annual amortisation schedule, and sits alongside a pari passu EIB loan of equal size and repayment profile.

The transaction's placement process was competitive due in part to the bidding preferences of the Scottish Ministers, where bidding consortiums were viewed more favourably based on the level of investor support available with bid submission. As such, institutional bond investors demonstrated their willingness to evaluate the transaction well in advance of financial close, providing letters of support at bid stage, as well as pricing the transaction competitively against other potential lenders, committing to fixed spreads several months in advance of financial close.

Issuer	Scot Roads Partnership Finance Ltd ('M8')
Project Description	Design, construction, development and operation of roads in Scotland
Sector	Road
Country	UK
Project Type	Greenfield
Issue Type	Senior Secured, non-recourse
Issue Ratings	A- (S&P)
Amount	GBP 175.5 million
Maturity	16-March-2045 / Fully amortising
Coupon	5.591%
Spread	n/a
Issue price	100%
Listing	Luxembourg Stock Exchange

Brownfield transactions

Examples of brownfield/operational/refinancing transactions with credit enhancement:

Watercraft Capital S.A. / Castor, Spain

Credit Enhancement Type – EIB Project Bond Credit Enhancement Programme

Castor, the shareholders, issued a project bond through Watercraft Capital S.A., which was the first to receive EIB's Project Bond Credit Enhancement in order to refinance an offshore gas storage facility off the Spanish coast through a 23 year bond. The bonds were redeemed on 30 November 2015 due to the concession being cancelled as a result of an earthquake rendering the gas storage facility unworkable.

Issuer	Watercraft Capital S.A.
Project Description	Refinancing of an offshore gas storage facility
Sector	Energy
Country	Spain
Project Type	Brownfield
Issue Type	EIB Project Bond Credit Enhancement (PBCE)
Issue Ratings	BBB/BBB+
Amount	€1.4bn
Maturity	23 year amortising / 13 year average
Coupon	5.75%
Spread	Spain sovereign + 100bps
Issue Price	100%
Listing	Luxembourg Stock Exchange

Axione Infrastructures

Credit Enhancement Type – EIB Project Bond Credit Enhancement Programme.

Axione Infrastructures was the first project in the telecommunications sector and in France to have benefited from the EIB Project Bond Credit Enhancement Programme. Axione Infrastructures is a holding company for 12 special purpose vehicles (SPVs) which each hold long-term concession agreements with local authorities to design, roll-out, operate, maintain and provide wholesale broadband network services to internet service providers in rural France under the Public Initiative Networks framework. The issuer, FCT France Broadband Infrastructures, is a securitisation vehicle established to issue bonds to fund the purchase of receivables arising under a project finance loan entered into by Axione Infrastuctures. The rating (Baa2) incorporated around one-and-a-half notches of uplift to reflect credit enhancement provided in the form of a 20% on-demand first-loss letter of credit from the EIB.

The transaction included creditor protections that are typical for project financing structures, including designated reserves, restrictions on business activities and additional indebtedness.

Issuer	FCT France Broadband Infrastructures
Project Description	Refinancing existing debt on 11 long-term concessions
Sector	Telecommunications
Country	France
Project Type	Secondary (refinancing)
Issue type	Brownfield
Issue ratings	Baa2
Amount	€189m
Maturity	11 years (average life 6.4 years)
Coupon	2.622%
Spread	n/a
Issue Price	100%
Listing	Euronext

Ineos Grangemouth plc

Credit Enhancement Type – UK Treasury (IUK) type

This 5-year bond issued by Ineos Grangemouth plc was the first IUK-wrapped bond to be denominated in Euros. Issuing in Euros was preferred by the client as it suits the project cash flows and pricing was broadly in line with what could be achieved in sterling. The proceeds were used by Ineos to support the transformation of its petrochemical site in Grangemouth, Scotland. This bond will be guaranteed unconditionally and irrevocably by The Lords Commissioners of Her Majesty's Treasury ('HMT') under the Infrastructure UK Guarantees Scheme. Therefore, the rating is in line with the UK sovereign (Moody's: Aa1).

Issuer	Ineos Grangemouth plc
Project Description	Support the transformation of a petrochemical site
Sector	Petrochemicals
Country	UK
Project Type	Brownfield
Issue type	Credit Enhanced by the UK Treasury (IUK)
Issue ratings	Aa1
Amount	€285 million
Maturity	5 years
Coupon	0.750%
Spread	0.634%
Issue Price	100%
Listing	Irish Stock Exchange

Examples of brownfield/operational/refinancing transactions with demand risk

Autoroutes Paris-Rhin-Rhône (APRR)

APRR is the second-largest motorways group in France and the fourth-largest in Europe. It successfully issued a fixed-rate six-year €500m bond on 9 January 2014 following APRR's recorded positive traffic growth in 2013 and an improving underlying trend observed since the beginning of the year.

Issuer	Autoroutes Paris-Rhin-Rhône (APRR)
Project Description	Portfolio of toll roads refinanced part of bank debt with bond finance
Sector	Roads
Country	France
Project Type	Refinancing
Issue type	Demand risk
Issue ratings	BBB+/BBB+
Amount	€500 million
Maturity	6 years
Coupon	2.25%
Spread	French sovereign + 90bps
Reoffer Price	99.342
Listing	Luxembourg

Appendix B: Indicative project bond financing timetable and list of responsibilities*

		Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 6	Wk 7	Wk 8	Wk 9	Wk 10	Wk 11	Wk 12
General	Issuer or municipality receives authorisation from their board to issue												
	Appoint lead managers – organisational meeting all advisors												
	Preliminary due diligence; list of background information prepared												
	Investor Pre-Sounding												
	Structure definition: guarantees, covenant package, documentation model, rating, listing, public vs. private offering												
Public Bond	Begin drafting Legal Documentation												
	Drafting of Prospectus and Legal Documentation												
	Prepare Investor presentation												
	Receive Draft comfort Letters and Legal Docs												
	Due Diligence with Bookrunners												
	Prepare Execution Versions												
	Announce Transaction												
	Sales tech-in / distribute marketing materials												
	Roadshow (up to 5 days)												
	Bring down due diligence call												
	Price Notes												
	Execution of Legal Documentation												
	Close and fund transaction												
Rating	Preparation of background information, operating & Financial data for the presentation / ongoing DD												
	Schedule rating meetings; Send background information												
	Rating book sent to rating agencies												
	Rehearsal with management												
	Meetings with the rating agencies												
	Rating Agencies Analysis, initial feedback (Provide as required)												
	Rating Agencies communicate rating												

* The timeline covers all the major steps in the execution of a bond offering, which could take approximately 12 weeks from mandate to closing.

Appendix C: Typical bond and bank loan documentation requirements

Typical bond documentation

Mandate/engagement letter

This deals with the appointment of the arranger/lead manager (if any).

Timetable and responsibilities list

This will describe the main parties and their responsibilities, and will set out targeted deadlines from first meeting until closing.

Key participants list

This will include key participants such as issuer, arranger/lead manager, legal advisors, auditors, credit rating agencies (if any), trustee or fiscal agent/paying agent, SPV management company (if required), listing agent (if any), printer (if any), technical and environmental consultants, financial model auditor, insurance advisor.

Documents

Required documentation will depend on the transaction, but will typically include:

- Preliminary Term Sheet
- Offering document, comprising a prospectus or offering memorandum, which would generally include[24]:
  - Risk factors relating to the bonds, the issuer's business, the project, the guarantor (if any)
  - Terms and conditions of the bonds
  - Description of the project and use of proceeds
  - Description of the issuer and the project company including governance, shareholders, existing contracts
  - Historical financial information (if any)
  - Potentially, financial forecasts
  - Taxation
  - Information relating to the form and delivery of the bonds
  - Legal matters and general information
- Underwriting/Subscription Agreement or Placement Agreement
- Trust Deed/Deed of Covenant under which the bonds are constituted and which may contain the covenant package – if there is more than one source of finance, a common terms agreement may be used
- Fiscal Agency Agreement[25] /Paying Agency Agreement
- Interest Rate or Currency Swap Agreement (if any)
- Security Documents

24 See Appendix F for further information on the requirement for a prospectus.

25 If no Trust Deed is used.

Conditions precedent documents

The conditions precedent documents will vary between transactions but will generally include at a minimum:

- Legal opinions from issuer's legal advisors
- Legal opinions from arranger's/lead manager's legal advisors
- Comfort letters from the issuer's auditors (delivered on the date of the prospectus on the closing date)
- Auditor's report on financial model
- Tax report on overall structure
- Reliance letters from technical consultant
- Copies of board resolutions and other authorisations for the transaction
- Copies of governmental or other consents, authorisations, approvals, orders, filings, registrations required for the issuer to issue the bonds
- Certificates of compliance from the issuer with relevant consents, authorisations, approvals, orders, filings, registrations required for the issuer to issue the bonds
- Other required certifications concerning anti-bribery and anti-corruption laws, money laundering, OFAC sanctions
- Rating agency confirmation
- Completion of KYC requirements

Typical loan documentation

Mandate/engagement letter

This deals with the appointment of the mandated lead arrangers (MLAs) (if any) and sets out the conditions for the arrangement and underwriting (if any) and the commitment, the agreed syndication strategy and termination rights.

Timetable and responsibilities list

This will describe the main parties and their responsibilities, and will set out targeted deadlines from first meeting until closing.

Key participants list

This will include key participants such as borrower, mandated lead arrangers, legal advisors, credit rating agencies (if any), security trustee, facility agent, SPV management company (if SPV is required), Technical and Environmental consultants, financial model auditor, insurance advisor.

Documents

Required documentation will depend on the transaction, but will typically include:

- Preliminary Term Sheet
- Information memorandum, which would generally include:
  - Risk factors relating to the project and the transaction, the sponsor's and the borrower's business
  - Terms and conditions of the loans
  - Description of the project and use of proceeds
  - Description of the borrower and the project company including governance, shareholders, existing contracts
  - Historical financial information (if any)

  - Financial forecasts
  - Taxation
  - Key investment considerations
  - Legal matters and general information

- Due diligence reports (including Technical, Environmental, Tax and Insurance consultants' reports and audited financial model with projected cashflows)
- Security Documents
- Facility agreement under which the loan is documented
- Intercreditor agreement (defines sharing of security and voting rights between creditors, including swap counterparties and subordination of any sponsor debt and equity)
- Accounts agreement (security over and management of cash accounts, including use of proceeds and excess cash flow distributions)
- Bank meeting presentation (in case of syndication)
- Agreed hedging policy
- Interest rate or currency swap agreement
- Fee letters signed with MLAs and facility agent

Conditions precedent documents

The conditions precedent documents will vary between transactions but will generally include at a minimum:

- Legal opinions from issuer's legal advisors
- Legal opinions from investor's legal advisors
- Auditor's report on financial model
- Tax report on overall structure
- Reliance letters from technical consultant
- Copies of board resolutions and other authorisations authorising the transaction
- Copies of governmental or other consents, authorisations, licenses, approvals, orders, filings, registrations required for the issuer to enter into the loan
- Other required certifications concerning anti-bribery and anti-corruption laws, money laundering, OFAC sanctions
- Completion of KYC requirements

Appendix D: Sample credit review considerations from banks, investors and credit rating agencies

Asset type: Assets are often specialised and should have an economic life well beyond the term of the debt.

Term: The term of financing facilities should be commensurate with the economic life of the asset, and the project structure should encourage subsequent refinancing either in the bank or capital markets.

Performance risk: An investor is exposed to the performance risks involved in the design, construction and operation the project. Suitable contractual protections, qualified and competent counterparties and independent technical advice should be sought to ensure adequate comfort.

Issuer financial covenants: Financial covenants, in which the issuer undertakes to comply with certain ratios, act as a proxy measure of the issuer's ability to service and repay its debt and, if measured in a consistent way, can be an effective 'early warning system' which allows investors to assess deteriorations in the risk attached to the credit quality of the issuer and to the debt. Well-designed and appropriate financial covenants can also provide timely performance indicators for investors.

It is however difficult to design a finite list of appropriate financial covenants as the terms may vary considerably depending on the circumstances, including the nature of the issuer's business, its credit quality and the scope of financial covenants in existing bank loan and other debt documentation (although the starting point for financial covenants will usually be the scope of any financial covenants in the issuer's existing bank loan and other debt documentation, if any). Key ratios in project finance include the Debt Service Coverage Ratio (DSCR), Loan Life Coverage Ratio (LLCR), Project Life Coverage Ratio (PLCR) and Debt to Equity ratio. Precise definitions of the financial covenants and each component of the ratios should be the subject of careful drafting in the documentation, and consideration should be given to ensure consistency with those used in other bank loan and debt documentation (if any) and/or the accounting policies of the issuer. Issuers will be required to supply investors with a compliance certificate signed by senior management of the issuer, at a frequency and time to be specified in the documentation, demonstrating to investors their compliance with the covenants and potentially showing the calculations of any ratios in the financial covenants, and based upon which investors will ascertain compliance with the covenants and, if necessary, take appropriate actions.

Third Parties: Where third parties have significant obligations to the project company, their credit standing is an important part of the credit application for the project. Third parties may include corporate entities, banks and insurance companies.

Environmental Risk: Environmental issues may materialise due to the intrinsic nature of project finance transactions and sector environmental risk profiles. Most investors have adopted the 'Equator Principles'[26] which seek to provide a framework for assessing and managing social and environmental risks, in line with international best practice.

Documentation: Rights and obligations of the various parties must be clearly set out to avoid the risk of lengthy litigation at a later stage. In respect of PFI/PPP projects the powers of the public sector body to enter into contracts with the project company needs to be investigated. Other issues include the transaction structure, security, step-in rights, events of default and compensation on termination.

Interest Rates and Currency Risk: Changes in interest and currency exchange rates may materially affect the project company cashflow. A hedging strategy should be established and described in the credit application.

Insurance: Insurance is required by the SPV to allow for, *inter alia*, reinstatement of assets, loss of earnings and third party liabilities.

Tax: With the exception of corporation tax, the project company should not be exposed to changes in tax.

26 http://www.equator-principles.com/

Appendix E: Details on EIB/Commission Project Bond Credit Enhancement programme (PBCE)

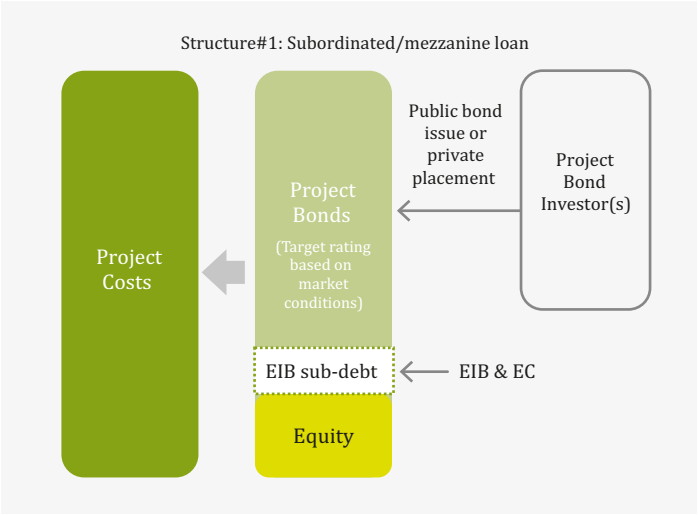
From the onset of the financial crisis, banks were unwilling to provide an adequate amount of long-term lending, financial insurers (monolines) had all but disappeared due to their own financial difficulties and there was a lack of demand from investors for lower rated (higher-yield) bonds. To help try to facilitate a resurgence of the project bond market, the EIB and the European Commission created a joint initiative, the purpose of which was to stimulate the growth of project bond financing in Europe. The resulting initiative – the PBCE – can offer both external and internal approaches to credit enhancement, either a subordinated structure (internal) or a letter of credit (external) (although at the time of writing, only the latter approach has been used).

The intention was to provide a public sector alternative credit enhancement mechanism for project bonds (but not for bank debt) in the absence of long-term lending from banks or 'wrapping' by financial insurers. The price of EIB credit enhancement is intended to equal the economic cost of providing such enhancement in order not to fall foul of European state aid rules.

The PBCE project does not insure senior bonds. It is not credit substitution on the basis of the EIB's own AAA rating. Instead, it is credit enhancement which, as noted, is offered in two forms, funded (internal) or unfunded (external):

Funded EIB credit enhancement

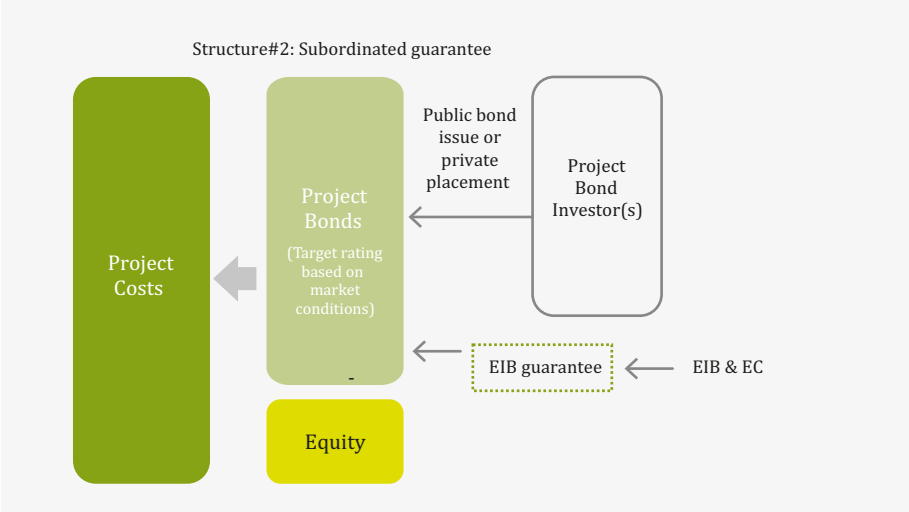
Funded credit enhancement is through the provision of a subordinated loan and thus the EIB becomes an 'internal' party providing internal credit enhancement to other (senior) creditors.



The graphic above shows the three components of the capital structure. Equity at the bottom takes the first loss. The EIB subordinated debt takes second loss and only after losses exceed this amount would senior bondholders suffer any loss given default (LGD). The PBCE is intended to provide an amount of credit enhancement of up to 20% of the the senior debt, up to a maximum of €200,000,000. Thus on a project costing €1.5bn, if there was €300,000,000 equity and €1bn of senior debt then there could be additional €200,000,000 EIB sub-debt.

Unfunded EIB credit enhancement

Unfunded credit enhancement is enabled through the provision of a standby letter of credit (LC) in favour of the bond trustee (similar to a commercial bank letter of credit). This allows the trustee to draw down cash from the EIB which can be used to make principal and interest payments to the senior debt holders as well as financing a cost overrun or, in some cases, a revenue shortfall. It thus has the benefit of providing additional funding for the project under certain circumstances which the subordinated loan cannot provide. In addition to having to pay interest on any drawdown, the project company also has to pay a commitment fee to the EIB. It should be noted that this model is better described as external credit enhancement in contrast to the funded version where the EIB is an internal party as an investor in the capital structure. The unfunded structure is shown below:



The maximum size of the LC facility that the EIB will provide is the lower of €200,000,000 and 20% of the amount of the project bond. Thus in this case, if the project cost is €1.3 billion, with €300,000,000 equity and senior debt of €1 billion, then the EIB letter of credit would provide up to €200,000,000 of additional cash in the event that construction costs over-ran or during the operational phase, the company could not meet payments of principal and/or interest or, in the case of default or termination, to reduce any investor's losses.

In practice, the PBCE supported projects to date have been unfunded given the perceived benefits of this structure. The EIB's PBCE programme, at the time of writing, is in a pilot phase and therefore the types of project that are eligible and the terms of the guarantee may change under the new EU financial framework 2014-2020, and as part of EFSI. It is currently targeted at projects in parts of the trans-European network (TEN) programme, in particular at transport (e.g. Via A11 NV), energy (e.g. Watercraft Capital – Castor) and telecommunications (e.g. Axione Infrastructures).

At the moment, the PBCE is available only to bond structures although the EIB is looking at a potential extension of its programme to support bank financing under the new EU financial framework 2014-2020. A core requirement is that the initiative is directed towards developing specific eligible infrastructure assets, not the support of corporate balance sheets and therefore the eligible assets must be ring fenced and targeted by the financing. Most importantly, the project must be 'robust' prior to PBCE i.e. a bankable financial structure. There is no minimum project size and the PBCE can be considered for the credit enhancement of either public bonds or private placements.

PBCE projects will need to meet EIB's normal eligibility criteria. A description of EIB's process for determining eligibility is available at: http://www.eib.org/attachments/documents/project_bonds_guide_en.pdf

Appendix F: Regulation relevant to the issuance of project bonds

This appendix gives an outline of some of the more important European legislation that may be relevant in the context of the issue of a project bond and some of the practical consequences of that legislation in context.

Prospectus Directive/Transparency Directive

The Prospectus Directive (the 'PD') requires the production of a prospectus (the 'Prospectus') and imposes other specific requirements where transferable securities are either (a) offered to the public or (b) to be admitted to a regulated market in the European Economic Area.

'Offer of securities to the public' is defined as 'a communication to persons in any form and by any means, presenting 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 to these securities'. The term therefore catches many forms of communications of information. For example, even the communication of a term sheet could, in some circumstances, constitute an offer to the public.

There are, however, exemptions from the requirements of the PD which relate to public offers, the most important of which in the context of a project bond will probably be that only securities in denominations of at least €100,000 are offered.

Although a Prospectus may be prepared even where it is not required under the PD, for example for liquidity reasons, the level of disclosure required will be less for securities with a denomination of €100,000 or higher. Securities in denominations below €100,000 are considered to be 'retail' for the purposes of the PD and will typically attract greater and more intrusive attention from the competent authority reviewing and approving the Prospectus.

If a Prospectus is required for a project bond (or an issuer chooses to prepare one), it will have to contain all information about the issuer (and any entity guaranteeing the bonds), its financial position (including two years' historic audited financial information), profits and losses and prospects that a prospective investor would require in order to make an informed investment decision (PD Article 5(1)). This may create difficulties in relation to, for example, financial model projections, which are generally required by investors, but could involve the issuer in increased liability, given that it by definition refers to projections of future financial positions. If investors were given access to financial models, this could potentially be inside information (on which see further below).

Most major stock exchanges in Europe have two markets, a 'regulated market' to which the PD applies and an 'exchange-regulated market', which is subject to the exchange's own rules, generally similar to the PD, but which may offer greater flexibility in relation to the disclosure of financial information.

Issuers and guarantors will also have to publish annual financial information on the relevant stock exchange throughout the life of the bonds.

Where a project bond takes the form of securities that are admitted to a regulated market, the issuer will have to comply with on-going disclosure obligations under the Transparency Directive. Among other things, this requires the production of annual and semi-annual reports, including financial statements produced using International Financial Reporting Standards if the issuer produces consolidated accounts, and a management report. The management report must contain extensive prescribed information.

Market Abuse Directive

Two provisions of the Market Abuse Directive (MAD) are relevant in the context of a project bond. Both relate to inside information.

The first provision requires issuers to make prompt public disclosure of all inside information. 'Inside information' is defined in a complex manner but is, broadly, non-public information that is precise and, if made public, would have a significant effect on the price of the issuer's securities. The term 'significant effect on price' is further defined as meaning anything that a reasonable investor would be likely to use as part of the basis of their investment decision.

The second provision is the prohibition on those who are in possession of inside information from using it, either by disclosing it to others, or procuring others to deal, or dealing themselves. This means that an investor who has inside information will be unable to sell their bonds until that information is made public.

Appendix G: Glossary of terms

AFME	Association for Financial Markets in Europe
Availability-based projects	Projects that entitle a private entity to receive regular payments from a public sector entity to the extent that the project asset is available for use in accordance with contractually agreed service levels
Basel III	A comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision and risk management of the banking sector
Brownfield	A private entity takes over the management of a state-owned enterprise or, alternatively, a project in which construction and testing have been completed which is now operational and revenue generating
Build-Operate-Transfer Projects (BOT)	A Build-Operate-Transfer (BOT) project is typically used to develop a discrete asset rather than a whole network and is generally entirely new or greenfield in nature (although refurbishment may be involved). In a BOT Project, the project company or operator generally obtains its revenues through a fee charged to the utility/ government rather than tariffs charged to consumers. A number of projects are called concessions, such as toll road projects, which are new build and have a number of similarities to BOT projects
Committed	A financing facility provided by a bank to a borrower, which cannot be withdrawn unless the borrower breaches covenants or other terms of the facility
Concession	A type of PPP. A concession gives an operator the long-term right to use all utility assets conferred on the operator, including responsibility for all operation and investment. Asset ownership remains with the authority. Assets revert to the authority at the end of the concession period, including assets purchased by the operator. In a concession the operator typically obtains its revenues directly from the consumer. A concession covers an entire infrastructure system
Covenant	A condition that requires a borrower to fulfill certain conditions or which forbids a borrower from undertaking certain actions, or which in other ways restricts certain activities. A key financial covenant in a project financing is the debt service coverage ratio (DSCR) which can give an indication of a deterioration in the risk of the debt due to a fall in the ratio (caused for example, by a decline in expected revenue from the project)
CRA	Credit rating agency
Debt Service	Scheduled payments of principal and interest
Debt Service Coverage Ratio	Within a given ratio, the ratio of cash available for debt service divided by debt service payments scheduled in that period
Demand-based projects	Projects that entitle a private entity to receive payments related to the revenue generated by the project asset
Demand risk	Reliance on income from a third party for a project, for which credit enhancement is usually required, or the risk during the operational phase from not having a contractually guaranteed revenue stream and thus being subject to volume or price risk
EFR	European Financial Services Round Table
EIB	European Investment Bank
EIF	European Investment Fund
EURIBOR	Euro Interbank Offered Rate
Financial model	A financial model is built to confirm that a project is economically viable for the lenders but also for the equity investors and any offtaker/ contracting authority or users in the expected future scenario and, through the use of sensitivity calculations (stress testing), to confirm that lenders are not at undue risk in a downside scenario. The inputs required for such a model include the underlying macroeconomic assumptions, the cost of the project and its financing structure, the expected operating revenues and costs and any relevant accounting or taxation assumptions
GDP	Gross domestic product
Greenfield	The project is not yet built. Financing is required for both the construction phase and permanent operations, or, a project still at the planning stage which requires financing for the construction and operational phases
ICMA	International Capital Market Association
IRSG	International Regulatory Strategy Group
Intercreditor Agreement	An agreement which regulates the respective rights and ranking of two or more funders in a single class of security or between different classes of security in a financing, including rights to receive payments and rights to enforce security

Issuer	The issuer of the debt for the infrastructure project (usually an SPV). This may be the project company or a separate (usually sister) company incorporated to issue the bonds and on-lend the proceeds to the project company
KYC	Know your customer – the process used by a business to verify the identity of its clients
LIBOR	London Interbank Offered Rate
Mark-to-market	The accounting act of recording the price or value of a security, portfolio or account to reflect its current market value rather than its book value
OFAC Sanctions	US sanctions administered by the Office of Foreign Asset Control of the US Department of the Treasury
Procurement Directive	Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement
Project company	Normally the sponsors will create an SPV known as the project company, which is the counterparty to the contracts with the construction company, offtaker, concession provider etc. The project company could also be the borrower of debt or the issuer of bonds. However, in some cases, for regulatory and tax reasons, a separate (usually sister) company is incorporated to issue the bonds and on-lend the proceeds to the project company
Public Private Partnership (PPP)	PPPs describe a form of cooperation between the public authorities and economic operators. The primary aims of this cooperation are to fund, construct, renovate or operate an infrastructure or the provision of a service
SPV	Special Purpose Vehicle
Sponsor	A party which develops and becomes a shareholder in infrastructure projects
Swap	A derivative in which two counterparties exchange cash flows of one party's financial instrument for those of the other party's financial instrument
Swap curve	The name given to the equivalent of a (sovereign) yield curve but using market swaps prices. The swap curve shows the relationship between swap rates at varying maturities and can be used as the basis for pricing fixed income bonds as in 'mid-swaps plus spread of x bp'
Volume risk	Volume risk arises from a project not generating the expected revenue as a result of lower volume of output (such as electricity) or from the lower than expected usage of a project (such as a toll-road) or from selling prices/ charges, being below expectation
Yellowfield	Category of infrastructure which sits between traditional greenfield and brownfield asset categories. Yellowfield assets are assets which require work to either upgrade or replace the asset. Construction work is involved but is considered a lower risk than greenfield as more performance information will be available

Appendix H: Further resources

ICMA HANDBOOK

The ICMA Primary Market Handbook is a comprehensive document covering a broad range of international fixed income securities, which contains recommendations, standard documentation, guidance notes, etc. Generally, the Handbook is intended to apply to cross-border issues of securities. It is very much a 'live document', continuously responding to market developments when guidance or standardisation is required.

AFME

AFME produces a wide range of publications that assist market practitioners in helping to standardise business practices in specific sectors such as the high yield bond market and securitisation market. AFME also produces research on topics of interest, to assist policymakers in decisions which impact the development of efficient capital markets. AFME produces a Primary Dealers Handbook to provide detailed information on government bond market participants and practices.

EFR

The European Financial Services Round Table (EFR) was formed in 2001. The Members of EFR are Chairmen and Chief Executive Officers of international banks or insurers with headquarters in Europe. EFR Members believe that a fully integrated EU financial market, a Single Market with consistent rules and requirements, combined with a strong, stable and competitive European financial services industry will lead to increased choice and better value for all users of financial services across the Member States of the European Union.

IPFA

The International Project Finance Association (IPFA) is the largest and the only international, independent, not-for-profit association dedicated to promoting and representing the interests of private companies and public sector organisations in Project Finance and Public Private Partnerships (PPPs) throughout the world. Its main focus is on providing regular speaker meetings in Asia, Europe and the Americas to disseminate current thinking on industry issues and the provision of training programmes in all continents.

IRSG

The International Regulatory Strategy Group (IRSG) is a practitioner-led body comprising leading UK-based figures from the financial and professional services industry. It aims to be one of the leading cross-sectoral groups in Europe for the financial and related professional services industries to discuss and act upon regulatory developments.

The EFR and IRSG participated as observers in the AFME ICMA working group but do not take responsibility for any content other than relating to their institutions or initiatives.

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Notes

/ About AFME

The Association for Financial Markets in Europe (AFME) is the voice of Europe's wholesale financial markets.

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