

Capital Markets:

The Rise of Non-Bank Infrastructure Project Finance

Talking Points

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Executive Summary

In recent years we've all seen significant changes to the financing of large-scale infrastructure projects around the globe. The traditional route of long-term bank debt is still available in some markets. But with stiffer banking regulation, it is questionable whether it can keep up should the project pipeline significantly expand. In many regions, institutional project debt may fill this need.

We believe that capital markets involvement in financing infrastructure projects outside of North America has now reached a tipping point and will steadily increase. Already in 2013 there have been landmark transactions in Brazil, Spain, Holland, the UK and France. But markets around the world have varying degrees of receptivity to institutional debt and different norms. There remains a great deal of confusion among both

governments and project sponsors about how best to access the capital markets for infrastructure projects.

This paper seeks to provide some clarity to the project bond concept. Firstly we have identified four critical preconditions that we think must exist for a project bond market to take root:

- 1** available capital outside of the banking system;
- 2** sufficient governance and transparency in financial reporting;
- 3** Balanced tax and commercial policies; and
- 4** project specific mechanisms to support credit quality.

Delineating this list allows governments to see where policy reform is required and how they should prioritise their efforts if they wish to create a stronger environment for infrastructure project bonds. In addition, we have categorised markets around the world by these factors, so that bidders can identify the most promising areas in which to tap the capital markets. We also set out some areas where investors may need to flex their approach in order to meet the specific needs of infrastructure projects.

Introduction

There is a growing need for large-scale infrastructure projects around the world. In 2006, the OECD¹ estimated that around 3.5% of global GDP, or approximately USD2trn needs to be invested in electricity distribution, road and rail transportation, telecommunications, and water infrastructure annually or USD 53trn from 2010 to 2030². Adding in sectors such as ports and airports pushes the figure even higher: including another USD11trn makes the annual requirement USD3trn plus per annum. In 2012, the World Economic Forum (in a report³ prepared in collaboration with PwC) estimated global annual infrastructure investment and maintenance needs in excess of 4% of GDP. The needs are more concentrated in developing countries. If the OECD and Eastern Europe are removed from the average, the World Economic Forum figure rises to over 6% of GDP. In Africa and South Asia the estimated need is higher still at c10% of GDP.

Demand for large-scale investment has been complicated by the fiscal constraints in many countries. With shrinking budgets, governments are increasingly forced to choose between competing priorities. Economic infrastructure in particular can have a positive multiplier effect on output and productivity. The challenge is finding innovative ways for value-adding infrastructure to be funded and financed⁴ in a manner that is sustainable for both governments and infrastructure users. In this paper we focus on the latter challenge, but note that the former is top of mind for financiers as they evaluate the quality of infrastructure project opportunities.

1 OECD, Infrastructure to 2030, Vol 2: Mapping Policy for Electricity, Water And Transport.

2 OECD Infrastructure to 2030.

3 World Economic Forum, Strategic Infrastructure Steps to Prioritize and Deliver Infrastructure Effectively and Efficiently.

4 Financing is the time-shifting of infrastructure costs incurred, whereas funding is how the costs are ultimately repaid.

Some Banks Have Steadily Reduced Exposure to the Market

Admittedly, the end of bank financing for infrastructure projects has been predicted in the past, and banks are still making loans. But it is clear that many banks which have provided the bulk of private project finance through long-term loans before the Global Financial Crisis (“GFC”) have steadily reduced their exposure to the long-term infrastructure market.

Some governments have got deals closed by reducing the bank debt required, often by committing to significant milestone payments (i.e. 40% to 50% of the capital value of the project) either during construction or when the project is built out. This structure effectively prepays some of the availability charge that would otherwise be paid to the concessionaire, reducing the senior debt required whilst attempting to retain a suitable risk transfer. In other cases, governments have more formally co-lent into deals, or taken on project risk by offering guarantees to the lenders. In still others, reliance on multilaterals such as the European Investment Bank has significantly increased.

Where governments are not directly involved in financing projects (e.g. regulated utilities) in some countries, government is nevertheless providing support through enhanced tariff structures and potentially providing guarantees for investors and debt providers.

If this level of support drops away because of continued strains on government finance, insufficient risk transfer or because the transaction size and deal pipeline increase significantly, that will increase the natural underlying pressure to seek non-bank finance routes.

The Rise of Infrastructure Project Bonds and Non-bank Lending

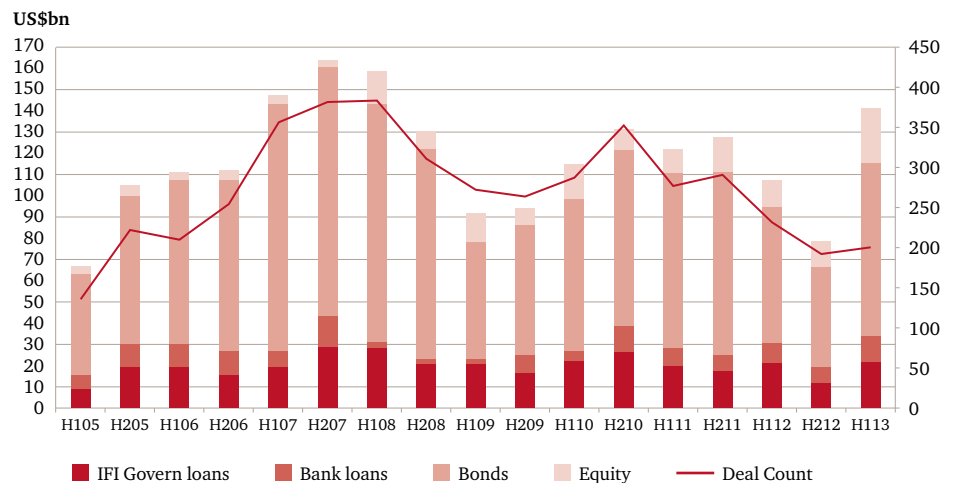
Given the market conditions we've described, we think there is a clear opportunity for the private sector to provide infrastructure financing via project bonds and non-bank lending. After a number of false dawns (at least outside of the Americas, where project or municipal bonds have been the norm for infrastructure project finance), that trend is finally beginning to gather momentum.

One contributing factor is that activity in the overall corporate bond market has been high. For example, the second half of 2012 saw record levels of corporate bond issuance. Even in the context of reducing

central bank support, yields on quality sovereign debt are still historically low. In turn, this creates demand from asset managers and investors seeking higher yield options, particularly where they are trying to match longer duration or inflation-linked obligations. Project bonds and non-bank lending could provide a flow of suitable highly rated assets direct to pension plans and life insurance companies.

A major reason for the slow uptake of infrastructure project bonds is a lack of clarity (amongst both governments and project sponsors) regarding the

Global volume by source of funding 2005 – H1 2013



Source: Infrastructure Journal

feasibility of bond finance relative to the “tried and tested” route involving one or more of bank debt, multilateral finance and capital contributions. We believe that infrastructure bonds have substantial potential to expand beyond the jurisdictions they are currently used, but each such financing is still relatively new and tied to the specific conditions within individual markets.

Another traditional impediment – construction risk – is increasingly being mitigated by targeted credit enhancements or (in some cases) priced in by sophisticated investors who consider the increased yield to be good value relative to the risk taken on. This is particularly true of private placements but increasingly public bond investors are showing willingness to take construction risk. We would recommend that investors consider the risk return profile carefully in the context of actual recovery rates and available credit mitigation. In addition, construction risk might not be completely new for investors already taking this risk indirectly through the corporate bonds of (say) companies undertaking major capital projects.

No dominant project bond model has yet emerged, and local conditions will always vary. There are numerous financing solutions that are competing for investor and procurer attention, each with different benefits and challenges. While the specific deal structure for each market is likely to remain in flux, we think the financing source for infrastructure will increasingly transition from bank debt to institutional investors. While this transition unfolds, we believe that both governments and project sponsors would gain from a clearer understanding the prerequisites needed for such a market to take root.

A couple of words of caution:

1 Some of the institutional appetite is driven by absolute return strategies whereby the low returns offered on government bonds make infrastructure bonds look attractive. If sovereign yields increase sharply e.g. due to reversal of quantitative easing, the relative attractiveness of long-dated infrastructure debt will decrease;

- 2** A logical infrastructure project debt market would use short-term bank debt markets e.g. construction finance, with refinancing into the long-term institutional markets, as seen increasingly in the regulated infrastructure utilities and leveraged infrastructure acquisition markets. The key risk with this model is what refinancing risk arises and who takes it – users, investors, government, etc. If this market were to evolve it would reduce the need for institutional debt to take construction risk; and
- 3** A return, if any, of the securitisation market whereby banks would package project finance loans and sell them into the institutional markets, may obviate the need for institutions to invest/lend directly to projects themselves. The typical credit quality of the infrastructure sector should make this possible in future, provided the worst excesses of the pre GFC securitisation market are not repeated.

Four Prerequisites

In most markets there is a considerable demand for infrastructure project finance. The key issue is structuring and funding projects to a level where they become financeable. Moving to the supply side of infrastructure project finance, there are some key criteria that need to be met in order to unlock the capital markets. We have identified four main areas:

1 Available capital outside of the banking system

In most cases, this implies a stable and well-structured private, public or third-sector insurance and savings industry, with retirement savings and pension funds managed by investment professionals. Such a system creates a competitive pool of capital which generally seeks a wide range of debt investment opportunities. In some jurisdictions, institutional investors require a domestic AAA rating for portfolio holdings which most infrastructure projects cannot achieve.

This effectively precludes investment in infrastructure that does not carry a guarantee from government. This, in turn, undermines the rationale for a specific project bond. Government has little incentive to create a new, less deep/liquid class of its own bonds and pay a premium for its own covenant i.e. where government is the counterparty as opposed to users. As such, an important precondition for a project bond market is a domestic capital market that has the flexibility to invest in a broader category of highly rated securities beyond just AAA/government paper⁵.

2 Sufficient governance and transparency in financial reporting

A functioning bond public market – not just for project bonds – requires a significant amount of financial infrastructure, including (at a minimum) adequate disclosure and

⁵ Notwithstanding this, suitably long duration government securities are important to provide a pricing benchmark for long-dated corporate and project bonds.

reporting rules. This is related to our first requirement in that a country very likely cannot have one without the other. But for the purposes of this argument, we have separated them. Even in developed markets such as the UK, the first generation of monoline wrapped transactions often had little underlying investment information flowing to investors. This became problematic for investors when the monolines' credit quality deteriorated as there was little information with which to manage the investments. The answer isn't always more information, though. Provision of additional information for investors needs to be balanced against public market information disclosure rules which require timely dissemination to all market participants. As such, an effective means of managing confidential information (especially

pre-default) and even managing normal-course waivers (especially during the construction phase) can be awkward. Options include private placements, bank/bond hybrids (where the bank adopts its traditional agency role as well as funding/guaranteeing construction risks), expanded roles for bond trustees, use of the electronic voting system and new-generation monoline wraps with greater transparency for investors and downgrade triggers.

3 *Balanced tax and commercial policies*

The key needs here are clarity of policy and whether there is a level playing field between bank debt and bonds. The importance of policy clarity can be seen in Brazil's project bond initiative (Infrastructure Debentures or IDs) which was initially slow to take off due

to a lack of clarity around tax exemptions. This was a key reason for the year's delay in the Rodovias do Tiete BRL 650m 12 year bond issue originally planned for the summer of 2012. The delay necessitated rolling over the bridge debt and, together with slowing economic growth in Brazil, this pressured the company's ratings outlook at the time. In terms of level playing field, withholding tax⁶ provides an example as the treatment isn't always level as between bank and bond. For example, in Turkey, interest paid to foreign banks attracts zero withholding tax, but interest paid to foreign bondholders that do not qualify as "financial institutions" attracts a 10% rate (although it does taper down to 0% for maturities of 5 years or more). This means the bond interest rate needs to be higher than the bank debt for the same project risk unless there is a bilateral tax treaty that

⁶ Some jurisdictions have rules in place regarding the treatment of interest paid to foreign investors. Such interest is commonly tax-deductible for the payor, and if the bondholder is in the same country, the recipient will be within the same tax system. But when the interest crosses borders and goes to foreign investors, governments are generally not able to tax the other side of the transaction. As a result, many governments opt to levy withholding tax against foreign recipients of interest.

reduces the rate. Credit support in a termination also differs between bank and bond (discussed in greater detail below). In terms of overall regulatory treatment of bank vs. bond, France provides an even broader example: beneficiaries of the *cession Dailly*⁷, a key component of infrastructure project finance in France, can only be banks. This necessitates the use of a fronting bank or similar structure for institutional investors seeking to finance projects.

4 Project-specific credit support

The degree of credit support for infrastructure projects varies dramatically by market. Not all markets have a class of investors seeking highly rated (but not sovereign-guaranteed) infrastructure debt. Even in markets that do, there

may be a gap between what these investors require and the project's underlying credit quality. Lower leverage naturally helps, but there may still be a gap to be closed by bonding/letters of credit, state provided credit enhancements (typically less than outright guarantee)⁸, commercial de-risking of projects and additional risk capital either from either private sources or (increasingly) multilateral initiatives such as the European Investment Bank's Project Bond Credit Enhancement ("PBCE") mechanism.

For many markets (including Brazil, India, Turkey and several countries in Central and Eastern Europe) project level credit enhancement is not currently relevant. In these markets, a significant amount of infrastructure is either built by government directly or funded by state owned banks.

Where infrastructure is privately financed, it is often done so through corporate guaranteed loans or bonds (either until completion or throughout the project life), meaning there is no explicit reason to enhance the stand-alone credit quality of the project. However, we can see countries currently dominated by a corporate/sovereign finance approach moving to a more limited recourse model, particularly where sovereign and/or contractor balance sheets become stretched due to the scale of pipeline. A good example is Brazil where the national development bank BNDES has signalled that it can no longer fund the majority of infrastructure. As such, BNDES has been supportive of Infrastructure Debentures by sharing security *pari passu*.

⁷ The Dailly tranche benefits from the public sector waiving the ability to make payment deductions on finance related to c80% of the project cost, meaning related debt service is essentially guaranteed post construction completion.

⁸ Such as the UK government's Infrastructure Guarantees.

We believe these four criteria are generally necessary. However, they may not be sufficient as individual markets have their own characteristics. However, for governments looking to establish a private infrastructure project bond market in order to get infrastructure ventures financed, these four areas represent clear priorities.

Even where these four criteria are present, institutional investors will need to be flexible on certain points in order to present viable alternatives for public procurers and compete with bank solutions. In general, these include an increased tolerance for construction risk, offering deferred drawdowns to reduce negative carry⁹ and increasing flexibility on make-whole/prepayment penalties.

⁹ Being the shortfall between interest earned on deposit and interest paid on the bonds. As many bonds (in particular public bonds) are drawn down in a single instalment, to the extent the bond proceeds are spent over time - such as when an asset is being constructed - this shortfall can be substantial. As the project generally does not earn a return until completion, this shortfall generally needs to be borrowed up front, increasing the size of the bond. Some private placement bonds however offer the flexibility of deferred drawdowns, eliminating the negative carry cost.



Market Segmentation

With these four prerequisites in mind, we have analysed the current conditions in markets around the world, and clustered countries and regions by the relative feasibility and attractiveness of financing infrastructure projects through the capital markets.

Green

Regions and countries where the market conditions are largely in place already for an infrastructure project bond market:

- Canada
- Australia
- U.S.
- Mexico
- Latin America, notably Brazil
- UK
- France, Benelux, Germany

Amber

Regions and countries where governments are taking the necessary steps to implement an infrastructure project bond market:

- Amber/Green: Middle East, Asia
- Amber: Spain, Turkey
- Amber/Red: CEE

Red

Regions and countries that still have significant hurdles before an infrastructure project bond market is likely to develop, but where pilot initiatives are being developed:

- India
- Africa

Green

Canada is the country that most relies on the capital markets to finance infrastructure projects. Historically, Canadian domestic banks did not lend beyond five to seven years, regardless of sector. For a time, European banks provided long-term debt for Canadian projects, but they retreated to home markets after the GFC. With a number of Public Private Partnership (PPP) projects in procurement at that time, sponsors turned to the bond market. From a process perspective, it was a short leap, given the existence of numerous Canadian life insurance companies and asset managers who were experienced buyers of infrastructure/project finance bonds. Infrastructure bonds are also common in **Australia** with recent issues in airports (Perth) and roads (ConnectEast), albeit generally unwrapped post GFC. The AUD 3.7bn Victoria Desalination project is presently considering partly refinancing into the bond market.

Traditionally, infrastructure project finance in the **United States** has relied on municipal bonds. However, infrastructure project bond activity has been growing with programmes such as the Transportation Infrastructure Finance and Innovation Act (“TIFIA”) and Private Activity Bonds (“PAB”). While TIFIA is a low cost federal loan programme for up to 49% of the cost of PPP and conventional transport infrastructure projects, it still requires the underlying project to be investment grade. This requirement helps bring discipline/viability to the project selection and development pipeline, and also mitigate the reputational risk inherent in such a high profile programme. TIFIA has supported long tenors/average lives (including a 34 year loan on Virginia Midtown Tunnel, alongside a PAB) and pricing akin to Treasuries. The government’s position is subordinated until an event of default, at which point it springs up. PABs are one way of making up the 51% not funded under TIFIA, but

(as for TIFIA) only transport projects are eligible. In addition, there is a ceiling on PABs of USD15bn at present. USD4bn has been issued and another USD4bn is allocated to projects¹⁰. As with municipal bonds in general, PABs have tax advantages whereby the interest received is tax-exempt to the investor and therefore the borrower can offer/pay a lower interest than would be the case. This is effectively a tax allocation from the federal tax base to the municipality and the infrastructure users.

Outside of the transport sector, there is presently debate around introducing a structure similar to TIFIA for potable water and wastewater projects¹¹ and, more generally, development of a loan and bond guarantee facility to states, local governments and non-profit infrastructure providers in respect of transportation, energy, water, communications and educational facility infrastructure projects¹². Lastly, much of the market's growth potential lies in the

renewables sector, which will require about USD150 billion in new construction through to 2022¹³. MidAmerican Topaz – one of the world's largest photovoltaic solar farms – raised USD850m in privately issued 144A/Reg S 5.75% project bonds (due 2039) in February 2012, and another USD250m in April 2012¹⁴.

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In **Mexico**, the central issue is insufficient pipeline as there is currently more funding available than projects. The country has a sizable life insurance and pension industry and government policies implemented in the mid and late 2000s increasingly encourage funds to invest in infrastructure projects. Since roughly 2008, state-owned Banobras has funded the relatively small number of projects, and subsequently syndicated the debt. That said, as the project pipeline grows, it is unlikely that Banobras will be able to meet rising demand and increasingly there are long-dated project finance bonds. Notable recent issues included

(in 2011) a MXN7.1bn nonrecourse bond related to Sarre and Papagos prisons, the first fully commercially financed greenfield¹⁵ social infra concession in Mexico. More recently, Banobras acted as credit guarantor on the Red de Carreteras de Occidente concession sold to domestic and foreign institutions for USD1.16bn in long-term, peso-denominated notes to pay for the FARAC I toll road, and Mexico Generadora de Energia ("MGE") issued USD575m of long-dated BBB paper for two gas turbines at T+388bps.

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Brazil needs some USD50bn per year in infrastructure investment. As noted above, the size of this pipeline is pressuring BNDES (funded by the federal government) which has recently had very high lending levels. For example, in 2010 they disbursed around BRL168.4bn.

10 http://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/private_activity_bonds/#current

11 See Title X of: <http://beta.congress.gov/bill/113th-congress/senate-bill/601?q=%7B%22search%22%3A%5B%22water+infrastructure%22%5D%7D>.

12 <http://beta.congress.gov/bill/113th/house-bill/2084>

13 <http://blogs.wsj.com/environmentalcapital/2008/08/29/obamas-green-dream-would-his-renewable-energy-plan-make-a-difference/>

14 <http://www.bloomberg.com/news/2013-06-13/buffett-s-midamerican-plans-700-million-solar-bond-deal.html>

15 The project benefits from a priority budget allocation of the Mexican federal government. Minimum payments are at least equal to debt service, meaning the bonds are essentially sovereign credit.

In 2012 they lent around BRL156bn, around 1/3rd of it on infrastructure¹⁶ While this remains a significant sum, it is now reducing. Commercial bank tenors in Brazil are short, and Brazilian pension funds can generally only invest in assets rated A+ (local) or higher. As such, bridge finance is common but there is a significant underlying demand (as well as supply) for long dated infrastructure bonds such as IDs. In the first half of 2013, notable issues included the Triangulo do Sol refinancing, Ecorodovias, CART, CCR and also Rodovias do Tiete's re-launch of the planned 2012 issue.

PwC recently advised a toll road operator on raising BRL 60m of bridge debt with two to eight year tenors across three tranches. The debt was rated BBB+ by Fitch to facilitate refinancing in the long-term debt market. Following completion of public bank approvals processes (which can be lengthy in Brazil), the bridge will be refinanced via a mix of 20 year SUDAM¹⁷ funding and

BNDES participation. In this case the BNDES participation will be structured as a project bond, albeit via the same public bank used to disburse SUDAM funding.

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In the rest of **Latin America**, as in Mexico, capital is generally available and the problem is a lack of bankable projects. **Chile** is seen as a relevant model for the region; it established a project bond market in 1999, and prior to the GFC institutional investors were funding significant deal volumes in this fashion – as much as 50% of the total infrastructure pipeline. However, the retraction of monoline bond insurers significantly impacted Chile, and the country has not seen any project bond issuances since then.

The governments of several countries in the region, such as **Argentina, Uruguay and Peru** consider pension funds as one of the key financing sources for enabling and accelerating the execution of their current or future

infrastructure programmes. This policy choice resulted in a package of measures and tools (including political pressure) to facilitate and stimulate pension fund involvement. For instance, **Columbia and Peru** have recently made changes to their legal framework to spur institutional investment into infrastructure. However, the lack of a pipeline has meant that institutions have generally not had the business case to develop project finance structures further. Recent issues in Peru include Terminales Portuarias Euroandinos Paita which raised USD110m of long dated BB/BB- paper at c350bp over, and also the Peru Hospital PPP (USD320m). The latter is a quasi-sovereign issue secured by EsSalud. This issue also mitigates construction risk for investors through milestone based issuance of EsSalud's obligations. In July 2011, Invepar issued PEN1.17bn in inflation linked, private placement bonds to finance the 30-year Via Parque Rimac toll road concession in Lima at VAC +650bp.

¹⁶ Source: BNDES

¹⁷ Being the federal development fund for Brazil's northern and middle eastern regions. The fund is disbursed via three publicly owned banks.

In the **UK**, after a long hiatus, the first half of 2013 has seen numerous greenfield (i.e. with construction risk) project bond issuances in the university accommodation, social housing and healthcare sectors. Notable issues in student accommodation include Uliving@Hertfordshire (GBP143.5m of A- rated index-linked priced at 235bp over index linked gilts) and University of Edinburgh which sold GBP31m each of monoline-wrapped, index-linked and fixed rate tranches with spreads of 190bp and 215bp over gilts respectively. In social housing, the Leeds Little London and Holbeck Housing PFI sold GBP102m of monoline-wrapped, fixed rate bonds at 235bp over gilts. In addition, the Salford Pendleton Social Housing project issued senior fixed rate bonds (at 190bp over gilts), supported by a subordinated tranche. In healthcare, the Alder Hey Children's hospital raised GBP110m via a private placement bond. PwC advised on

the Edinburgh, Leeds, Salford and Alder Hey transactions, giving us unparalleled insight into recent project bond issues.

The UK Treasury has also sponsored a cGBP40bn guarantee scheme. The scheme was initially set up to provide credit enhancement to financiers where long-term lending was expected to no longer be available. The significant decline in the volume of infrastructure projects in the UK has meant that banks have so far been able to finance most of the projects. The future use of the guarantee scheme is unclear, as project activity declines and capital markets innovate to plug the bank gap. It is possible that the guarantee will be targeted as projects that cannot be financed on a stand-alone basis due to size or cost, hopefully without over exposing the tax payer to project risk.

The Benelux countries (**Belgium, Netherlands, and Luxembourg**) and Germany are very advanced in their application of project finance. Whilst traditionally bank funded markets, there is active exploration of capital markets solutions. To date, authorities' procurement rules (particularly in the Netherlands) have required committed finance and this does not sit easily with public bond "book building" where the bond spread is only known just before the launch. As such, the market is evolving more towards private placements (where investors have offered greater price certainty) or bank to bond structures. Over the last 12 months, two out of three bids on Dutch projects have included such structures. The N33 road in the Netherlands features a EUR78m index-linked tranche which will partially

take out (at a pre-agreed price) the banks financing the transaction upon practical completion. In addition, the EUR300m Zaanstad prison project in the Netherlands reached financial close in September 2013. The hybrid structure includes an institutional investor tranche alongside a subordinated, shorted dated senior bank tranche. PwC advised the government on N33 and the consortium bidder on Zaanstad.

The A11 road in Belgium (currently at preferred bidder) is actively evaluating capital markets solutions, either directly or via a bank to bond structure. In Germany, projects considering the capital markets include the A7 road and UKSH hospital, and PwC is advising bidders on both projects. In addition to the committed finance approach described above, the Netherlands is expected to launch a preferred bidder debt funding competition pilot project in the next 12 months. The rationale for this is to increase the depth of competition in a constrained financing market.

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In **France**, bank financing has been able to fund the pipeline of current projects thus far. However, the market may be at a tipping point, particularly given the recent financial close of the Cité Musicale (July 2013) where the *Daily* tranche of the debt will be subscribed by an institutional investor who will refinance out the three banks providing construction loans. Most institutional investors in France require relatively high project credit ratings, which are often tough to achieve given construction risks and other factors. On Cité Musicale, the investor coming in for the *Daily* tranche post completion means the credit risk they take is essentially local government rather than project. However, institutional investors have demonstrated willingness to take construction risk in the French market. For example, the Valence/Riom/Lutterbach Prison PPP closed in January 2013 with an insurer providing EUR100m of the debt from financial close, and L2 Marseille bypass may also feature allocation of the construction risk to the institutional investor.

Arguably the recent developments of bond financing were possible only because the bond investors became flexible on parameters that traditionally were deal-breakers for this type of project, namely make-whole provisions and drawdown periods. PwC advised the public sector on Cité Musicale and is currently advising the public sector on L2.



Amber/Green

Before the GFC, bank tenors in the **Middle East** were long. Most projects were backed by government or government owned sponsors, making bank debt accessible at relatively low cost. There have been some significant project bonds to date¹⁸, but compliance costs associated with numerous securities laws and exchange listing have discouraged some sponsors.

Post GFC, bank margins for 10+year tenors remain high and tenors beyond 15 years are a challenge. In response, some procuring authorities have relaxed committed finance requirements, allowing the use of mini-perm financing to support bids. However, large scale project finance in the Middle East now requires support from external credit agencies, other forms of financing such as Islamic lending, and other multilateral lending agencies which means the process is not as simple as it used to be. Considerable guarantees and contractual commitments are required before such financing can be secured, and these factors are increasing the attractiveness of project bonds. In August 2013, Shuweihat 2 IWPP¹⁹ in Abu Dhabi became the first project to be refinanced in the bond market with a USD825m A- rated 6% 2036 144a/Reg S issue.

The depth of corporate bond markets varies considerably across **Asia**, making it difficult to categorise the entire region. In particular, **Malaysia** has a vibrant bond market which contributed approximately half of the country's private infrastructure investments between 1993 and 2006. The Malaysian government took some notable steps to spur this market, including mandating the use of credit ratings for corporate bonds as of 1992. In addition, the **Republic of Korea** has a substantial corporate bond market which has previously financed infrastructure. Other regionally significant corporate bond markets include **China, Japan** and **Thailand**²⁰. Export credit agencies and multilaterals such as the Asian Development Bank are active in supporting infrastructure finance, including through credit guarantee programmes. However, with the exception of Malaysia, Singapore and the Republic of Korea, the OECD estimates that total assets held by pension funds, life insurance companies and mutual funds are small relative to GDP in East Asian economies²¹. As such, in many Asian countries the preconditions are not yet in place to support private project bonds.

18 Such as the USD3.4bn Ras Laffan Liquefied Natural Gas Company issue, Dolphin Energy's USD1.25bn issue and the 2011 Saudi Aramco Total Refining and Petroleum Company project sukuk (Shari'a compliant project bonds).

19 Independent Water & Power Producer

20 <http://www.bis.org/publ/bppdf/bispap63.pdf>, pg.6

21 <http://www.oecd.org/daf/fin/public-debt/45811325.pdf>, pg 52.

Spain's fiscal challenges are well-publicised, but a gas storage project (Castor) in the country has recently given the EIB its first financial close using the PBCE instrument. In addition to providing the PBCE facility (akin to a long term letter of credit, ranking junior in order to credit enhance the senior bonds), the EIB also bought EUR300m of the senior bonds. The project was a refinancing, meaning investors did not take construction risk, and reached financial close in July 2013. The large size and long tenor of the issue (EUR1.4bn, 21.5 year bonds) arguably favoured the public bond route. The issue was rated BBB+ at launch²², one notch above Spain's sovereign rating of BBB. For investors requiring investment grade (i.e. BBB-), a sovereign rating of BBB doesn't leave much room in the structure for project risks hence the importance of PBCE or other credit enhancements. Without such enhancement, investor appeal may be relatively narrow, suggesting that project bond gearing levels and/or underlying risk may need to remain relatively low until Spain's sovereign rating improves.

Central and Eastern Europe (CEE) falls somewhere between amber and red. Most CEE countries have virtually no market for non-bank infrastructure project finance, and in some cases (particularly Russia) project finance remains the preserve of state-owned lenders. Many countries have low sovereign credit ratings, pension funds that are primarily state-sponsored, a lack of well-prepared and recurrent infrastructure projects and political uncertainties which lead to regulatory risks. While there has been significant improvement in putting the right enabling legislation in place, much of it remains untested. In addition, multilaterals such as the EIB and European Bank for Reconstruction and Development (EBRD) provide significant amounts of infrastructure finance in the region.

In some stronger CEE countries, particularly **Poland**, international banks are willing to lend to domestic projects. Until recently, significant amounts of infrastructure have been funded with EU structural resource and domestic public

²² On 1st October 2013, Fitch put Castor's bonds on credit watch negative following seismic activity in the vicinity (source: Thomson Reuters).

money at both the central government and municipal levels. This has crowded out private finance. This however may change as EU funding principles may become more commercially/debt oriented and government budgets are stretched. The demand for new sources of infrastructure finance may be potentially met by insurance companies, government initiatives such as PIR (the Polish Development Investment Fund) and inflows from international infrastructure funds that already have a foothold in the market (e.g. power sector, sea logistics). Major infrastructure financing may also come from or through large corporates, especially in the power and chemical sectors.

As a result, while CEE countries indicate that they are open to capital markets financing for infrastructure, we don't anticipate that this market will take off until the concept becomes more established in Western Europe. This may

change if governments force pension funds to invest a minimum proportion of their portfolios into infrastructure (i.e. mandatory minimum sector limits). Progress in individual countries may vary as significantly as their relative macro-economic performance does. In general, we expect the Polish corporate bond market to grow strongly. However, from a project bond perspective, secondary markets are relatively immature and issuers may find the liquidity premia required by investors unattractive.

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Akfen and PSA in **Turkey** have recently launched a seven year bond refinancing Mersin International Port. However, project bonds at a PPP level have a way to go yet. There are relatively few domestic institutional investors and the corporate bond market is not yet very deep. In addition, the post-termination debt assumption agreements that apply to PPP transactions above a certain size cover bank (but not bond) transactions. As

such, bond investors have less certainty of recovery in a default scenario than bank lenders for the same project risk. The market remains very corporate and relationship driven, and when sponsors do access the bond market they often do so decoupled from specific projects. Turkey acknowledges the need to increase the average life of its debt financing at a sovereign/quasi-sovereign level. Using long-tenor project bonds to privately finance key infrastructure may be one way to deepen the market, but this will be challenged by the lack of suitably long duration sovereign debt pricing benchmarks.

In **India**, privately funded infrastructure is done via bank debt rather than bonds. The largest global project finance lender for Thomson Reuters' Project Finance International is the government owned State Bank of India. The country's 12th Five Year Plan (which covers 2012 through 2017) considers that insurance and pension funds will be a key source of infrastructure finance. Such funds have grown in the past decade due to favourable demographic trends, but remain proportionately small. Yet there is effectively no project bond market thus far. During the 11th plan, nearly half of all infrastructure finance came from public-sector capital, and another third came from commercial banks and non-bank finance companies (NBFCs). Over the longer term, however, we do not think that banks will be sufficient to fund the entire pipeline. The banking sector cannot lend more than 15% of their net worth to a particular sector (and 25% to a particular group). However, bank credit to the infrastructure sector has reached 13.5%.

There are however numerous policy and market structure challenges. Infrastructure companies are not frequent issuers in the corporate bond market, investors are generally unable to fund infrastructure SPVs due to their typical structure as unlisted private companies and investor rating requirements can preclude widespread participation in infrastructure. There are two broad options to overcome these challenges: one being to refinance out banks at stable operations (although the banks have shown little inclination to exit, despite Basel III) and the other to create an infrastructure debt fund for pension funds/insurers.

The second option is a challenge for greenfield projects as Indian institutions are traditionally not comfortable with construction risk. While some overseas investors may be more comfortable with this risk, India's current international sovereign rating of BBB- leaves little to no headroom for project risk, particularly for investors that require investment grade²³. This suggests that domestic investors will need to get comfortable with construction risk.

23 BBB- being the lowest category of investment grade.

The first option is still challenged by the minimum rating requirements for pension and insurance managers to invest (typically domestic AA or AAA), well below the typical BB structured project. Traditionally there have been no credit wrappers to bridge the ratings gap. However, the India Infrastructure Finance Corporation (IIFCL) and the Asian Development Bank (ADB) have recently signed credit enhancement documents for the GMR Jadcherla Expressway as a pilot project. The purpose of the guarantee is to raise the rating to a point that the project can refinance in the bond market when the bank facility matures or reaches a price reset point.

In **Africa**, many countries need to deepen sovereign and multilateral bond issuance as a precursor to corporate and project issuance. Across most of the continent, reforms to date have focused on getting sovereign bonds issued, often to finance infrastructure development. Many sovereigns are not rated, and those with natural resource revenues often need to set up a sinking fund committing future

revenues to secure financing. Nonetheless, 2012 and the first half of 2013 saw significant Eurobond issuances, notably Ghana (USD750m 10 year bonds), Rwanda (USD400m 10 year bonds), Zambia (USD750m 10 year bonds), Tanzania (USD500m seven year private placement) and Angola (USD1bn 7 year private placement). Although local capital markets are dominated by dollar bonds, in February 2013 IFC issued a five-year, local currency NGN12bn denominated bond (cUSD75m) in Nigeria as part of a program to deepen the domestic bond market across Africa. In September 2013, Kenya issued its sixth infrastructure bond for KES20bn (cUSD230m).

It is important that African issuers appeal to investors by focussing on the “basics” of increasing transparency in the financial markets and coordinating more effectively across borders. The specific needs of each country vary, but commonly needed reforms include deregulation, a lifting of capital controls and stronger governance and disclosure.

South Africa has a developed bond market in place, and sizable life insurance and pension markets. Some institutional investors have bought into projects post completion, but have not yet shown much appetite for construction risk. The infrastructure market in South Africa is dominated by state owned utilities such as Transnet and Eskom who finance infrastructure on balance sheet. The largest project finance programme to date is to support investment in the ambitious renewables PPP program which the domestic banks have so far financed comfortably to the surprise of some international investors. Nevertheless, the implementation of Basel III in general and a growing pipeline of projects could spur greater demand for capital markets financing. In particular, round 3 of the renewables program will drive cZAR30-40bn across 1,000MW of capex.

Conclusion

Following an abrupt decline since 2007/8 and much discussion thereafter, viability of capital markets financing for infrastructure has reached a tipping point – in particular over the past 6 to 12 months. Although volumes never really declined in some markets, i.e. Canada and the US, there have been notable developments in markets such as Brazil, Spain, Holland, the UK, France and the Middle East. Banks are continuing to lend, but will likely be unable to meet the financing demands of a growing project pipeline. New banking regulations make long tenor project finance loans even less attractive, and sovereigns are only likely to face continued fiscal pressure.

The decline in available long term debt (from non-government banks) has coincided with declining global deal flow post GFC. Any gap that would have opened up has been financed by multilaterals, procurers (with capital contributions) and state owned banks to keep infrastructure programmes on track. Nevertheless, the multilaterals and state-owned banks are increasingly under

pressure to reduce levels of lending as they are not immune to capital and liquidity constraints, either regulatory or political. At the same time, governments are looking to increase infrastructure investment to support economic growth. Given the regulatory pressure on banks it is very difficult to see them financing infrastructure at pre-GFC volumes or terms should investment levels recover. This gap will need to be filled by capital markets products – directly or indirectly – continuing the recent evolution of the project finance market. It is now clear that institutional investors are keen to support the infrastructure market where projects are sensibly structured.

In the context of these factors, infrastructure bonds hold clear appeal for institutional investors, project sponsors and governments seeking to get projects funded. Some clarity regarding the preconditions that must be in place – and the relative attractiveness of this model in markets around the world – will help all three groups identify and capitalize on the opportunities.

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