# Discussion

## 1. Jim Turnbull

Almost every paper I have ever read on infrastructure finance focuses on the achievement of what market practitioners believe is the Holy Grail of infrastructure finance. As PwC (2013) has stated in a recent publication, '[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' (p 5). The reality is that the conversion rate from the high-risk construction phase to the capital market funding phase is relatively low – it is important to try to find out the reasons why and to attempt to rectify them.

This lack of conversion of infrastructure finance from syndicated bank loans to viable capital market instruments is now of much greater concern because of changes to the regulatory system that threaten to restrict the availability of longer-tenor bank loans. Market commentators have raised the issue that many banks are resistant to lending on a syndicated basis out past the 5–7 year maturity, particularly in local currency. A watershed moment is approaching, as many of the traditional elements of this financing model are undergoing extensive structural change. Major regulatory reforms such as Basel III and Solvency II are forcing banks and, to a lesser extent, insurers into reviewing the capital charges related to the provision of long-term finance through loans to end users of a lesser credit quality. Several banks are exiting this type of business because new regulatory capital charges make it uneconomic. This hits the traditional model of project finance and acts as a powerful incentive to review the business process of infrastructure finance to see if the capital market offers a truly viable funding alternative for the post-construction phase of an infrastructure project.

It is in this context that the paper by Ehlers, Packer and Remolona seeks to chart the progress of the capacity of local capital markets to provide a partial infrastructure finance solution within emerging market economies (EMEs). It also attempts to answer a question raised earlier about why emerging market investment flows into the infrastructure sector are not finding their way into projects in home markets, with the limited pool of domestic infrastructure investors preferring to invest in 'safe assets' denominated in hard currencies from developed economies.

What becomes clear from the paper is that promoting the issuance of infrastructure instruments in the capital markets confronts many of the same issues that are discussed with respect to developing domestic local currency bond markets. Indeed, infrastructure bonds are effectively a subset of the wider capital market development agenda and must be considered in this context. At the basic level this agenda includes:

- Formulating a government bond issuance strategy that creates a viable risk-free benchmark but does not crowd out alternative issuance.

- Encouraging a domestic investor base with the 'right' long-term bias. This presupposes that there is capital available outside of the banking system. In many EMEs – particularly economies where the European Bank for Reconstruction and Development operates – this does not exist. Additionally, while governments may recognise the importance of finding investors for infrastructure projects, they may be undertaking short-term and cynical reforms to the private pension sectors that actually undermine the growth of this essential source of funds.
- Promoting the development of local currency hedging products as a prerequisite for international real money investors to participate; many regulators and central banks of EMEs have a historical aversion to derivative products. But the absence of these instruments can lead to limited market penetration or a proliferation of the 'wrong' sort of international investor.
- Supporting a policy of long-term regulatory commitment including balanced tax and commercial policies while minimising direct intervention in project selection.
- Ensuring sufficient confidence in the governance and transparency of financial reporting.
- Developing gradations of project-specific credit support with the potentially conflicting goal of creating a supply of both high-quality credits for conservative investors and more risky instruments for other investor groups. And here the role of the international financial institutions (IFIs) comes under the microscope.

The paper covers all of these elements in some detail and the progress looks broadly optimistic. Infrastructure bonds have lower default rates and better recovery characteristics than corporate bonds at the same rating level – so on its face, they represent a viable capital market asset class. However, some caution needs to be exercised before saying that there is a solid foundation from which the capital markets can provide some of the finance shortfall that may result from the reduced activities of banks in the project finance sector. The long quantitative easing cycle has kept sovereign yields low and has encouraged investment in 'riskier' long-term assets, which is essentially a hunt for yield. So while the current growth potential looks positive, any upward shifts in interest rates in the sovereign space are likely to lead to growing risk aversion to longer-dated assets that are less liquid, particularly local currency assets where there are embedded currency risks to international investors. This may act as a brake on the progress we have seen in the utilisation of local bond markets over the last five years.

I am less convinced about the conclusion that the existence of a systematic difference between local and international rating scales means that 'international investors may discount the information content of local ratings given the increased difficulty of comparing them with international benchmarks' (p 87). As an ex-foreign investor, I personally find local rating scales quite helpful because of the increased granularity that results from the absence of the sovereign ceiling. Focusing on the difficulty of aligning local rating scales to global scales rather misses the point. Local ratings address a target investor group that might be captive and have different dynamics to the international investor, such as restrictions on external investment or currency of investment. Nevertheless, the information is valuable to any investor if they wish to do their analysis. Additionally, my experience suggests that issues of currency denomination and hedging capability are far more material to a foreign investor's investment process.

Ultimately, the issue of lower cumulative default rates and higher recovery rates at each rating level after year 4 of a project cycle relative to corporate bonds seems to me to be less material to long-term investors than the fact that early infrastructure investments often undergo debt restructuring and reorganisations, which diminish the cash flow certainty of the instrument. And it has often been observed that where other market participants see a bond, a long-term investor sees a cash flow stream. Many real money investors lack the capacity to be a part of the restructuring process, which is why they have tended to leave the 0–4 year area to the banks that traditionally have this expertise. Once again, this does not explain why we see limited conversion to capital market instruments after year 4 of the project cycle.

Discussions of the capacity of local markets to provide infrastructure finance need to consider the role played by the public finance strategy of the government. While I realise the paper focuses on local corporate bond markets, this certainly underestimates the role domestic capital markets play in providing infrastructure funding outside of the 'project bond' space. As an example, issuance of government bonds by the Turkish Government across longer maturities has been said to 'crowd out' other issuers. But Turkey also uses many of the funds raised in its local markets for infrastructure projects. It is just that they are not labelled as infrastructure bonds – they are government bonds. As part of any infrastructure funding discussion it is perfectly legitimate for government issuers to assess whether savings in lower funding costs through their own-name generic issuance can outweigh the benefit of utilising the traditional public-private partnership (PPP) model. In fact, as taxpayers and users we should hope that this is done!

At the same time, while I hesitate to introduce the phrase 'regulatory arbitrage' into the infrastructure bond discussion, we need to be aware that governments have their own hurdles due to self-imposed debt limits or the like that may or may not incentivise infrastructure bond issuance. This is a huge determinant of the way that an infrastructure finance market develops and has to be recognised. Nevertheless, this appears to be a greater issue in emerging Europe than in the Asian capital markets.

The new paradigm suggests that existing ring-fence styled models using special purpose vehicles (SPVs) have their purposes but that they may need to be adapted over time. In many ways, the SPV is a legacy structure based on project finance principles and complex interrelationships between contracting parties that supports early stage investments. It has not yet fully evolved to a viable instrument that is then acceptable to the capital markets. Some form of structuring or financial engineering is needed before acceptable capital market style products develop from infrastructure financing needs. The present solutions seem to take one of three forms:

- slicing various infrastructure projects into parcels and allocating them to infrastructure investment trusts and funds – somewhat erroneously called the Macquarie Model in some circles
- encouraging investors such as pension funds and specialist boutiques into taking and managing project risk as a business
- a hybrid approach of the two where a whole infrastructure project is positioned into a trust and run as a standalone investment vehicle.

While each of these solutions has some benefits and negatives, they are clearly not the whole answer and are somewhat evolutionary. None of the above appear particularly conducive to promoting local currency bond issuance.

Recognising the importance of this issue, the G20/B20 Infrastructure Working Group has also proposed an internationally standardised structure for the PPP asset class, which would employ a trust structure that implements and manages PPP projects at the national level. However, this work is in its early stages and will require extensive consultation.

Nevertheless, future capital market structuring is likely to focus on developing solutions that make the cash flow more predictable for long-term investors. Discussion of 'insuring away' some of the early project risk inevitably morphs into an examination of the role of IFIs as risk insurers in EMEs, but it is worth remembering that IFI balance sheets are relatively small so their capacity is limited.

Some optimism has also been expressed about the future of instruments such as securitisation or even the covered bond structure. In these cases, the lack of homogeneity of the pool creates difficulties as does the issue of collateral substitution in covered bond pools.

## References

**PwC (PricewaterhouseCoopers LLP) (2013),** 'Capital Markets: The Rise of Non-Bank Infrastructure Project Finance', Report prepared by the Capital Projects and Infrastructure Group, October.

## 2. General Discussion

The discussion began with one participant commenting that demand-side factors could be behind the higher average credit quality of infrastructure bonds relative to that of other non-financial corporate issuance. The participant suggested that the difference in credit quality may reflect the tendency for bond investors to hold diversified portfolios of highly rated bonds as a way of avoiding the need to expend time and resources on assessing risk independently – that is, they invest passively. The participant noted, however, that supply factors also play a role (i.e. bond investors can only buy what has been issued). Frank Packer suggested that the preference for highly rated issues could also reflect a perception that ratings – particularly by local ratings agencies – are less informative at the lower end of the ratings spectrum.

Another participant questioned the importance of country-level risk characteristics (such as political risk and bureaucracy quality) in explaining infrastructure bond ratings. The participant noted that the rank-order correlations between measures of country risk and infrastructure bond ratings do not imply causation, and suggested analysing the relationship in a multivariate setting as a better way of identifying a causal relationship. The participant went on to hypothesise that the inclusion of controls – particularly GDP per capita or other broad measures of economic development – in such a multivariate model could result in the country risk measures losing their explanatory power.

There was robust discussion around the relative merits of bond versus bank financing of infrastructure projects. One participant noted that recovery rates for infrastructure-related project loans are close to 100 per cent because of continual project monitoring by banks; in contrast, corporate infrastructure bonds only have recovery rates of around 70 per cent. The participant explained that the restructuring of project loans by banks during the initial phases of a project – particularly the construction phase – allows them to capture value, but, in contrast, restructuring bonds is impractical (as noted in the paper). The participant went on to argue that, because of these shortcomings, project bonds do not have a future, but that bonds backed by pools of infrastructure-related project loans could potentially be a useful financial innovation. Another participant pondered whether any viable infrastructure projects are not being built due to the nature of the available finance, and questioned whether the issue of financing using bond issuance or bank loans was of first-order importance.

The discussion then turned to aspects of the data used in the paper. One participant queried whether the infrastructure bond sample included petrochemical companies in Latin America. In response, Torsten Ehlers indicated that these types of companies were not included in the sample. Another participant suggested that the infrastructure bond market in China may not be as large, relative to total project finance supplied by banks, as the data on syndicated loan finance suggest, because syndicated loans represent only a subset of total bank lending. Dr Packer acknowledged that the sample excludes bilateral bank lending, which is likely to account for a significant share of total bank lending for infrastructure projects.

One participant highlighted the very high share of infrastructure bond issuance accounted for by EMEs since 2009 and described this as 'striking'. The participant also noted that new syndicated loan finance has fallen significantly since 2010, but that this decrease has not been offset by an increase in infrastructure bond issuance. Another participant emphasised a theme that the paper had in common with other papers presented at the conference: if governments 'get their houses in order' by developing high-quality institutional frameworks and ensuring stable political and regulatory environments, then markets will provide the necessary financing for infrastructure investment.