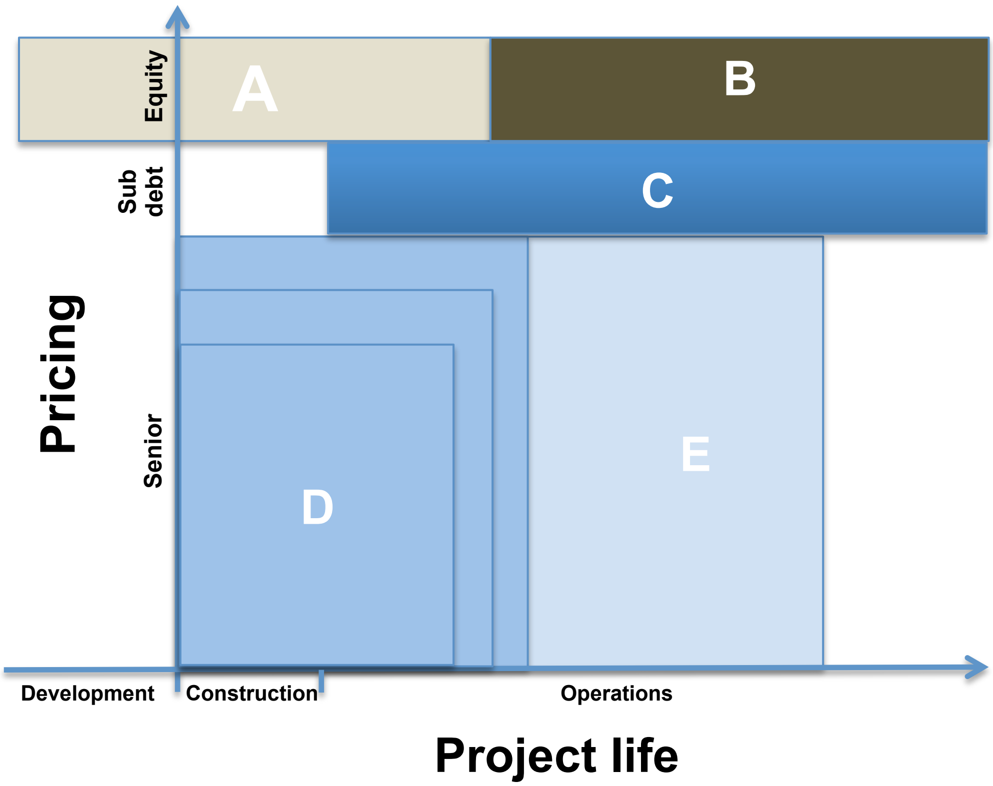
Infrastructure Debt

Trends & Opportunities in Emerging Markets



Key trends in financing of Emerging Markets infrastructure

A There is significant capital seeking opportunity in this segment, with strategic players and financial investors with a PE-bias (i.e. targeting 20%+ IRRs and PE-style fees).

B There are few options for long-term ownership of infrastructure in EM. Local stock markets are not developed enough to allow the sale of minority positions. Consequently, many financial investors face the prospect of holding their assets long after their original maturity timeframes.

C Sub-debt is virtually unused in emerging markets. There is significant demand for long-dated subordinated debt, which could replace part of the equity once the project is operational. It requires long tenors, which are not available from banks.

D This section is getting smaller. After the financial crisis, the capital structures have become more conservative and tenors have shortened. New sources of capital are needed to bridge the gap in available funding and demand for senior debt.

E Institutional capital is willing to accept longer tenors, particularly in countries with relatively strong credit rating. This section presents great opportunity.

Role of institutional investors in Emerging Markets infrastructure debt

Institutional investment in emerging market debt
Institutional investors have been investing in emerging market sovereign and corporate debt for quite some time. This asset class has grown substantially over the last decade, with outstanding sovereign and corporate EM bonds issued in the international market totalling c. USD1.5 trillion.

But, traditionally, institutional investors have not participated in infrastructure debt finance for these markets to any significant extent.

Financing of infrastructure loans
Most infrastructure financing transactions in emerging markets have traditionally been structured as loans and financed by domestic and international banks. Considering their very high quality of credit, until the financial crisis, there was almost unlimited appetite among banks to finance ever larger deals.

Post-2008, however, with the gradual adoption of new capital rules under Basel-II and III, banks increasingly find the long-dated infrastructure loans to be not particularly attractive given the amount of capital required to back these loans (assigned ~100% risk weight).

This is increasingly leading to situation where new infrastructure projects are having to seek long-term financing from non-bank sources. This gap has partly been filled by export credit agencies and multilateral institutions.

Use of project bonds
In recent years, some emerging market issuers have also tried to access the capital markets to meet their long-term funding requirements, through issue of project bonds.

Such bond issues are subscribed to almost exclusively by institutional investors. The volume of capital raised through project bonds, however, remains miniscule when compared to the total infrastructure investment needs of emerging markets. For example, in the power generation sector there are only 25 issuers across all emerging markets that have issued project bonds.

What's required is a structure that's equally attractive to the institutional and the bank market, so that project finance issuers can address the widest possible investor base.

The challenge we face is to open up the institutional market to infrastructure debt. That is the only way in which vast amounts of long-term capital can be secured to fund the very large infrastructure investment needs of the emerging markets.

Key considerations for institutional investors to invest in infrastructure debt

Indexation and Performance benchmarking

Most institutional investors will, generally speaking, seek to benchmark their performance to a widely-accepted index. The most common reference for emerging markets is the JP Morgan EM Bond Index (EMBI). Investments in EMBI constituent countries are far easier to accommodate than those in "off-benchmark" countries.

Custody, tradability and clearing

Institutional investors require their investments to fit into existing "back end" infrastructure and systems, particularly to be held by their Trustees and be settled via Euroclear. A listing provides additional advantage of better disclosures. [Note: Banks would prefer the reverse, to avoid the "beta risk" from marking to market the asset.]

Transparent deal structure and credit risk

Given investors' familiarity with EM sovereign credit, they would seek to reference the credit quality of an infrastructure debt issue to that of the relevant sovereign. This is particularly relevant for the less mature (i.e. frontier) markets.

Tenor and issue size

Institutional investors tend to be less sensitive to tenor and would take a more objective view of the overall risk/return trade-off, unconstrained by regulatory requirements.

The relationship between issue size and demand is not linear, but smaller issues will be of interest to a much smaller universe and, consequently, have wider pricing.

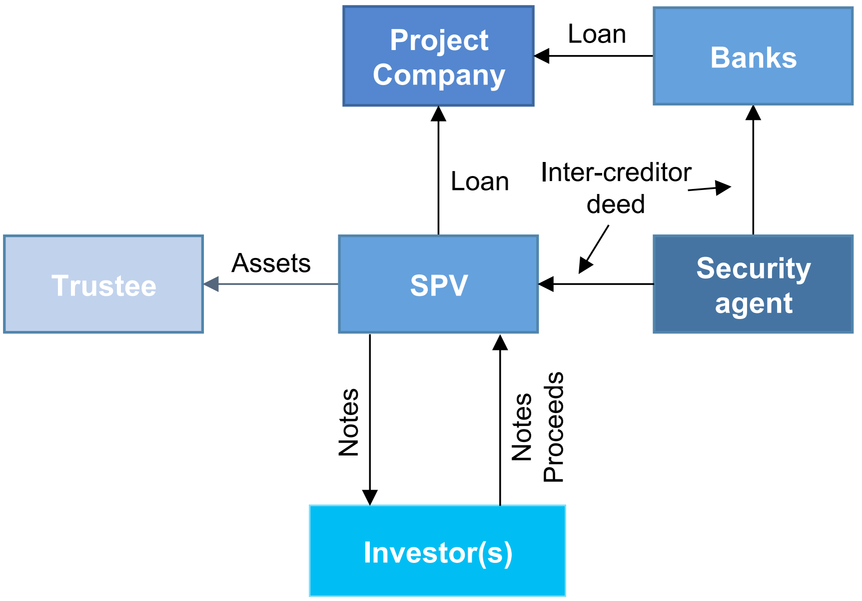
Liquidity

Liquidity is a major factor influencing both the demand and pricing for any infrastructure debt issuance. While there is relatively limited opportunity to issue benchmark size paper (over US$500 million), alternative approaches exist wherein a pool of these deals could be securitised and listed.

Structuring of infrastructure loans as a Euroclearable note can open up the institutional market for infrastructure debt

Axius Capital is, for the first time, using the otherwise commonly used structuring option of Credit Linked Notes to channel institutional investment into EM infrastructure debt.

Structuring the loan as a Euroclearable note preserves the underlying credit quality in all respects. The noteholders' rights are *pari passu* to those holding rest of the loan.



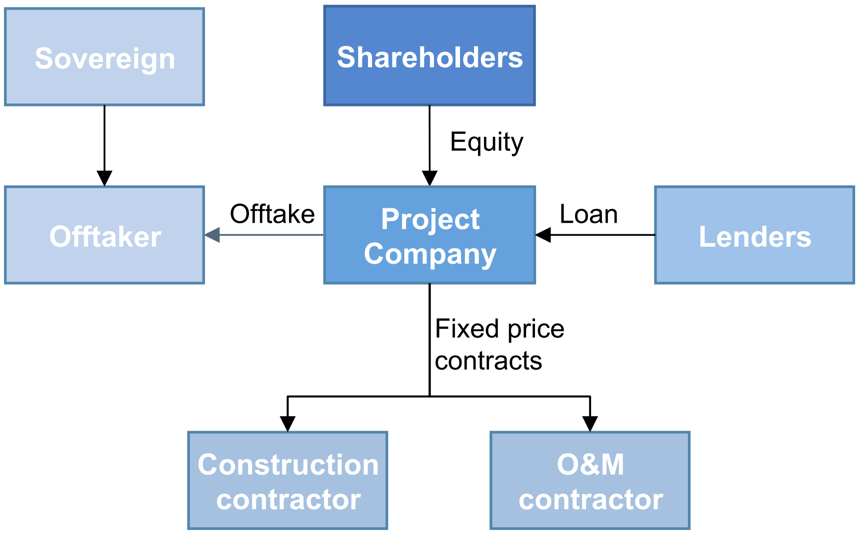
The Credit Linked Notes (CLNs) can be issued as both listed, or unlisted, securities.

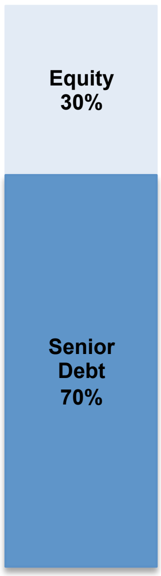
Listed CLNs would meet a higher level of disclosures, similar to that of a project bond (i.e. full information about the underlying asset).

In case the CLNs are unlisted, they will have more limited disclosures about the underlying asset; and the disclosures can be directed only to the potential investors.

	Loan	Unlisted CLN	Listed CLN
Is the security "Euroclearable"?	✗	✓	✓
Will institutional investors be able to invest?	✗	✓	✓
Can this be issued with limited disclosure to a discrete audience?	✓	✓	✗
Is full disclosure required on the underlying asset?	✗	✗	✓

Emerging Markets infrastructure projects have sovereign offtakers with long-term, availability based payments. This closely replicates the sovereign credit risk.





Typical capital structure

Profile of a typical Emerging Markets infrastructure project

Highly predictable cash flows and conservative capital structures
With their fixed revenue and costs, the net cash flows for infrastructure projects with long-term offtake can be estimated with a high degree of certainty.

In spite of their cash flow strength, EM infrastructure projects tend to have relatively conservative capital structure. This provides lenders additional comfort through high DSCR (debt service coverage ratio) and, with the amortisation of loans, a continually improving credit quality.

Robust contractual structure and risk allocation
These infrastructure projects make extensive use of Project Finance tools, including robust legal contracts written typically under English law, to deliver an effective risk allocation framework.

Under the offtake agreement, the sovereign is responsible for FX risk. If the project is expropriated, it is sovereign's obligation to make the lenders whole.

Highly experienced project owners and operators
Most EM infrastructure projects are owned , constructed and operated by high-quality sponsors and contractors. They have global and/or regional portfolios of such projects, with track record of executing projects within time/ budget and operating them with high reliability.

The obligations of construction and operations contracts are subject to stringent performance criteria, backed by financial guarantees.

Important factors in investment analysis of infrastructure projects

Beyond the standard financial analysis of projects, certain qualitative aspects of due diligence play a vital role in determining the quality of EM infrastructure projects.

Sovereign macro-economic performance

Given the sovereign backed nature of project cash flows, it is critical to assess the ability and willingness of the sovereign to honour its financial obligations over the medium to long term. Availability of international credit rating is quite useful in this context (to judge the "ability"). A very important factor in judging the willingness is the "affordability" of the project on a longer term basis.

Stability of government policy

It is quite important that host governments have a stable policy regime that supports the infrastructure projects. These projects have relatively long gestation and payback period, so it requires diligent work from all stakeholders to meet their obligations over the long term and provide the "certainty of outcome" to private investors and lenders.

Political risk mitigation

Political risk is a matter of fact in Emerging Markets. It is, therefore, important that investors determine their "tolerance thresholds" and consider taking out Political Risk Insurance (PRI), if necessary. Having said that, sovereign-backed EM infrastructure projects have an excellent track record of performance, as discussed in detail later.

Covenants and other lender protections

Covenants and other structural protections play an important role in building a robust financing structure for EM infrastructure projects. Extensive use of offshore accounts, debt service reserves, cash flow waterfalls and dividend locks provides additional layers of comfort for lenders, particularly against short-term disruptions to cash flows.

Axius Capital team has a long track record of helping investors make the right investment decisions on EM infrastructure projects

Track record of infrastructure debt: EM and Global perspectives

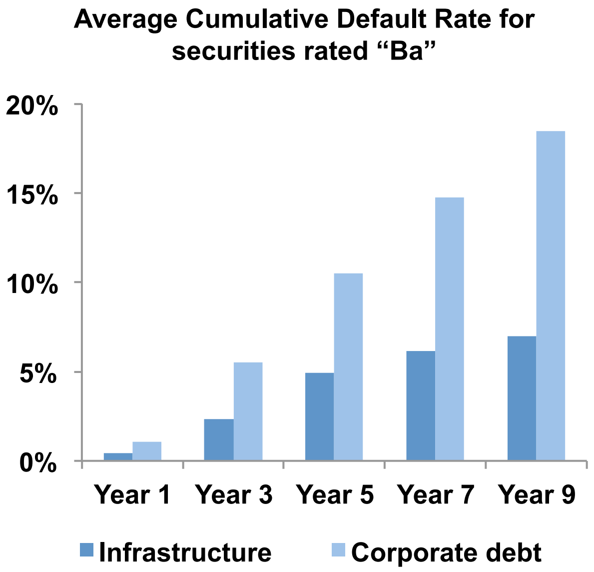
Performance of sovereign-backed infrastructure projects in Emerging Markets:1990-2014

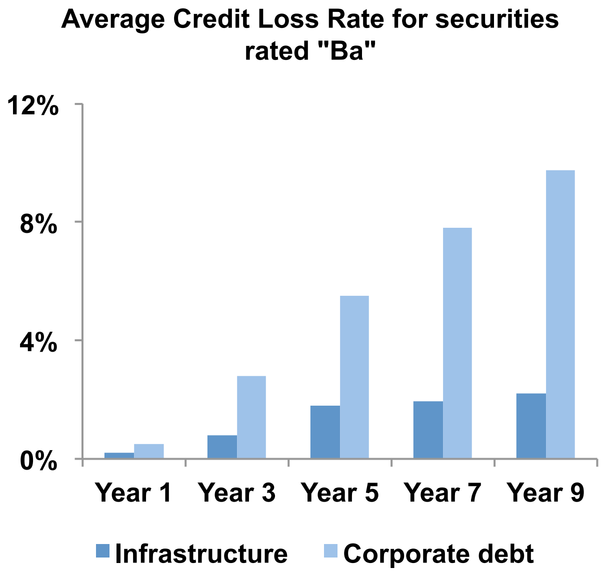
Geography	Total projects	"Distressed" projects	% distressed
Asia	**1,737**	**12**	**0.7%**
Central & Eastern Europe	**450**	**2**	**0.4%**
Middle East & Africa	**268**	**6**	**2.1%**
Latin America	**1,154**	**27**	**2.3%**
Total	**3,609**	**47**	**1.3%**

Source: World Bank PPI Database

In emerging markets, sovereign-backed infrastructure projects have generally been highly successful. The same experience is also reflected in MIGA's claim ratio of 0.08% for c. USD21bn guarantees for 600+ projects.

Moody's analysis of global infrastructure debt performance





Source: Moody's Infrastructure Default and Recovery Rates 1983-2013

Moody's analysis of infrastructure debt performance over three decades confirmed (i) infrastructure debt has significantly lower default rate compared to similarly rated corporate debt; and (ii) Credit loss rates for infrastructure debt are much lower as compared to similarly rated corporate debt

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