Bullet bonds, co-obligor structures attracting investments in infrastructure

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Analytical contacts

Somasekhar Vemuri
Senior Director, Rating Criteria and Product Development
Email: somasekhar.vemuri@crisil.com

Ramesh Karunakaran
Director, Rating Criteria and Product Development
Email: ramesh.karunakaran@crisil.com

Chaitali Nehulkar
Associate Director, Rating Criteria and Product Development
Email: chaitali.nehulkar@crisil.com

Wazeem M A
Senior Analyst, Rating Criteria and Product Development
Email: wazeem.a@crisil.com

Opening up capital market investments in infrastructure

The infrastructure requirements of the Indian economy are huge. CRISIL estimates that investments of over Rs 55 lakh crore are needed in the infrastructure sector over the five fiscals through 2023. The development of the corporate bond market for the infrastructure segment is imperative for funding its investment needs. Infrastructure projects are also exploring opportunities to tap the capital market to diversify their funding sources.

For attracting funding from a segment of the debt market investors who have an appetite for lower tenure instruments, issuers in the infrastructure space are increasingly aligning their debt instruments to meet these investor requirements. This is achieved by issuing lower tenure bonds with bullet repayment, which can be refinanced comfortably on the back of the long life and stable cash flow-generating ability of the underlying assets. Pooling of cash flows of multiple projects through co-obligor structures are also being undertaken to provide portfolio diversification benefits to investors.

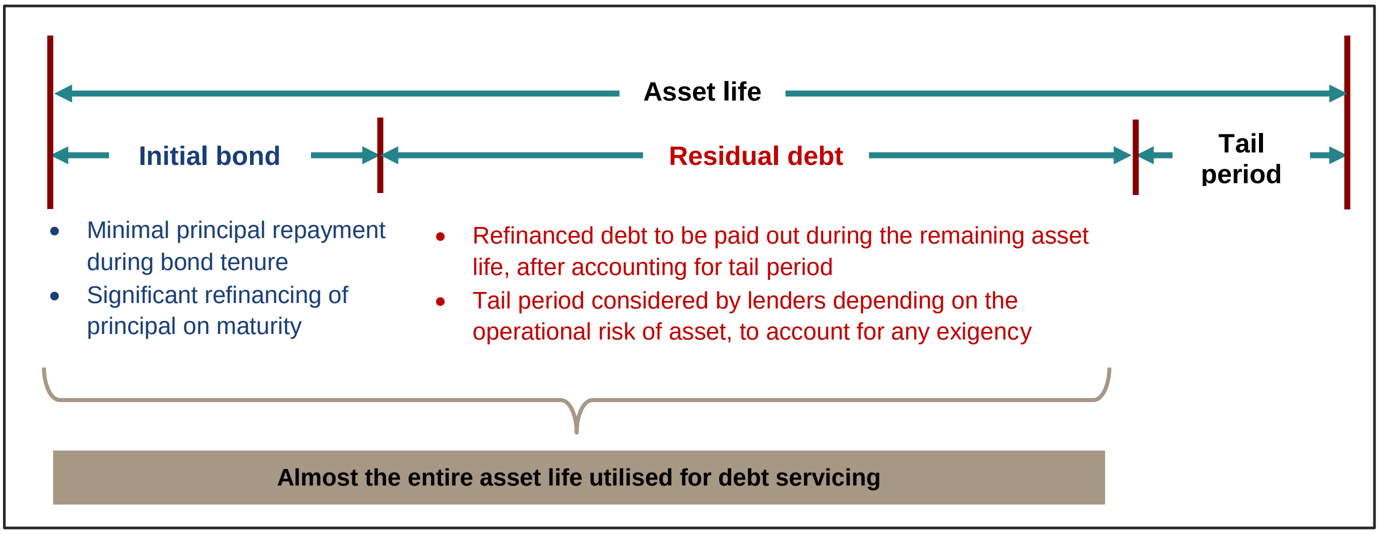
These measures can help infrastructure developers refinance their construction loans through capital market issuances, thus freeing up bank capital for funding new projects. Such mechanisms for attracting capital market investments can go a long way in ensuring adequate resources for infrastructure development in the country.

Bullet bonds enabling infrastructure projects tap capital market

Infrastructure projects have long asset lives; however, certain domestic capital market investors display appetite only for lower tenure liability structures. Hence, operational projects are adapting to the requirements of investors by raising bonds of lower tenures (3-5 years), or embedding call/put options providing exit opportunities for investors. Such bonds usually involve bullet repayment of principal, or minimal scheduled principal repayments, which expose them to refinancing risks. The long asset life and confidence on the asset quality mitigate the refinancing risks associated with these bonds.

By raising bonds with lower tenures and then refinancing the same with another debt, the project will also be able to utilise almost the entire asset life for debt repayment, excluding a tail period that lenders usually consider to account for any exigency due to cash flow volatility (see Chart 1).

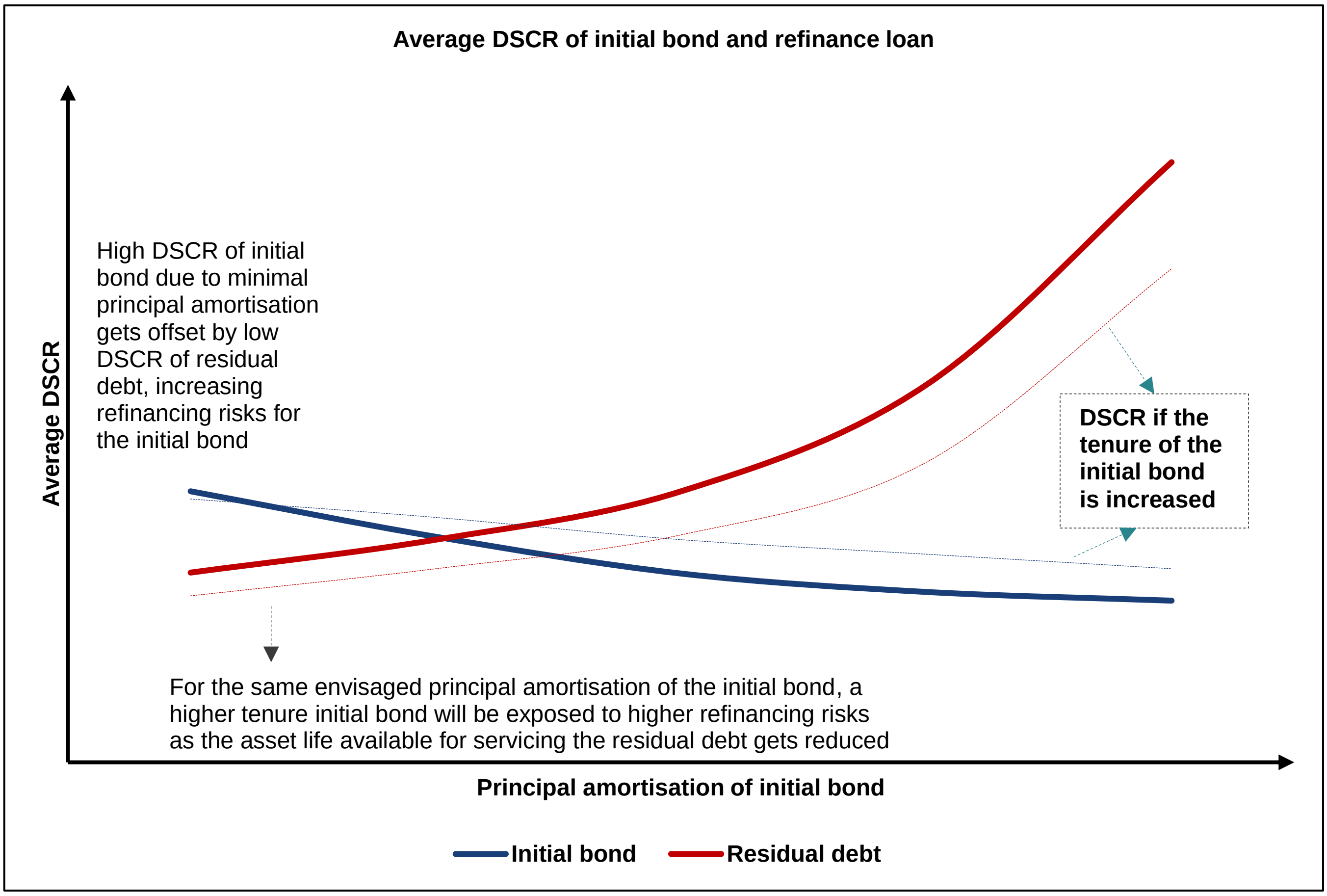
Chart 1: Bond issuance of infrastructure projects involving refinancing



Due to nil/negligible principal repayments on these bullet bonds, investors may be taking comfort in high debt service coverage ratios (DSCRs), computed after excluding the bullet redemption. However, they need to take cognizance of the refinancing risks involved. With lower scheduled principal repayments during the tenure of the initial bond, the DSCR of the initial bond increases. However, as higher proportion of principal repayments get pushed to the residual debt, the DSCR of the debt raised at the point of refinance decreases, exposing the initial bond to higher refinancing risks. These risks also increase with higher tenure of the bullet bond as the bond consumes a greater share of the asset life, thereby reducing the cash flows available to service the residual debt (see Chart 2).

The refinancing risks essentially hinge on the quality of the asset and its ability to service the to-be-refinanced debt. Provision for certain minimum scheduled principal payments during the initial bond tenure, or presence of cash trap mechanisms may mitigate these refinancing risks. The ability to refinance will also depend on the sponsor quality. Hence, investors may also consider the credit risk profile of the sponsor, and the ability of the project to generate stable returns so that the sponsor interest in the project does not diminish over the tenure of the bond.

Chart 2: Refinancing risks increase with lower principal amortisation and higher tenure of initial bond



CRISIL's approach for rating lower tenure bonds of infrastructure projects

CRISIL's rating on the initial lower tenure bond factors in the refinancing risks that the bond is exposed to. CRISIL conducts a detailed cash flow assessment of the infrastructure project, and the final rating of the bond is typically based on the following factors:

- **Credit risk profile of initial bond** based on, among other considerations, DSCR of initial bond after factoring the scheduled interest and principal payments (excluding the large amount expected to be refinanced at redemption) during the bond tenure, and the nature of the asset.

- **Credit risk profile of residual debt,** which indicates the refinancing risks
  - While estimating the DSCR of the residual debt, a tail period specific to the asset class is considered for the residual debt to account for any exigency that may arise due to cash flow volatility. The quantum of debt to be refinanced is based on the scheduled principal repayments during the tenure of the initial bond, and any cash trap mechanisms, if present. CRISIL considers the typical amortising debt maturities offered by the banking system or capital markets for such assets as part of this analysis.

- **Credit risk profile of project,** indicative of its overall credit quality through the tenure of the initial bond and the residual debt (assuming the project is funded by debt that utilises the entire asset life, without being split into an initial bond and residual debt).

Please refer Box 1 for an illustration on a CRISIL-rated capital market transaction of an infrastructure company, involving refinancing risks.

Box 1: Illustration – Bhopal Dhule Transmission Company Ltd, rated 'CRISIL AAA/Stable' [1]

Bhopal Dhule Transmission Company Ltd (BDTCL) is a wholly owned step-down subsidiary of India Grid Trust. Its transmission project involves the establishment of 765-kilovolt (kV) single-circuit lines in the Vadodara-Dhule-Aurangabad (Gujarat-Maharashtra) belt and the Indore-Bhopal-Jabalpur (Madhya Pradesh) belt. The project involves a total line length of about 975 kilometres and construction of two sub-stations at Bhopal and Dhule. This project has been awarded on a build-own-operate-and-maintain basis and was commissioned in June 2015.

BDTCL raised bonds of Rs 735 crore in May 2017, with Rs 656 crore to be redeemed in April 2022. The details of the bonds raised are as follows:

ISIN	Date of allotment	Coupon rate (%)	Maturity date	Issue size (Rs crore)
INE774N07012	30-May-17	7.85%	30-Jun-18	12
INE774N07020	30-May-17	7.85%	30-Sep-18	12
INE774N07038	30-May-17	7.85%	31-Dec-18	12
INE774N07046	30-May-17	7.85%	31-Mar-19	12
INE774N07053	30-May-17	7.85%	31-Mar-20	5
INE774N07061	30-May-17	7.85%	31-Mar-21	11
INE774N07079	30-May-17	7.85%	31-Dec-21	15
INE774N07087	30-May-17	7.85%	04-Apr-22	656

Thus, BDTCL is exposed to refinancing risks in April 2022. However, these risks have been assessed to be moderate, considering that the company has a 35-year concession period extending way beyond the repayment tenure, which will enable it to comfortably refinance the bullet repayment.

Co-obligor structures lending portfolio diversification benefits

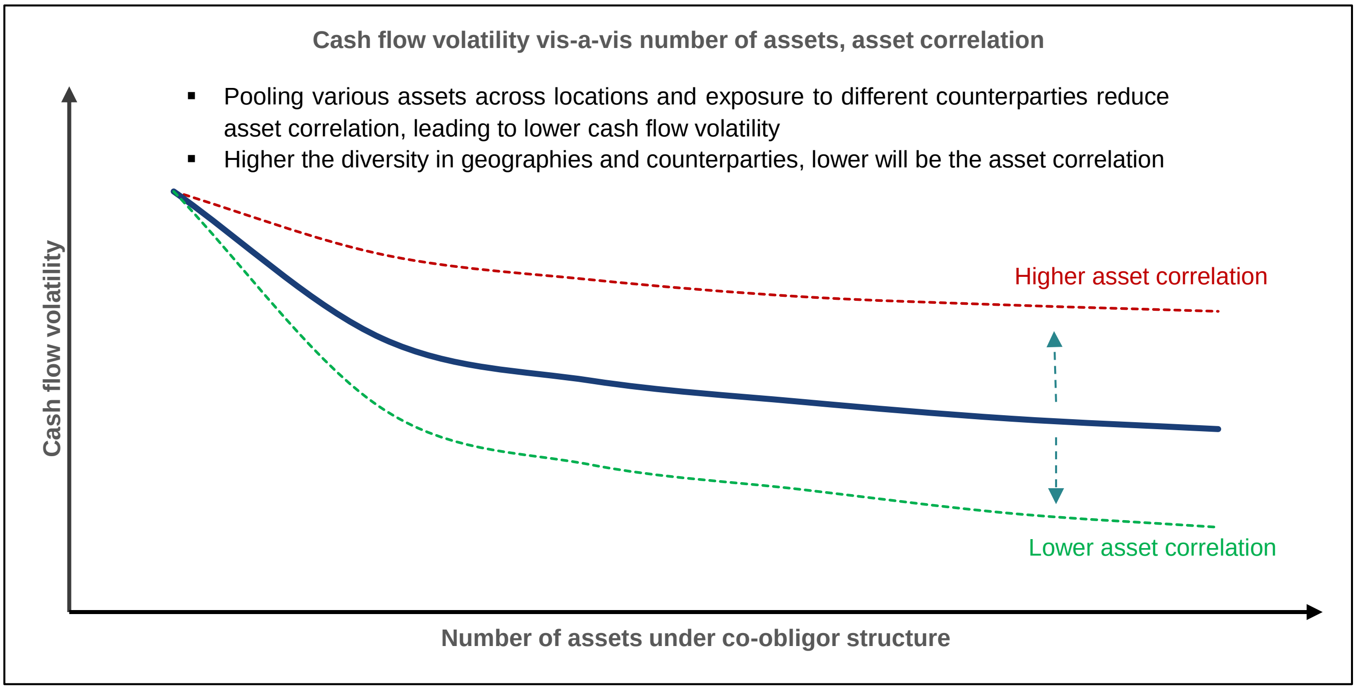
Co-obligor structures are also gaining prominence in the infrastructure space, wherein multiple special-purpose vehicles (SPVs) of a sponsor act as co-obligors for the collective debt of all SPVs. Such structures enable sponsors to form pools of select SPVs tailor-made to fit the risk appetites of different investors, thus enhancing the bargaining power of sponsors through better scale and portfolio diversification across multiple geographies and counterparties.

Co-obligors are typically governed by a common loan agreement, and cash flows from individual co-obligors are made available for servicing their collective debt obligations. Hence, the credit strength of each co-obligor is linked to their combined credit strength, and may additionally benefit from portfolio diversification.

Entities within a co-obligor group typically operate in different geographies, and may be exposed to many counterparties. This diversity helps reduce the volatility in cash flows of the co-obligor group, and can provide a structural credit uplift to the ratings of co-obligors. Investors can gain more confidence in the cash flows of infrastructure projects through such portfolio diversification (see Chart 3).

[1] As per rating rationale published on May 10, 2018

Chart 3: Portfolio diversification benefits through co-obligor structures

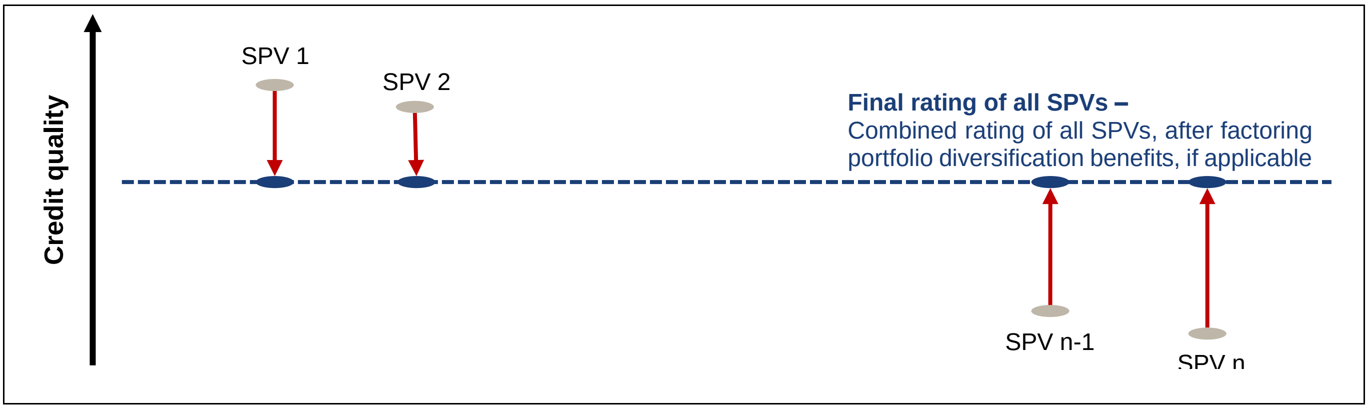


CRISIL's approach for rating co-obligor structures

The credit risk profiles of the entities under a co-obligor structure are driven by their collective performance, as the cash flows from individual entities are made available for repayment of their entire collective debt obligations. Hence, the ratings of individual entities are linked to the combined rating of all entities.

The presence of multiple co-obligors also reduces cash flow volatility due to geographical diversification and exposure to multiple counterparties. Hence, CRISIL factors in potential portfolio diversification benefits, depending on the number of assets being pooled under the co-obligor structure, diversity in geographies and counterparties, and nature of the underlying assets (see Chart 4).

Chart 4: CRISIL's rating approach for co-obligor structures



Please refer Box 2 for an illustration on CRISIL-rated infrastructure SPVs governed by a co-obligor structure:

Box 2: Illustration – Toll road SPVs of Macquarie Asia Infrastructure Fund 2, rated 'CRISIL AA-(SO)/Stable' [2]

CRISIL has rated nine toll road SPVs of Macquarie Asia Infrastructure Fund 2, which are part of the first toll-operate-transfer package awarded by the National Highways Authority of India in March 2018.

<table>
<tr><th>Sr. No.</th><th>SPV</th><th>Rated bank facilities (Rs crore)</th><th>Road length (km)</th><th>NH</th><th>State</th></tr>
<tr><td>1</td><td>Icchapuram Tollway Pvt Ltd</td><td>521.6</td><td>96.7</td><td rowspan="6">NH-5</td><td rowspan="5">Andhra Pradesh (AP)</td></tr>
<tr><td>2</td><td>Ankapalli Tollway Pvt Ltd</td><td>1353.6</td><td>88.5</td></tr>
<tr><td>3</td><td>Siddhantham Tollway Pvt Ltd</td><td>161.0</td><td>72.0</td></tr>
<tr><td>4</td><td>Diwancheruvu Tollway Pvt Ltd</td><td>960.0</td><td>71.0</td></tr>
<tr><td>5</td><td>Diwantham Tollway Pvt Ltd</td><td>400.0</td><td>49.0</td></tr>
<tr><td>6</td><td>Puintola Tollway Pvt Ltd</td><td>396.7</td><td>64.4</td><td>AP, Odisha</td></tr>
<tr><td>7</td><td>Bamanbore Tollway Pvt Ltd</td><td>321.7</td><td>71.9</td><td rowspan="2">NH-8A</td><td rowspan="3">Gujarat</td></tr>
<tr><td>8</td><td>Garamore Tollway Pvt Ltd</td><td>860.0</td><td>51.5</td></tr>
<tr><td>9</td><td>Porbandar Jetpur Tollway Pvt Ltd</td><td>25.4</td><td>115.6</td><td>NH-8B</td></tr>
</table>

Around 70% of the revenue of the SPVs is from six stretches in Andhra Pradesh, which are part of National Highway (NH) 5 of the Golden Quadrilateral connecting Kolkata and Chennai and have high upside potential for traffic, given the presence of ports, industrial clusters, and consumption centres in their periphery. The project stretches in Gujarat provide connectivity to the Kandla, Mundra, and Porbandar ports, and to large industrial districts such as Morbi and Rajkot.

The SPVs act as co-obligors for each other. Surplus cash flow after debt servicing in any SPV is made available to fund shortfall in others. The presence of the co-obligor structure supports the consolidated DSCR of the group. CRISIL has combined the business and financial risk profiles of all the nine SPVs, and equated the rating of the individual SPVs to the group.

The way forward

A combination of lower tenure bonds and co-obligor structures can potentially channel more capital market funding to the infrastructure sector. While lower tenures may give rise to refinancing risks, the asset quality (life of the asset and stability of the cash flows) will need to be assessed to evaluate refinancing ability. Investors can benefit from the portfolio diversification provided by co-obligor structures. Infrastructure development is an imperative for the robust growth of the Indian economy, and increasing acceptance of such market innovations can help channelise capital market investments to finance the country's infrastructure needs.

[2] As per rating rationales published on August 27, 2018

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