Rating Indian BOT-Annuity Road Project Bonds

Special Report

Overview

In this report, India Ratings explains the key considerations it adopts in rating Indian annuity road project bonds, the first infrastructure project bonds to be seen in the country. This analysis is timely given India's strong economic growth and growing interest to refinance original construction bank loans with bonds as more projects become operational.

While the annuity bond ratings are linked to the rating of the National Highways Authority of India (the NHAI, 'AAA(ind)'), the commonly held assumption that its rating is the only relevant credit consideration fails to recognise the importance of private counterparties to these transactions, especially for performance-related payments being granted by the NHAI.

India Ratingswill, however, analyse a number of more nuanced credit considerations in connection with counterparty and contractual relationships when rating Indian annuity road project bonds. These considerations will apply equally to state government concessions where the linkage with the credit quality of the concession grantor will be the limiting factor. Projects that are in the construction phase will be rated much lower due to the substantial degree of completion risk.

Annuity Road Projects in Context

Several projects put out to tender by the NHAI to the private sector under its BOT-annuity model have completed construction and are operational. According to data published by the NHAI, 23 projects are being constructed and 18 are operational now. Once the projects become operational, the NHAI, under a concession agreement, makes fixed semi-annual instalment payments to the concessionaire. These are used to pay the operation and maintenance (O&M), major maintenance and debt service costs of the project, as well as provide for a return on equity. Construction is usually financed though domestic commercial bank loans on a non-recourse basis and through sponsor equity.

As more projects become operational, interest grows in refinancing the original construction bank loans with bonds. In fact, annuity road project bonds are India's first infrastructure project bonds. The original bank loans are usually for nine- to 15-year tenors and carry interest reset provisions at one- to three-year intervals. Projects that were initially funded at around 8% interest saw a sharp spike to between 11% and 13% interest during the financial crisis in late CY08.

Many annuity project concessionaires (special-purpose vehicles or SPVs), therefore, want to refinance the bank loans with bond issuances that will offer fixed (and hopefully lower) interest rates, and tenors that better match the concession period. These terms and conditions better allow the projects to advance more predictable equity distributions over the life of the concession, by eliminating interest-rate volatility.

India Ratings expects that operational Indian annuity road project bond ratings will fall within a range of between 'AA-(ind)' and 'AAA(ind)'. A commonly held assumption is that since the NHAI is the governmental counterparty to these transactions, its rating is the only relevant credit consideration.

Related Research

Applicable Criteria

- Rating Criteria for Infrastructure and Project Finance
- Rating Criteria for Availability-Based Infrastructure Projects

Projects that are under construction would generally be rated much lower — in the 'BBB-(ind)' to 'A-(ind)' range — due to the many factors influencing completion risk[1], including time delays and potential cost overruns.

Projects that have state government-owned entities as the concession grantor will be constrained by their respective ratings, ie lower than 'AAA(ind)'.

The level of the rating is also influenced by the nature of the sponsor's business relationship with the NHAI, the sponsor's and operator's experience in performing under similar road concession projects, their credit quality, and the presence or absence of credit enhancement provisions within the concession agreement and financing document. India Ratings believes that all of these considerations are important, and its ratings of annuity project loans and bonds will consider the granularity of the working relationship and contractual provisions between the public and private counterparties, as well as their credit quality. Thus, while the projects may be operational and annuity payments are flowing as scheduled, not all of the annuity project bonds will be rated at the level of the concession grantor.

Key Rating Considerations for Indian Annuity Road Bonds

The applicable criteria for rating Indian annuity road projects is entitled "*Rating Criteria for Availability-Based Infrastructure Projects*", dated 29 March 2010. This criteria report applies to infrastructure projects whose revenue stream is determined primarily by the extent to which the project is available for use to the required standard and at the required times. The key credit considerations for Indian annuity road project bonds are as follows.

- The rating on the annuity road project bonds will be linked to the credit quality of the NHAI (or the entity that is undertaking to make annuity payments under a concession), as the public counterparty (currently rated 'AAA(ind)' with a Stable Outlook by Fitch). While the rating is linked to that of the NHAI, this is not the only credit consideration. That is to say, the rating is not automatically 'AAA(ind)', or the then current rating of the NHAI.
- The projects in these annuity road bond transactions are expected to be fully operational, and should already be receiving annuity payments from the NHAI under the concession agreement. The history of how well these payments flow in a full and timely manner (revenue risk) is an important credit consideration.
- The experience of the private sector sponsor and operator with this and other NHAI road projects, and the credit quality of these private sector counterparties are also important rating considerations. The India Ratings debt rating of the sponsor or operator company is important to understanding its financial ability to honour contractual payment obligations or guarantees, or to inject additional equity, but it is not an appropriate proxy to judge its experience in building, operating and maintaining these annuity road projects under a concession agreement with the NHAI (operator risk). The capability and experience of these contractors to maintain lane availability (ie ensure that the road is available for uninterrupted use) and perform maintenance as required by these contracts without incurring performance-related penalties or inducing a termination event are important credit considerations.
- The margins of protection provided by these annuity cash flows (financial adequacy risk) may differ by contract. Key factors include the level of debt gearing, debt structure relative to the cash flows, estimates for operating, maintenance and capital expenditure, as well as the propensity for performance-related deductions under the terms of the concession agreement. Since the annuity payments come from a highly rated public sector counterparty, debt service coverage will be lean by definition, and will probably range from 1.1x to 1.3x.
- The presence of structural enhancement provisions within the concession agreement and bond trust deed/loan agreements can be a positive credit consideration. In some cases, low risk or moderate risk factors can be mitigated through such structural enhancements, such as through internal or external liquidity.

[1] For a more complete analysis of factors underlying completion risk in Indian infrastructure projects, please refer to Fitch's reports, titled "Infrastructure Finance in India: Lessons from the Front Line" dated 25 November 2008 and "Indian Infrastructure Outlook for 2009 – An Eventful Journey Ahead" dated 7 April 2009

- Based upon the confluence of factors described above, India Ratings expects that Indian annuity project bond ratings with the NHAI as the concession grantor will range between 'AA-(ind)' and 'AAA(ind)'. An annuity bond transaction rated 'AAA(ind)' is likely to have an experienced and creditworthy sponsor and operator, debt service coverage at 1.1x or greater, a high degree of certainty with respect to costs, firm contractual arrangements and structural enhancements as discussed in this report.

Public Counterparty Risk: NHAI and Annuity Payments

The NHAI is the governmental counterparty in most of these annuity project concessions. As such, the full and timely payment by the NHAI of its annuity payments, so that the concessionaire can make full and timely payment on its debt service is considered a revenue risk, even though the probability of ultimate payment is very strong. India Ratings rates NHAI based on its ability and willingness to meet its own unsecured debt obligations.

Nevertheless, since these concessions represent contractual relationships between public and private sector counterparties, India Ratings must also consider the NHAI's payment history under the contracts. For projects that have been receiving annuity payments for a number of years, India Ratings notes regular payments are made on the scheduled dates but, in some cases, periods of irregular payments range from several days to several months from the contractual payment dates. As with other government agencies and corporations in India, the regimen of full and timely contractual payments is sometimes treated in a "more or less" manner.

Risk Mitigant

To mitigate revenue risk, the annuity project concessions require that the NHAI post a letter of credit (LoC) from a scheduled commercial bank for an amount equivalent to one semi-annual annuity payment. A highly rated bank counterparty with unconditional drawdown provisions is most beneficial to the stability of cash flows. While the LoC is considered as a concession-based credit enhancement, it is more important from a credit standpoint that the annuity payments have a proven track record of timely receipt.

Public Sector Material Event Risks

In addition to the revenue risk described above, the model concession agreement specifies a number of areas where actions by the NHAI or another level of government could result in material event risk. The occurrence of one of these events (listed below), would result in a review of the rating.

- A change in law affects the operations of the annuity road project. While the NHAI is required under the concession agreement to compensate the concessionaire for a change in law that has a financial impact on operations or capital expenditures above pre-fixed limits, these effects could be subject to interpretation and negotiation.
- At any time after the commercial operations date (COD), the NHAI may put out to bid a road capacity augmentation project. The concessionaire may submit a bid for a capacity augmentation project, but is also entitled to a termination payment if it chooses not to bid, or if its bid does not match the preferred bid. The termination payment is calculated based upon the discounted value of future net cash flow (a negotiable point at the time of granting the concession that may not result in full debt recovery). India Ratings will review these provisions on a case-by-case basis. In this circumstance, the potential for a road capacity augmentation project creates a material event risk that could lead to a termination event where full debt recovery is not assured. If this risk is not otherwise mitigated through reserves or some form of external credit enhancement, then it is highly unlikely that India Ratings will be able to assign one of the highest India national scale rating categories to this transaction.
- An NHAI event of default could result in a termination of the concession agreement.
- There may be a default under a state support agreement that includes provisions for project site access, certain permit approvals or the construction of adjoining facilities, etc. Sometimes these agreements stipulate that a failure by a state to meet a financial obligation, after the NHAI determines that it is due and payable to the concessionaire, may

be advanced by the NHAI. Still, this is not a complete substitution of responsibility, since many forms of state support do not require state budgetary outlays.

The National Highways Authority of India (NHAI)

India Ratings maintains a 'AAA(ind)' rating on NHAI's INR80bn long-term debt programme. The Outlook is Stable. The NHAI is an autonomous body of the government of India (GoI) that is constituted by the NHAI Act of 1988 to develop, maintain and manage the national highways system that was entrusted to it. A key ratings factor is the significant linkages between the NHAI and the GoI, as evidenced by the substantial governmental support received by the NHAI in the form of allocation of fuel cess (a statutory levy on petrol and diesel) appropriations and grants. Besides its statutory authority and budgetary support, strong operational and managerial linkages between the NHAI and the GoI also exist (for more details, see the rating action commentary entitled "*India Ratings Affirms National Highways Authority of India at 'AAA(ind)*", dated 4 May 2012).

The NHAI has been assigned a crucial role by the GoI to develop and implement the National Highways Development Programme (NHDP). Although one of the programme's components, the Golden Quadrilateral (GQ), is 98.6% completed with contracts for the remaining portion already awarded, the progress of other components in awarding contracts and completion of construction remains slow. Up to the end of February 2010, the NHAI was able to complete 75.4% of its FY10 target, which is better than the completion rate achieved during FY07-FY09 (51.4%).

However, failure to complete projects on time is still a cause for concern. Highway projects under the programme are funded, built and operated by the NHAI, but also through concession agreements with private sector sponsors (public-private partnerships), which include both toll road and annuity road projects. Annuity project concessions usually have a term of 17.5 years.

Private Counterparty Risk: Sponsors and Operators

The sponsor's and operator's relationship and experience with the NHAI are key credit considerations. Quiet enjoyment of annuity payments over the life of the concession, without performance deductions or an event of termination, is critical not only to the mitigation of default risk but also for the ultimate recovery of debt outstanding. The NHAI pays a fixed annuity in semi-annual instalments over the life of the concession agreement provided that the private sector concessionaire ensures lane availability and satisfactorily performs maintenance. This includes both routine ongoing maintenance and major maintenance at scheduled intervals (usually five years).

The NHAI is entitled under the concession to seek reimbursement for certain O&M works that it performs in lieu of the concessionaire, to make a deduction from the annuity payment on account of performance issues with either lane availability or maintenance, or to terminate the concession for a material breach by the concessionaire of the O&M requirements (operator risk). While the concessionaire enters into the concession agreement with the NHAI, it usually contracts out project operations to an operator, and sometimes to two counterparties — one for regular O&M and one for periodic major maintenance.

Ownership and Sponsors

Since the operating projects would already be receiving annuity payments from the NHAI, construction and completion risk is not a factor for annuity road project bonds. However, some projects may receive a provisional COD certificate with the proviso that a small stretch of the road needs to be completed as and when the NHAI can make available the land/right of way (RoW). In such situations, it also becomes important to understand the extent of construction budget that has been separately earmarked to fulfil this stipulation without the project having to dip into operational cash flows.

The depth of the sponsor's working relationship with the NHAI is an important credit consideration for Indian annuity road projects. Some of the more experienced sponsors manage up to five annuity road projects through separate SPVs. New project sponsors, having reached a measure of success in other industries, now want to develop annuity-based road projects. Some of these may have never worked with the NHAI on annuity or toll road projects, and have never been through the process of constructing or operating a segment of national highway. It is possible that two annuity project bonds, with the same contractual structure and debt service coverage, but one with a sponsor who had successfully worked on many NHAI concessions, and the other with a sponsor who had never worked on an NHAI concession, might not have the same ratings.

The India Ratings rating of the sponsor is also important to the extent that it has outstanding contingent or contractual financial commitments with the concessionaire. If the sponsor is not a Fitch-rated entity, the agency will try to form an internal opinion of its credit quality. A strong sponsor credit profile does not automatically mitigate O&M risk on an annuity road project if it has no prior experience on such roadway projects. Conversely, a weaker corporate credit profile is not necessarily a rating constraint for an annuity road project transaction if the sponsor is very experienced in these projects.

Operator

The O&M contract is usually entrusted by the project SPV to a sponsor group company through a separate contract that mirrors contractual obligations of the project SPV in the concession. This contract covers both routine O&M expenses, and major maintenance capex. It is structured as a fixed price contract for the life of the concession, although some concessionaires split routine O&M and major maintenance into two separate contracts.

The expertise, operating track record, group credentials, size and sector presence of an O&M operator are important considerations that can influence its ability to perform under the concession agreement's contractual obligations. The O&M contractor's operational and financial strength are important credit considerations since, in some cases, the O&M contractor undertakes to compensate the concessionaire, ideally within a specified timeframe (say five to 15 days), should the NHAI make a deduction from the annuity on account of performance issues.

As with project sponsors, a strong operator credit profile does not mitigate O&M risk. Conversely, a weaker corporate credit profile is not necessarily a rating constraint for the transaction, especially where the operator risk is credit enhanced by a revolving bank facility of sufficient size — usually equivalent to a specified percentage of the aggregate routine maintenance expense or say, the first major maintenance expense estimate — and from a bank rated 'AA-(ind)' or higher.

Private Sector Performance-Related Material Events

The concession agreement contains a number of clauses that pertain to the definition and penalties for inadequate performance by the concessionaire. For a highly rated annuity bond transaction, these performance-related events should be considered by the independent engineer to be very remote. The occurrence of the following performance-related events would result in a review of the rating.

- If the project is completed late, the first annuity payment post COD carries the risk of a performance event deduction.
- If the concessionaire fails to meet an O&M requirement, and the NHAI decides to perform it, NHAI may then require the concessionaire to reimburse it within seven days of sending a claim to it.
- When lanes are unavailable, there is a proportionate deduction (calculated based on lane kilometre hours of unavailability) from the succeeding annuity payment.

- If the independent engineer determines that there is a material breach of O&M requirements (includes failure or delay to carry out scheduled maintenance or to meet safety requirements, substandard ride quality of the roadway, non-availability in excess of 1,000 lane kilometre hours, or the repeated occurrence of these events), the NHAI has the right to terminate the concession agreement.
- Failure to complete capital expenditure requirements in advance of a project hand-back to the NHAI could result in the retention of annuity payments. Availability of a cash reserve/bank guarantee equivalent to the amount that is withheld by the NHAI from the last few annuity pay-outs as "security" to ensure satisfactory hand-back of the road would be an important requirement to minimise the impact on cash flows and coverage towards the end of the concession.
- Other post-COD concessionaire events of default that could result in a termination event include a default under the financing document, voluntary or involuntary bankruptcy, project repudiation or abandonment, and the delay of any other payment falling due that is not cured within 90 days. *Appendix 2* lists the termination payments under different scenarios. A bank guarantee covering the difference between termination payment receivables and the bond amount outstanding would help mitigate this risk.

Sponsor Turnover

India Ratingswill also monitor for any changes in the concession project's equity ownership. The concession agreement requires that the sponsor has no less than 51% paid up equity for three years after COD, and no less than 26% during the balance of the concession's operating period. Since an important credit consideration is the relationship and experience of the sponsor with NHAI projects, it is possible that changes in the equity ownership could result in a review of the rating.

Operator Substitution

The annuity road project concessions include a substitution agreement between the concessionaire, the NHAI and the banks. This agreement specifies the process by which the lenders can substitute the concessionaire. Upon a concessionaire event of default, the lenders must deliver a substitution notice to the NHAI, and then procure a substitute concessionaire by bid or auction within 120 days of delivery of that notice. The proposed substitute concessionaire is presented to the NHAI, which has 30 days to convey its acceptance.

The substitution would be for the remaining concession period, and would allow the assumption of the concessionaire's obligations under the financing document. As prior consent from the NHAI is essential for a bond issuance that seeks to refinance the initial bank debt, either by an explicit amendment to the substitution agreement or an inference, the bond trustees would step into the lenders' shoes as far as the substitution rights are concerned.

Financial Analysis – Debt Structure

Counterparty risks aside (especially performance-related annuity deductions), the flexibility of annuity payments to meet fluctuations in O&M costs, major maintenance costs and debt service payments on an annuity road project bond is limited. As an annuity payment, debt service coverage would be lean by definition; within an expected range of 1.1x to 1.3x on a net revenue basis (after O&M, major maintenance reserve contributions and taxes).

The annuity road project bond refinances the outstanding bank loan and eliminates interest-rate risk by providing a fixed interest rate for the term of the bonds. It usually takes the form of a "secured", taxable, redeemable, non-convertible debenture, and NHAI consent is a prerequisite for such bond issuance. The project SPV issues the bond. There is no separate debt issuer, as in a securitisation.

Principal amortisation is usually sculpted to mirror net cash flows although a short concession tail period (some structures do not envisage a tail) after bond amortisation is a positive credit consideration, given the moderate risk for cost overruns and the limited base-case debt service coverage projection. Limited debt service coverage also means that re-gearing exercises are next to impossible, although the risk is there that some concessionaires may try to inflate O&M

costs as a means to indirectly boost equity returns. However, where bond tenors exceed those of the bank loans to be refinanced, headroom exists for re-gearing. A trustee-controlled escrow account is maintained with a bank rated at least 'AA-(ind)'. The escrow account traps annuity receipts and stipulates the waterfall mechanism to appropriate payments, including for debt service.

At the time of the concession, the prospective concessionaire and the NHAI agree on a stream of annuity payments that provide adequate coverage of projected O&M expenses, taxes, major maintenance costs and debt service, plus a small residual amount (financial margin). The annuity payments are fixed and generally do not carry any provision for inflation adjustment. O&M contracts are usually structured as fixed-price agreements with a built-in annual escalation of between 4% and 5%, which, in Fitch's opinion, is very low, given India's economic growth and historical rates of inflation.

To the extent that any unexpected expenditures are not covered by excess cash flow, reserves, an operator LoC, or compensation payments from the NHAI, there is an increased risk of default. Where warranted, the agency moderates management's base case to arrive at a Fitch-adjusted rating case. Two important variables that may usually require revision are the annual inflation percentage assumed in the O&M contract for routine maintenance as well as the sizing of the major maintenance expenditure. For the latter, while India Ratings relies on the independent engineer's estimate, it will also verify that the amount compares well with industry benchmarks and that the assumption on cost escalation is a realistic one.

India Ratings may also perform stress tests to evaluate the effect of reduced lane availability on receipt of full annuity payments and also how any extraordinary increase in maintenance costs (due to unanticipated spikes in input costs, for example) can affect cash flows. Even if O&M contracts are structured as fixed-price agreements, in periods of exceptional rises in costs, it may not be unusual for the contract to be renegotiated or for a new operator to be brought in at the then-prevailing "substantially higher" cost levels. Computation of "breakeven" levels can help the agency understand the extent of downward cushion available, although this is, by definition, likely to be low.

Structural Enhancements for Annuity Project Revenue Bonds

Structural enhancements can mitigate timeliness of payment issues and to a certain extent can provide additional liquidity to offset unexpected expenditures or annuity payment deductions. Structural enhancement is usually not designed to bridge nor can it predict a gap that might result between a discounted termination payment and the amount of debt outstanding. Nevertheless, credit enhancement if properly designed can mitigate default risk, while the substitution agreement can mitigate termination risk. Together, these provisions are designed to keep the concession alive and to maximise the ability of annuity payments to retire debt. The following forms of structural enhancement are viewed as positive rating considerations.

Advance Segregation

Advance segregation between the scheduled dates of NHAI payments and legal bond service payment dates can insulate project cash flows from the potential delays (largely administrative) in receipt of annuities. A 20- to 30-day advance segregation period is typical for these transactions.

Debt Service Reserve Fund

An upfront debt service reserve account (DSRA) provides some cushion against potential cash-flow mismatches, whether from uncovered payment delays or performance deductions. The DSRA may be either cash funded or take the form of a bank guarantee. The amount of the DSRA is usually commensurate with the debt service coverage ratio (DSCR). Therefore, if the DSCR is higher, then a six-month DSRA can provide adequate credit enhancement. If the DSCR is lower, necessary credit enhancement may only be achieved with a 12-month DSRA. If the DSRA is drawn down, it has to be replenished via the waterfall post debt service payments. Until it is replenished, there can be no dividend distributions.

Major Maintenance Reserve

The major maintenance reserve is also held by the trustee in interest-bearing deposits in bank(s) rated at least 'AA-(ind)'. It is built up through regular contributions from operating cash flows, and then drawn down for scheduled capex. The graduated contributions into the major maintenance fund smooth out the cash-flow requirements for capex, and are critical at the low DSCRs expected of annuity payment streams.

Equity Lock-Up

Equity lock-up triggers are a positive credit consideration, since they trap cash during periods of cash-flow stress in order to pre-pay debt. The equity lock-up trigger for these transactions will be low (such as a DSCR of 1.1x), since coverage is necessarily low.

Additional Debt

A positive credit consideration is a bond document that only allows for bond issuance for refinancing purposes, and then only to save on interest costs. A negative credit consideration is a bond document that allows for re-gearing over the life of the non-convertible debentures.

Appendix 1

Documentation Required for Annuity Project Debt Rating

- information memorandum;
- financial model;
- consent for the non-convertible debenture (NCD) issue from the NHAI;
- LoC from the NHAI;
- O&M contract(s) — both routine and periodic (major maintenance);
- performance bank guarantee(s) in terms of the O&M contract(s);
- financial and operating information on the O&M contractor(s);
- financial and operating information on the project sponsor(s);
- debenture subscription agreement;
- escrow agreement and trust and retention agreement;
- trustee agreement/trust deed;
- state support agreement;
- concession agreement; and
- draft legal opinion, concerning the legality and enforceability of the debt transaction.

Appendix 2

Figure 1

Review of Annuity Concession Termination Events and Payments

Termination event	Termination payment
After COD	
Due to a force-majeure (FM) event that is a non-political event	No termination payment. Concessionaire to receive insurance payments
Due to an FM event, which is a political event	Discounted value of future net cash flows
Due to an FM event, which is an indirect political event	75% of discounted value of future net cash flows
Concessionaire event of default (EOD) post-COD	70% of the book value
NHAI EOD post-COD	Discounted value of future net cash flows
Where the NHAI proposes capacity augmentation and because the concessionaire (i) chooses not to submit its proposal for capacity augmentation, or (ii) is not the preferred bidder and also fails or declines to match the preferred offer, the NHAI terminates the concession	Discounted value of future net cash flows

Source: India Ratings

Appendix 3

Figure 2

Typical Risk Factor Attributes for Indian Annuity Road Projects

Risk factor	Expected range	Comments
Ownership and sponsors (▲)	Stronger/mid-range	India Ratings expects that most project SPVs will have sponsors who are very experienced in constructing Indian highways and other types of infrastructure projects. The stronger sponsors will be among India's leading construction companies, and will have considerable experience in working on NHAI annuity and toll road projects. Midrange sponsors will have experience on NHAI government-funded highway construction projects but not necessarily with annuity or toll-based public-private partnerships (PPPs).
Jurisdiction and other legal risk factors	Mid-range	The NHAI's PPP framework for annuity road projects is India's best developed and longest running PPP framework, with many projects either under construction or under operation. Highway development is a long-term and high priority commitment of the Indian government, and the NHAI has proven a capable public sector counterparty under most aspects of contractual responsiveness.
Operator (▲)	Mid-range/stronger	Stronger project operators are likely to be wholly owned subsidiaries of the stronger sponsors (see sponsor attributes above), with outstanding credentials to operate and maintain highway projects. Nevertheless, given the volume of approved road PPPs (annuity and toll based), India Ratings has some concern about capacity constraints. New entrants with little or no experience working on NHAI projects pose greater risk, as do projects with higher maintenance features, such as tunnels, bridges or retaining walls.
Information quality	Mid-range	While legal documentation is strong and PPP contractual arrangements have many precedents, financial forecasting and use of independent engineers post-COD remain underdeveloped in India. Stress tests are often necessary as a test to the reasonableness of underlying cost assumptions.
Gross revenue (▲)	Mid-range/stronger	The propensity for annuity deductions is likely to be related to the experience of the operator. Since the DSCR is low by definition, the financial margin depends on mitigating performance events that could result in an annuity deduction. The independent engineer report should evaluate the possibility of an annuity deduction as a low probability risk.
Costs/financial adequacy (▲)	Mid-range	Since financial forecasting is underdeveloped in India, in certain respects project costs (both operating and capex) could err either way (positive or negative). As more projects get rated, India Ratingswill develop peer studies that will provide benchmarks against cost estimates. Annual provision for major maintenance contributions in advance of scheduled draw-downs is a positive. The independent engineer's report should evaluate the cost estimates and assign a low probability to the possibility of underestimated or underdeveloped operating or capex cost estimates.
Tail risk	Mid-range	Most projects have zero to six months' tail but the value of this tail depends on debt service coverage, which can be affected by annuity deductions or cost overruns, as described above. This rating consideration affects recovery to a larger extent than default risk. Not having a tail is a credit weakness.
Debt structure	Mid-range/stronger	Level annuity payments allow for the sculpting of debt amortisation in a mortgage-style structure. While continuously amortising, debt service coverage is relatively low by virtue of being an annuity project.
Structural enhancement (▲)	Mid-range/stronger	India Ratings expects to see a number of structural enhancements to the bond transaction. These include major maintenance and debt service reserve funds. Since debt service coverage is low and concession tails are limited, a six- to 12-month debt service reserve fund is a positive consideration. Other important structural enhancements can include advance segregation of annuity payments before a scheduled debt service payment, operator LoC, etc.
Termination event risk	Mid-range	Termination events are mostly related to performance, so experience of the sponsor and operator are a key and related consideration. Other termination events related to default under the financing agreement, project abandonment, and SPV voluntary or involuntary bankruptcy are standard for project finance.

Note: (▲) Indicates a key credit consideration
Source: India Ratings