Rating Methodology – Toll Road Projects

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Background

CARE Ratings Limited's (CARE Ratings) rating methodology for debt issues of toll road projects is designed to facilitate appropriate credit risk assessment, keeping in view characteristics of the Indian road sector.

Methodology

CARE Ratings examines following critical areas while rating toll road projects:

1. Revenue risk
2. Operations and Maintenance (O&M) risk
3. Financial risk
4. Project risk
5. Sponsor risk
6. Regulatory risk
7. Evaluation of Concession Agreement (CA)

Assessment of toll operate transfer (TOT) projects is also conducted similar to operational toll project.

1. Revenue risk

Revenue of toll projects is the function of traffic volume and toll rates. Viability of a toll road project critically depends on the extent and nature of benefits enjoyed by road users and their willingness to pay for it.

Demand analysis, competition and toll pricing

CARE Ratings' analysis focuses on traffic demand, potential variation of demand due to economic activity in influence area and competition from alternate routes. Independent traffic study report furnished by the project company is relied on to assess extent of linkage between toll pricing and users' willingness to pay, which impacts demand.

Track record of toll collection

CARE Ratings puts more emphasis to track record of actual toll collection of operational projects and connecting stretches. The absence of track record of toll collection for under-construction and newly built toll roads leads to challenges in estimating traffic, and thus, increasing possibilities of large variations in traffic. However, long track record of stable toll collection imparts cash flow visibility for operational projects and is a credit positive for operational toll roads. CARE Ratings, also analyses achievement of projected traffic in passenger car units (PCUs) terms and consequent toll collection based on latest available traffic study report.

Demand analysis and location of stretch

Demand analysis involves assessment of the toll road region in terms of economic strength, demographic pattern, diversity and historical vulnerability to geographical and economic shocks and trends of recovery for such period. For this, regional economic and social indicators such as level of industrialisation, and availability of facilitating infrastructure, among others are examined. A sound and growing local economy assure high level of commercial and business travel, the mainstay for revenue generation. Demand analysis is crucial as wrong estimation of demand or lower-than-anticipated economic activity in the region can adversely affect traffic and consequent viability and debt servicing capability of a project.

Traffic Study Reports

CARE Ratings' traffic demand analysis principally relies on assessment studies carried out by traffic consultants engaged by rated entities/lenders. Origin-Destination survey, number of alternate routes and their probable impact on traffic of the project stretch, assumption of traffic growth rates on base traffic due to likely developmental traffic and seasonal variations are important aspects covered in such reports. CARE Ratings further applies few simulation or stress scenarios on traffic forecasts.

Nature and composition of traffic and traffic volatility due to business cycles seasonal variations, (floods, and landslides, among others), social unrest and escalation in fuel prices are studied critically.

Traffic Mix

Analysis of traffic mix is crucial for toll projects. While commercial traffic tends to serve as a stabilising force, CARE Ratings would favourably consider a balance between commercial and private vehicle traffic. Commercial traffic is less sensitive to toll increases than private traffic since additional cost (tax-deductible) can be passed on to customers. However, commercial traffic is highly susceptible to slowdown, economic downturn, and changes in load carrying regulations (axle norms), which disproportionately impacts revenue in case of large variations due to its higher toll rates. Generally, a diverse traffic mix largely minimises impact of a decline in any one segment.

Competition

Toll road projects are exposed to traffic diversion to alternate routes and competitive facilities. Development of alternate toll-free roads can divert traffic away from a toll facility and disrupt the traffic and revenue forecasts. Covenants in the CA, which explicitly prohibit the government from setting up competing facilities up to a stipulated period will mitigate 'diversion risk' of the project to an extent.

Quality of connecting roads and induced traffic

Traffic density and construction quality of connecting roads also influence traffic plying on the project route. Project stretch with good connectivity to high traffic road and good quality connecting roads offer good prospects of origin destination traffic and vice versa.

Toll pricing

Appropriate toll pricing, which is based on user's 'willingness to pay' is crucial for the success of road projects. Typically, a toll road project would result in benefits in the form of (i) savings in vehicle operating costs (VOC), (ii) savings in time and (iii) savings in distance covered.

A CA that provides for 'automatic' revision with pre-defined formula for revision in toll rates, for example linkage to inflation index and requisite authority to the project directors to implement toll rate revisions is considered as a credit strength for the project. CARE Ratings also examines applicability of revised toll rates on the project stretch.

2. O&M Risk

O&M risk is the major risk in operational toll road projects as heavy traffic, especially of commercial vehicles results in relatively higher wear and tear on road surfaces. Inadequate maintenance on the project stretch can result in traffic diversion to other routes, penalties from authorities and withholding collected toll. Higher-than-envisaged O&M and major maintenance reduces cash-flow cushion, while impacting debt service coverage ratio (DSCR).

CARE Ratings evaluates O&M risk, considering following factors:

- Terrain, traffic mix and actual traffic against design capacity to access O&M cost and major maintenance cost. For example, O&M cost and major maintenance cost can be lower for relatively lower-traffic state highway projects and can be substantially higher for projects carrying heavy vehicles.
- Comparison of O&M expenditure and major maintenance cost of projects with industry aggregates.
- Presence of fixed-price O&M contract and credential of O&M contractor.
- Provision for major maintenance reserve and its adequacy to fund actual major maintenance expenditure.
- Number of major maintenance cycles completed and their actual cost.
- Past instances of levy of penalty for non-maintenance of road per stipulation.

3. Financial Analysis

An in-depth analysis of projected operations is undertaken to get a clear indication of the special vehicle purpose's (SPV's) ability to service debt. The analysis would include critical examination of underlying assumptions, possible stress points and extent of flexibility to tide over difficulties. A sensitivity analysis is carried out to evaluate the impact on debt servicing ability due to changes in assumptions.

The financial analysis considers the following factors:

- Financial structure and leverage measured by debt/cash flow available for debt (CFAD) servicing.
- Revenue share payable to the authority and payment schedule
- DSCR and interest coverage ratio.
- CARE Ratings also analyses concession life coverage ratio (CLCR) for the project. CLCR is calculated as net present value (NPV) of cash flow available for debt servicing in the remaining life of concession divided by current debt levels.
- Debt/toll collection in comparison to balance loan tenor.
- Debt amortisation schedule.
- Financial flexibility and tail period. Longer the tail period, better the financial flexibility.
- Since road projects generate revenue in Indian Rupees, foreign exchange debt by the project results in exchange risk.
- Adequacy of debt service reserve account (DSRA). If DSRA is created in the form of bank guarantee, renewal clauses of such bank guarantee before its expiry mitigates rollover risk. However, in absence of such clauses, rollover risk of DSRA bank guarantee generally lies with the sponsor. Stronger credit profile of the sponsor mitigates rollover risk to an extent, while a moderate to weak credit profile of sponsor increases rollover risk associated with such bank guarantee and dilutes the liquidity support feature of DSRA. Presence of DSRA or cash trap mechanism lends higher cash flow resilience to operational toll roads in case of exigencies.
- Provision of cash sweep.

- Restricted payment covenant and clauses in case actual DSCR is lower-than-threshold DSCR assumed at the time of funding.
- In case of foreign currency term loan, CARE Ratings also analysis the extent of exposure hedged.

Permitted investments

- Pending redemption of debt obligations, surplus funds would have to be appropriately invested by the SPV. CARE Ratings examines the proposed investment policies to ensure safety of such investments. Liquidity aspects of proposed investments are also considered.

4. Project Implementation Risk

Risk associated with implementation of a toll road project can be quite high, considering the long gestation period and large investments required. Project risk related to green field projects is higher compared to expansion/enhancement projects such as widening of four lane to six lane. CARE Ratings analyses following factors to estimate risks associated with project completion.

- Status of financial closure.
- Financial resourcefulness of the sponsor/SPV to fund time and cost overruns.
- Capability of the engineering, procurement and construction (EPC) contractor, based on technical and financial strengths and experience and terms of EPC contract.
- Status of land acquisition in terms of available area (3G and 3H basis) and length at the time of declaration of appointed date.
- Status of de-linking of unavailable land.
- Availability of resources in the vicinity of project area.
- Extent of structural work in total EPC cost and complexity associated with such work.
- Status of clearances mainly forest, tree cutting and rail over bridge.
- Environmental, social and political issues.
- Comparison of project progress with scheduled progress.
- Status of approval of extension of time (EOT) from National Highway Authority of India (NHAI) in case of delay in project execution and corresponding approval from lender for shifting repayments in line with EOT.
- Appointment of reputed contractors improves chances of timely implementation of the project.
- Other tools to mitigate construction risks include fixed-price contracts with suitable clauses to motivate the contractor to complete the project ahead of time; liquidated damages on delay; performance bonds; a favorable contractor payment schedule, including partial withholding or subordination of contract repayment in construction, among others.
- In project implementation, CARE Ratings would monitor progress against initial cost and time estimates to determine the effect of variations from schedule on the ability to meet debt servicing obligations.

5. Sponsor Evaluation

CARE Ratings evaluates the sponsor on its financial capability and track record in implementing and operating projects of similar nature and size. Sponsor is required to fund cost overrun, per sponsor support agreement entered with lenders. In a toll road project, the management's forecasting ability to assess traffic, operating and maintenance expenses are important to predict future cash flow adequacy for debt servicing.

6. **Regulatory Risk**

CARE Ratings has observed that ratings assigned to debt of state highways projects are exposed to regulatory risk largely in the form toll exemption of cars announced by state governments. Although, the concessioning authority is required to compensate concessionaire loss of revenue arising from such toll exemption, delay in finalisation of compensation modalities and release of funds from state government exposes projects to cash flow risk. CARE Ratings evaluates track record of release of compensation payment and its adequacy in these cases.

7. **Evaluation of CA**

The right to implement the project and to levy and collect tolls emanates from the CA. Hence, terms of CA are carefully examined, especially those relating to:

- Tenor of concession and provision of extension of concession period in case of shortfall in revenues.
- Construction support in form of pre-determined grant provided for expansion of existing infrastructure.
- Clauses for de-scoping unavailable land and issue commercial operations date (COD).
- Levy of tolls and their periodic revision.
- Target traffic computation.
- Clauses to curb project implementation delay.
- Issues relating to land acquisition.
- It is essential that the CA contains sufficient safeguards to provide disincentive to contracting parties to default.

From a credit rating perspective, force majeure and termination events are excluded from the assessment methodology.

Conclusion:

The rating outcome is ultimately an assessment of fundamentals and probabilities of change in fundamentals. CARE Ratings analyses each of these factors and their linkages to arrive at the overall assessment of credit quality of an issuer. While the methodology encompasses comprehensive technical, financial, commercial, economic and management analysis, credit rating is an overall assessment of all aspects of the issuer.

[For previous version please refer 'Rating Methodology – Toll Roads Projects' issued in October 2022**]**

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CareEdge is a knowledge-based analytical group offering services in Credit Ratings, Analytics, Consulting and Sustainability. Established in 1993, the parent company CARE Ratings Ltd (CareEdge Ratings) is India's second-largest rating agency, with a credible track record of rating companies across diverse sectors and holding leadership positions in high-growth sectors such as BFSI and Infra. The wholly-owned subsidiaries of CareEdge Ratings are (I) CARE Analytics & Advisory Private Ltd (previously known as CARE Risk Solutions Pvt Ltd), (II) CARE ESG Ratings Ltd, (previously known as CARE Advisory Research and Training Ltd) and (III) CareEdge Global IFSC Ltd. CareEdge Ratings' other international subsidiary entities include CARE Ratings (Africa) Private Ltd in Mauritius, CARE Ratings South Africa (Pty) Ltd, and CARE Ratings Nepal Ltd.