CARE Ratings
Professional Risk Opinion

Rating Methodology – Annuity-based Road Projects

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Sector overview

Road construction has predominantly been under the purview of Government agencies. The involvement of private sector in road construction has been through cash contracts or through Build-Operate-Transfer (BOT) format, viz., Annuity, Toll, and Hybrid annuity models. In case of Annuity-based road projects executed under concession agreements, the revenues are released by way of fixed quantum payouts by the Concessioning Authority on a bi-annual basis, during the operational period of the concession.

Rating Methodology

CARE Ratings has a well laid out methodology for the rating of companies belonging to the infrastructure sector. CARE's rating approach is slightly different for under implementation projects and operational projects. As per this methodology, the evaluation begins with sponsor evaluation of the infrastructure project followed by the assessment of the counterparty, business risk factors, contractual features and regulatory risks specific to the project. This is followed by an assessment of the financial and project-related risk factors as well as its viability. However, considering the size and diversity within the infrastructure segment, CARE Ratings has developed methodologies specific to various sectors. The following is a list of such additional factors, along with their analytical implications, considered by CARE Ratings while arriving at the rating of the players that operate in the road sector under BOT Annuity model.

Please refer to CARE Ratings' separate criteria published for Road projects under Hybrid Annuity revenue Model which is available on our website www.careratings.com.

Rating methodology for Project Phase Road Annuity entities:

The various risks which are assessed when the entity is under project phase are as under:

I. Sponsor's evaluation

- Demonstrated track record: The sponsor entities' established track record in the road sector is viewed positively.
- Current financial position: The sponsor's current financial position is assessed to judge its ability to achieve financial closure as well as provide need-based support for timely completion of the project.

- Ownership & Technical strength: Full ownership of the project as against joint ownership between two or more sponsors imparts superior decision making and governance and is viewed positively. Some of the sponsors may be joining solely on the basis of technical capabilities rather than financial strength. The underlying arrangement is evaluated to understand likely operational and financial implications on the project.

- Track record of honoring operational and financial commitments: The sponsor's willingness to honor operational and financial commitments is judged by demonstrated track record in the same or similar other projects set up by it, wherever applicable.
- Corporate guarantee of sponsor, wherever meaningful. In such cases, CARE's criteria for Credit Enhanced Debt will also be applicable which is available on CARE's website.

Despite non-recourse nature of the SPV debt, financial flexibility and execution track record of sponsor are important in pre-COD phase.

II. Implementation stage risk / construction risk

- It is important to ensure availability of all resources for smooth implementation. The construction status and progress is driven by mobilization of adequate financial resources, manpower and machinery for the same.
- Statutory clearances: The availability of all statutory clearances or advanced stage of the same is viewed positively. Prominent clearances which impact execution include land acquisition, forest clearances and railway approvals for construction of Railway over bridge, etc. CARE relies on third-party assessment reports, viz, Monthly Progress Reports by Independent Consultant /Lenders' Engineer to gauge the project progress and status of approvals.
- Risk of time and cost overrun: Infrastructure projects including annuity-based road projects face the risk of time and cost overrun due to issues at any of the above two stages, i.e., statutory clearances and availability of resources. The same can impact viability and credit profile of the project significantly. CARE evaluates the mitigating factors built in for restricting the impact of such overrun.
- Extent of financial closure, tie-up of funds, proposed funding mix: cost of project and break up, means of financing and break up, adequacy of each of these, whether comparable to similar other project is looked into. The projects with full or substantial financial closure are seen positively.

CARE Ratings considers the following points for analysis of project implementation risk:

- Developer's track record in execution of large-sized EPC projects
- Availability of Right of Way (RoW) on 3H basis in terms of both length and area
- Gap between Lowest bidder (L1), L2 and L3 bidders
- Achievement of financial closure and status of funds deployment by sponsor and lender

- Status of clearances including forest clearance
- Complexity of the project road in terms of presence of structural work and terrain
- Stage of project progress and current project progress against stipulated progress
- Presence of fixed price EPC contract & assessment of the EPC contractor
- Sponsor support undertaking to fund cost overrun and any cash deficit during under-construction

II. Contractual risk assessment: CARE Ratings undertakes identification of various risks and mitigants in place through contractual arrangements. The extent of adequacy of Risk allocation framework provides comfort to the overall credit profile of the project.

Under the PPP model followed for sectors like roads, the project details are worked out by the Ministry sponsoring the project and the terms of concession are put forth by way of Model concession agreements. These terms of concession (Concessions Agreement) broadly determine the risks associated with the project. In its first step of evaluation, CARE examines these terms for the clarity of their definitions, their inherent risks- which are irrespective of the project developer- and the rewards thereon. A concession agreement with well-defined terms and conditions, optimum risk allocation and suitable rewards for the risks allocated is considered as adequate/complete. In this context the political, regulatory and legal environment and track record of honoring the commitments by Concessioning Authority –be it National Highways Authority of India (NHAI) or State Authorities is taken into consideration as counterparty assessment.

The presence of contracts in clear, comprehensive and enforceable terms by a strong counterparty / Conessioning Authority provides comfort to the overall credit profile.

III. Projected financials and sensitivity:

CARE's analysis of Annuity road projects includes an in-depth analysis of the financial risk associated with the project. CARE studies adequacy of expected project cash flows for servicing the debt. The DSCR – sensitivity is worked out to analyze the cash flow resilience under various scenarios. The prominent parameters that are stressed comprise Operation & Maintenance (O&M) expenses and variations in borrowing rates.

Rating methodology for Operational Phase projects:

The various risks which are assessed when the entity is under operational phase are as under:

I. **Management Risk:** Similar to projects under implementation, it is important to analyze the management risk for projects in operational stage also.

II. **O&M Risk**: O&M cost of the stretch depends on the traffic, terrain and quality of road construction. O&M cost increases for the stretches dominated by heavy vehicles and highways falling under higher economic resilience area. Typically, annuity road projects are less prone to heavy vehicular movement and hence their O&M expenses are generally lower than Toll-based road projects. Further the O&M expenses are found to be generally lower for the state highways as compared to National Highways. In case, the road stretch is present in zones of high precipitation, possibilities of moisture percolating to bituminous layer are higher which in turn results in higher O&M and periodic maintenance expenses. Quality of road construction depends on the financial and technical capability of O&M Contractor, design capacity of the road vis-à-vis actual traffic on the stretch and roughness index (ranges between 1,800 mm/km and 3,000 mm/km; lower the better). CARE Ratings assesses the O&M expenses and periodic maintenance expenses on per lane km basis and compares against the industry aggregates of its Annuity-based road projects portfolio. CARE Ratings relies data on the quality of road maintenance, which is generally prepared by the Independent Consultant appointed by the Concessioning Authority. Closer or higher than industry aggregates O&M assumptions reduces the reliance on the sponsor to extend financial support. O&M cost is expected to be significantly lower in case of rigid pavement as compared to flexible pavement.

III. **Cash flow Risk:** In case of the operational projects, cash flow adequacy and financial flexibility are important financial parameters which are looked into. In absence of demand risk for annuity projects, the credit profile of the Annuity Provider / Counterparty, i.e., Concessioning Authority assumes paramount importance. Track record of timely annuity disbursals is critical for revenue visibility of the project. The analysis also encompasses evaluation of waterfall mechanism, escrow arrangments, ring fencing of cash flows besides any specific covenants spelt out in the financing documents with regards to operational indicators. Typically, fixed-price O&M contracts with a strong O&M contractor are viewed as a credit positive. Periodic interactions with lender / Trustee are also undertaken to establish compliance of the contracted terms and/or covenants on financing agreements. Cash trapping towards Debt Service Reserve account (DSRA) and upcoming major/periodic maintenance activities in the form of major maintenance reserve account (MMRA) safeguard the liquidity profile in case of timing mismatches of annuity disbursals. Considering that the revenues are largely static in nature, the cash flows are subjected to sensitivity analysis, as mentioned earlier, to assess its resilience under various scenarios especially towards change in interest rates and increased O&M expenditure. The corresponding DSCRs are required to be steady and adequate under such scenarios.

IV. Contractual arrangement, risk allocation: The Regulatory environment and political, legal factors impacting the operations of the project are identified and analyzed. The mitigation of risks involved over project life and mitigation thereof through various contractual arrangements are considered important. The comprehensiveness and enforceability of the relevant project-related contracts is examined. Fo example, Concession Agreement, Financing agreements, EPC Contract, O&M contract, etc. However, the provisions in respect of Force majeure, or in respect of financial implications of liquidated damages and their adequacy cannot be ascertained upfront and are therefore not factored in credit ratings**.**

Conclusion

The rating outcome is ultimately an assessment of the fundamentals and the probabilities of change in the fundamentals. CARE Ratings analyses each of the above factors and their linkages to arrive at the overall assessment of credit quality, by taking into account the industry's cyclicality. While the methodology encompasses comprehensive, financial, commercial, economic and management analysis, credit rating is an overall assessment of all aspects of the issuer.

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