ICRA Rating Feature

This methodology note stands superseded. Refer to ICRA's website www.icra.in to view the updated methodology note on the sector.

Rating Methodology for Construction Entities

This rating methodology updates and supersedes ICRA's earlier methodology note on the construction sector, published in February 2013. While this revised version incorporates a few modifications, ICRA's overall approach to rating issuers in the sector remains materially similar. In this document, construction entities are also referred as 'contractors'.

This rating methodology document explains ICRA's approach to analysing business and financial risk for construction sector entities. The objective of the rating methodology is to provide a reference tool that can be used to evaluate the credit profiles of entities engaged in the construction business. It aims to help issuers, investors and other interested market participants understand ICRA's approach to analysing the quantitative and qualitative risk characteristics that are likely to affect rating outcomes. This methodology does not include an exhaustive treatment of all factors that are reflected in the ratings but would enable the reader to understand the rating considerations that are most important.

Overview

The construction sector plays a major role in the economic growth, provides major employment, and occupies a pivotal position in the country's development plans. In India, the sector contributes about 8% to the GDP (one of the largest amongst the sectors) and is the second largest employment provider after the agriculture sector.

The construction sector can be classified into three main segments - real estate construction, infrastructure construction, and industrial construction. Real estate construction includes construction of residential and commercial real estates. Infrastructure construction includes construction of transportation infrastructure (roads, railways, civil aviation, ports), utilities (power, irrigation), urban infrastructure, etc. Industrial construction signifies construction of oil and gas refineries, pipelines, manufacturing plants etc. Infrastructure projects form the largest segment of the construction sector.

While real estate and industrial projects are predominantly developed by the private sector, infrastructure projects are often funded by the Government. Though there has been a push for private sector participation in funding infrastructure projects, they still remain heavily dependent on Government funding. With increased focus on infrastructure investment by the Government, the construction sector has witnessed active interest from lenders, investors, and other stakeholders over the years.

ICRA's Credit Risk Assessment Framework

This note highlights some of the key factors that are evaluated while assessing the credit quality of a construction entity. For analytical convenience, these factors have been grouped under the following categories:

Credit Risk Categorisation

Business Risk
- Competitive Position
- Order Book Analysis
- Adequacy of Resources

Management Risk
- Management Quality and Financial Policies
- Risk Management Practises

Financial Risk
- Revenue and Profitability
- Capital Structure and Coverage
- Working Capital, Liquidity and Cash Flows

Public Private Partnership (PPP) Exposure
- Funding Risks
- Project Related Risks

Business Risk Assessment

Competitive Position

The competitive position of a construction entity plays an important role in its ability to secure fresh orders. Entities with a long-established market presence and track record are better placed to bid for and execute projects as opposed to new entrants. A strong competitive position of the incumbent (in its addressable region and segment) also serves as an entry barrier for others, while also giving the incumbent a higher bargaining power with sub-contractors and suppliers.

ICRA evaluates the competitive position of a construction entity on the following key parameters:

» Client and project profile
» Adherence to quality and time parameters
» Experience, track record and scale of operations

Client and project profile:
The composition of clients in the contractor's order book is one of the indicators of its competitive position. The presence of the financially strong corporate entities, central/state government funded projects, and well funded overseas projects are reflective of a strong client profile and viewed favourably by ICRA. The contractor's ability to maintain strong relationships with its clients can also be gauged from the extent of repeat orders, and lack of or limited number of disputes.

ICRA also assesses the relative complexity and size of the projects handled, and the demonstrated capability of the contractor in each of the segments it has presence. A construction entity with a successful track record of executing large and complex projects such as hydropower, metro rail, and tunnelling projects is viewed positively as such a track record supports the competitive position and also increases the pricing power of the contractor. In comparison, entities that are involved in jobs such as small irrigation projects and road and building construction, remain prone to high competitive intensity because of the presence of a large number of players in these segments.

As construction activities involve a high level of interaction with local residents and local Government bodies, understanding of local environment helps in mitigating execution impediments. Many construction entities tie up with local entities or sub-contract labour intensive work for faster execution. In this regard, ICRA assesses the quantum and type of work sub-contracted.

Adherence to quality, and time parameters:
The performance of the contractor in its completed projects in terms of adherence to quality parameters, and time schedule is assessed. If there are any delays in the completed projects, the reasons for the same are studied to ascertain whether those are attributable to the contractor. For assessing adherence to quality parameters, ICRA looks at the instances of liquidated damages or penalties levied by clients in the past and the reason thereof. Feedback from the bankers regarding invocation of the performance guarantees, which the contractor furnishes in favour of its client, also serves as an important input. On the other hand, the earlier-than-scheduled completion of contracts and consequent receipt of bonus from client, is viewed favourably by ICRA. During the rating exercise, ICRA's team also visits some of the completed and on-going projects.

Experience, track record, and scale of operations:
Competitive position of a contractor is assessed from its experience and execution track record, which is an important input in the assessment of its ability to efficiently execute its order book. Moreover, the contractor's track record becomes an important bidding criterion and hence its ability to procure fresh projects. While assessing the track record, ICRA's critical focus is on the size and complexity of the projects executed, and the timeliness of construction.

The scale of a construction entity's operations indicates its relative market strength, operating flexibility, and its ability and expertise to undertake large projects. Moreover, the scale of the entity in terms of revenues and net worth becomes an important eligibility criterion when larger projects are bid for.

Order Book Analysis

Order book analysis plays a critical role in business risk assessment of a construction entity. ICRA undertakes assessment of the following aspects of the order book of a construction entity:

» Revenue (also referred as Operating Income) visibility
» Diversification
» Risk profile of orders

Revenue Visibility:

The order book of a construction entity provides insights into its revenues over the short to medium term. For evaluating the revenue visibility of a construction entity, ICRA looks at the following key parameters:

- Size of order book adjusted for slow-moving or stuck orders
- Ratio of order book to past revenue in comparison with residual execution period of orders
- Estimation of execution schedule for each order
- New order inflows and bid success ratio

The size of the order book and its execution schedule provides inputs into the revenues that a construction entity can generate over the medium term. However, while assessing the size of the order book, adjustment is done for any slow-moving or stuck project, which would likely not be contributing to revenue in the near term. The adjustment would depend on the expected traction in the order and would typically be exclusion of stuck orders from the order book from revenue visibility perspective.

The size of the order book is also viewed in relation to both the past execution track record and the current execution schedule. For this, ICRA compares the ratio of the entity's order book to the previous year' operating income (referred to as OB/OI ratio) with the weighted-average residual execution time of its order book. A large OB/OI ratio could be the result of aggressive bidding and can have an adverse impact on the future profitability and result in enhanced execution risks because of the challenges associated with rapid scaling-up. On the other hand, lower ratio could be a result of an entity's inability to perform well in execution of its prior contracts and/or its unfavourable cost structure, or lack of bidding capacity arising from technical/financial shortcomings.

ICRA also evaluates the revenue visibility of a construction entity by estimating execution phasing for each order in its order book. The execution schedule for each order is estimated based on its scheduled execution time-frame, current status of the order, nature of contract, execution challenges, etc.

In addition to the revenue visibility from the existing order book, ICRA also evaluates the prospect of new order inflows for the entity. In this regard, ICRA relies on its outlook on the new projects in the segments in which the entity has presence. In addition, ICRA also looks at the tenders bid and orders secured (both in terms of number and contract value) over the past 3-4 years, to estimate the new order inflows.

The ratio of orders secured to tenders bid for and finalised during a financial year (referred to as '*bid success ratio*') can throw some light on new order inflows. However, the bid success ratio for an issuer needs to be looked in conjunction with other factors like total tenders bid, and competitive intensity. A very high bid success ratio generally indicates either low competition, or contractor's strong competitive position. However, this could also be a result of aggressive bidding by the contractor and is looked at by ICRA in relation with the bids of other players as well as total tenders bid by the issuer in comparison to its revenues.

Diversification:

A diversified order book provides stability to a contractor's revenues because of lower reliance on a specific geographic region, client, segment, or project. This factor is assessed in conjunction with the entity's capability to manage the diversified projects and deliver them in accordance with the cost, time, and quality parameters. ICRA assesses order book diversification on four key aspects – geography, client, segment, and nature of projects.

Geographical Diversification:

Construction entities have to comply with several regulatory, environmental, and safety norms. Many of these norms vary from state to state, and hence entities that have geographical diversity in their operations

have lower exposure to regulatory risk pertaining to a particular region. Geographical diversification also reduces the impact of regional economic cycles on the entity and allows it to cope better with delays in projects (and, therefore, cash flows) caused by natural events like floods, droughts, and earthquakes in the affected areas. However, over diversification with limited scale of operations could result in suboptimal utilisation of resources and inadequate management attention.

Segment Diversification:
Construction entities operating in diverse construction segments (such as roads, bridges, power plants, oil and gas, railways, and irrigation) have a lower susceptibility to regulatory risks. Further, diversification also reduces the contractor's exposure to demand volatility and competition in any particular segment. However, such diversification is viewed in conjunction with the entity's ability to execute diverse projects and its track record of project execution.

Client Diversification:
There are a large number of players that invite tenders for construction projects, including Central and state Government entities, projects funded by multilateral agencies as well as private firms. The profitability, payment cycle, and relative credit risk across these entities could vary significantly. Private sector orders usually have a shorter and less cumbersome bidding process, and the easier availability of the project site and other requisite approvals also support a shorter execution period. Public sector orders, on the other hand, provide more stability to revenues as they are relatively less prone to economic cycles. Furthermore, the counterparty credit risk is lower in case of public sector orders compared to private sector orders. Overall, a healthy mix of public and private sector projects enables a contractor to have a more stable revenue stream, manage working capital cycle better, and also lower the customer credit risk.

While reviewing a construction entity's client mix, ICRA also analyses the ratio of contracts obtained from external parties to those obtained from the contractor's own group entities. In general, the higher the proportion of the latter, the lower the pricing flexibility but relatively more relaxed the contract terms.

Project Diversification:
Excess exposure to a few large-sized projects can lead to high project concentration and counterparty credit risk for a construction entity. At the same time, a large number of smaller contracts can increase execution risks significantly as simultaneous execution makes greater demands on management bandwidth and project management systems. ICRA, in its analysis, calculates the contribution of the top five projects to the contractor's total order book; higher values (typically more than 65-70%) indicate high project concentration risk for the entity concerned.

Risk Profile of Orders:
An analysis of the larger orders in the contractor's order book is carried out to assess the associated risks including likelihood of delays in their execution. ICRA undertakes the following assessment for key orders:

- Project secured through aggressive bidding
- Execution risks like status of right of way / land, clearances, project funding, etc.
- Complexity of the order
- Provision for raw-material price escalation
- Key contractual terms

For a few large orders, ICRA evaluates the difference between the top two bids (lowest bid or L1, and second lowest bid or L2) for the tender in case of competitive bidding. This helps in assessing any aggressive bidding involved in procurement of order, in which case the profitability could be lower.

ICRA also makes the assessment of execution risks related to some larger orders. Some of the factors that can lead to delays in project execution and which are beyond the control of the contractor are unavailability of the site, lack of environmental clearance, absence of other requisite approvals, change in government policies/regulations, and delay in financial closure (in the case of private sector orders). Difficult terrain and unpredictable climate also increase the risk of delays if the scheduled construction time does not have room for contingencies. Complexity of the order is another important factor that can result in delays. In case the contract does not adequately cover the construction entity for cost overruns and idling charges, its

profitability can be severely impacted by delays. Moreover, these delays lead to the deferment of cash flows for the contractor and also curtail its bid capacity by the extent of the value of the delayed projects.

Construction contracts are often priced assuming a certain level of input (raw material) prices. Thus, any steep increase in raw material prices during project execution can push up the project cost significantly beyond the initial estimates. Moreover, delays in land acquisition or regulatory approvals may extend the construction period, thereby exposing the entity concerned to possible escalations in commodity prices. An entity that has entered into a fixed-price contract has to absorb this increase in prices, which in turn would drive down its profit margins. In the case of contracts having a cost escalation clause, ICRA also reviews the specific terms so as to assess the adequacy of the escalations allowed under the contract to cover for the actual cost increase for the contractor. For instance, some contracts allow escalations in input prices in line with the inflation rate (Wholesale Price Index, or WPI). In case the actual increase is much higher than this rate, it would expose the contractor to input price risk, notwithstanding the presence of a cost escalation clause in the contract. The other important contractual terms examined include penalty clauses, obligations and responsibilities of the client and the contractor, terms of payment, and flexibility in the extension of the project's time schedule if the delay is not attributable to the contractor.

Adequacy of Resources

ICRA, in its analysis, takes into account the adequacy of the various resources of the entity concerned, viz. manpower, management bandwidth, project management systems, machinery and equipment, tie-ups with subcontracting firms, financial resources, and financial tie-ups, to assess its ability to successfully execute the order book. Assessment of the contractor's execution capability is important as any delays in project execution can significantly impact its profitability and cash flows. Moreover, delays can affect the entity's market position, thereby impacting its ability to obtain orders, both fresh and repeat.

Attracting and retaining skilled manpower is also one of the key challenges for contractors, as is training of human resources, given the increasing complexity of projects. Apart from possessing skilled manpower, having good relationship with labour contractors and being in compliance with the local labour laws are necessary for uninterrupted operations. These factors apart, ICRA also looks at the experience profile of the key executives of the entity concerned.

In addition to adequate manpower, appropriate mechanisation of operations including adequate machinery and equipment base is required to optimise construction time and achieve the desired quality levels. In this regard, ICRA looks at the issuer's Operating Income to Gross Block ratio (OI/GB ratio) and compares it with its peers. While it is assumed that the Gross Block of a construction entity would be primarily equipment, in case of other assets, an adjustment is made to reflect only the equipment-related Gross Block. In case of a major deviation in OI/GB with peers, the reasons for the same are evaluated. A lower OI/GB ratio generally indicates underutilisation of equipment or more reliance on self-owned equipment, whereas a higher OI/GB ratio could be because of higher dependence on leased equipment. However, OI/GB is looked at in conjunction with other factors like the recent addition of equipment, proximity of multiple project sites to each other and so on.

Since a contractor may be executing several projects in different geographies at any point in time, implementation of effective project monitoring systems is necessary to enable the top management to continuously monitor the progress of the projects and also make the right intervention as and when required. In addition, the entity's ability to raise funds via either equity or debt and tie up adequate non-fund-based limits is critical for it to be able to meet its capital expenditure and working capital requirements.

Financial Risk Assessment

The financial risk analysis is concerned with assessing the ability of an entity to generate sufficient cash flows to meet its debt servicing obligations and is influenced by the degree of financial leverage. As a starting point, ICRA takes into account an entity's reported financials to get a glimpse of its financial risks. However, financial risk analysis is not undertaken by ICRA solely on the basis of a given year's performance results as it may result in a point-in-time analysis bias, because of reasons such as recent capital expenditure, recent equity infusion or fund-raising for expansion, or the stage of the business cycle.

ICRA analyses long period past performance trends and makes estimates of future financial performance to assess the financial risk exposure of an entity. Moreover, ICRA recognises the potential pitfalls of relying on financial risk analysis, solely based on accounting numbers as these may not adequately reflect the intrinsic or market value of a business. Yet, accounting ratios do offer a useful reference to evaluate the performance trends of an entity over a given time period as well as to compare an entity's financial performance metrics with that of its peers.

The various financial metrics assessed by ICRA could be divided into three categories viz., Revenue and Profitability, Capital Structure and Coverage, and Working Capital, Liquidity and Cash Flows. Besides, there are a few additional elements of financial risk like accounting policy, off-balance sheet exposure, and financial flexibility which are also assessed by ICRA. This document provides a brief summary of why ICRA considers these metrics to be important. For a more detailed description, readers may refer to the note titled, "Approach for Financial Ratio Analysis" published on ICRA's website.

Revenue and Profitability

ICRA analyses growth in revenues (also referred as operating income) over a period of multiple years and makes a comparison with that of the other entities operating in the same segment. However, growth in revenues is looked at in conjunction with profitability. A contractor's ability to achieve higher growth in revenues without compromising on profitability is generally a reflection of its strong execution capabilities.

The trends in operating profit margin[1] and return on capital employed[2] are also analysed and compared with peers. Complexity of the jobs done, the presence of escalation clauses, and the extent of sub-contracting are some of the main factors that determine the profitability of construction entities. Ability to complete projects before time can also make the entity eligible for bonus from client and enhance profitability. An entity with higher profit margins and returns on capital has a greater ability to generate internal accruals, attract external capital, and withstand business adversity.

Capital Structure and Debt Coverage

For capital structure and leverage, ICRA looks at the debt to net-worth ratio, and debt to operating profit ratio of construction entities and compares it with that of its peers to determine its relative leverage position. Conservative leverage ratios are viewed favourably as the same involves lower committed debt servicing outflows i.e. interest and principal repayment.

Entities with higher profitability and lower leverage will generally have better coverage ratios and thereby healthier financial risk profiles. The debt coverage indicators that are examined include Interest Coverage Ratio, ratio of Net Cash Accruals to Total Debt, and Debt Service Coverage Ratio (DSCR). Further, the profile of debt in terms of maturity and average cost is also analysed. High leverage also exposes an entity to interest rate risks.

Adjustments in case of PPP projects: If a construction entity has made an investment in PPP projects, additional adjustments to its debt and net worth need to be made. If the project is being developed in a special purpose vehicle (SPV) with the debt availed by the SPV having no recourse on the construction entity, ICRA will generally not consolidate the debt of the SPV with the construction entity for financial analysis. However, as the equity invested by the construction entity in the SPV is a long-term investment - depending on the assessment of the project - an adjustment to the net worth of the construction entity is made. If the project is being developed in the construction entity itself or the debt for the project has recourse on the construction entity, ICRA will generally take a view on the consolidated financials of the entity along with the SPV.

Working Capital, Liquidity and Cash Flows

[1] Operating Profit before Interest, Depreciation, and Tax/Operating Income
[2] Profit before Interest & Tax/(Total Debt + Tangible Net Worth)

ICRA's evaluation of the financial position of a construction entity also involves a detailed assessment of its working capital management, with the emphasis being more on its cash flow generation ability. Some of the factors that impact the contractor's working capital requirements include its inventory and receivables management policies, project monitoring systems, billing frequency (milestone-based or time-based), payment terms (with clients), retention money involved, and bargaining power (with suppliers and sub-contractors). Other than these, adherence to quality and time stipulations, which are linked to the contractor's execution capability, also facilitates faster release of payments from clients. Some contracts have the provision of mobilisation advances (generally 10% of the total project value) by the clients concerned, which reduces the contractor's working capital requirements. However, these can have a bearing on the entity's financial profile, depending on whether these mobilisation advances are interest bearing or not. High dependence on interest-bearing mobilisation advances could also be an indicator of the contractor's limited financial flexibility.

ICRA looks at the trend in working capital movement and compares various working capital ratios of the entity with those of its peers. Any significant deviation in the ratios like debtor days and inventory days gives an indication of a possible dispute with a client with regard to certification of work executed, recognition of revenue, and/or release of payments. Any build-up in receivables, or inventory can be a sign of weak client or slow-moving/stalled project and needs to be explored in depth.

Apart from the fund-based working capital, construction entities also require sizeable non-fund based limits mainly bank guarantees (BG). BGs are required typically towards bid security (given at the time of bidding), performance security (given after contract is awarded), and against the release of retention money during the defect liability period (post completion of the project). For construction entities with long execution cycle and defect liability period, the BG requirement keeps on adding over time. ICRA assesses the availability of sufficient non-fund based bank lines. Further, as non-fund based limits also require margin (typically in the form of Fixed Deposits or collateral assets), availability of surplus liquidity provides a cushion to enhance non-fund based bank lines if required.

ICRA lays emphasis on analysis of the cash flows of the entity. Analysed here are the trends in the contractor's Funds Flow from Operations (FFO) after adjusting for working capital changes, the Retained Cash Flows, and the Free Cash Flows after meeting debt repayment obligations and capital expenditure needs. The cash flow analysis also helps in understanding the external funding requirement that a construction entity has in order to meet its maturing obligations.

Since the prime objective of a rating exercise is to assess the adequacy of the issuer's debt-servicing capability, ICRA draws up projections on the likely financial position of the entity under various scenarios. Future cash flows are projected after taking into account the entity's current order book position and the likely conversion of the same into earnings; bids in the pipeline and the growth it envisages for itself; the margin money required for additional bank guarantees; capital expenditure plans, its funding requirements; the debt repayment schedule; and the funding options available to it. Besides, ICRA takes into account the commitments of the entity towards other group entities and new ventures, and its investments in subsidiaries/SPVs. These cash flows are then used to determine the entity's future debt-servicing capability under various scenarios.

Other Elements of Credit Risk Assessment

Accounting quality:
The financial analysis begins with a review of the contractor's accounting quality. Here, the Accounting Policies, Notes to Accounts and Auditors' Comments that are part of the Annual Report are reviewed. Accounting practises such as the income recognition method (percentage of completion versus completed contracts method), depreciation policy, and treatment of contingent liabilities, are reviewed and compared with the industry practises. The financial statements of the entity are adjusted to reflect the impact of such deviations.

The construction entity's policies on the recognition of disputed revenues and disclosure of contingent liabilities are also examined while assessing its accounting quality. When projects get delayed, claims for idling of resources and cost overruns are submitted by the contractor and in some cases counter-claims

are lodged by clients. Such disputes usually take a long time to get resolved. A construction entity that recognises such claims as revenues without the final settlement is viewed negatively by ICRA. However, if there are counter-claims, adequate provisioning and inclusion in contingent liabilities, these are considered more prudent.

Contingent liabilities/ Off-balance sheet exposures:
Typically, a contractor has to provide multiple bank guarantees for bid security and performance guarantee. These bank guarantees form a sizeable part of the contractor's contingent liabilities. ICRA, in its analysis, determines the possibility of such guarantees being invoked and the pressure that the event would exert on the entity's cash flows. In case of concentration of the bank guarantees on few projects, performance of those projects becomes important. In case there are any other contingent liabilities like corporate guarantees and cases in disputes, the impact of the same on the contractor's credit profile is also assessed.

Debt-servicing track record:
The debt servicing track record of a construction entity is an important input for a credit rating exercise. Any delays or defaults in the past in the repayment of principal and/or interest payments reduce the comfort level with respect to the contractor's future debt-servicing capability and willingness.

Financial flexibility:
An entity's financial flexibility as reflected by its un-utilised bank/ credit limits, liquid investments, and the nature of its relationship with banks, financial institutions and other intermediaries. Financial flexibility could also emanate from other factors such as the entity's large-scale operations with strong financials, unencumbered assets/ flexibility to borrow against existing assets, or the entity's strong parentage or linkages with a strong group.

Management Risk Assessment

In addition to the business and financial risk analysis, ICRA also undertakes an assessment of the rated entity's management, the financial policies and the risk management practises.

Management Quality and Financial Policies

As a part of its process, ICRA undertakes discussions with the rated entity's management to understand its views on past performance as well as its future plans and strategies and the outlook on the industry. Some of the points assessed are:

» Experience of the promoter/ management in the industry
» Commitment of the promoter/ management to the rated entity
» Organisation structure and level of delegation of responsibility
» Risk appetite of the promoter/ management on taking up new projects, acquisitions and expansions
» Policies on leveraging, managing interest rate risks and currency risks
» Ownership pattern and presence of independent directors on board
» Corporate governance practises and related party transactions

Periodic interaction also helps in ascertaining their tendency to deviate from stated philosophies and policies during times of stress. ICRA also interacts with external auditors to understand their view on the entity's policies and corporate governance.

Risk Management Policies

Construction entities are prone to cost-overrun risks and hence special emphasis is laid on their operating efficiency and risk management policies. The two key parameters assessed for risk management policies related to operations of a construction entity are:

» Bidding Policy - Trade-off between growth and profitability
» Sub-contracting Policy – Extent of work sub-contracted, selection/management of sub-contractor

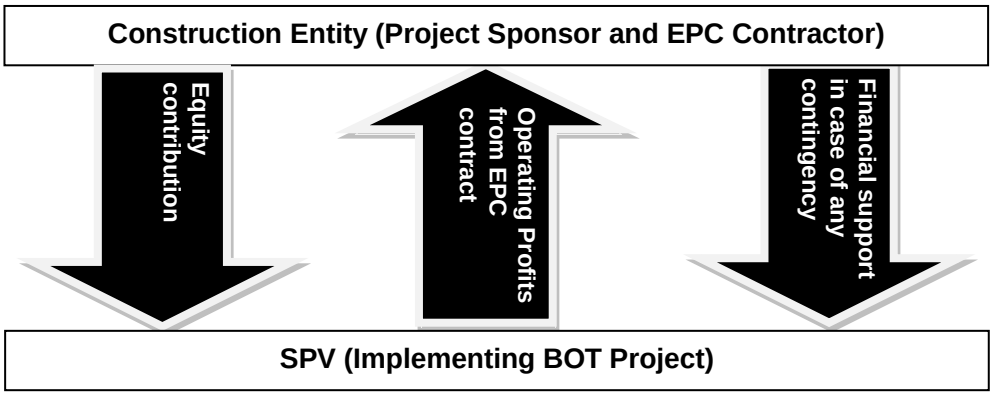
The risk management policies adopted by an entity are an important input for rating. Construction entities with formalised policies and procedures — mandatory bid evaluation by a bid assessment committee, third-party project appraisal, and consistent bidding policies, among others — are viewed favourably by ICRA. The project-monitoring systems implemented by an entity, the policies put in place to mitigate credit risk, and other control mechanisms instituted for functions like management of supplier and/or subcontractor relationships and review of their execution strength, are also assessed.

Exposure to PPP Projects

Over the last decade, with the emergence of Public Private Partnership (PPP) projects, many contractors have invested in infrastructure projects in the road, power, port, and airport sectors. While varied forms of PPP projects have been undertaken in India, these are largely on the lines of the Build-Operate-Transfer (BOT) model. The BOT projects in the roads and highways sector can be broadly classified into three categories depending on project funding and the revenue model – BOT (Toll), BOT (Annuity) and Hybrid Annuity Model (HAM).

The BOT projects are generally implemented under a project-specific SPV often promoted by contractors. The SPV undertakes the execution of the project by entering into an engineering, procurement and construction (EPC) contract with a construction entity (which may be the parent contractor).

Figure 1: Linkages between the construction entity and its SPV implementing the BOT project



Unlike in the case of an EPC contract in which the contractor receives compensation from the client for project execution, for a BOT project a developer has to recover its costs and profits within a specified period from the cash flows generated by the asset that is created. Thus, in addition to project execution risk, the BOT projects are also exposed to various other risks that are typical of projects. These are classified under two categories: project-related risks and funding risks and are discussed in the following sections.

Project-Related Risks:

A BOT project is exposed to multiple project-related risks including execution, cost overrun risks, market/demand risks, operations and maintenance risks, and regulatory risks. While the SPV generally enters into a fixed-price contract to shield itself from execution risks, the contractor often has to bear these risks. Further, BOT projects in the past have witnessed significant delays in acquisition of right of way, clearances, shifting of utilities, which often takes up a lot of management resources and leads to cost and time overruns. In addition, demand-based projects like BOT-toll projects have high exposure to market risk.

Funding-Related Risks:

As BOT projects require a sizeable equity investment and have long gestation periods, the capital gets locked in for a long period of time. ICRA takes into account the investments in the BOT projects by the construction entity in relation to its net worth. For weaker projects, an adjustment is made in the net worth of the entity.

In most cases, the debt component in the BOT projects is without any recourse or with limited recourse to the parent (contractor). In such cases, ICRA does not consolidate the debt of the SPV with the parent while undertaking a financial analysis. However, ICRA is of the opinion that in case a project faces any shortfall in meeting its debt or other obligations, it is likely that the contractor would provide the necessary financial support out of moral obligation and also to protect its interest in the project, especially for projects that are likely to be viable over the long term but are facing temporary cash flow pressures. Hence, while assessing the credit profile of a contractor, all the BOT projects in its portfolio are also analysed to ascertain the extent of risk in each project and the financial support the parent may have to extend to these projects in case of need. ICRA factors the financial support to these projects while drawing cash flow projections.

Summing Up

ICRA‘s credit ratings are a symbolic representation of its opinion on the relative credit risk associated with the instrument being rated. This opinion is arrived at following a detailed evaluation of the rated entity‘s industry, business and financial risks, its likely cash flows and the adequacy of such cash flows vis-à-vis the debt-servicing obligations and other funding requirements. ICRA’s rating approach also involves making an assessment of the entity’s management quality and governance practises. In addition to these considerations, an entity’s credit rating may also be influenced by its ownership, the nature of linkages with its parent or group entities, degree of financial flexibility, the corporate legal structure, track record of operations and that of debt servicing, and vulnerability (if any) to discrete event risks.

ICRA Limited

CORPORATE OFFICE
Building No. 8, 2nd Floor, Tower A; DLF Cyber City, Phase II; Gurgaon 122 002
Tel: +91 124 4545300; Fax: +91 124 4050424
Email: info@icraindia.com, Website: www.icra.in

REGISTERED OFFICE
1105, Kailash Building, 11th Floor; 26 Kasturba Gandhi Marg; New Delhi 110001
Tel: +91 11 23357940-50; Fax: +91 11 23357014

Branches: **Mumbai**: Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 **Chennai**: Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 **Kolkata**: Tel + (91 33) 2287 8839 /2287 6617/ 2283 1411/ 2280 0008, Fax + (91 33) 2287 0728 **Bangalore**: Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 **Ahmedabad**: Tel + (91 79) 2658 4924/5049/2008, Fax + (91 79) 2658 4924 **Hyderabad**: Tel +(91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 **Pune**: Tel + (91 20) 2552 0194/95/96, Fax + (91 20) 553 9231