

## Industry overview

The construction industry plays an important role in the development of infrastructure within the economy. The entities operating in the sector include contractors deriving revenue from executing projects, which are broadly classified under three heads - (I) civil infrastructure, (II) industrial infrastructure, and (III) real estate. The civil infrastructure space includes segments, such as transportation (roads, bridges, tunnel, railway, ports, and civil aviation), utilities (dams and power), and urban development. Industrial infrastructure includes construction work associated with manufacturing units of industries such as steel, textile, cement, and chemicals, among others. The construction work in the real estate segment pertains to the construction of buildings for commercial/residential purpose, hospitals, malls, educational institutes, and others.

The civil infrastructure projects are generally undertaken at the instance of the Government with some projects, particularly in the transportation segment, undertaken through Public–Private–Partnership (PPP) route. The private players may operate as both contractor and developer/sponsor of such projects. The urban development projects under civil infrastructure are primarily undertaken by the Government entities. There has been an increased focus of the Government on the urban development front with large budget allocation and several projects tendered in the segment over the past two-three years. The projects in the industrial and real estate space are initiated both by the public and private sectors.

## Industry characteristics:

### Close linkage with the economy

Growth in infrastructure is critical for the development of the economy. Focus on developing infrastructure in the country such as roads, rails, airports, power, and ports, among others, in turn results in growth in the construction activity. The industry depends significantly on budgetary allocation and government spending on infrastructure development.

### Highly fragmented

Construction industry in India is highly fragmented. There are few large, organised players and a considerable number of medium and small-sized players in the industry. These would also include players operating as subcontractors.

### High working capital intensity

Construction contracts are associated with relatively large working capital requirement (particularly non-fund-based). The working capital requirement depends upon a host of factors, including size of the project, order mix, tenure, clientele, project advances associated with the order, and credit policy of the company and the counterparties. Majority projects are labour intensive, and accordingly, construction industry is the second-largest employer in India after agriculture. However, incrementally, the construction activities across real-estate, urban development, and civil space are getting mechanised with specialised construction equipment being used for faster project execution.

The industry largely operates on a milestone-based payment mechanism for the contracts linked to physical and financial progress on the project. Delays in the receipt of dues from the clients and delays in project execution result in receivable and inventory build-up and increase in the working capital requirements.

### **Rating Methodology**

Considering the size and diversity of the construction sector, CARE Ratings Limited (CareEdge Ratings) has developed a methodology for the sector, which attempts to analyse factors, over and above the broad corporate rating methodology. This methodology is used to analyse entities operating in the engineering, procurement, and construction (EPC) space.

CareEdge Ratings' rating process begins with a review of the economic and industry scenario in which the entity operates along with an assessment of the business risk factors specific to the entity. Analysing industry factors includes analysis of extant government policies, demand in terms of infrastructure requirement and industrial and real estate construction expected in the area catered to, level of competition in the sector and geographies in which the entity operates, financing options and interest rate scenario, inflationary factors affecting the input cost, among others. This is followed by an assessment of the financial and operational risk factors and quality of management of the entity.

The sub-elements of each risk factor are described below-

#### **A. Management evaluation**

CareEdge Ratings interacts with the management of the entity to understand the management's vision, focus, and growth strategy. Management evaluation includes evaluation of management's experience in the industry, risk appetite, quality of accounts, and nature of related party transactions, among others. For more details on management evaluation, please refer to CareEdge Ratings' Rating Methodology – Manufacturing Companies' on website of CareEdge Ratings [www.careratings.com](http://www.careratings.com)

#### **B. Business/Operation risk**

Evaluation of the track record of the entity in the industry and execution capability is critical for business risk analysis, as it would determine the ability to get new orders. An assessment of the order book indicates the revenue visibility and profitability.

##### **1. Evaluation of past projects executed**

Assessing the size and past track record of the entity is a key factor in assessing its future prospects. The entity's overall size indicates the scale of projects that it can bid for, whereas past track record indicates the competence and ability to execute projects efficiently. Major projects executed in the past are evaluated including details with respect to the size of the projects, type of clientele, and complexity level of projects.

##### **2. Order book analysis**

The order book of a construction company summarises the core business activity of the company and is the most important exhibitor of the business profile of the company in terms of revenue visibility. For assessing revenue visibility, slow-moving/passive orders are excluded from the order book. Status of requisite approvals required for project execution is also ascertained to gauge the revenue visibility. Land acquisition, Right of Way (RoW), Environmental / Forest Clearances, financial closure are among common factors which impact the project timelines affecting the status of order book.

The construction contracts, by terms of agreement, can be classified as, lump-sum contracts, item-rate contracts, cost-plus-percentage contracts, cost-plus-fixed fee contracts, and turnkey contracts, among others. The raw material/input prices are the major determinant of the cost of contracts and labour cost. Any steep rise in input prices due to macro-economic factors and/or delays associated with the project execution may have an adverse bearing on the profitability of the companies in case of fixed-cost contracts. The companies having majority contracts with in-built escalation clauses may be viewed favourably. However, the cost escalation may be linked to wholesale price index (WPI) or any other index and cost increase higher than the Index may limit the benefit from the presence of escalation clause.

**a. Diversity and credit quality of counterparty****Order book diversity**

A company which operates across various segments and geographies is more protected against a slowdown or issues in a particular segment or geography compared to a company with high concentration in a particular segment or geography. Diversification can be seen on the basis of total number of orders, clients, nature and size of projects undertaken, among others.

**Credit quality of clientele**

CareEdge Ratings also ascertains the credit profile of the clientele for whom the work order is being executed. Client composition is important in ascertaining the liquidity associated with the work orders. The bifurcation can be broadly in terms of central government, state government or state departments, private clients and Principal/Sub-Contractor. Assessment of the credit quality and payment track record of the respective counterparty, state's Budgetary Allocation toward infrastructure and designated funding authority enables assessment of the cash-flow adequacy of projects. Largely, the construction orders are obtained through participation in tenders floated by the various Authorities (except private orders) and composition of orders based on mode of receipt, through direct participation in bidding or sub-contracted. Order received through direct participation is usually associated with higher margins against sub-contracted ones. High proportion of sub-contracted orders may be due to lack of adequate technical/financial qualification to participate in the tender, track record of project execution, among others. In case of subcontracts, the credit quality of both the principal contractor and the client is assessed.

**b. Revenue visibility**

Order book to gross sales ratio gives an indication of the future revenue potential and visibility for the medium-term. A high order book to sales ratio may be a constraint from a credit perspective, if the company does not have adequate resources to fulfil its contractual obligations or may also be an indication of some delayed/stuck orders. On the other hand, a lower ratio indicates lesser revenue visibility. Hence, this ratio should be at an optimum level and is looked at in light of resources availability and execution capability.

Apart from the outstanding order book, CareEdge Ratings also ascertains the value of bids that the company has participated in, the volume of orders classified as lowest bidder (L1 status), which reflect the orders having high potential to be converted into firm orders, the order flow in the past three years which determine the volatility of order book, among others. CareEdge Ratings also tries to ascertain the reserve price, corresponding L2 (second-lowest bid) and L3 (third-lowest bid) value

of the tender award received by the company to understand the associated margin with the order and whether the company has done aggressive bidding to enhance the order book while sacrificing on the profitability.

**c. Resource availability and execution capacity**

The execution capacity of the company is analysed considering its equipment base, past project execution track record, technical expertise demonstrated, manpower availability and extent of sub-contracting. Most construction projects require a host of clearances and approvals at various stages, which adds to the execution risk in these projects due to probable delays.

The availability and adequacy of resources w.r.t manpower, labour contractors, and construction equipment play a prominent role in determining the ability to meet the project timelines and also impact the profit margins of construction companies.

CareEdge Ratings undertakes assessment of the work expense and sub-contracting expense against cost of sales, and a higher sub-contracting cost for relatively smaller firms/companies often indicates limited execution capabilities and resource availability.

Construction entities usually do not operate on fixed asset-intensive model with exceptions constituting entities involved in the projects of complex nature requiring specialised equipment. However, requirement of faster work execution and increased efficiency has triggered the development of the construction equipment industry which is gradually resulting in increased spending on the fixed assets by the construction companies. In this context, the fixed asset turnover (FAT) ratio (total operating income [TOI]/average gross block) throws light on the efficiency to utilise the available fixed assets and also dependence on own v/s leased equipment.

**3. Scale of operations**

The scale of operation of the entity and trend of gross billing for the last few years exhibits the stability of operations of the entity. Growing trend in gross billing indicates the company's ability to consistently secure orders and steadily execute them.

**4. Profitability trend**

Profitability is an important indicator of the operational efficiency of the company. Profitability levels can vary widely within the industry depending on the range of value-addition activities carried out by the company (ranging from large-scale contractors to subcontracting companies) and the competitive bidding process, leading to refined margins. Entities having largely fixed-price contracts in the order book may witness margin volatility due to adverse movement in input costs which are not pass through.

For entities not having own resources in terms of machinery and labour, the operating margin can be impacted considering hiring charges and higher sub-contracting charges. Contrarily, entities having own equipment will have higher operating margin and higher depreciation cost.

A company's financing capabilities can be assessed on the basis of net profit margin, as interest cost is typically higher for companies struggling to raise finance. The net profit margin will be higher for companies with access to interest-free mobilisation advances or other cheaper financing options.

## **5. Working capital management**

A longer collection period, which is not in line with peers operating in similar segment or per contract terms, indicates delays in payments from the clients, which could lead to the entity utilising excess outside borrowings to service newer projects, leading to strain on the debt profile. Apart from receivables, CareEdge Ratings also considers retention money (including retention money not due) and unbilled revenue/contract asset as part of the debtors while calculating collection period so that a realistic operating cycle is arrived at. Clarity on revenue recognition policy of unbilled revenue is sought to identify aggressive revenue booking, if any.

This apart, information with respect to receivables under arbitration/dispute and ageing of debtors is sought for, if required, to check whether such debtors are realisable.

Apart from inventory of raw materials and stores, construction companies also have work-in-progress for contracts which have not reached the billing stage. The inventory period is critically examined for slow moving orders/projects.

CareEdge Ratings computes the gross current asset days (GCA days) to analyse the working capital requirement. The advance income/unearned income forming part of contract liability may be adjusted against GCA days.

A part of the funding requirement is met through creditors and often construction entities have back-to-back arrangement with sub-contractors and payment to them is made on debtor realisation. The creditor's period is also analysed to see whether the company is unduly stretching payments to its suppliers or sub-contractors due to liquidity issues.

## **C. Financial risk**

While assessing the financial risk of the entities operating in the construction industry, CareEdge Ratings analyses the revenue, profitability, cash flow, capital structure, and turnover ratios. Off-balance sheet exposures are also critically examined with respect to the size of the company.

### **1. Capital structure and coverage indicators**

CareEdge Ratings tries to ascertain the leveraging policy adopted by the management for the project execution in terms of reliance on mobilisation advances, external credit lines or own funding for equipments and working capital requirement and dependence on subcontractors. The same in turn is correlated to the profitability.

#### **a. Debt profile**

Debt in construction entities is largely in the form of working capital borrowings to fund the operating cycle. Term loans mainly comprise loans availed for acquiring construction equipment. Construction entities also avail mobilisation advances from their clients towards the construction jobs done by them. These advances are a stable source of funding for construction contractors

and may be interest free or interest bearing, depending upon the terms of the contract. However, the entity is generally required to furnish bank guarantee against all such advances. CareEdge Ratings considers advances backed by financial guarantee as a part of working capital debt for its analysis.

Apart from bank borrowing and advances, a part of the working capital requirement is met through the creditors. Therefore, apart from debt-equity and overall gearing ratio, CareEdge Ratings also considers the ratio of total outside liabilities to tangible net worth (TOL/TNW).

#### **b. Debt coverage indicators**

To assess the ability to timely service debt, CareEdge Ratings considers the coverage indicators including interest coverage, term debt/gross cash accruals (GCA), total debt/GCA, total debt/net cash flow from operations and total debt/PBILDT, and debt service coverage ratio (DSCR). The DSCR calculation is adjusted for internal accruals committed for capex and investment commitments/support to be extended to special purpose vehicles (SPVs) sponsored by the entity. CareEdge Ratings also performs stress test on DSCR by varying parameters, such as interest costs, income, margins, foreign exchange exposure, among others.

The availability of the sanctioned and unutilised bank limits is also factored to assess the cash flow position.

The companies having a positive cash flow from the operations are viewed favourably, while companies having a negative cash flow from operations due to higher collection period or slow-moving projects may have to resort to additional debt funding to fulfil their working capital requirements and repayment obligations.

## **2. Off-balance sheet exposures**

Construction companies often have significant off-balance sheet items in the form of contingent liabilities and other non-fund-based exposures, which are required for the normal functioning of the business. Contingent liabilities in the form of corporate guarantees are treated as debt of the entity being rated depending upon whether the guaranteed entity is in a position to repay its debt. The EPC companies have large requirement of non-fund-based limits, such as bank guarantees (BG), which can be broadly summarised as following -

- BG for submission as bid bond guarantee for participation in tenders/project bidding.
- BG for submission as performance guarantee - post confirmation of tender/project award.
- BG for availing mobilisation advance, as applicable.
- BG for releasing the retention money deposit.

Hence, given the requirement of BG at various stages of operation, CareEdge Ratings analyses the utilisation of the sanctioned BG facility/availability of the BGs with the company to understand the business growth prospect and requirement of cash margin against such BGs.

The analysis of these guarantees is also done based on the past track record of invocation of such guarantees. All such current/projected off-balance sheet exposures, both in terms of sanctions and outstanding balances, are analysed in correlation to the current/projected net worth base of the entities.

For more details on financial ratios, please refer to CareEdge Ratings' methodology on 'Financial Ratios-Non financial sector entities' on website of CareEdge Ratings [www.careratings.com](http://www.careratings.com)

### **3. Liquidity assessment and financial flexibility**

The management's approach and track record of maintaining sufficient liquidity cushion and entity's financial flexibility to access long-term funds is assessed. Liquidity cushion available with the entity in the form of cash or cash equivalents against its upcoming obligations is analysed to monitor cash flow mismatches. CareEdge Ratings also assesses un-utilised bank lines and sanctioned undrawn limits to analyse the liquidity cushion. Financial flexibility could also depend on other factors such as the entity's parentage, scale of operations, and its level of leverage. For more details on liquidity-related aspects, please refer to CareEdge Ratings's criteria on liquidity analysis on CARE Rating's website [www.careratings.com](http://www.careratings.com)

### **4. Exposure to projects under Public Private Partnership model**

Many construction entities have ventured from core construction activities to investment in projects under Public Private Partnership (PPP) model such as Build-Operate-Transfer/Build Own Operate Transfer (BOT/BOOT), hybrid annuity, and real estate development, among others. The change in business model from pure play EPC contractors endeavouring to graduate to developers has resulted in these entities assuming additional risks (funding risk, legal issues, post implementation risk, and throughput risk, among others) and increase in debt burden for these entities. The financial risk assumes higher proportions for entities with significant exposure to their associates/SPVs/subsidiaries engaged in asset developmental activities, as the asset developers, in general, may not have adequate cushion to absorb hike in interest rates and commodity prices, and in turn, rely on their sponsors (promoters) for any tangible and intangible support. The debt availed by the SPVs is usually guaranteed by the sponsors or supported through sponsor undertakings. Funding support may be required till the project generates cash flows. The nature and extent of support to SPVs are factored in the rating analysis.

While analysing such entities, CareEdge Ratings may undertake moderate consolidation based on the financial linkages. Suitable adjustments are made in the leverage and coverage ratios considering the execution risk associated with the projects, guarantees extended, sponsor commitment towards the project, and cash inflow/outflow estimations for such investments.

## **D. Industry risk**

The construction industry is closely linked with the economy, with macro-economic factors affecting the entities in the sector. CareEdge Ratings analyses the demand in terms of expected infrastructure spending planned by the Government in various areas and schemes announced to boost infrastructure spending. The demand in industrial and real estate construction space is analysed considering the economic activity in the country or area in which the company operates. CareEdge Ratings also analyses the lending scenario towards the construction sector to assess the ease of availability of bank finance in the sector. The tight lending scenario or heightened risk perception of the sector by the lenders leads to lower availability of the fund-based and the much-needed non-fund-based limits, which may potentially hinder growth.

The industry highly depends on the impact of changes in the government regulations, and policy thrust on infrastructure spending by the centre and states. CareEdge Ratings keeps track of the overall investment scenario in sectors impacting the construction industry to assess the sector outlook.

**Environmental, social, and governance risk:**

Over the last few years, Environmental, Social and Governance (ESG) risks have started gaining importance across the globe and are increasingly influencing investment decisions. The companies may have to incur operational or capital costs towards mitigating these risks. CareEdge Ratings analyses the impact of ESG risks on the credit profile of an entity by assessing the expected impact of these costs on the future earnings/revenue/cash flows of entities.

**Environmental risk:**

Environmental risk emanates from the disruption of economic resources while construction activities are under progress. Various construction projects, especially in the transportation and industrial segment may result in environmental pollution and ecological dislocation necessitating requisite regulatory approvals. In absence of adequate approvals in place, projects may face time overrun resulting in increased cost, blocking of funds in working capital and impacting the liquidity profile.

**Social risk:**

Construction being labour intensive activity has high social impact on overall employment generation but entails labour relations risks and other risks related to labourer employment, which are adequately assessed by CareEdge Ratings. The EPC projects typically require large tract of land and Right of Way (RoW) and Right of Use (RoU) approvals to build necessary infrastructure, thus exposing them to social risk. The issues would be around resettlement and rehabilitation (R&R) or compensation on land acquisition between the counterparties and affected parties/land owners.

**Governance risk:**

Governance risk in an entity is determined by a host of factors, which includes and is not limited to the following, financial reporting, corporate practices, adherence to code of conduct, board composition, whistle-blower policies, investor relations, among others. CareEdge Ratings tries to develop a thorough assessment ~the governance standards of the company being evaluated based on the information that is available. From the standpoint of corporate governance, CareEdge Ratings also generally analyses the board composition and degree of compliance with various regulations. The quality of financial reporting and adequacy of disclosures among others are also evaluated.

**Conclusion**

The rating outcome is ultimately an assessment of the fundamentals and the probabilities of change in the fundamentals of the rated entity. Based on its experience and holistic judgement, CareEdge Ratings' Rating Committee analyses each of the above factors and their linkages to arrive at the overall assessment of credit quality by also considering the industry's outlook. While the methodology encompasses comprehensive, financial, commercial, economic, and management analyses, credit rating is an overall assessment of all aspects of the issuer.

**[For previous version please refer 'Rating Methodology - Construction Sector' issued in March 2023]**

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