

CRISIL Ratings criteria for the industrial sector

February 2024

Criteria contacts

Somasekhar Vemuri

Senior Director, Regulatory Affairs & Operations and
Chief Criteria Officer

somasekhar.vemuri@crisil.com

Geeta Makkar

Senior Executive
Rating Criteria and Product Development

geeta.makkar@crisil.com

Ramesh Karunakaran

Director
Rating Criteria and Product Development

ramesh.karunakaran@crisil.com

In case of any feedback or queries, you may write to us at criteria.feedback@crisil.com

Contents

Executive summary	4
Scope	5
Criteria for the engineering industry	5
Criteria for the construction industry	8
Conclusion	10

Executive summary

The industrial sector is key to the growth of manufacturing and allied sectors, and thus to the overall economic development of a country. Since growth in the industrial sector follows business cycle with a lag, policy measures play a key role in shaping the sector. Multi-year order books, long product cycles, replacement demand, and large working capital requirement are some of the characteristics of the industrial sector.

For rating companies in this sector, CRISIL Ratings evaluates their business, management and financial risk profiles. The key parameters for analysing business risk profile are market position and operating efficiency. Market position covers order book, expertise, client profile, diversification in terms of products/projects and end-user industries, and the extent of competition in the industry. Analysing operating efficiency involves control on input costs, working capital management, and technology adopted.

For financial risk assessment of engineering companies, CRISIL Ratings follows the standard criteria used for all manufacturing companies wherein the sustainability and adequacy of cash flows is evaluated with particular emphasis on debt-servicing ability. The assessment also covers how the business strengths of a company translate into its current and future financial performance, and its financial flexibility, mainly liquidity and timing of cash flows.

For management risk assessment, CRISIL Ratings follows the standard criteria used for all manufacturing companies, which include evaluation of management philosophies, strategies/policies, and risk appetite.

These are presented in detail in the CRISIL Ratings publications, 'Rating criteria for manufacturing and services sector companies' and 'CRISIL Ratings approach to financial ratios'.

CRISIL Ratings analyses financial risk for construction companies broadly in line with the criteria adopted for other manufacturing companies. Accounting quality and cash flow and liquidity analysis are additional parameters considered for construction companies.

Construction companies that follow a consistent, transparent and conservative policy on financial accounting tend to be viewed more favourably than those that do not. As construction companies can and do adopt varying accounting policies for income and profit recognition, analysis of accounting policies is a critical first step in their financial risk analysis.

The revenue and cash flow of construction companies could be lumpy given the nature of business. Additionally, there could be a sharp distinction between cash flow and accrued income. Therefore, conventional techniques of ratio analysis are often not sufficient to ascertain the credit worthiness of a construction company. CRISIL Ratings tends to focus on a cash-based analysis of revenue, expenses and other financial indicators. Assessment of the working capital cycle and cushion available in bank limit carry significant weightage. Construction companies that have stronger liquidity and more predictable project cash flow are viewed more favourably from a credit perspective. Predictability of cash flow is often supported by project, geographic and customer diversification. Hence, companies with diversified revenue streams may be viewed more favourably than those with concentrated revenue streams

Scope

While the broader criterion of manufacturing companies is applicable to the industrial sector, this document¹ details the factors specific to the following industries:

- Engineering
- Construction

The criteria document highlights the parameters that are relevant for assessing the credit profile of issuers within the sector. These parameters serve as illustrative guidelines. The relevance of specific parameters varies based on the issuer's unique circumstances. For instance, if the liquidity of the company is weak, industry risk or other business-related factors may exert minimal influence on the final rating. Likewise, business parameters that hold substantial importance for one issuer may be less pertinent for another, potentially being encompassed within the broader category of industry risk.

Criteria for the engineering industry

Background

Engineering companies derive the bulk of their revenue from the manufacture, sale and servicing of production equipment used in a variety of end-user industries such as power, mining, oil and gas, consumer goods, construction, and the general manufacturing sector. The engineering sector is characterised by cyclicalities in new orders, which is partially offset by fairly stable replacement demand.

CRISIL Ratings evaluates a number of engineering companies in sub-sectors such as cutting tools, engines, boilers, abrasives, pumps, compressors, construction equipment and industrial components. While each sub-sector is an industry in itself because of varying market dynamics, there are similarities in demand patterns, operating mechanics, and end-user profiles. CRISIL Ratings evaluates the business risk of an entity by analysing its market position and operating efficiency.

Business risk

Market position

Stability of revenue

Unlike most manufacturing entities, the revenue of an engineering company tends to be bunched up depending on the order book and delivery schedule. The extent of fluctuation in revenue depends on the sub-sector. For instance, the revenue pattern of a mining equipment manufacturer would be linked to orders from mining companies. As the need for equipment depends on new mining activity, there could be years when there is no additional equipment demand. On the other hand, availability of extensive financial assistance could trigger mining activity, thereby creating demand for mining equipment. Sub-sectors such as engines and other industrial components have more stable revenue compared with equipment manufacturers.

¹ For accessing the previously published document on the rating criteria for the industrial sector, kindly follow the link: https://www.crisilratings.com/content/dam/crisil/criteria_methodology/industrials/archive/crisil-ratings-criteria-for-the-industrial-sector-june2023.pdf

CRISIL Ratings analyses the current and emerging demand drivers for the products offered by the company. As demand for engineering products is derived demand, the analysis focuses on demand forecasts for end-user products. It also considers economic factors and international market conditions.

Where the demand is fairly established, the future price of the product could be a variable. Here, the company's bargaining power with its clients and its ability to negotiate price escalation clauses would become important determinants of sales growth. Other factors that improve stability and quality of revenue are exports, a reasonable proportion of spare parts sales, ability to increase penetration into higher-value added (higher-margin) products, new geographies and service-related income for products sold in the past. CRISIL Ratings assesses these factors to determine the sustainability of future sales growth.

CRISIL Ratings also uses the following indicators as revenue visibility measures:

- New orders and order backlog
- Book-to-bill ratio
- Unit volume and production line rates
- Bidding success rates (where relevant)

Client profile

Many engineering companies depend on a few clients for the bulk of their businesses, and hence are vulnerable to the performance and sourcing strategies, pricing decisions, and overall business plans of these customers. Apart from client diversity and the extent to which the customers are dependent on the engineering company, CRISIL Ratings examines the business strategies and financial performance of key customers.

Typically, the client concentration risk is minimised if a company is present in the replacement market, which has a large number of buyers. CRISIL Ratings, nevertheless, assesses client credit quality, as the likelihood of late and poor recoveries is fairly high. Receivables from each customer are compared with industry norms to ascertain the strength of client relationships as well as the credit policy of the engineering company. Exports provide significant client diversity, though they carry country and currency risks.

Market presence and competition

The market share of an engineering company in various product categories indicates its strength on the ground. Factors that result in a robust market share include presence in relevant sub-sectors, access to good technology, product quality and client relationship.

In high-technology areas, multinationals typically offer stiff competition to home-grown engineering firms. For low-technology products, there could be intense competition from unorganised players. In the original equipment manufacturer (OEM) segment, clients demand a high-quality product at an optimal price, while the replacement market is often driven by price rather than quality. Also, with spares/service sales fetching higher margins, players with significant market presence focus on improving revenue share from this stream. Technology and ease of use being at the forefront for such services, players are increasingly investing in technology.

An engineering company can distinguish itself by offering custom-made products and providing total solutions encompassing product design, service and implementation. Companies with established presence across the entire value chain and that provide total solutions would have stronger market positions and enjoy higher profit margins than those that only focus on manufacturing.

Diversification of end-users

Engineering goods and services are used in the mining, power, refinery, fertiliser, textiles, plastics processing, chemicals, construction and defence sectors. An engineering company, however, cannot cater to all these end users because of product and technology constraints. That said, ability to service several end-user segments is a positive in the assessment of market position, as diversified end-user profiles would help withstand the impact of a slowdown in one or two segments.

Distribution network and after-sales service

The geographical spread of end-user segments demands an efficient and effective distribution network. For OEM clients, timely supply of spare parts and after-sales service quality would be critical for future business. In the replacement segment too, reach is important as products that find shelf space are more likely to sell.

On the whole, a strong after-sales service network to provide spare parts, repair and maintain equipment, and offer technical assistance services is an important distinguishing factor in the engineering industry.

Operating efficiency

Technology employed

Technology is a crucial element in operations. By possessing a strong technology in a niche area, a company can dominate a segment or, at least, have a strong market position.

Historically, multinational subsidiaries have enjoyed access to high-technology products from their parents. There have been a number of indigenous technology developments and more companies have started focusing on research and development (R&D) for innovation, facilitating energy savings, and reducing costs.

Making smart technology available at optimum price points is also critical to drive market position, especially in segments where customers are price-sensitive.

While assessing the operating efficiency of a company, CRISIL Ratings places a lot of emphasis on its access to technology, R&D capability and new initiatives, and their bearing on cost-competitiveness and output quality.

Key cost drivers

High fixed costs in the engineering industry make cost control crucial for profitability. A company that continuously focuses on cost control would be better equipped to withstand an economic downturn.

Also, with raw materials comprising a larger share of costs, assessing the ability of players to pass-on raw material prices to customers is also critical in operating efficiency evaluation. Here, besides market position, the extent and intensity of competition in the particular industry/sub-sector is also a key determinant.

CRISIL Ratings evaluates the efforts taken for cost optimisation and the extent of cost control achieved in the past. The flexibility of the system in terms of facilitating future cost control is also analysed.

An engineering company has to contend with the following key cost heads:

- **Inputs:** Raw materials, mainly equipment components and steel sheets, account for 55-60% of operating income.

- Moreover, the average raw material inventory holding is over three months. Hence, improving the bottom line through cost-cutting initiatives such as vendor management systems and supply chain initiatives has an important bearing on the ratings.
- **Labour:** Rationalising the workforce by deploying it optimally across the facility or pruning excess manpower through voluntary retirement schemes would indicate the level of labour cost optimisation.
- **Indirect costs:** The industry has a high interest incidence given its large working capital requirement and sizeable debt.

Efficiency improvements

The other factors that determine operating efficiency are:

- Level of automation to improve productivity
- Flexibility in operations through techniques such as flexible manufacturing systems
- Pruning inefficient and low-priority capital expenditure plans
- Developing superior engineering capabilities and project execution skills through training and development and benchmarking exercises

Criteria for the construction industry

Background

The construction segment supports a large number of upstream and downstream industries and has strong linkages with the overall economy. Hence, it has a high economic multiplier effect. The Indian construction industry can be classified into three broad sub-groups:

Category	List of construction activities
Residential and commercial/industrial	Residential and commercial buildings and complexes such as houses, offices, hospitals, restaurants, shops and shopping complexes
Infrastructure	Roads, ports, bridges, flyovers, dams, power plants, telecommunication facilities, and oil and gas plants and refineries
Urban infrastructure	Municipal roads, water supply, sewerage and drainage, sanitation, and solid-waste management systems

The construction industry has many entities of various sizes and competencies. Other than a few large and medium-sized players, the majority are small contractors and their activities are restricted to constructing residential and commercial units.

Business risk

Market position

Area of expertise and business potential therein

It is undeniable that the physical infrastructure in India needs significant improvement. This includes roads, ports, energy, and housing, with each sector carrying a demand potential that would call for an expenditure of several billion

rupees. The timing and extent of activity in each sector would depend on the interplay of numerous factors. Using its knowledge and understanding of the economic environment, CRISIL Ratings continually attempts to identify segments of the construction industry that are likely to witness more activity than others. This view is coupled with the area of expertise of individual construction companies to assess their order book build-up in the long term. For near-term revenue visibility, the size of the current order book in relation to revenue is studied. Furthermore, it is important to look at the quality of order book in terms of stage of projects, as a skew towards projects in nascent stage or nearing completion may impact revenue over the medium term.

Diversity and dispersion of project portfolio

Construction companies that have a diversified project portfolio, both across sectors and geographies, have an edge over companies with a concentrated portfolio. Quality of order book in terms of counterparties, funding, approval status, and price escalation clauses will also determine timeliness of execution and payment. All other things remaining equal, a company with a diversified order book would be viewed more favourably from a credit perspective than one with a concentrated one, provided the former has adequate resources. This is because diversity and dispersion enable the company to better withstand unforeseen adverse developments in any project being implemented. However, domain expertise, environmental constraints, and the as yet nascent level of construction activity in the country could limit the extent of portfolio diversity achievable.

Operating efficiency

Track record and implementation expertise

Construction companies that have a strong track record of project implementation adhering to the required quality standards and without cost or time overrun have strong prospects of winning future business in their areas of expertise. This is because most construction projects are awarded through tenders, where experience in the sector is a prerequisite for bidding. Experience also enhances execution skills, which is why construction companies tend to operate in their respective areas of expertise. Some large players, however, have been able to establish project management expertise spanning a wide range of technical skills.

Cost structure and operating philosophy

Cost structure is an important determinant of operating efficiency. A high fixed cost structure will make it unviable to quote aggressively for projects until operating leverage sets in, and thereby affect the success ratio. An aggressive quote may not cover costs. Therefore, several companies operate extensively through subcontractors to increase the variable element of their cost structures. Thus, an optimum cost structure is critical for the long-term viability of a construction entity. While analysing operating efficiency, CRISIL Ratings considers the operating philosophy, cost structure, past track record in tenders, and reasons for losing tenders.

Knowledge of the local environment

Construction companies that are more aware about the environment they operate in are significantly better equipped to handle uncertainties and potential surprises that are a part of all construction projects. With increasing globalisation, most businesses have crossed national and regional boundaries. However, this process has been particularly slow in the construction industry, which has retained its predominantly local character in most markets. This is likely to continue over the medium term, given the importance of awareness of nuances of the local environment for a project to be successfully implemented. Consequently, all other things remaining equal, a player having knowledge of the local environment by virtue of experience of executing projects in the geography would have an edge over other players.

Working capital management

Construction companies have sizeable funds tied up in working capital. Thus, their ability to manage working capital is a critical parameter in evaluating their operating efficiency. CRISIL Ratings evaluates the working capital management of construction companies by analysing gross current assets, mobilisation advances received, among others.

Conclusion

To rate companies operating in the industrial sector, CRISIL Ratings evaluates their business, management and financial risk profiles. The key parameters considered for analysing business risk profile are market position and operating efficiency. CRISIL Ratings also considers the sector-specific factors that affect the market position or operating efficiency of the entities operating in the engineering and construction industries

About CRISIL Ratings Limited (A subsidiary of CRISIL Limited, an S&P Global Company)

CRISIL Ratings pioneered the concept of credit rating in India in 1987. With a tradition of independence, analytical rigour and innovation, we set the standards in the credit rating business. We rate the entire range of debt instruments, such as, bank loans, certificates of deposit, commercial paper, non-convertible / convertible / partially convertible bonds and debentures, perpetual bonds, bank hybrid capital instruments, asset-backed and mortgage-backed securities, partial guarantees and other structured debt instruments. We have rated over 33,000 large and mid-scale corporates and financial institutions. We have also instituted several innovations in India in the rating business, including rating municipal bonds, partially guaranteed instruments and infrastructure investment trusts (InvITs).

CRISIL Ratings Limited ("CRISIL Ratings") is a wholly-owned subsidiary of CRISIL Limited ("CRISIL"). CRISIL Ratings Limited is registered in India as a credit rating agency with the Securities and Exchange Board of India ("SEBI").

For more information, visit www.crisilratings.com

About CRISIL Limited

CRISIL is a leading, agile and innovative global analytics company driven by its mission of making markets function better.

It is India's foremost provider of ratings, data, research, analytics and solutions with a strong track record of growth, culture of innovation, and global footprint.

It has delivered independent opinions, actionable insights, and efficient solutions to over 100,000 customers through businesses that operate from India, the US, the UK, Argentina, Poland, China, Hong Kong, UAE and Singapore.

It is majority owned by S&P Global Inc, a leading provider of transparent and independent ratings, benchmarks, analytics and data to the capital and commodity markets worldwide.

For more information, visit www.crisil.com

Connect with us: [LINKEDIN](#) | [TWITTER](#) | [YOUTUBE](#) | [FACEBOOK](#) | [INSTAGRAM](#)

CRISIL Privacy Notice

CRISIL respects your privacy. We may use your personal information, such as your name, location, contact number and email id to fulfill your request, service your account and to provide you with additional information from CRISIL. For further information on CRISIL's privacy policy please visit www.crisil.com/privacy.