

Rating criteria for the steel industry

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Executive summary

The steel industry plays a significant role in the economic development of a country. It is cyclical, and prices are fairly volatile and influenced by many factors, including demand, raw material cost, worldwide production capacity, capacity utilisation, and improvement in manufacturing processes.

For rating steel companies, CRISIL evaluates their business, management, and financial risk profiles. The key parameters considered for analysing business risk profile are market position and operating efficiency. Market position covers market share, customer profile, product mix, demand pattern, and the level of competition in the industry. Analysis of operating efficiency involves the company's cost position. Financial risk profile of a steel manufacturer is evaluated on the basis of financial position and cash flow in the context of ability to withstand downturns.

Scope

While the broader criteria for manufacturing companies¹ is applicable to steel manufacturers, this article² details the industry-specific factors that impact their credit risk profiles.

Business Risk

Market position

The key factors that drive a company's market position are its market share and customer profile. Market share is related to a company's size and is an important determinant of its position in the industry. Large, well-diversified companies in the highly fragmented steel industry typically have greater ability to withstand external shocks, easier access to capital markets, and greater bargaining power with suppliers and customers. Consequently, a larger size tends to have a favourable impact on credit risk profile, although the benefits can be overshadowed by a weak capital structure or poor cost position.

A steel company's customer profile determines its business position. For instance, a client base that includes auto and auto ancillary companies is more stable than one that comprises traders, because sales in the former are generally governed by contracts, ensuring long-term demand stability. In some cases, prices are negotiated for a fixed period, reducing exposure to price fluctuations.

CRISIL believes a diversified client base is a positive factor, as a setback in a particular end-user segment will have lower impact on total sales than that for a company with high client concentration. Diversification may also be across geographies, and include export.

¹ The detailed criteria is on the CRISIL website under the "Criteria and Methodology" section – Rating Criteria for Manufacturing and Services Sector Companies and "CRISIL's approach to Financial Ratios"

² For accessing the previous published document on "Rating Criteria for the Steel Industry", kindly follow below mentioned link: https://www.crisil.com/content/dam/crisil/criteria_methodology/materials/archive/CRISIL-Ratings-criteria-steel-industry_2007.pdf

Product mix

In terms of product mix, CRISIL examines the product range and the extent of value addition. A wide product range enables a company to cater to a larger clientele. The product range may cover several grades and product types (the latter, essentially, entails flat and long products). In the Indian context, it is a prudent strategy for steel companies to adopt a judicious mix of flat and long products, because prices of long products are generally more stable than those of flat products, though the latter are typically more profitable.

The extent of value addition is another crucial differentiating factor for steel companies. Value-added products offer higher realisations, and hence, boost profitability. The cost of adding value is generally much lower than the incremental realisation that such products offer.

In the flat segment, value-added steel products include cold-rolled, colour-coated, galvanised, and tin-plated. In the long product segment, value addition involves producing more wires, wire ropes, and rails. Higher profitability and stable cash flow are significant benefits of selling a larger quantum of value-added products.

There are large number of small and mid-sized steel companies, many of whom are not primary producers of steel but engaged in re-rolling of flat and long products. These companies cater to the customized requirements of their end users and operate on fixed conversion margins.

Demand-supply dynamics

In general, steel consumption is highly cyclical, with capital goods, consumer durables, and construction accounting for a significant proportion of the end-user base. Yet, demand for certain products tends to be more stable—for instance, the recession-resistant consumer packaging industry is the primary market for tin-mill products, leading to stable demand.

The demand pattern for flat and long products depends on the stage of development the economy is in. Typically, long products are used in infrastructure. Hence, their consumption is higher in a developing country. On the other hand, flats have higher consumption in developed economies as they are primarily used to manufacture consumer goods, automobiles, and the like.

Rationalising capacity between flat and long products is important. During downturns in the steel cycle, a company's ability to cut production and yet remain cost-competitive is a key factor determining long-term competitive advantage.

Level of competition

The level of competition that a steel producer has to contend with is critical in assessing its credit quality. The intensity of competition is influenced by the demand-supply balance in the company's product category and the regions it operates in. Local freight economics also has a critical bearing on ability to stave off competition.

Operating efficiency

Steel companies have little control over end prices. Therefore, the key to success is keeping cost low. The key cost determinants are technology, manufacturing method, operational integration, and operating efficiency. As the steel industry is capital-intensive and has a fairly high fixed-cost base, a company can also control cost by maximising capacity utilisation. Some of these parameters are discussed below.

Technology

State-of-the-art technology can help a company achieve a competitive cost position. But, for a particular choice of technology, factors such as experience of the management team, workforce training, and operating and maintenance practices influence operating efficiency.

Manufacturing method

Steel can be manufactured through the integrated route or through mini-mills. The integrated route uses iron ore, coke, and limestone, while mini-mills produce steel by melting scrap or scrap substitutes (such as sponge iron) in an electric arc furnace (EAF). Some plants combine the advantages of both routes using a mini-blast furnace (MBF) to make iron and an EAF to make steel.

In India, EAF is the most common route for producing steel. While long products are typically produced in small- to medium-sized mills, flat products are mostly manufactured in large integrated mills.

Operational integration

The greater the extent of integration in a steel company's operations, the lower its cost. Coal is a significant cost component in steel manufacturing. Companies with captive iron-ore and coal sources have a significant cost advantage over non-integrated players. In India, however, the lack of metallurgy-grade coal is a significant handicap. Some companies overcome this hurdle by using a mix of local and imported coal, while others import their entire coal requirement.

Similarly, EAF-based producers must have access to a low-cost supply of scrap substitutes, such as hot briquetted iron or direct reduced iron (sponge iron), as both the cost and availability of scrap are concerns in India. These producers must also have access to captive power because of the energy-intensive manufacturing process. The plant's distance from its key raw material sources is another important consideration that determines the landed cost of raw material, and eventually, the final cost of manufacturing.

Operational parameters

Some key parameters that CRISIL considers while assessing a company's operating efficiency are the energy consumption level in the blast furnace and its productivity, coke rate, labour productivity, and percentage of steel produced through the continuous casting technology. CRISIL also measures the production yield, which is the ratio of the quantity of finished steel shipments to the total raw steel produced.

Capital investments

Another key issue is a company's capital requirement, either to expand capacity or upgrade facilities. The steel industry requires regular, large capital expenditure (capex) to maintain modern and efficient facilities.

In some developing countries, such as India, mills need modernisation, which is costly, to compete effectively in the global marketplace. CRISIL examines the construction risks, technological challenges, and other constraints on these companies' financial flexibility as they pursue their capex programmes.

A strong financial risk profile is important to a steel company's credit strength for two main reasons. Steel producers with a weak balance sheet are less likely to withstand business downturns and maintain their investment programmes, thereby losing out on efficiency. Secondly, players with a strong financial risk profile will be able to acquire weaker competitors during a downturn.

Financial Risk

For the analysis of the financial risk profile of a steel company, CRISIL follows the standard criteria used for all manufacturing companies. This criterion is presented in detail in our publications 'Rating Criteria for Manufacturing and Services Sector Companies' and 'CRISIL's Approach to Financial Ratios'.

Management Risk

For the analysis of the management risk profile of a steel company, CRISIL follows the standard criteria used for all manufacturing companies. This criterion is presented in detail in our publication 'Rating Criteria for Manufacturing and Services Sector Companies'.

Conclusion

CRISIL believes the key success factors for steel companies are:

- Diversity in client base
- Globally competitive cost structure
- Presence of captive power plant, and coal and iron mines
- Share of value-added products in sales

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