Rating Methodology - Cement Industry

[Issued in May 2022]

Background:

India is the second-largest cement producer after China. India is also the second-largest cement consumer across the globe. The cement industry, part of the manufacturing sector, plays a pivotal role in the infrastructure development of the country. The industry growth rate is positively correlated with the GDP growth rate of the country. The industry has a total installed capacity of around 540 million metric tonnes (MMT) as of March 31, 2021. The industry is dominated by large, organized players with minimal fragmentation and around the top 10 players command 65% of the capacity share in the cement industry as of March 31, 2021. The industry is highly cyclical and being a low-value, bulky commodity involves large freight components making imports unviable and the industry is largely insulated against global demand-supply cycles and volatility in international prices, unlike other commodities.

Rating methodology:

CARE Ratings has a detailed methodology for a rating of companies belonging to the manufacturing sector. CARE Ratings' rating process begins with an evaluation of the economy/industry in which the company operates, followed by an assessment of business risk factors specific to the company. This is followed by an assessment of financial and project-related risk factors as well as the quality of the management. This methodology is followed while analyzing all industries that come under the purview of the manufacturing sector. However, considering the size and diversity of the manufacturing sector, CARE Ratings has developed methodologies specific to various industries within the sector. These methodologies attempt to point out factors, over and above those mentioned in the broad 'manufacturing sector methodology'. Following are such additional factors, along with analytical implications, considered by CARE Ratings while arriving at ratings in the cement industry.

1. Industry Risk:

Regional demand-supply dynamics and cyclical nature of the industry:

Cement, being a low-value, bulky commodity, is unviable to transport across the country due to high logistic costs. Therefore, the domestic cement industry is divided into five geographical regions, viz., North, South, East, West and Central, each region characterized by its own –demand-supply dynamics. The industry is influenced by regional rather than national demand-supply dynamics. Likewise, the industry is relatively insulated from global demand-supply and pricing dynamics with negligible imports and moderate exports. Therefore, while rating an entity, CARE Ratings focuses on assessing the likely demand-supply scenario in the region in which the entity operates. Further, due consideration is also given to the degree of consolidation that exists in the region(s), as that determines the extent of supply rationalization and the volatility in cement prices in that region.

The Indian cement industry is exposed to cyclicality in end-user industries. This is accentuated by the bunching of capacity additions leading to uneven capacity additions which drives demand-supply imbalances. The consequent periods of unutilized capacities and depressed realizations may weaken the financial profile of players in that region. Hence, CARE Ratings factors into its analysis of the expected capacity additions, which could lead to demand-supply imbalances in the regions of operations of the rated entity. The industry is also affected by seasonality; demand is generally low during the monsoon season and peaks during the festival period and end of the financial year (March to April) as government expenditure rises.

Government policies:

The cement industry is exposed to risks related to regulations governing the land acquisition, mining rights and environmental clearances. The auction of limestone and coal mines is governed by the respective states. Also, the Government policies and initiatives giving thrust to housing and infrastructure development have a direct impact on the cement demand and give a boost to the sector.

The industry is susceptible to governmental actions like ban on usage of pet coke, price freeze pact, etc.

2. Business & Operations Risk:

Market position & size:

Size is an important determinant of a company's market position, its revenue-generating capability and its resilience to shocks, such as sudden shifts in demand or rapid cost increases. The size of operations for cement companies is measured in terms of their capacity and sales volumes. Large companies generally have more flexibility to allocate capacity and absorb expenses under different demand and cost scenarios and are viewed favourably by CARE Ratings.

A company's market position is a meaningful indicator of its resilience to economic downturns and intensifying competition. Entities which have a dominant market position and are having capacities which are geographically diversified are usually better placed to cope with the

regional demand-supply volatility & are considered favourably by CARE.

Operating efficiency:

Operating margin provides indications of a company's competitive strength and cost efficiency as well as management effectiveness. One of the key metrics to measure a cement entity's operational efficiency is operating profits (PBILDT) per tonne of cement also known as EBITDA per tonne. The value of this parameter is dependent on the net cement realization and the cost structure of an entity. The long-term competitiveness of players can be determined by their production, logistics and power costs. Large cement plants enjoy better economies of scale concerning the operational costs and overheads. Further, due to the high fixed costs involved, an assessment of capacity utilization vis-à-vis the peers in the region is also done and any reasons for over/under-utilization are analyzed. Vintage of cement plants is also an important aspect which impacts the costs.

CARE Ratings assesses the following factors to determine an entity's cost structure:

- **Locational advantage (proximity to raw material sources, distance from end-markets):**

In most cases, cement production plants are located near limestone mines (raw material source) which are generally far away from the consumption centres. All the players have increasingly established split grinding facilities closer to the end market to optimise their freight costs. Companies having split location plants whereby clinkerization plants are near limestone reserves and grinding units are in proximity to end-user market are looked upon more favourably by CARE Ratings. By adopting this strategy, companies can increase their market reach and also optimise their freight costs as clinker can be transported in open wagons/trucks.

CARE Ratings also examines the long-term mining rights that the company possesses with respect to the adequacy of the reserves for the company's current and future operations. Apart from royalty and lease rent, the cost of limestone is also dependent upon its availability at surface level, quality and transport charges to the plant location.

- **Freight cost:**

Transportation of cement over long distances is expensive, and freight cost which accounts for about 20%-25% of the operating cost are among the largest expenses for a cement company. The average market radius (lead distance) to which the company caters is analysed. Cement can be transported through rail, road or sea routes. Rail transport is cheaper than road transport if cement is transported over long distances and in bulk. Also, companies benefit if they have their wagons and railway sidings. Road transport is advantageous while transporting cement over short distances as it does not involve secondary freight and handling cost. Road transport accounts for a major share of the total cement movement in the country. CARE Ratings analyzes the transport mode used by the companies for dispatching cement and favourably views companies using a judicious mix of the same to reduce the freight cost.

- **Power & fuel cost:**

In addition to freight costs, power and fuel cost is one of the key cost components accounting for about 20%-25% of the operating cost. The cost of captive power can be much lower than grid power if such a plant is working on low cost and easily available fuels. Coal and Pet Coke are the most common fuels used for kiln burning. Companies with established coal linkages are viewed favourably. CARE Ratings assesses the various means of coal (imports, domestic coal, e-auction) and petcoke procurement to analyse the adequacy of the fuel supply arrangements for a rated entity. Cement companies with firm domestic coal linkages are in a better position compared to companies whose reliance on imports and e-auctions is more. Apart from cost, an uninterrupted supply of quality power is also essential for better-operating efficiency. To optimise the power availability and its cost, companies have resorted to fulfilling their captive requirements through the installation of solar power plants, captive thermal power plants and waste heat recovery plants. The overall high share of captive power generation with overall optimization of the power cost / MT is viewed favourably by CARE Ratings as those players have an edge over others in terms of cost and availability of power.

Power cost / MT and Fuel cost/MT are analyzed for the same. Furthermore, power consumption norms like kWh/MT of cement are also analyzed for better understanding.

- **Plant vintage and capacity utilisation:**

On an overall operating cost basis, new cement plants have an edge over the older plants. While an older plant will have the advantage of lower capital cost, this benefit may however be offset by higher power and fuel costs per MT, as well as higher repair and maintenance expenses. The capacity utilization of an entity in comparison with the peers in its region of operations is another important factor which is analyzed by CARE given the high fixed cost nature of the industry. Higher capacity utilization is looked at favorably by CARE Ratings as this results in a better cost structure.

- **Product mix:**

CARE Ratings analyses the product mix of rated entities which would comprise Ordinary Portland Cement (OPC) and blended cement like Portland Pozzolana Cement (PPC), Portland Slag Cement (PSC) & Portland Blast Furnace Slag Cement (PBFSC). This analysis is done in the context of a trade-nontrade mix of the company which has a bearing on the product mix of a company. Blended cement like PPC, PSC & PBFSC enjoy the majority of the market share today as they have more comprehensive strength, are more environment friendly, have wider applications and have lower production costs as the limestone requirement is low for blended cement and this also results in cost savings concerning freight and power. Further, PPC allows a manufacturer to produce more cement using the same amount of limestone and clinker capacities. In this context, it is also important to check the proximity of the entity's plants to the supply of fly ash and slag as these are integral constituents. Therefore, CARE analyses the product mix of rated entities and its overall impact on the profitability of the company besides factoring in its efforts to shift the product mix in favour of blended cement.

Key metrics:

CARE Ratings uses the below metrics to analyse the business risk associated with cement sector players.

- Total cost per tonne of cement
- Freight cost per tonne of cement
- Power & fuel cost per tonne of cement
- PBILDT per tonne of cement sold across economic cycles

3. **Project risk:**

Cement players have to periodically increase their capacities to maintain or increase their market shares and for geographical diversification as well. This may be achieved through debottlenecking, brownfield, or greenfield expansions or by doing acquisitions. CARE Ratings analyses these plans of the rated companies based on the size of expansion about the companies' current capacity or net worth and funding pattern of the expansion and its impact on the debt profile of the company in the projected period. The impact of project risk on credit rating depends on a study of the below factors which may vary considerably from case to case.

- **Timing of expansion vis-a-vis demand-supply scenario:**

The demand-supply situation, although important for any cyclical commodity-based industry, assumes more importance for Cement due to the capital-intensive nature and long gestation period for setting up a new plant. In case of a downturn, companies who have project-related debt repayment obligations could find it difficult to service debt as both estimated cash accruals and fund-raising ability deteriorate. The companies that face a downturn immediately post-expansion or during an expansion are likely to be more at risk. CARE believes that the timing and size of the expanded capacity coming on stream is critical to the success of a cement manufacturer. CARE Ratings also assesses the risks involved in implementation which include aspects like the achievement of financial closure, the status of regulatory approvals, agreements entered with equipment suppliers, track record of the company in executing similar projects, project progress vis-à-vis scheduled implementation, cost or time over-runs, project cost vis-à-vis industry benchmarks, etc. While examining expansion plans, CARE Ratings assesses the demand-supply dynamics of the region in which the new capacity is being planned.

- **Land acquisition and clearances:**

The Indian cement industry is exposed to the risks of changes in regulations relating to land acquisition, renewal or grant of mining rights and environmental clearances. The risks are more predominant for greenfield projects; however, brownfield projects or existing operations of cement companies are also subject to these risks in some way. Since most of the greenfield projects are being set up under the assumption of the availability of limestone reserves and coal as captive sources, entities which proceed with projects without tying up the necessary captive raw materials are considered riskier.

4. **Financial risk:**

CARE Ratings follows its standard ratio analysis methodology for manufacturing companies as per CARE Ratings' criteria on Financial Ratios-Nonfinancial Sector (Refer to Financial Ratios – Nonfinancial Sector for this section on our website www.careratings.com). An entity with a weak financial profile as reflected in its weak liquidity, high leverage and low-interest coverage may likely outweigh strong business and sector characteristics in assessing ratings. To assess the financial risk of companies in the cement sector apart from the following the general ratios, some sector-specific points that are looked into are as follows:

- **Profitability:**

The profitability of the companies varies significantly along the cycle as cement is a cyclical industry. Hence, entities having efficient cost structures compared to peers can generally be expected to better withstand the pressures on profitability arising from demand-supply cycles. The key ratio assessed here is operating margin (PBILDT margins) as the stability in operating profitability is an indicator of a company's ability to manage its revenue and costs through economic cycles. PBILDT/MT is also calculated to capture how efficiently an entity converts one unit mass of cement produced into operating profitability. This, when used in conjunction with PBILDT margin (which is purely derived from financial statements and does not use operational data), facilitates further insight into the operational efficiencies of a company.

- **Leverage and Coverage:**

Leverage ratios provide an important indication of a company's financial flexibility and long-term viability in the analysis of a cement company due to the sector's high capital intensity. These metrics can also provide insight into management's philosophy regarding the company's capital structure and how much financial risk an entity is willing to undertake. The key ratios which are analysed by CARE Ratings to evaluate an entity's financial health include overall gearing (gross and even net of cash and cash equivalents), total debt to PBILDT (gross and net) and interest and debt service coverage indicators i.e PBILDT/interest and DSCR. Low leverage and stronger coverage indicators impart greater financial flexibility to tide over economic downturns and hence are considered more favourably by CARE Ratings.

- **Liquidity:**

CARE Ratings, while evaluating the liquidity of a cement entity, analyses the available cash balances, the ability of an entity to generate consistent levels of internal accruals, debt repayment obligations, and unutilised working capital limits (by drawing a comparison between working capital utilized against lower of the sanctioned limits or drawing power) & support from the parent/group. Liquidity measures an entity's ability to meet its obligations in the near-term (typically the next one year) from its cash accruals and any external sources available to it. An entity's obligations may be in the form of debt servicing, working capital requirements, capital expenditure plans, investment plans, dividend payments, share buybacks etc. Being a cyclical industry, companies in this sector usually maintain cash balances (including liquid short-term investments as well as cash) that are far more than their operating needs to tide over downcycles/competitive pressures. Hence, the underlying policy of the issuers of maintaining high cash balances and assessing their consistent track record in maintaining such liquidity is an important credit consideration.

Conclusion:

The rating determination is a matter of experienced and holistic judgment, based on the relevant quantitative and qualitative factors affecting the credit quality of the issuer.

CARE Ratings analyzes each of the above factors and their linkages to arrive at the overall assessment of credit quality by taking into account the industry's cyclicality. Credit rating is a futuristic assessment, and the rating outcome is ultimately an assessment of the fundamentals and the probabilities of change in the fundamentals in future. To arrive at the rating outcome, CARE Ratings also considers future estimation of the company's financials based on past trends and future strategies, competition, industry trends, economic conditions and other considerations.

[For previous version please refer 'Rating Methodology - Cement Industry' issued in May 2020**]**

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