

Rating Methodology by Sector

Cement

Cement companies are divided into two types: those that specialize in cement as their main business and those that have other businesses as their main business. Since the manufacturers who are engaged in businesses other than cement as their main business are in many cases incidentally engaged in the cement business in order to process and utilize by-products and waste from their main business, their creditworthiness depends on the status of their main business. For this reason, this rating methodology is applied to specialized cement manufacturers whose main business is the cement business.

1. Business base

Cement industry is an essential basic materials industry for the construction of buildings, dams, tunnels, bridges, and various other social infrastructures. However, domestic demand for cement in Japan has long been in decline. The demand may rise temporarily in the future, but in the long run, the demand will highly likely fall further due to a structural problem. Each company in the cement industry is always required to establish a production system and cost structure to meet the shrinking domestic demand.

(1) Characteristics of the industry

(i) Market overview

The domestic demand for cement had been increasing along with the rapid economic growth in Japan; however, after 1970s, it repeatedly increased and decreased in alignment with trends of construction demand. After having reached a peak in the final phase of the bubble economy in 1990, the demand for cement has since been in decline for a long time due to the economic downturn and reduction in public works, etc. After entering into 2010s, the rate of decrease declined; however, there are a number of negative factors for the future demands. Due to a shortage of manpower, construction capability has nearly reached its limit; thereby, it is difficult to increase the amount of construction work. Further to this, considering the diminishing need for strengthening infrastructure and construction works due to decreasing population, the declining demand is said to be a structural problem of the industry. Nevertheless, considering the fact that cement is essential for the maintenance of domestic infrastructure and the living and working environments and given the absence of alternative materials, a certain level of demand can be maintained.

Cement is mainly used in construction projects, and demand is influenced by trends in public and private investments. Companies dealing cement tend to deal other materials such as the aggregate and limestone, building materials, etc., but demand for these products is also principally dependent on investment in construction. Estimates of demand for cement over the medium and long terms are based on forecasts of future investment in construction, which is then applied to the expected income of each company. Because demand

trends have a significant effect on the production and sales strategies of each company, these strategies is also necessary to be assessed carefully.

As for overseas, cement companies have mainly entered into North America and Asia. JCR estimates the future direction of demand for cement by considering factors such as trends in construction investment, demographic movements or infrastructure development in each country. Even though the future demand is likely to grow in these areas, it is also necessary to confirm that the target areas are not experiencing oversupply and excessive competition.

(ii) Competitive situation

The cement industry is a typical process industry, and companies in the industry will likely fall into overproduction to increase utilization ratio of the facilities. In addition, they will likely face price competitions once the balance of supply and demand breaks as products are difficult to differentiate. The industry in Japan was reorganized in the 1990s and it became an oligopolistic market comprised by a few large companies. However, a reduction in production capacity progressed relatively at a slow pace against the subsequent decline in demand. The industry still has characteristics of easily falling into price competitions. Each company in the cement industry is aiming to sell products at fair prices to secure enough cash to properly maintain and renew facilities, and is raising prices when it sees an opportunity.

(iii) Cost structure

Because the cement industry is a process industry, the plant utilization ratio is one of the essential indicators in the light of assessing the profitability. When demand for cement decreases, companies close their plants or stop their kilns to prevent a decline in plant utilization ratio. Together with promoting the cost cut, by using waste and by-products as raw materials and fuel for cement, the processing fees for these materials and fuel have also become one of the large sources of revenue for cement companies.

Cement manufacturing costs are likely to be affected by coal prices used as fuel. Coal prices have generally been high from the past due to rising demand in emerging economies and geopolitical risks. Prices of cement, in contrast, have remained low, partly because of sustained levels of excess competition. Cement manufacturers have sought to improve or maintain earnings capacity largely through cost cutting and the waste treatment business. Downward pressure on cement prices and the increasingly volatile price of coal constitute risk factors for cement companies. JCR focuses on whether a reasonable sales price of cement can be realized.

In recent years, companies have been introducing energy-saving equipment and expanding the use of alternative energy sources such as waste and by-products in order to become carbon neutral, and these efforts have led to improved production efficiency. At the same time, they are also developing new technologies and conducting demonstration tests to reduce CO₂ emissions, which may lead to an increase in costs.

(2) Important factors in market position and competitiveness

(i) Market position and selling system

Sales volume is an important determinant of the size of earnings of each company. Since the reorganization of the industry in the 1990s, however, market shares have not changed significantly. With cement a commodity, likelihood of major changes in the market shares of the leading manufacturers is low unless another industry shakeup substantially alters the production capacity of each company.

In selling cement, ready-mixed concrete companies, which are generally small- and medium-sized enterprises, exist as intermediaries between manufacturers and general construction companies, the end-users, and this complex distribution route is a factor holding down the manufacturers' price controlling power. JCR sees that the system will remain unchanged.

(ii) Adjusting supply capacity

Amid the continuous decline in the demand for cement, reductions in production costs are necessary by reducing supply capacity with plant closures and kiln shutdowns. In view of sales areas and disaster risks, however, the number of plants that a manufacturer can close is limited. Considering also the efficiency of distribution channels and logistics, plant closures may cause problems that attenuate the effect of cost reduction. Further, some cement plants also support local economy and act as waste treatment plants for their communities, so they cannot easily be shut down. If, in fact, production capacity is reduced, the likelihood of its contribution to earnings will be determined and scope for further reductions in the supply capacity of each company will be examined. JCR sees that a movement of forming alliances through subcontracting, integration of production and other means is also important.

(iii) Room for rationalization

Because the domestic cement market is not expected to grow, ongoing cost reduction is essential for maintaining and improving earnings capacity. It is important for cement companies to cut the costs of production, and also of distribution by streamlining service stations or efficient use of transportation facilities such as tankers. It is also essential for them to make use of waste materials not only for reducing the cost of raw materials and fuel, but also for raising profit from securing processing fees by utilizing waste materials and byproducts. JCR will assess their capacity to process waste and byproducts as well as their ability to collect waste and the degree of contributions from these capabilities to profits.

(iv) International business development

With no potential seen in the future of the domestic cement market, some cement manufacturers have been expanding their market abroad. Besides the Asian region, which offers the prospect of future growth, the United States also represents a market with possibilities since its population is rising. In these markets, however, competition is fierce, as the local manufacturers and major cement manufacturers already exist. In addition to a trend in the market in which a company operates and degree of revenue contribution, JCR will also check a future overseas business policy.

JCR will analyze the types of overseas businesses operated by Japanese cement companies; for instance,

whether they are establishing subsidiaries or only investing in other companies, and whether they are investing in cement manufacturing or also in downstream industries, such as the ready-mixed concrete business.

(v) Earnings strength in other businesses

Companies specializing in manufacturing cement are also entering non-cement business areas including electronic components and real estate other than cement related businesses such as the collection and sale of limestone and aggregate, the production and sale of building materials. While these businesses are not sufficient in themselves to offset the fall in earnings capacity of the cement business, the development is appropriate if it helps stabilize revenue in the future. Meanwhile, from viewpoint of asset efficiency and reduction in interest-bearing debt, businesses with low degree of profit contribution, inefficient assets and an absence of synergies must be sold or liquidated. Whether these businesses are contributing to overall earnings strength, asset efficiency, and financial strength will be determined.

2. Financial base

(1) Earnings strength

Taking into account the long-term domestic demand for cement, growth potential of domestic business is limited. Since volumes will not increase, fixed cost burden will increase unless unit sales prices are raised. Therefore, in addition to price pass-on, it will be essential to improve production efficiency and reduce manufacturing costs. To confirm these conditions, JCR focuses on the gross margin. In addition to the above, improvement in profitability, including rationalization of indirect departments, will also be important, so the operating margin will also be checked. Furthermore, as a process industry, the size of fixed assets is large, and there is also a strong possibility that investment will increase in the future due to aging and environmental measures. It is also likely that a company will make investments to strengthen its overseas business for its growth strategy. Assets are likely to increase due to investments, and profits are likely to decline due to the increased depreciation burden. It will be important to confirm the company's investment stance with an awareness of asset efficiency, so JCR will also confirm the ROA trends.

Key financial indicators:

- Gross margin
- Operating margin
- Return on assets

(2) Cash flow generation capability

With high depreciation expenses, cement manufacturers maintain a certain capacity to generate cash even with falling earnings capacity. However, investments in maintaining and renewing production facilities are heavy; therefore, investment in streamlining and labor saving is essential. Large investment may be needed to strengthen overseas markets or businesses other than cement. Sustained financial improvement is needed in light of the future investment risk, and free cash flow that could reduce interest-bearing debt must also be

maintained. This requires some capacity to generate cash flow, and JCR always keeps a close eye on the interest-bearing debt level and the balance with cash flow in addition to transitions in cash flow level.

Key financial indicators:

- EBITDA
- Free cash flow
- Ratio of interest-bearing debt to EBITDA

(3) Safety

In addition to the heavy burden of capital expenditure for maintaining and renewing facilities due to the process industry, as they strengthen their overseas and non-cement businesses, cement manufacturers carry a commensurable amount of interest-bearing debt. In addition to such investments, they will need to make capital investments to become carbon neutral, which may further increase their interest-bearing debts. Furthermore, financial durability against extraordinary losses such as impairment losses will be important, considering the risks of new businesses, overseas businesses, and domestic business restructuring. JCR confirms whether they are able to maintain the financial structure essential for smooth financing and whether they have the scale of shareholders' equity to serve as a risk buffer.

Key financial indicators:

- Shareholders' equity
- Debt equity ratio
- Equity ratio

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