The cement industry at a turning point

Chemicals & Agriculture December 2015
Like industries from aviation to financial services, the cement business has been on a “big is beautiful” march over the past five decades. A rush of expansions, mergers, acquisitions, and consolidations has reshaped the industry. The model has not necessarily created value for companies or their investors. In pursuit of growth, they often overpaid for acquisitions, constrained their balance sheets, and were insufficiently disciplined in capital and operational expenditures. Consequently, the sector has an erratic value-creation history. Recently, however, demand growth has shifted to emerging regions where urbanization has been creating opportunities for regional companies to shine. A promising outcome of these developments has been the emergence of value-creating regional champions.

As for the multiregionals, they have gotten back into the M&A game. Recent consolidations among top players raise important questions. Will value creation continue to be elusive in this new round of consolidation? Can the industry’s largest competitors learn from the experience of the regional companies in creating value through growth? Can big be beautiful beyond the local level? And if it can, what can be learned from successful companies?

Valued at approximately $450 billion, the cement industry has shown a mixed financial performance over the past 30 years. Exhibit 1 looks at the industry through three different lenses: total return to shareholders (TRS), return on invested capital (ROIC), and economic profit and industry valuation. The picture that emerges is of a business surprisingly less cyclical than often believed and in which most companies do not deliver returns above the cost of capital.

With the exception of the crisis years of 2008 and 2009, the cement industry has shown strong cumulative returns, as expressed in TRS. Sector performance has been partly cyclical, with the 5-year TRS compound annual growth rate (CAGR) oscillating between 4 and 33 percent at the extremes. However, for 19 of the past 25 years, the oscillation was less volatile, ranging from

Exhibit 1  Overview of cement-industry performance.

Cement-industry index
Excluding goodwill
Including goodwill
TRS CAGR

1Cement-industry synthetic index composed of 74 cement companies globally.
2Compound annual growth rate.
Source: S&P Capital IQ
–5 percent to +10 percent; over the whole period, the sector beat the MSCI market index, with an average TRS CAGR of 11 percent versus 9 percent.

In many industries, TRS performance as a measure of performance is closely linked to ROIC and generation of economic profit. In the cement industry, however, this link is weak. The industry’s record of value creation is spotty, with ROIC levels roughly equal to the cost of capital, at around 9 percent.

Behind the lackluster ROIC, two drivers stand out: high goodwill (seen in the low tangible capital ratio) and inadequate capital efficiency. Call it bad timing. The companies have pursued the majority of deals during periods when valuations were high, which had a negative impact on balance sheets and, eventually, economic profit. As a consequence, after a short phase of high returns during the economic boom before the financial crisis, industry ROIC after 2009 has again fallen below the cost of capital.

Despite the ROIC declines, industry valuation (enterprise value compared with invested capital) has remained stable. This is a result of capital-market expectations of significant performance improvement for the industry, as reflected in significantly increased multiples. To justify those valuations, the industry generally and large multiregional players in particular must find a path back toward sustainable value creation or risk punishing rounds of declining valuations.

The effects of the overall weak value creation can be seen by looking at the very steep concentration of economic profit (Exhibit 2). The highest-performing cement companies (the top quintile) capture almost the full economic profit of

---

**Exhibit 2**

**A view of the industry by economic profit, 2010–14.**

<table>
<thead>
<tr>
<th>Quintile by EP</th>
<th>Revenues, $ billion</th>
<th>NOPLAT margins, %</th>
<th>Turns, ( ^1 ) times</th>
<th>Tangible capital ratio, ( ^2 ) %</th>
<th>Economic profit, $ billion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top quintile by EP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1 Top quintile by EP</td>
<td>21</td>
<td>25</td>
<td>1.0</td>
<td>97</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Middle quintiles by EP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2 Middle quintiles by EP</td>
<td>16</td>
<td>15</td>
<td>1.0</td>
<td>93</td>
<td>0.6</td>
</tr>
<tr>
<td>Q3 Middle quintiles by EP</td>
<td>19</td>
<td>9</td>
<td>1.3</td>
<td>86</td>
<td>0</td>
</tr>
<tr>
<td>Q4 Middle quintiles by EP</td>
<td>27</td>
<td>8</td>
<td>0.8</td>
<td>94</td>
<td>–1.2</td>
</tr>
<tr>
<td><strong>Bottom quintile by EP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5 Bottom quintile by EP</td>
<td>133</td>
<td>6</td>
<td>0.9</td>
<td>67</td>
<td>–11.4</td>
</tr>
</tbody>
</table>

\(^1\) Defined as revenue/invested capital excluding goodwill.
\(^2\) Defined as invested capital excluding goodwill/invested capital including goodwill.

Source: McKinsey analysis.
The cement industry at a turning point: A path toward value creation

The industry, whereas the next 60 percent of companies (quintiles 2 to 4) create returns just above or below the cost of capital. Significantly, top-quintile companies are almost exclusively composed of leading regional companies (“regional champions”). On the opposite end, the bottom quintile includes all five large multiregional players that have underperformed in terms of value creation by more than $50 billion in the past five years.

While industries often see high concentrations of economic profit, a situation in which 20 percent of the companies capture all of it is unusual. With multiples as high as they are, improvement on profitability has become an urgent need. The industry must identify the drivers of the strong performance of regionals and understand how the multiregionals can learn from their experience.

Regional champions: A dominant force
Since the early 2000s, as emerging regional economies have become more important to world markets, a new type of cement player has come to prominence in Africa, Asia, and Latin America: the regional champion. These companies drew their original strength from a robust footprint in one country; they were then able quickly to expand to capture leading positions regionally.

Performance of regional champions has been very different from that of the multiregional companies. The regional champions attained ROIC levels twice as high as the multiregionals, whose returns were below investor expectations from 2010 to 2014 (Exhibit 3). The regionals, on the other hand, were able to translate better operating performance into a significantly higher TRS CAGR of 12 percent (versus 2 percent for multiregionals). The performance difference has a lot to do with market positioning and size, but the multiregionals can certainly take some pages from the strategy books of their smaller competitors in terms of revenue growth, capital efficiency, and operational performance.

Exhibit 3 Performance breakdown of selected regional champions and multiregionals.

<table>
<thead>
<tr>
<th>Selected peers</th>
<th>Revenues, $ million</th>
<th>NOPLAT margin, %</th>
<th>Turns, 1 times</th>
<th>Tangible capital ratio, 2 %</th>
<th>Economic profit, $ million</th>
<th>Revenue growth (2010–14), %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional champions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>3,487</td>
<td>21.9</td>
<td>1</td>
<td>0.93</td>
<td>243</td>
<td>11</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Multiregional champions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>17,182</td>
<td>7</td>
<td>1.04</td>
<td>0.64</td>
<td>-1,236</td>
<td>-3</td>
</tr>
<tr>
<td>F</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Defined as revenue/invested capital excluding goodwill.
2Defined as invested capital excluding goodwill/invested capital including goodwill.
Source: McKinsey analysis
This performance difference is not the result of one factor but of a combination of revenue growth and capital efficiency.

Revenue growth
Between 2010 and 2014, regional champions achieved a CAGR of 12 percent in revenue growth, almost entirely organically. Multiregional players, on the other hand, showed negative growth of about 3 percent each year. One obvious cause of the discrepancy was the widespread portfolio holdings of the larger companies, which gave them market exposure to everything from low or declining growth in mature countries to specific market issues in emerging countries. Another likely reason for multiregionals’ underperformance was pressure to reduce debt following the economic crisis. This constrained their ability to spend aggressively and also resulted in divestment of noncore businesses. The divestitures resulted in year-on-year sales declines of over 1 percent for most multiregionals.

Capital efficiency
Multiregional and regional players are roughly similar in managing operating capital, as reflected in the ratio of their invested capital to sales. Relative to the regionals, however, multiregionals typically have significantly higher capital invested in goodwill and intangible assets—premiums paid for expansion through acquisition. These investments were made at peak prices and have not paid off, a common story in cement-industry M&A. Multiregionals also tend to overspend on new cement-plant construction. Coming in over budget and behind schedule means that these projects must thereafter struggle to provide decent returns.

Managing operating expenditures
Margins for regional players have long been better than those of multiregional players, and the gap has widened in the postcrisis years. Since 2002, after-tax operating margins have increased for the regional companies by around 350 basis points (bp), to 19 percent. The multiregionals, meanwhile, experienced a decline of 250 bp, with margins now at around 8 percent. The difference in profitability is explained both by different portfolios and better cost management. Our research suggests that margins in emerging markets—Asia-Pacific, the Middle East and Africa, and Latin America—are higher than in North America and Europe. Given their greater presence overall in developed markets, margins for multiregional companies are lower.

Reshaping the industry: Four strategic levers to create value
We believe that large multiregional cement companies can turn the performance picture around and create sustainable value by making considered moves in four strategic areas: actively rebalancing to improve portfolio attractiveness, improving M&A engines, choosing a winning business model, and capturing the advantages of scale. With this four-part approach, the industry leaders should be able to return to a path of value creation and meet market expectations.

A solution to bridging the gap between performance and market expectations—that weak link between ROIC and market valuation—must begin with a determination of the gap’s actual size. Current valuation levels imply a certain expectation for earnings before interest, taxes, depreciation, and amortization (EBITDA), which can be achieved through either revenue growth or margin improvement. Doing the math reveals that even with a 5 percent growth assumption, on average, these companies would still have to improve margins by 100 to 300 bp. Another way of looking at this burden of expectations is that for companies unable to increase performance from current levels, valuations could decline by over 50 percent.

In applying the strategic levers, the multiregionals should concentrate on improving profitability before setting their sights on spurring growth. With ROIC at around the cost of capital for many companies, a focus on margin improvement will be a more important strategy for value creation. When profitability has been firmly restored, growth will also create value and should once again be pursued.

How can multiregionals restore the link between value creation and valuation and bridge the performance gap? The strategic levers will allow companies to reassess the best markets and micromarkets to compete in, determine the best ways to enter and exit these markets, and operate...
in them once committed. These approaches define the path to value creation for multiregionals and will also be of great value to regional players that seek to execute a successful expansion strategy.

**Strategic lever 1: Active rebalancing to create an attractive portfolio**

Resource allocation and reallocation are important tools for creating value in every industry. As overall demand for cement has shifted from the developed to the developing world, most new capacity investment is located in Africa, Latin America, and Southeast Asia, with China shifting to a more mature stage. The cement industry has not, however, taken full advantage of reallocation. Multiregionals have of course expanded their footprint over time to attractive regions with high demand growth. They should also sell assets when value is at its peak. Only a few of these companies have exited markets that turned unattractive.

Companies can sometimes fail to recognize that markets are tipping from a growth stage to maturity in their development. This can lead them to overbuild capacity, as happened in South Korea and may be happening now in China. During the financial crisis, construction bubbles burst, such as those in Italy, Spain, and the United States, and the levels to which demand would fall were not known. Some of these excess assets are being held in the hope of a market recovery (or, in Europe, to generate income from CO₂ emissions trading). Companies have been left with underutilized plants in their portfolios that are unlikely ever to become profitable.

In building a more attractive portfolio, cement companies should consider both entering the most attractive markets and—if improvement is not possible—exiting the least attractive ones. Portfolio composition is a very important contributor to company performance and is also strongly related to valuation (Exhibit 4). We looked at the portfolio strength of key cement players based on attractiveness of each country. Attractiveness was measured using a combination of expected market growth, supply-demand balance, and country price levels. Our analysis indicates that 8 of the top 11 cement

---

**Exhibit 4**  **Portfolio attractiveness explains a significant part of valuation.**

<table>
<thead>
<tr>
<th>EV/1-year forward EBITA²</th>
<th>Portfolio-attractiveness score</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Low</td>
</tr>
<tr>
<td>20</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Low</td>
</tr>
</tbody>
</table>

**Correlation = 62%**

³Economic value.

²Earnings before interest, taxes, and amortization.

Source: McKinsey analysis
players globally have less than 40 percent of their portfolios in attractive markets. No multiregional has more than two-thirds of its portfolio in attractive markets, while for regional players this share is around 90 percent.

The lesson here is that both multiregionals and regionals looking to expand should review their portfolios with an eye toward market attractiveness and desired exposure, while putting in place a process for proactive and fast resource reallocation. As a second step, companies should decide how to enter these markets and how to leave them at peak value.

Strategic lever 2: Improving the M&A engine
While the top tier of the industry has not executed M&As particularly well, deals still have to be part of the growth picture and are likely to remain an important lever for portfolio rebalancing. Most regional champions have grown organically, but multiregionals need sharper M&A skills to add capacity. Our research suggests that most acquisitions happen when share-price cycles are near peak levels and are thus inopportunistically timed (Exhibit 5).

One way M&A can be improved is through a better understanding of when to enter and exit micromarkets. Business leaders these days are fond of quoting the father of hockey great Wayne Gretzky, who reportedly told his son, “Skate to where the puck is going, not where it has been.” Cement companies need to stay ahead of the business trend, closely monitoring relevant macroeconomic drivers, so that they arrive at the target location at the right time. In addition, industry executives should consider incorporating programmatic M&A in their growth plans. Programmatic M&A is defined as a pattern of many small deals that over time represent a significant share (nearly 20 percent) of the acquirer’s market capitalization. McKinsey research found that companies with a more programmatic pattern of M&A performed better on average than companies relying solely on bold, large acquisitions or solely on organic growth.

The cement industry can learn from M&A success observed in other sectors. The aerospace and defense industry in the United States experienced a wave of restructuring between 1993 and 2008. McKinsey analysis has revealed that during
this period the margin for EBITDA at the five largest companies rose by 3.5 percentage points. Between 1990 and 2010, furthermore, ROIC for the ten largest companies in the group rose by 40 percentage points. The deal making also dramatically reduced the number of competitors. Our analysis suggests that the most active portfolio reallocators using M&A in this sector generated 4.2 percentage points more in TRS than companies that stayed on the sidelines.

Strategic lever 3: Choosing a winning business model
The third strategic driver for creating sustainable value is the development of the right business model. Within the same country or micromarket, we have observed otherwise comparable competitors exhibiting divergent performance based on differing business models. The winning models achieved significantly better performance. What models will help companies improve their business? Two prevailing models are cost leadership and premium selling.

Cost leadership
In cement, a cost-leadership model is based on combining advantageous access to raw materials with operational excellence. The largest areas for cost improvement are usually thermal and electricity consumption, labor, maintenance, and logistics. In our experience, companies have achieved operational excellence in energy efficiency by creating performance transparency, using such measures as overall equipment effectiveness. In addition to standard parameters such as grade and throughput, additional levers can be identified by using profit per hour to understand the relationships between throughput, yield, energy, and the environment at any production rate or product mix. Better maintenance concepts will improve fixed costs: the renegotiation of maintenance contracts or use of insourced maintenance typically reduces procurement in this category by 15 to 20 percent.

The cost-leadership model is exemplified by Shree Cement in India and Anhui Conch in China. Shree Cement's clear focus on cost has resulted in high ROIC (40 percent) and a higher EBITDA margin (27 percent). Anhui Conch is the undisputed performance leader in terms of both ROIC (around 16 percent) and EBITDA, which has been 5 to 10 points higher than for the next-best player.

Anhui Conch capitalizes in a price-sensitive market with superior access to low-cost materials, greater scale in production, higher fuel and power efficiency, and lower labor costs. Anhui Conch has accordingly become the highest-margin player, at 31 percent EBITDA in 2013, and has the best growth perspective in the market, estimated at 12 percent annually from 2013 to 2016. Shree Cement has been able to beat price leaders by achieving significantly lower raw-material costs through proximity to the source and lower labor, fuel, and logistics costs.

The cost-leadership model uses the powerful combination of advantageous access to low-cost raw materials, excellent operational capabilities that optimize fuel and power, and a strong cost-performance culture. The examples of Shree and Anhui Conch demonstrate the close link between location and performance. Proximate access to low-cost resources is the foundation of a business model based on low-cost production. Without it, this model may not provide the necessary returns (at lower selling prices) needed to create value.

Premium selling
For companies unable to pursue a low-cost-producer model, differentiation might be attainable under a business model at the other end of the spectrum: premium pricing and operational excellence. This strategy can create value, especially when the pursuing company is in possession of a known and trusted brand. Significant price premiums have been commanded in some markets, though the advantage can be partly offset by higher costs elsewhere—higher operating expenditure in fuel and power or more costly raw materials due to disadvantageous locations. For the premium seller, the EBITDA for each ton of cement can equal or surpass that of a low-cost producer, however, especially when advantageous access to raw materials can be obtained.

But even with a premium-selling strategy, cement companies must make cost awareness a fundamental part of their business. Companies attempting to sell at premium prices without
also achieving operational excellence will face serious challenges. In some markets, two or more competitors have been able to develop winning brands and command price premiums above smaller producers. In such a landscape, one of the competitors might gain advantage over the others by switching to a lower-cost position.

Premium-selling strategies are more successfully pursued within business-to-business-to-consumer models (B2B2C). The approach is based on strong branding and world-class retail channel management. In some locations, including China, no company has pursued this brand-driven B2B2C strategy successfully, however. In B2B relationships, the focus is different. Companies pursuing a premium-selling strategy within a B2B model seek to tailor offerings to end-user segments in which superior value creation is possible through differentiation. Here successful case examples do exist, including a number of large bridge and roadway projects in Europe and North America.

For many cement players, success as a premium seller means doing business in a completely new way. They will need to develop deep understanding of customers and end users, build strong solutions capabilities, and apply them in downstream businesses to combine great products with distinctive services. As with the low-cost-producer model, premium selling is all about the selection of the right business model for the right time and place to create the most value.

Strategic lever 4: Capturing the benefits of scale

While the multiregional leaders have not been able to translate their superior size and global reach into a superior performance compared with the regional champions, they should be able to position themselves to do so in the future. Scale and global reach should enable superior performance based on the following three types of benefits:

- **Balanced portfolio strategy.** Strategic benefits can arise from three areas. First, the cement industry is subject to high volatility at times, as geopolitical factors and currency changes suddenly alter market conditions. The current downturns in Brazil and Russia provide examples of the market-specific pitfalls facing cement companies with more narrowly focused operations. Multiregionals can better respond to localized downturns, just as they are more able to act resolutely to capture opportunities created by market upswings. They can afford to take on more risk and act on attractive emerging opportunities more surely and boldly than regional counterparts. Second, because of their size and financial power, multiregionals can withstand economic downturns better and for longer periods than smaller companies. A third benefit for the multiregionals is that they can draw upon their global network of plants to balance some of their utilization differences through trading.

- **Operational efficiency.** Over the past ten years, regional companies have achieved higher levels of operational production efficiency than the multiregionals. Large equipment suppliers, furthermore, are now offering cement-plant management at or below the cost levels offered by the multiregionals. In this tightening climate, the multiregionals can and should aim at capturing benefits from global procurement category management, global IT infrastructure, and the cross-regional shared services.

- **Differentiation in the market.** Size and global reach are further sources for deriving benefits from differentiation. Large companies are able to invest more in developing stronger brand positioning as well as in value-creating innovation and R&D. They can thereby differentiate themselves from competitors more readily, both in B2B and in B2B2C markets. Global reach, furthermore, gives multiregionals superior access to global customer segments, such as in oil and gas, that value having a single global supplier with a consistent approach from location to location. Global presence also allows companies to develop and market distinctive concepts and offerings to many countries.

Given current disappointing performance levels and increasing market volatility, the cement sector faces strong obstacles in its path to profitability. Starting at different points, multiregional and regional competitors have work to do to clear the way to shareholder value creation. A big part of that work for both groups involves the companies...
ensuring their presence in attractive markets with privileged access to resources. For the regional companies, location and market responsiveness are advantages to exploit.

Multiregionals must especially improve profitability. As we have discussed, the path to value creation for the multiregionals is marked by four signal activities: active portfolio management, better M&A skills, choice of an optimal business model for each situation, and the exploitation of the advantages of scale. Along the way, global industry leaders can also take lessons on cost awareness from the smaller local and regional companies. Once profitability is established, growth can create value. For both multiregional and regional companies, future growth demands a mixed strategy of organic expansion and M&A, as well as the right timing and execution strategy.

There are exciting performance-transforming opportunities in the current industry environment. We believe that multiregionals can fully exploit their size, resources, and cross-border markets to create renewed value for themselves and their stakeholders. Bigger can be better for the cement industry—not only on the regional level but across the globe.

---

1 Based on June 2015 market capitalization of cement companies in a McKinsey sample of 74.
2 McKinsey research found that companies where capital and other resources flow more readily from one business opportunity to another generate 30 percent higher TRS annually than companies where reallocation is less fluid. Companies that conduct dynamic reviews of their portfolios of micromarket positions and reallocate resources accordingly have created considerable value.
3 Attractiveness of more than 150 countries was determined according to demand growth 2014–25, cement price, and future utilization rate (assuming stable capacity and demand growth to 2019). The analysis may not have detected attractiveness of specific micromarkets: companies must analyze their local micromarkets carefully to determine which ones are significantly more attractive than the country as a whole.

The authors wish to thank Rajiv Garodia and Virginie Maes for their contributions to this article.

Michael Birshan is a principal in McKinsey’s London office, Patrick Schulze is a principal in the Berlin office, Thomas Czigler is a knowledge expert in the Frankfurt office, and Siddharth Periwal is a knowledge expert in McKinsey’s Polish Knowledge Center.