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Chemicals Practice

Chemicals and capital markets: Searching for a way back to the winner's podium

Chemicals have lagged in global capital markets since early 2018. The industry needs a new set of value drivers to win back investors' interest.

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A combination of uncertainty about worldwide economic prospects, geopolitical tensions affecting trade, and the waning phase of a global economic-expansion cycle have all put pressure on chemical-industry performance in capital markets since early 2018, when we published our last report. But there are also worrying signs that the drivers of the industry's strong capital-markets performance so far this century, when it has been the top performer in its value chain, have played out. If so, the chemical industry faces a new round of challenges to luring investor interest.

Slipping from the top-performer position in its value chain

The global chemical industry is no stranger to setbacks in capital-market performance. It traversed its last bout of setbacks and unsteadiness in 2015–16, in the wake of the 2014 collapse of oil prices. This triggered concerns that a narrower naphtha-gas-liquid price differential might hold down commodity-petrochemical companies' profitability prospects and was compounded by worries about faltering global economic growth. But the whole industry—not just the petrochemical sector—was able to put this behind it, with the positive drivers for the industry's performance reasserting themselves. The chemical industry's performance in total shareholder returns (TSR) rebounded strongly in 2016 and 2017, at a 24 percent compound annual growth rate (CAGR), reaching an absolute peak in January 2018.

Since early 2018, however, the chemical industry's TSR performance has faltered markedly. The most pronounced deterioration in performance has been at diversified companies, with TSR performance falling by 10 percent CAGR from December 2017 to June 2019. This marks an abrupt change of sentiment on the part of the investment community, which had enthusiastically supported the diversified sector—in particular, several diversified conglomerates that were taking steps to focus their businesses—in the three years leading to the end of 2017.

Commodity chemical companies have also been hurt, down 7 percent CAGR from December 2017 to June 2019. This has been mainly because investors were already pricing in the high margins that petrochemical companies are currently earning (because of a generally snug supply–demand position in many petrochemicals and plastics) while becoming increasingly wary at the prospect of a new wave of capacity being built on the US Gulf Coast, in China, in the Middle East, and even in Western Europe. These plants are due to come onstream in the next two to three years and are likely to depress utilization—and with it, profitability.

Specialties have maintained a positive trend, up 3 percent CAGR, but the growth is much weaker than the 18 percent CAGR the sector had achieved in the 2016–17 period. Additionally, that trend is not strong enough to keep the chemical industry in positive territory: the overall industry is down 3 percent (Exhibit 1).

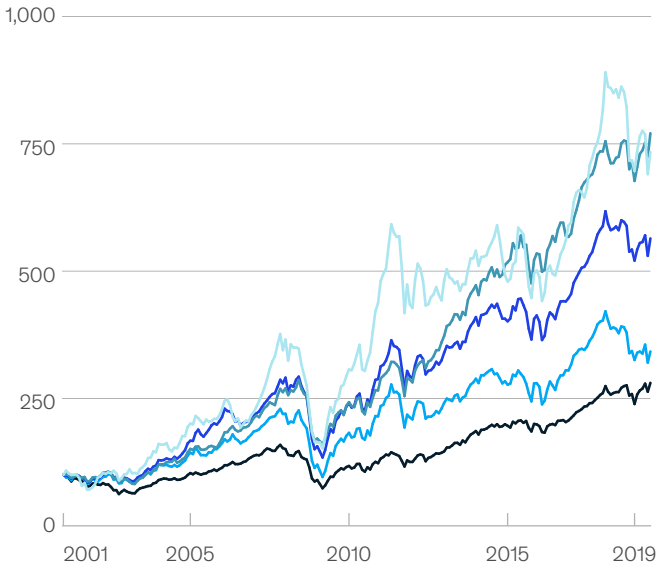
Looking at the chemical industry by geography, the Americas have fared best. They are down just 1 percent CAGR, as the generally buoyant US economy and strong performance of US equity markets have gone some way to offset the less positive view on chemicals. The hardest-hit region has been Japan, where the chemical-stock valuations have amplified the trend in the country's equity market. In Asia outside Japan, chemicals are down, in line with the market. In Europe, chemicals have fallen more than the market has, reflecting the region's overall economic performance and poor sentiment, particularly on European manufacturing's prospects (Exhibit 2).

Weaker TSR since the end of 2017 has dropped the chemical industry from its perch atop its value chain. From 2000 to the end of 2017, the chemical industry was the clear TSR leader in its value chain. Even in the medium term (the five years since December 2013), it is still ahead of most of its value chain, although only slightly. But in the past 18 months,

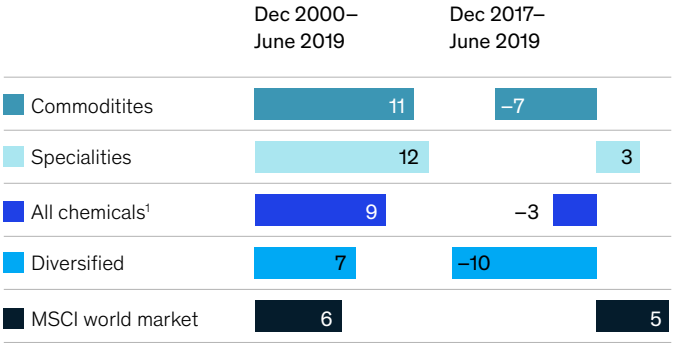
Exhibit 1

Across the overall chemical industry, only the specialties sector has been able to maintain an upward trend in total shareholder returns since the end of 2017.

Total shareholder returns (TSR), $ (indexed, 100 = Dec 31, 2000)



TSR, compound annual growth rate, %



[1] Excludes fertilizer companies and SABIC.

Source: Datastream; Corporate Performance Analytics by McKinsey

the chemical industry has fallen behind upstream players in its value chain and, on the downstream side, behind pharmaceuticals—even though it has fared better than most of its other downstream customers (Exhibit 3).

Why the chemical industry faces new challenges

Is the current sag in capital-market performance just another temporary setback, or are new and disruptive trends at work? Our research suggests that the chemical industry is indeed entering new territory and that more profound challenges are in play this time.

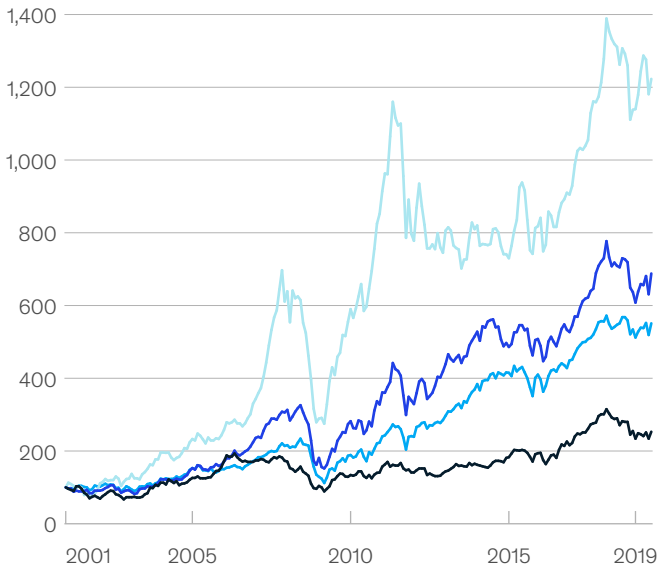
Since 2000, the chemical industry has benefited from a powerful combination of factors that have propelled its performance. First is the industry's hard work to improve productivity. By maintaining and strengthening its position in the value chain at the same time, it has been able to hold onto these gains.

The second factor is more intrinsic to the nature of the chemical industry. Endowed with products that play an essential part in most aspects of modern life, many companies have used their innovation capabilities to find profitable growth areas as new trends emerge, from lithium chemicals for electric-vehicle batteries to essentials for the inner workings

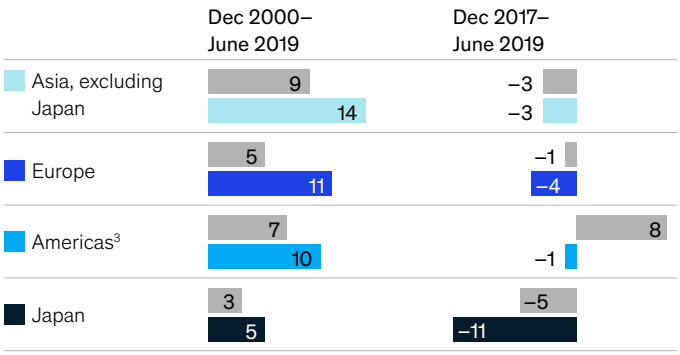
Exhibit 2

Has the tide turned on the industry's impressive performance in total shareholder returns?

Total shareholder returns (TSR), $ (indexed, 100 = Dec 31, 2000)[1]



TSR, compound annual growth rate, %[1]



[1] Geographic chemicals sample excludes fertilizers.
[2] Datastream-defined index.
[3] Based on capital-market-perspective data set; only includes Canada and United States.

Source: Datastream; Corporate Performance Analytics by McKinsey

of smartphones. Much of the industry's intellectual property and process know-how is hard to access, putting incumbents in a strong position.

Third has been the "China effect." Chinese economic growth over the past two decades has outpaced the expansion of the country's chemical output, enabling North American and Western European producers to offset near stagnation in their home markets as they have contributed to meeting that demand. At the same time, other emerging-market countries have provided demand growth, though not on the scale of China.

The industry has also been the beneficiary of a number of other developments not directly related to its own endeavors. Notable among these developments are the availability of lower-priced gas feedstock in the Middle East and North America that created a profit windfall for petrochemical makers and the rising agricultural-commodity prices from 2000 to 2013 that helped the makers of chemical inputs to farming.

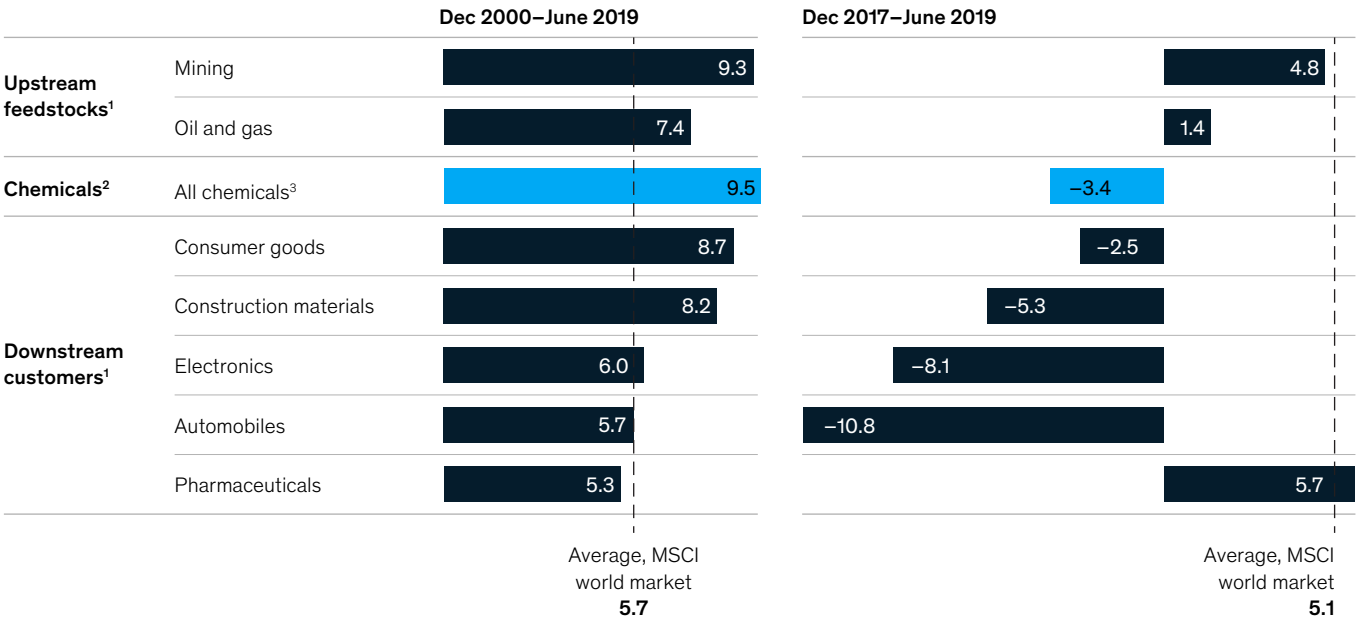
Our research suggests that the outlook for a number of these drivers is much less certain than it was in the past. For example, while China's chemical market—already the world's largest—is expected to continue to grow, there is a perception among investors that the buildup of new capacity within China itself is going to be a headwind for future industry profitability.

Trends in the petrochemical sector are another example. The boost in petrochemical-sector profitability of the past four years has made an important contribution to that of the overall chemical industry, but it is now playing out. Not

Exhibit 3

Since the end of 2017, the chemical industry has lost its position as the top performer in its value chain in total shareholder returns, although it still leads when measured back to 2000.

Total shareholder returns, compound annual growth rate, %[1]



[1] Datastream-defined index.
[2] Custom index.
[3] Excludes fertilizers and SABIC.

Source: Datastream; Corporate Performance Analytics by McKinsey

only is the contribution from low-priced feedstock already factored into valuations, but the sector's profitability looks likely to diminish because of the massive capacity additions we mentioned.

An industry looking for new growth

The picture emerging from the chemical industry's TSR performance is that of a middle-of-the-pack industry rather than a leader. That view is also borne out upon examination of the industry's performance through the lens of another metric: economic profit (EP).[1] EP measures what is left after subtracting the cost of capital from net operating profits. It is affected primarily by four factors: revenues, margins, asset turns, and the tangible-capital ratio. It is a good complement to TSR metrics, as it is looking at a set of indicators broader than those for TSR and is less sensitive to the start and end dates of the performance-measurement period.

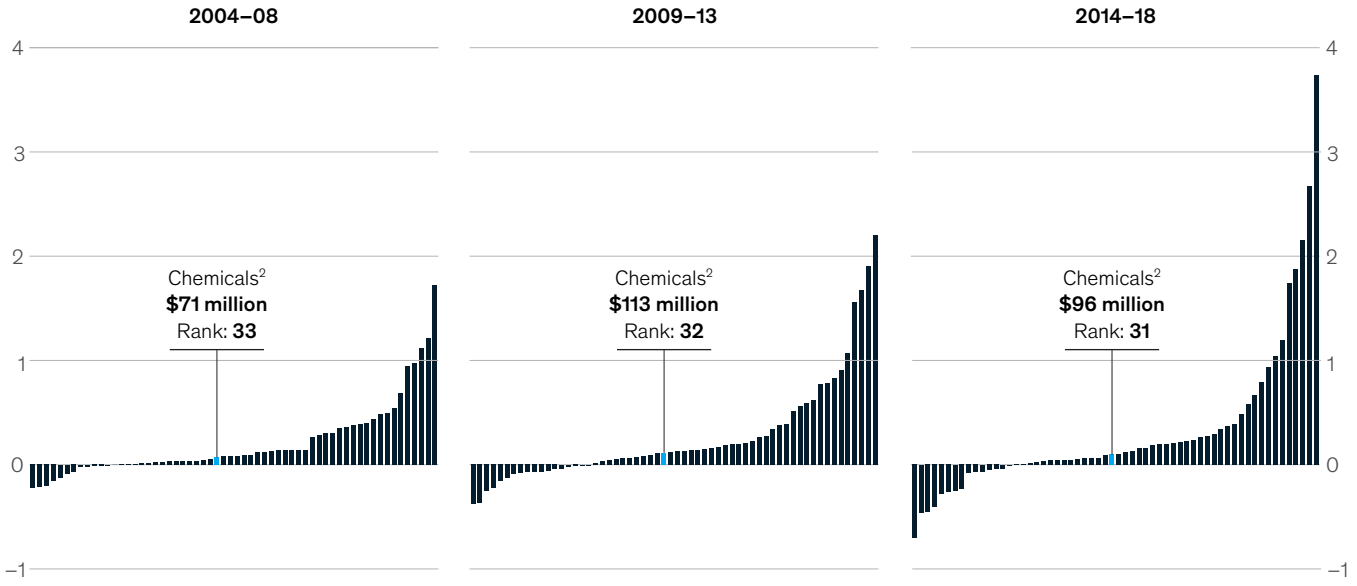
Our analysis shows that, despite a high-flying TSR performance, the chemical industry has consistently been a middle-ranking performer among all industries in EP performance over the long term. A detailed look shows that in the ranking among all industries, the chemical industry has risen slightly, from number 33 in the period before the 2008 recession to number 31 in the four years leading to the current period. This marginal change obviously does not alter its middle-ranking status (Exhibit 4).

[1] See Chris Bradley, Angus Dawson, and Sven Smit, "The strategic yardstick you can't afford to ignore," *McKinsey Quarterly*, October 2013, McKinsey.com.

Exhibit 4

Despite a strong profit-growth performance, the chemical industry has remained a midranking player on the economic-profit power curve.

Average economic profit, $ billion[1]



[1] Total economic profit generated by industry divided by number of companies in industry. Results from 2,633 companies across 60 industries: top 3,000 nonfinancial, publicly listed companies by revenue in 2017, less companies with insufficient data to calculate accurate average economic profit for 2004–08 and 2014–18.
[2] Includes 165 companies from capital-market-perspective data set with average economic profit for the periods of 2004–08, 2009–13, and 2014–18.

Source: Corporate Performance Analytics by McKinsey

What explains the apparent paradox between the industry's star performance on long-term TSR and its middle-of-the pack EP performance when compared with all industries?

A key insight from the EP analysis is that the chemical industry has been growing its revenues at a lower rate than has the sum of all industries globally (2.7 percent CAGR between the 2004–08 and 2014–18 periods, compared with 4.0 percent for industries globally). But the EP analysis shows that the chemical industry has increased its margins faster than have industries globally (4.8 percent CAGR, compared with 3.5 percent for all industries over the same period), reflecting the chemical industry's top-of-its-league TSR performance (Exhibit 5).

It is this higher rate of profit increase that explains the paradox of why an industry with top TSR performance has nevertheless remained in the middle of the EP power curve. The high rate of profit increase has, in effect, enabled the chemical industry to make up for its lower revenue growth and thereby sustain its EP performance and ranking. The average EP for a chemical company increased to $96 million in the 2014–18 period, from $71 million in the 2004–08 period.

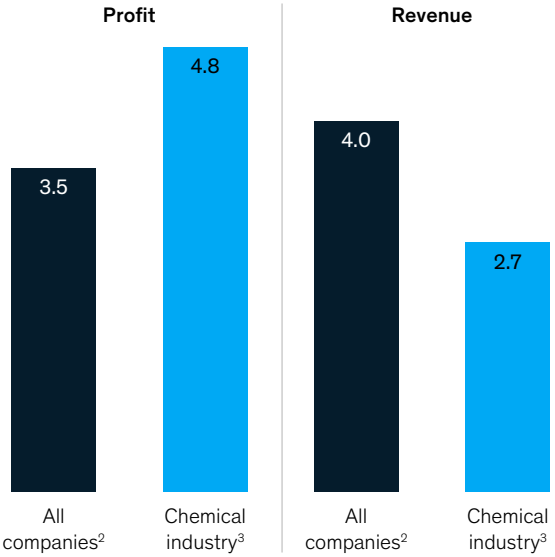
Achieving that degree of margin expansion has clearly been an impressive feat on the part of the chemical industry. But looking at the industry through the EP lens brings out the underlying challenge facing the industry: margin growth without revenue growth is difficult to sustain over the long term. Our research has shown that it is very rare for an industry to expand margins consistently over the long term without also growing its revenue base from which to extract a greater margin.[2]

[2] See Marc Goedhart, Tim Koller, and David Wessels, "The real business of business," March 2015, McKinsey.com.

Exhibit 5

The chemical industry has outperformed the overall market in profit growth but lagged it in revenue growth.

Compound annual growth rate,[1] %



[1] Growth comparison based on calculating average performance for each group in revenue growth and profit growth in 2004–08 period, then comparing with average performance over 2014–18 period.
[2] Top 3,000 nonfinancial, publicly listed companies by revenue in 2017, less companies with insufficient data to calculate accurate average economic profit for 2004–08 and 2014–18.
[3] Includes chemical companies that are part of capital-market-perspectivechemicals analysis (excludes fertilizer companies), less companies with insufficient data to calculate accurate average economic profit for 2004–08 and 2014–18.

Source: Corporate Performance Analytics by McKinsey; McKinsey analysis

Investors have appreciated and profited from the previously described tailwinds, which have helped carry the chemical industry's performance forward since 2000. The emerging concern is that, as those tailwinds fade, the industry will not be able to generate similar growth. Investors want to see new sources of growth and profit-growth potential.

The outlook for the chemical industry, like the outlook for the world economy, includes more elements of uncertainty than when we published our last capital-market report. Only time will be able to disentangle the short- to medium-term pressures from the long-term shifts that affect chemical makers worldwide. Nevertheless, as we have described in this article, our analysis suggests that profound shifts are under way in important factors that have driven the chemical industry's most recent capital-market performance.

In the face of these uncertainties, we recommend that management teams keep in mind the moves made by the chemical companies that fared the best during the latest economic downturn and recovery—the industry's "resilients." Chemical-company leaders will of course have their own view on where we are in the economic cycle, but the playbook we have compiled based on our research on these resilients' activities highlights important lessons on balance-sheet management, cost control, proactive M&A moves, and other topics.[3] And for the industry's longer-term health, leadership teams need to start taking the steps necessary to generate substantial new revenue growth for the chemical industry. While the industry continues to have success with its application-development efforts, which are helping sales by placing existing products into new uses, the growth that the industry needs to shift its value-creation potential substantially is going to have to be on a different order of magnitude.

[3] See Obi Ezekoye, Avinash Goyal, Laura Millroy, and Georg Winkler, "Beating the cycle: Building resilience in chemicals," September 2019, McKinsey.com.

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