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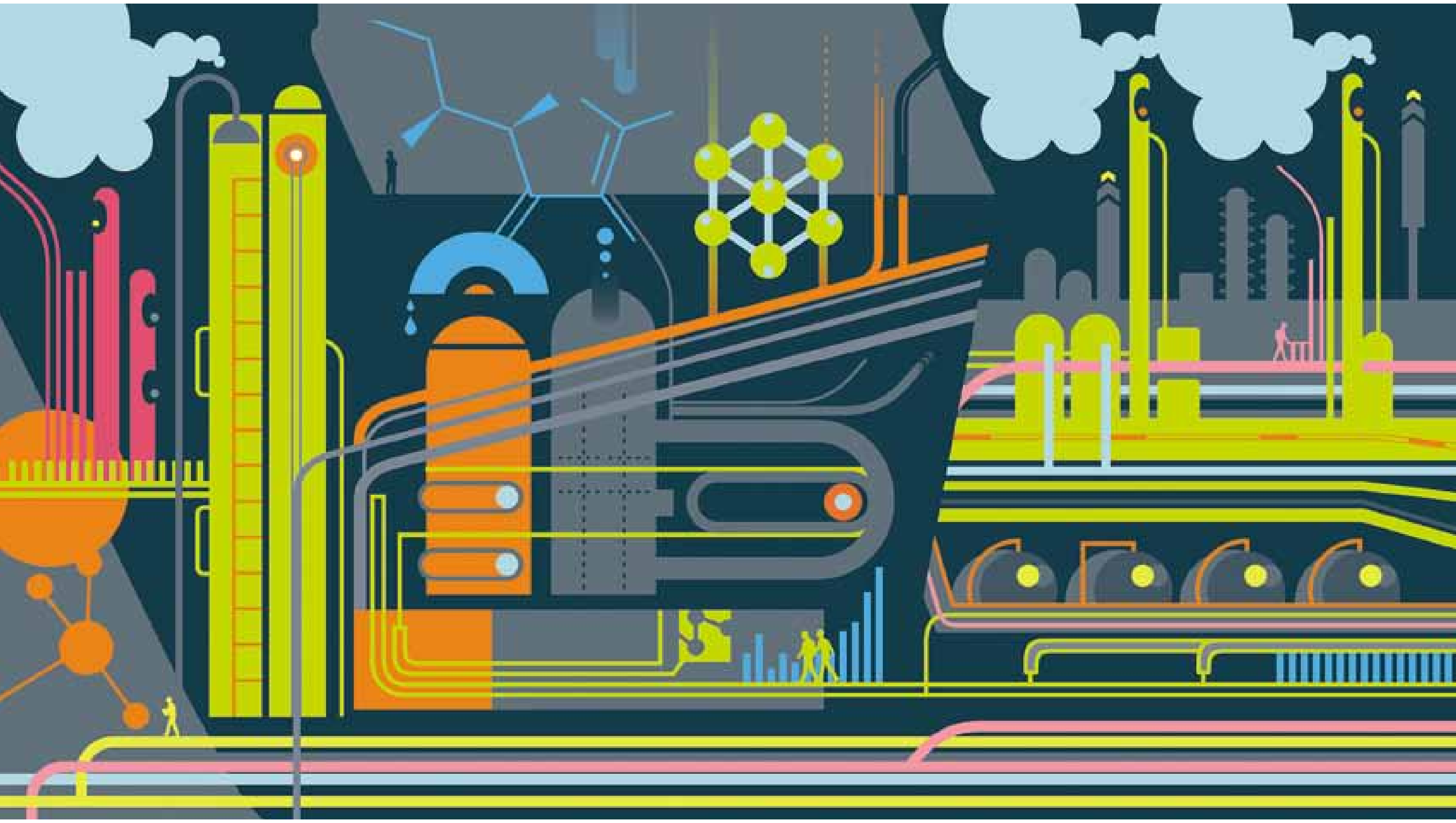
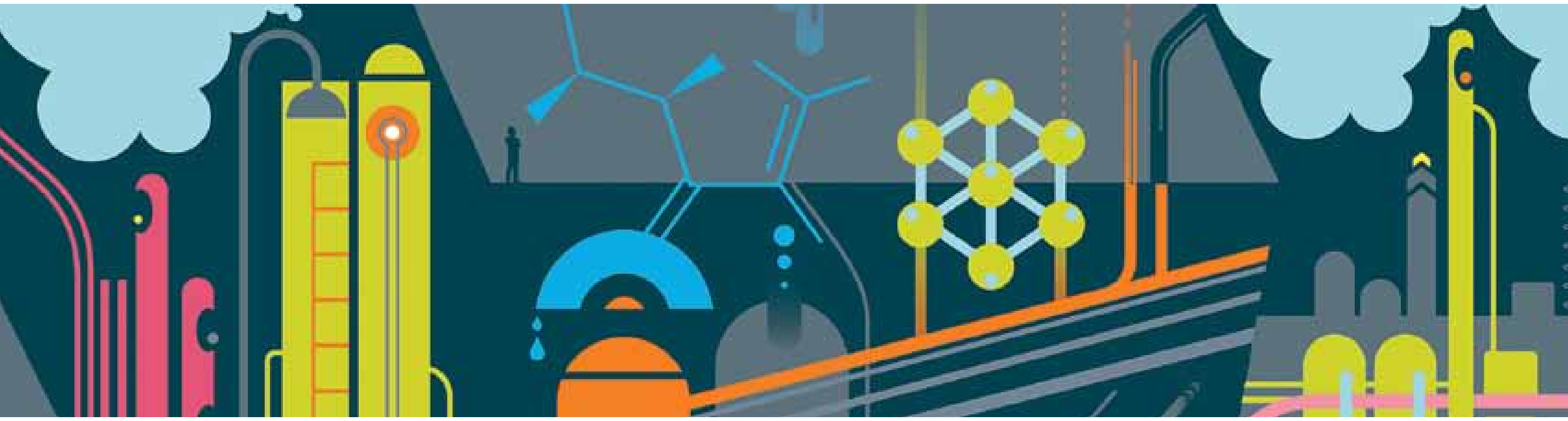




Squaring the circle: Growth and value creation

Capital markets have been pleased with the chemical industry's high profitability levels. But future value creation will require that companies achieve growth while maintaining this performance.

Florian Budde, Christoph Schiller, and Christoph Schmitz

The chemical industry is riding high in the capital markets, still largely due to excellent performance in return on invested capital (ROIC). At the same time, profitability levels have risen to well above the weighted average cost of capital (WACC), which has made it possible for growth[1] to make something of a comeback as a valuation factor. And growth is likely to come even more into focus as the headroom for ROIC improvements declines. The value-creation challenge will therefore be to "square the circle"—that is, to identify and exploit new capital-investment opportunities to deliver growth, but to do so without sacrificing profitability. We believe companies can use four key ingredients to prepare carefully balanced strategies as they pursue profitable growth in today's chemical industry: they must earn the right to grow through functional excellence, use portfolio momentum effectively, do as the locals do in emerging markets, and focus M&A explicitly on value creation.

The capital-market perspective updated

The good news is that we are seeing a continuation of the positive capital-market trends for the chemical industry described in the 2011 issue of *McKinsey on Chemicals*.

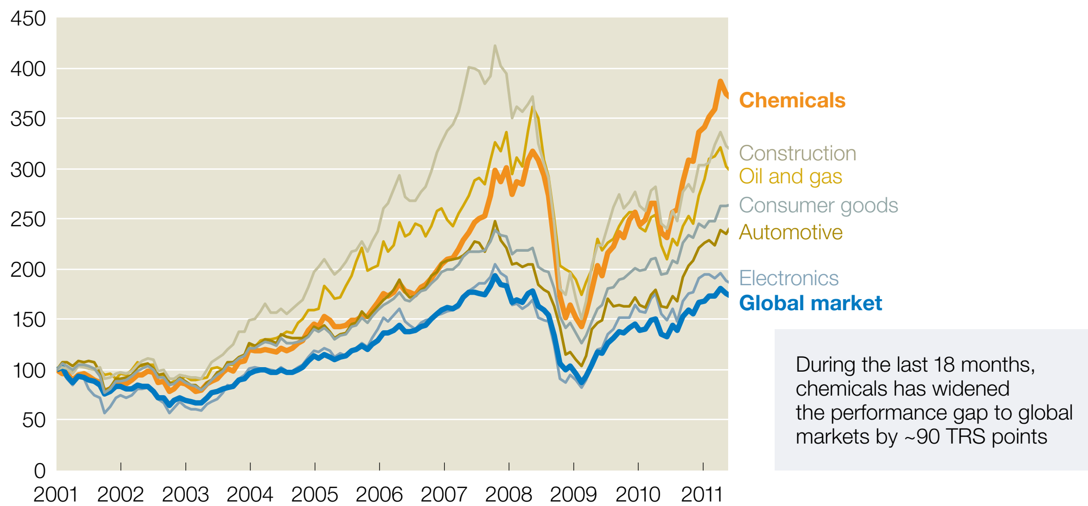
Chemicals show stellar performance, based mainly on profitability gains. On average, chemical companies lead the pack, recently trumping the

[1] Growth, in the context of this article, refers to growth in invested capital.

Exhibit 1

Chemicals are leading the market.

Total return to shareholders (TRS),
indexed; 100 = December 31, 2000, $

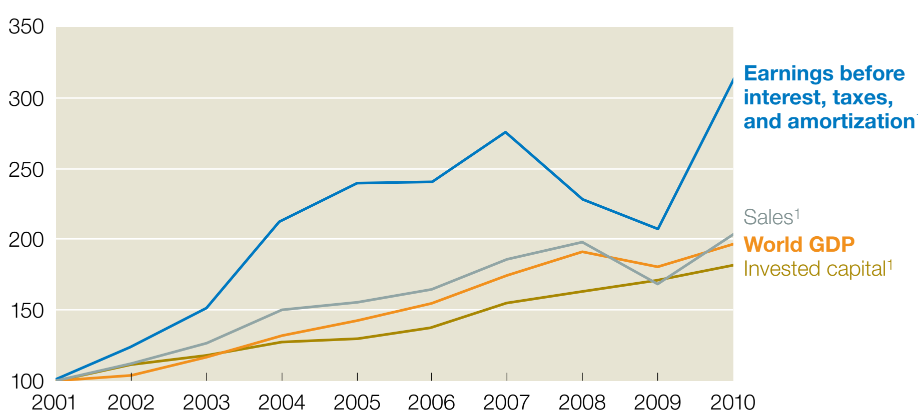


Source: Datastream; McKinsey chemicals capital-markets perspective, 2011 update

Exhibit 2

Chemicals outperformed the market based on profitability gains.

Increase,
nominal, indexed; 100 = December 31, 2000,
percentage points



[1] Data of 100 selected companies of the chemical industry, excluding fertilizers.

Source: Datastream; McKinsey chemicals capital-markets perspective, 2011 update

This year's analysis is based on data from 2001 to 2010, drawn from a proprietary McKinsey database. It includes 100 chemical companies with sales in excess of $1 billion, covering approximately 67 percent of chemical-industry market capitalization and spanning all chemicals subsectors. Income-statement and balance-sheet data have been adjusted to make figures comparable and consistent. Annualized performance metrics used include total return to shareholders, trading multiples, return on capital, cost of capital, and capital efficiency.

global share-price performance of stock-listed oil and gas companies, as well as that of most of chemicals' customer industries, such as the automotive, construction, and consumer-goods sectors. This lead has lengthened significantly over the past 18 months (Exhibit 1). Profitability gains, not growth, are the most important factor here. Increases in earnings before interest, taxes, depreciation, and amortization (EBITDA) have far exceeded nominal world GDP growth; the compound annual growth rate (CAGR) for EBITDA was 13.5 percent in the 2001–10 period, compared with a CAGR of 7.6 percent (not adjusted for inflation) for nominal world GDP growth. Sales and invested capital—key indicators of chemical-industry growth—more or less tracked GDP (Exhibit 2).

ROIC remains preeminent. Analyses based on capital markets' valuation methods confirm that the absolute valuation of chemical companies is still predominantly driven by ROIC performance (Exhibit 3). This trend is increasing in strength, with the correlation coefficient of valuation (with regard to its enterprise value to invested capital ratio) and operating profitability (ROIC) showing an overall positive slope over the past 10 years.

Growth is now valued again. For a time, the stock markets shunned growth as a valuation driver. In the first three years of the period under discussion, 2001–03, growth had little effect on valuation; in the several years prior to that period, the effect was also hardly in evidence.[2] But it has been welcomed back: companies with sales growth above the median for 2003–10 (5.3 percent per annum) enjoyed a significantly higher valuation in 2010 than those with sales growth below the median (Exhibit 4). The main cause of the change is the increase in ROIC levels described earlier: as ROIC rose to about 14 percent in the early 2000s and thereby significantly exceeded WACC, growth began to create value again. By comparison, growth was often an ineffectual or even value-destroying force in 2001–03, when ROIC levels hovered near WACC at about 11 percent.

The next advance in value creation has to come from profitable growth. However, a new challenge awaits. After years of productivity improvements, increasing profitability via productivity will eventually become more and more difficult. To up their game in performance and value creation, chemical companies will need to identify and exploit new capital-investment opportunities to grow their businesses and at the same time maintain their high profitability levels—or even increase them. Put another way, value creation will have to move up and to the right on the matrix that maps profitability and size (Exhibit 5). Squaring the circle, then, is an appropriate metaphor for the feat that will be required of senior chemical-company management teams.

What makes growing profitably so difficult?

Accomplishing this task is likely to be harder today than at any time in the past. After a long period of stable and predictable boundary

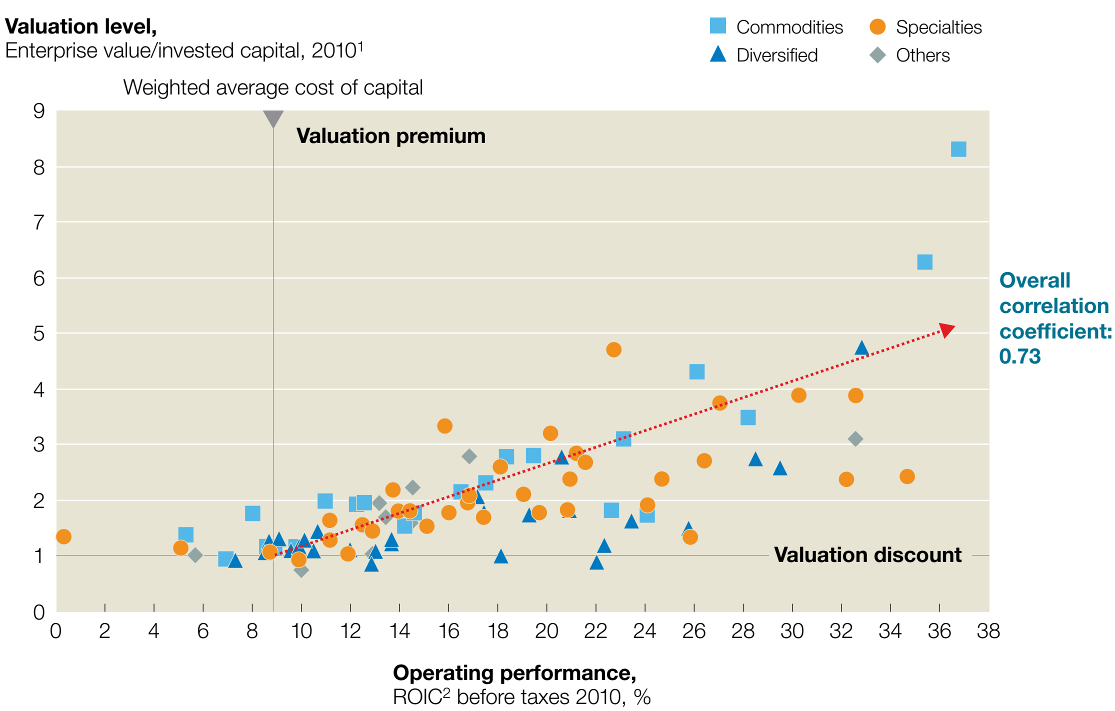
[2] The period discussed here is 2001–03, for data-sample consistency. However, our analysis shows the same valuation effects across the 1996–2003 period.

conditions, the chemical industry is navigating highly changeable waters. Companies must learn to face up to crises induced by a highly ambiguous, volatile, and uncertain environment, and they will need to consider changes in their regional market focus and the location of capital assets.

The fast-changing environment makes it difficult to bet on the 'right' trend. Making the right strategic bets is particularly difficult in the current environment. Continuous shifts in technologies and the entrance of new competitors must be considered alongside volatility in financial markets and prices for raw material and energy, and they are compounded by regulatory and resource constraints. The variety of choices and the speed of change are immense, as is the uncertainty of outcomes. Moreover, in an industry where large, very expensive, and immobile assets have a life span of 30 years and more, particular care should be taken when making choices under uncertainty.

Exhibit 3

ROIC performance is the main driver of chemical valuations.



[1]Invested capital (IC) includes goodwill, 2010 market data as of December 31, 2010; IC = 2010 adjusted for latest-quarter (2010) property, plant, and equipment and for goodwill (where actual numbers not available).
[2]Return on invested capital.

Source: Datastream; McKinsey chemicals capital-markets perspective, 2011 update

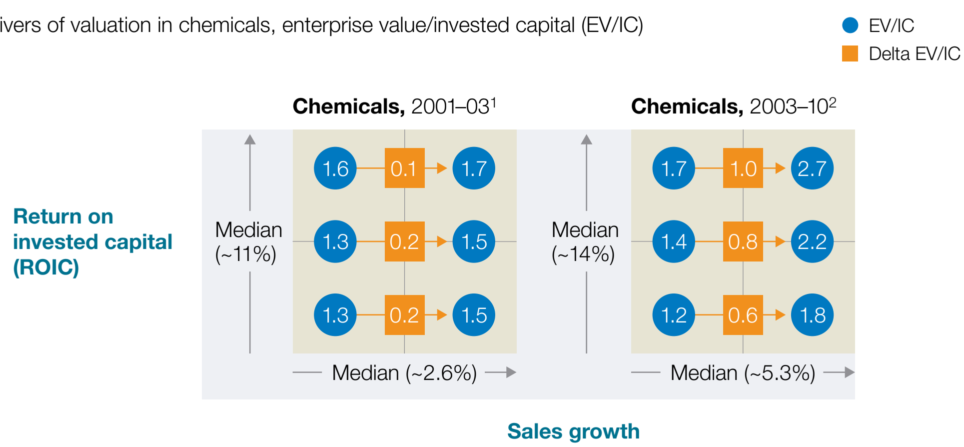
For Western players, a value-creating presence in emerging markets is difficult to establish and maintain. Given the eastward shift in regions of high demand, tapping this growth will require a presence in Asia and particularly in China. However, Western companies face two key problems here. First, although the East initially opened up to them, foreign players are now finding it increasingly difficult to establish a foothold or expand. For example, local companies often enjoy a privileged position in ongoing industry consolidation. Second, many Western companies are still struggling to ensure value creation in Asia. Causes of poor performance include selling products that are not tailored to Asian markets; supplying from faraway assets built and operated to Western standards, which results in lower ROIC; using Western financing and therefore non-competitive WACCs; and relying on centers of authority and management teams that are physically distant. Nevertheless, with China set to account for a significant share of industry growth in the next 10 years, having a presence in these markets is likely to be a condition of success.

Procyclical investment activity and focus on the same M&A targets are making value creation an increasing challenge. Chemical companies, especially commodity players, make life more difficult for themselves by engaging in herd behavior, which also hurts profitability. Many companies follow the same investment pattern: net investment follows the ROIC curve, lagging behind it typically by one to two years, resulting in overcapacity and an industry

Exhibit 4

Growth is valued again.

Drivers of valuation in chemicals, enterprise value/invested capital (EV/IC)



[1] EV/IC as of 2003; pretax ROIC (including goodwill), average ROIC (2001–03); sales growth (compound annual growth rate, or CAGR), 2000–03; acquisitions and divestitures included in growth figures. The period shown is 2001–03, for data-sample consistency. However, our analysis shows the same valuation effects across the 1996–2003 period.

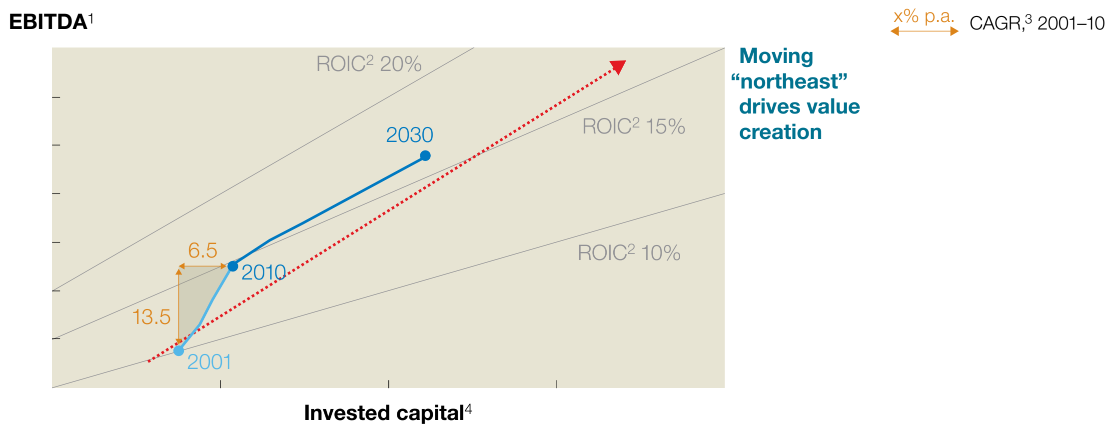
[2] EV/IC as of 2010; pretax ROIC (including goodwill), average ROIC (2003–10); sales growth (CAGR), 2002–10; acquisitions and divestitures included in growth figures.

Source: McKinsey chemicals capital-markets perspective, 2011 update

Exhibit 5

The next wave of value creation needs to come from profitable growth.

CONCEPTUAL



[1] Earnings before interest, taxes, depreciation, and amortization.
[2] Return on invested capital.
[3] Compound annual growth rate.
[4] Including goodwill.

Source: McKinsey chemicals capital-markets perspective, 2011 update

margin squeeze. Too few companies attempt to break out of this well-recognized cycle.

M&A is plagued by the same ailment: most companies look to the same attractive but expensive targets in the same highly profitable and fast-growing sectors. As a result, deals carry increasingly high premiums, making them difficult to justify. In addition, there is a trend toward M&A transactions aimed at diversification (Exhibit 6); in many cases, such transactions offer little in the way of synergies and guide management into new territory. This makes them risky.

Profitable growth: Combining the right ingredients the right way

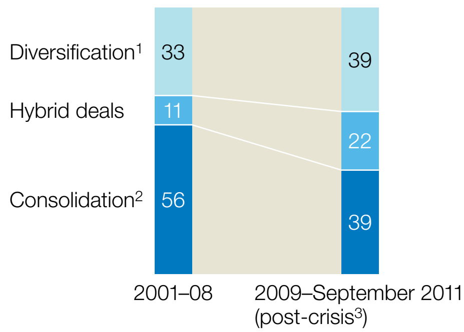
In our opinion, companies are most likely to find their way successfully in the present climate by basing their strategies on four key ingredients. Companies must first earn the right to grow through functional excellence. Second, they must use portfolio momentum effectively, and combine it with positions of power. Third, they should do as the locals do in emerging markets, and fourth, they should focus M&A explicitly on value creation.

These ingredients may appear basic, but to yield successful results, they must be rigorously and uncompromisingly executed. Identifying the right combination and putting it in place to create profitable growth is a game of inches. Given the complex challenges facing the industry, finding a silver bullet that will fix a company's fortunes will prove quite difficult, if not impossible. Instead, all levers must be applied in parallel and in balance.

Earning the right to grow through functional excellence. Functional excellence in innovation,

Exhibit 6

The trend in M&A is toward more diversification deals.



[1]Diversification: deals where the acquirer has entered a new market segment, significantly diversified its product portfolio, or entered a new step in the value chain.
[2]Consolidation: deals with significant overlap in market segments and products, technologies, or geographies.
[3]Includes 3 deals that are in the process of closing.

Source: Dealogic; press search; company Web sites; McKinsey analysis

commercial practice, and operations needs to be addressed continuously, and its importance cannot be overstated. It is the fundamental prerequisite for profitability, mitigating and ideally more than offsetting price pressure, increases in labor cost, and other inflation factors. Supported by comprehensive and rigorous implementation, functional excellence is the key to maintaining ROIC levels that are sufficiently higher than WACC, thus enabling growth to create value. In addition, functional excellence is essential to value creation in postacquisition and postmerger integration. In evaluating M&A moves, companies often fail to consider how functional improvements in the target's operations could complement and very often be worth more than any synergy effects.

Using portfolio momentum effectively and combining it with positions of power. Leveraging portfolio momentum lays out the strategic pathway. Companies must pay close attention to the megatrends influencing the industry in order to discover and tap value pools. To adapt to changes in the markets and the volatility and uncertainty that accompanies them, companies need to exercise more foresight and insight than ever to be at the right location with the right product or technology at the right time. Moreover, because these sweet spots are constantly moving, chemical companies should be sufficiently agile to track them swiftly.

To identify the right opportunities, players have to examine future potential at a sometimes painfully meticulous level of granularity. For example, although crop-protection sectors have recently been popular, not everything food related is a valuable play. In many cases, business leaders should explore the match between products and micromarkets at, for example, the regional or country level, rather than simply looking at a given sector. To be truly attractive, the value pools should be combined and matched with the company's positions of power: natural or acquired advantages such as distinctive technology, recognized product brands, superior customer-back innovations or solutions, value-added services, privileged raw-material access, or supply positions.

Doing as the locals do in emerging markets. Profitable growth in the chemical industry of the next decade could depend on a presence in the growth markets of Asia, particularly China. For Western multinationals, the best option may well be to do as the locals do, shifting their structures and operating models culturally and geographically closer to these markets.

For example, business leadership and authority should be transferred to the countries in question. The market environment is becoming increasingly regionalized and localized. Multinationals may have a better chance of becoming established if they form part of the local economy and blend with its culture and mind-set. Some leading players have already started to relocate business-unit headquarters from Western countries to the core markets of Asia. In addition, tailoring specifications and therefore reducing capital expenditure to compete with local companies (without jeopardizing compliance with environmental, health, and safety standards) is also likely to be of critical importance to maintaining ROIC performance. Currently, a Western-standard plant in China is 30 to 40 percent more expensive on average than a comparable plant built there by a local company.

Focusing M&A on value creation. As discussed above, it can be extremely difficult to make M&A deals create value. Often, the growth prospects of strategic targets are already reflected in the purchasing price and premium; their attractiveness to many buyers adds further expense. We strongly believe that value creation should be the predominant objective of M&A activities. This opens three principal pathways. One option is for companies to make acquisitions in the middle field of profitability and growth, where lower prices may offer promising value-generating opportunities in less overtly attractive segments. Second, opting out of the cycle and actively managing for cash availability in troughs could help boost value-creating capital investment and M&A behavior. The third option is to pursue the classic play of capturing synergies, but to complement this with a strong focus on stand-alone improvement potential, applying a type of "better operator" approach.

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Squaring the circle to achieve profitable growth is an intricate game in an ambiguous environment. Finding the right strategic mix of functional excellence, making forward-looking technology and product choices, ensuring positions of power, establishing a presence in growing markets (and playing local), and leveraging M&A as a value-creation lever will be important ingredients. ○

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