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CHEMICALS

What to do when a specialty-chemical business gets commoditized

Contrary to conventional wisdom, a commoditized chemical business can be as profitable as a specialty one. The key is to change to a different operating model.

Michael Glaschke, Marco Moder, and Christoph Schmitz

Commoditization of the specialty-chemical industry is accelerating. While the history of the chemical sector is one of relentless commoditization as one generation's innovations become standard products of the next, the pace is increasing. There are a number of causes behind the shift.

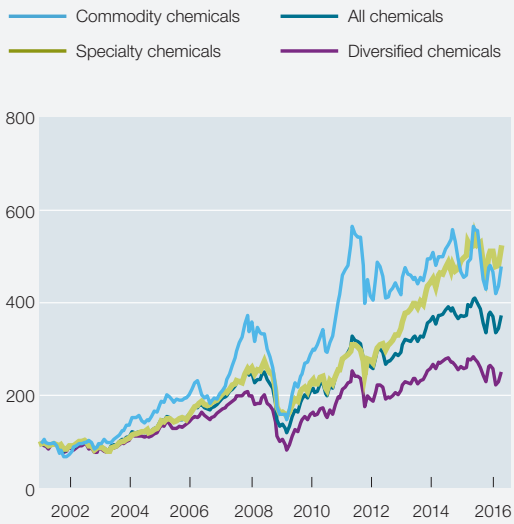
In some segments, specialty players are struggling to create the innovative products that offer significant additional value to customers and differentiate themselves from competitors. Meanwhile, the combination of new, low-cost market entrants—especially from China—and too much capacity means that the prices of increasing numbers of products are determined not by the value they deliver to customers but by their production costs and freight to market.

Commoditization of specialty-chemical businesses poses a structural challenge for the industry. How should these enterprises respond? Chemical companies must recognize that commoditized businesses can earn attractive returns if they are run in an entirely different way from specialty businesses. The key is to tailor the new operating model to the business's true needs and the costs it can bear.

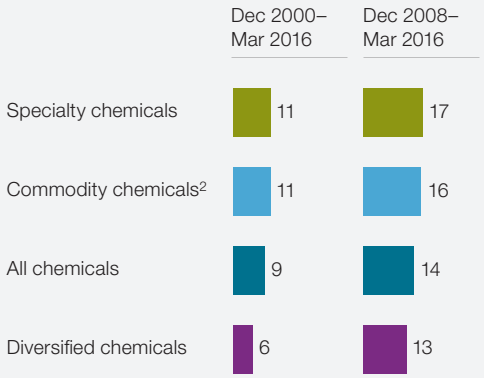
Exhibit 1

Over the long run, commodity chemicals and specialty chemicals show similar performance.

Total returns to shareholders (TRS),[1]
indexed, 100 = Dec 31, 2000, $



TRS,[1]
compound annual growth rate, %



[1]Figures have been calculated using $. Data set used is based on 212 chemical companies worldwide and excludes fertilizer companies and SABIC. Data have been indexed to Dec 31, 2000.
[2]Excluding fertilizers.

Source: Datastream; Corporate Performance Analytics by McKinsey

Our analysis of chemical-industry shareholder-returns performance shows that commodity-chemical players have captured just as much value as specialty players since 2000[1] (Exhibit 1). While this performance may be contrary to widely held assumptions and conventional wisdom in the chemical industry, our data have consistently shown that over the long term, this pattern holds. Chemical companies facing these challenges can also take encouragement from the example of other industries successfully supplying commoditized offerings. In the airline sector, for example, low-cost carriers have outperformed their full-service rivals in profitability.

To turn commoditization from a threat into an opportunity, companies should take three steps. First, they need to spot commoditization coming, so that they can start to act before they are outpaced by others. Second, they should design an appropriately tailored operating model for their commoditized businesses. Third, they must embark on a comprehensive change effort to put that new model to work. Companies that get this right can capture significant rewards, with a return-on-sales uplift of as much as five percentage points.

Recognizing commoditization

Companies that have built their reputations on innovative, differentiated products and responsive customer service can be understandably reluctant to admit that the market has moved on. That's risky. If the tide of commoditization has already turned,

they can find themselves isolated while more focused competitors snatch their customers.

Every specialty-chemical player should keep a watchful eye for encroaching commoditization and systematically look out for the warning signs. Here are some questions that executives should ask themselves: Does capacity significantly exceed demand? Have prices been declining steadily despite attempts to raise them? Have prices been squeezed to maintain market share? Have new competitors from countries with lower production costs entered the market, and are their offerings similar to those of the incumbents but at lower prices? Have we created any innovative products in the last five years? Are we no longer dealing with our customer's product-development unit but just with its purchasing department? Have customers stopped asking and paying for additional services? Central to the analysis should be a clear understanding of the price-setting mechanisms in the market. If the price of a product is close to the costs of a marginal producer, then it is, or soon will be, a commodity.

By analyzing these indicators across its product portfolio, a company can understand how it should shape its operations: as a specialty player, as a commodity manufacturer, or in a mixed model with pockets of specialty production alongside a core of commodity products.

Designing the right operating model

Once it identifies what products are becoming commodities, a company can set about designing an operating model that will allow it to manufacture and sell those products profitably. There is no one-size-fits-all approach here, but there are certain requirements that must be met. The right combination of changes will depend on the company's portfolio mix, on the nature of the products involved, and on the needs of its commodity customers and markets. For some organizations, the breadth of this operating model will extend to the whole company; for others, it will include specific business units, or lines of business within those units (Exhibit 2).

Whatever the scope, there are a few guiding principles that will greatly increase an organization's chance of designing and implementing a successful operating model. First, it should start from scratch, and make a priority of minimizing costs. Merely tinkering with approaches more suitable for specialty products will rarely achieve the impact necessary to compete in a commodity market—or create an organization that is agile enough to deal with the cyclicality of a commodity business. Second, the change should encompass the whole organization, including sales, manufacturing, supply chain, and administrative and support functions. Third, the design should begin with a clear perspective on customers, bearing in mind that commodity buyers will have needs and expectations different from those that purchase specialty products.

Understanding customer needs

Commodity customers expect simplicity and standardization. They typically do not need technical support and are comfortable with standard delivery sizes and schedules, in contrast to specialties customers, who often expect extensive sales and technical support and different lot sizes. A good commodity operating model is designed specifically to meet those needs. That usually means a reduction in the number of products offered. It always calls for a standardized sales and marketing and service offering—tailored to a limited number of customer segments—and taking steps to minimize the cost of serving those customers.[2] This should be backed up by the right kind of lower-cost sales and distribution channels.

Such transitions must be done with care, with clear and consistent customer communication. And

Exhibit 2

Before and after: Key changes in the operating model made at a chemical company moving to a commodity setup.

	From Specialty-chemical management	To Commodity-chemical management
Business services and general and administrative	• Manage growth and differentiate vs competitors	• Lean setup to manage costs
Marketing and sales	• Value pricing mind-set • Differentiated segment approach with differentiated service levels	• Low cost-to-serve model (eg, web based) • Standard offering with 1 service model • Rigid product-portfolio management
Operations	• No OEE[1] focus • As many product grades as demanded • Shorter run times, many changeovers • Flexibility	• High utilization, targeting ~92–96% OEE • ~10–20 product grades, as demanded • Cost leadership • High degree of right first time
Supply-chain management and procurement	• Predominantly made to order • "Frozen zone" ~1–2 weeks • Securing supply	• Predominantly made to stock • Frozen zone ~8 weeks • Standard service level and model • Reduction of raw materials and standardization of recipes
Innovation and R&D	• Tuned and tailored to market and customer requirements • Strong innovation engine	• No tailoring • Focus on recipe improvements for cost optimization and maximizing throughput

[1]Overall equipment effectiveness, a metric for manufacturing productivity.

Source: McKinsey analysis

companies must accept that not all their current customers will be willing to accept the change. Losing a certain percentage of high-cost, low-profit customers is an inevitable, and planned, part of the switch to a commodity approach.

For many commodity players, digitization is proving to be a powerful way to reduce cost to serve.[3] Switching customers to self-service models using online platforms makes sales, support, and order management cheaper, especially if most of the business is reordering. Done well, it can also result in a more satisfactory customer experience.

Manufacturing and supply chain

Commodity businesses need streamlined manufacturing and supply-chain processes that align with their new customer-service requirements. That means a shift from make-to-order to make-to-stock strategies, with automated forecasting and clearly defined and rigorously enforced "frozen zones"—where no changes can be made—in manufacturing planning. Manufacturing operations aim to achieve high levels of equipment utilization and apply lean principles in an effort to continually improve quality and productivity. A different approach to capital investments is also needed in a cyclical, commodity business: it's hard to do, but adding capacity at the bottom of the cycle rather than when profits are peaking can contribute substantially to value creation.

Commoditization often requires a fundamental mind-set change in manufacturing operations, as staff learn to prioritize standardization, compliance with agreed service levels, and progress in efficiency improvement, and to move away from costly individual orders and exceptions to meet specific customer needs. Transparent pricing helps here: when customers understand that they will have to pay for late specification changes or shorter delivery times, they are less likely to make such demands.

Innovation

Commodity operating strategies make fundamentally different demands on the organization's innovation department. Its focus will switch from research to development—especially the development of recipe and process improvements that reduce costs and increase throughput. Efforts to reduce the number of raw materials used and standardize the specifications required can pay off through higher equipment utilization and reduced costs elsewhere in the supply chain.

The function may still support customers in application development, but as with supply-chain exceptions, these activities should be limited and clearly priced, with customers understanding they will pay a premium for special products and services.

Administrative functions

Across the business, all other support functions will need to modify their way of working to support the new focus on costs and standardization. Procurement, for example, will shift its strategy from sourcing innovative new technologies to securing inputs at the lowest overall cost. Often this change requires purchasing staff to adopt new tools, find new suppliers, and modify their negotiation and contracting strategies.

Efforts to streamline the finance and controlling functions will also benefit from the adoption of new digital approaches. Activities such as report creation and accounts-payable processes can become automated, for example.

To support their ongoing efforts to squeeze costs and waste from their processes, many companies find it valuable to establish a dedicated continuous-improvement team with a remit to help the organization to achieve performance excellence in all the business's functional areas—including production and related operations, as well as marketing and sales. We call this functional excellence.

Governance

Many commoditized businesses find they also need to alter their management and governance approaches. Changes can include a reduction in the number of management layers and increasing spans of control for individual managers. Many organizations make greater use of "working managers" who share functional and management responsibilities. Strong centralization and the greater use of shared-service functions can also help to promote standardization and reduce overhead.

Many companies implementing a commodity operating model find that it's helpful to follow a zero-based budgeting (ZBB)[4] approach, which can help focus on minimizing costs now and in the future. This cost-budgeting technique helps to ensure a repeatable process is in place to challenge every dollar in the annual budget, and to manage financial performance throughout the year. To get the most efficient return on spending, the ZBB approach includes rigorous annual target setting and a stringent monthly budget-monitoring process—and provides deep visibility into underlying cost drivers. It also drives accountability and broadens ownership of the cost-management focus, which helps to ensure an overall alignment between top management and the line organization for every dollar spent in the

company. In this way, ZBB can be an important component in a commodity operating model, alongside the operating-model initiatives within each functional area described previously.

Companies also need to change the way they steer their activities. Commodity businesses are inherently cyclical. Companies should recognize and respond to this cyclicality, for example, by measuring their capital returns on a through-cycle basis. They also need to focus on cash flow and price adjustments so that they have the resources to invest during downturns to be better prepared for the subsequent peaks.

Making the shift

Once a company knows what its commodity operating model should look like, the challenge is getting there. Like any large-scale change effort, this process is not to be taken lightly. Even with decisive action, the transformation process can take around two years to achieve—and the process can be painful. Focusing on mind-sets, behaviors, and culture is as important as the more outwardly obvious changes in organizational structures, systems, and processes.

There are two requirements for the management team to make this a success. First, the leaders must embrace the idea that there is nothing bad about a commodity business—it is just as valuable as a specialties one, but it simply needs to be managed in a different way. Second, the management team must fully understand all of the changes that will have to be made, and it must be able to act as a role model for the organization. Successful companies often appoint a chief transformation officer and bring in new managers who have experience running commodity operations.

Many people may need to take on new roles, or they may need to adjust to significant changes in long-established ways of working. Salespeople, for example, have to learn to offer their customers only standardized order sizes from a more limited catalog of products, instead of the customized orders, backed up with technical advice, offered in the past—and many individuals find this is a difficult adjustment to make.

To help the workforce navigate the change, executives must establish clear guidelines and redesign work processes—and they must actively ensure that employees are not slipping back into their old ways of working. It is also essential to deploy classic change-management techniques that emphasize extensive communication with the workforce, including frequent meetings with staff, newsletters, and speeches from company leadership.

Commoditization can't be stopped, but it will reward those companies that can adapt better, and faster, than their competitors. Those benefits can be significant: as noted before, return-on-sales increases of up to five percentage points can be achieved by companies that get their commodity operating models right.

Take the example of one global chemical company with operations in China, Europe, and the United States. Recognizing the inexorable commoditization of its core-product portfolio, the company embarked on a comprehensive change program. Abandoning its former governance model, in which its operations had been managed on a regional basis with little central coordination, it adopted a new global structure and performance-management system designed to meet the needs of commodity customers. The company streamlined and centralized several functions, including procurement, and set up a global manufacturing-improvement program. An intensive change effort also identified annual

savings opportunities worth more than €100 million in the company's purchasing, manufacturing, sales and marketing, and administrative functions—savings that could represent a possible five to eight percentage point increase in earnings before interest, taxes, depreciation, and amortization. Together, those changes helped the company to lift its profitability from close to zero to more than 5 percent of sales, although this took place against a background of strong volume pressure from emerging-market competitors. ■

[1] See Bing Cao, Obi Ezekoye, and Michael Glaschke, "Chemicals and capital markets: Still a strong performer," *McKinsey on Chemicals*, July 2016.

[2] For further discussion of adapting commercial operating models to commoditization, see Jochen Böringer and Theo Jan Simons, "Commoditization in chemicals: Time for a marketing and sales response," *McKinsey on Chemicals*, December 2016, McKinsey.com.

[3] For further discussion of digital approaches to marketing and sales in chemicals, see Søren Jakobsen, Kedar Naik, Nikolaus Raberger, and Georg Winkler, "Demystifying digital marketing and sales in the chemical industry," *McKinsey on Chemicals*, February 2017, McKinsey.com.

[4] For a more detailed discussion of zero-based budgeting, see Matt Fitzpatrick and Kyle Hawke, "The return of zero-based budgeting," August 2015, McKinsey.com; and Shaun Callaghan, Kyle Hawke, and Carey Mignerey, "Five myths (and realities) about zero-based budgeting," October 2014, McKinsey.com.

Michael Glaschke is a partner in McKinsey's Munich office; **Marco Moder** is a partner in the Frankfurt office, where **Christoph Schmitz** is a senior partner.

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