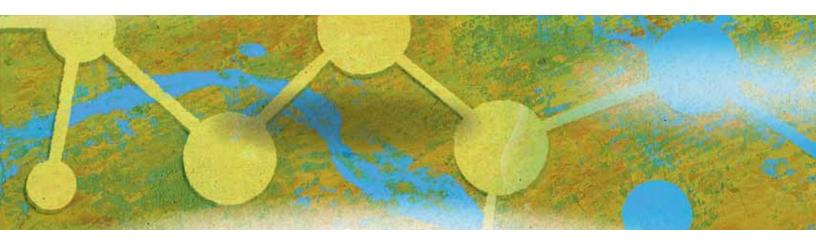
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CHEMICALS PRACTICE

Chemicals' changing competitive landscape

High energy prices and the global economy's eastward shift are changing the formula for success. Newcomers must build capabilities, and incumbents must sharpen value propositions.

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A major shift in the competitive landscape of the worldwide chemical industry is under way as new players from oil- and gas-producing countries and the high-growth developing markets of China and India join the industry's top ranks in sales. The new players focus on resource monetization and economic development, in contrast to the classic shareholder value-creating goals that have historically informed the strategies of top players.

Not only are these newcomers playing by different rules, but they are also better placed to benefit from two of the key dynamics driving the industry's future: control of advantaged feedstocks in a high-oil-price world, and privileged access to the most attractive consumer-growth markets.

While newcomers may be better placed than incumbent chemical companies in Europe, North America, and Japan, the shift creates challenges for both groups. If the newcomers want to establish themselves as industry leaders in the coming decades and fully realize the industry's wealth-creating and society-supporting potential, they must evolve rapidly. They should move beyond simply monetizing their cost- and market-advantaged positions to build capabilities that will put them on more equal footing with incumbents when it comes to management, innovation,



and marketing performance. At the same time, to assure continuing success in this new landscape, incumbents must reconsider their position in the industry and adapt their strategies and priorities accordingly. Newcomers and incumbents that can take these steps will be well positioned to ride the global chemical industry's continuing profitable growth trajectory.

A changed industry

Coming out of the financial crisis and economic slowdown of the past two years, the global chemical industry is seeing major changes. The first relates to energy-price dynamics. The chemical industry is confronting unprecedented hydrocarbon price volatility. In addition, energy prices are significantly higher than they have been for the past two decades-and they are higher than they were coming out of previous recessions. While there is little progress on climate-change regulation, which could add carbon tax-related costs for chemical companies in certain regions, the industry is nevertheless seeing increasingly pronounced divergences in gas and electric power prices among regions. Overall, the degrees of cost advantage and disadvantage among regions have increased.

Second, the economic downturn has highlighted the accelerating shift in the growth of global chemical demand from developed economies to the developing world. While demand in Europe and the United States has not returned to pre-crisis levels and seems unlikely to do so until 2012, China's chemical demand increased by 6.4 percent in 2009 and by over 15 percent in 2010. Meanwhile, new petrochemical capacity in the Middle East continues to expand, while plant-closure announcements have multiplied in Europe, Japan, and the United States.

Closely related to this is the third major change—the arrival among the chemical industry's leadership ranks of companies based in hydrocarbons-producing countries and in large, high-growth developing markets such as China and India. The simpler value propositions of the new players are in some ways on a collision course with the value propositions of the traditional players, and the disruptive potential of this development is only gradually coming into view.

The industry's leading incumbents have operated for the past two decades with similar goals: striving to increase shareholder value based on their technology portfolio and asset base, and making opportunistic excursions from traditional home markets to tap emerging-market growth. Whether the companies were based in Europe, North America, Japan, or South Korea has only added nuance to this common approach.

In contrast, for governments and their production subsidiaries from hydrocarbons-rich countries, chemical manufacturing represents an opportunity to monetize advantaged feedstock resources and build industries that will provide jobs for their rapidly expanding populations—even if it will have a detrimental effect on industry structure and profitability.

For leading companies based in fast-growing major emerging markets, chemical production is seen as a necessity to provide the products needed for continued economic expansion. Lower labor costs in these countries translate into competitive capital-investment and operating costs for these companies, many of which are owned by the state or by families that have close ties to the government. These companies can establish

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production to capture local market growth, and they are little concerned about any resulting global supply-demand imbalances for the chemicals in question.

Importantly, both groups of newcomers include many government-backed companies. As a result, these companies can invest on a scale that is much greater than even the largest traditional chemical-industry players.

These changes have been building for years, but their importance is hard to overstate. In summary, incumbents that have ridden growth in developed and developing markets are now undercut by powerful new rivals with access to cheap feedstocks and the most attractive growth markets.

The new competitive dynamics pose important questions for both newcomers and incumbents about the steps they must take to assure their continued success. For the newcomers, the choices are arguably more straightforward than for the incumbents, which have large legacy businesses to reposition.

Newcomers must develop world-class capabilities

For new producers—whether based in feedstockrich countries or high-growth emergingmarket countries with low labor costs—market entry has been built on production, taking advantage of their lower cost base to establish a presence based on price in their export markets. This is a logical approach and a natural entry point. But it tends to result in the commoditization of the market and a strict focus on the lowest price, and it therefore risks destroying a lot of the value that exists in the market for the new entrants as well as for existing players.

There have been numerous examples of competition from new low-cost producers that has reduced prices well below the level that would assure them a foothold in developed markets, in products as varied as polyethylene terephthalate and fluorochemicals. Similarly, Chinese specialty-chemical products are often sold in developed markets in North America and Europe on a specification basis through third parties, which means that the Chinese producers are cut off from customers and have limited insights into market dynamics.

As new players build their presence in the industry, they must develop capabilities to sustain their growth and look more ambitiously at the kind of profile they want to create. As a first step, they must establish their own R&D and innovation capabilities, which will enable them to offer differentiated products and make them less dependent on incumbents for technology.

Second, new producers must start to build marketing capabilities that will enable them to move beyond selling simply on low price and reap the full economic benefits from their products. They must develop expertise in approaches such as differentiated marketing, transactional pricing and value pricing, and sales-force management. This is a need shared by all new producers, whether they are manufacturing for export or meeting surging demand in home markets.

Developing these capabilities will help new producers get better returns from their current product range and avoid leaving money on the table from selling at unnecessarily low prices. Doing so will become even more pressing as new producers expand their portfolios to include more sophisticated and higher-value-added products, from which they will want to extract maximum value.

Becoming worldwide suppliers will require new producers to establish marketing and sales capabilities in developed markets that are sophisticated enough to support this type of product. Many of these products will require a completely different type of sales approach—one that is capable of dealing with product-approval registrations, gaining intimacy with customers' product-development programs, and getting products specified for these programs.

Third, all of the above moves related to building a worldwide market presence will require that newcomers take steps to establish international operations and—most important—build up the management skills to run those operations successfully. Whether such operations are established through acquisitions or built from scratch, creating and running subsidiaries in

overseas locations will be a new challenge for these players' senior-management teams.

Incumbents must reappraise their opportunities and adapt

Established producers in Europe, Japan,
South Korea, and to an extent North America
will have to take steps to adapt to lower
overall demand-growth rates for chemicals
in their home markets. Clearly, there are
segments of the industry in mature, developed
markets that continue to enjoy good prospects
and that are relatively safe in the new competitive
landscape. These divide into two main areas,
upmarket and down-market, where there will be
niches that are relatively impregnable.

The first area is chemical-industry segments in markets that require customer intimacy and a high level of service support. Examples include flavors-and-fragrances companies that have developed superior customer insights and exclusive manufacturing know-how to support customer demands; coating companies that manage the painting of automobiles within the production line; leather chemicals, where the producer works closely with luxury-goods makers; and water-treatment and construction chemicals. In all these cases, customer intimacy makes them less vulnerable to inroads from low-cost offshore competitors. The second area is a group of basic chemicals where the low prices mean that importation is not viable; this includes such products as sulfuric acid, hydrogen peroxide, industrial gases, and, to an extent, caustic soda. These are, and will continue to be, regional markets.

Where incumbents must look especially carefully is at the many market segments between the two poles. In many of these segments, lower

demand growth is likely to translate into the consolidation of players in certain sectors and capacity closures. Producers in Europe, North America, Japan, and South Korea have historically been net exporters of chemicals, but for many product areas, their export cost position will become less and less competitive. They already face cost disadvantages on raw materials and must confront disadvantages on two other scores: incumbents' domestic plants are not only in the wrong place to serve emerging growth markets such as China, but they also tend to be older installations that have intrinsically higher costs than the new world-scale production capacity that is being installed in the new growth markets.

Successfully managing the transition to this lower-growth mode will require that incumbents evaluate their product portfolios and manufacturing footprints. They must also decide in which sectors they want to be consolidators, with an eye to becoming the "last man standing," and in which sectors it would make more sense for them to be among the companies being consolidated.

Companies must bear in mind that as the industry landscape shifts, the relative attractiveness of products will change, with some more vulnerable to the trends in the industry than others. They must look at their portfolios accordingly. Established markets are becoming net importers of a growing range of chemicals, as new feedstockadvantaged producers can profitably serve these markets. While imports frequently lead to lower prices and reduced margins in the short term, this is not always the case in the long run, particularly if incumbents are willing to shut part of their capacity. Imports are rarely able to

cover all domestic demand volumes, and for the surviving incumbents that can manufacture domestically at below the cost of imports, this evolution can be positive if it results in a more clearly structured and disciplined market with pricing based on import-price parity.

It is also important to emphasize that across all of their businesses, incumbents must work hard for functional excellence with regard to low-cost operations and lean and effective marketing and sales. In the face of the growing competition from newcomers, incumbents cannot afford any slack in their businesses and must make sure they are top-class operators in all areas.

Riding the new market-growth waves

Next, incumbent companies must look beyond their home markets and consider how they can ride the dynamics that are transforming the industry—the rise of chemical production in feedstock-advantaged countries and the shift in demand growth to emerging markets. Incumbents must ask themselves how they can join up with the new players, whether by establishing a presence in a resource-rich country or by building capacity in China and other highgrowth markets—or by doing both.

They must then consider what they can do to enhance and maintain their attractiveness as a partner. Many incumbents operate broad portfolios of businesses; these companies must think about how they can clarify and best articulate the value proposition that they bring to their potential partners. High on any list will be innovation—creating new technologies and products—which has always been a route to profitable growth in the chemical industry and remains an area of strength for incumbent

chemical companies. Companies that have technology that is needed by oil-producing countries to use in their new petrochemical plants will be best placed in any contest to participate in joint ventures. And companies with knowhow that is much in demand in rapidly growing emerging markets will be of greater interest to those countries' governments; they are thus better placed to gain access to such markets.

Incumbents must also think about how the market access that they could provide in their home market could be valuable to new producers. They should consider the best way to make this available. One possibility is to act as a joint-venture partner with a new producer in a way that would enable the incumbent to gradually ramp down its own production.

Finally, incumbents must recognize the strategic choices that they face. What kind of bargaining chips does the company have, and what types of chips might it want to develop? Is it strong enough to stay independent? Should it consider partnerships or alliances? Does a focus on the Middle East make more sense than a focus on China? And if a company decides to focus on China, should it try to ally with a Chinese player or to establish a greater direct presence in China? Companies must think carefully about how to play their bargaining chips for maximum value creation—these chips cannot be used multiple times.

The global chemical industry has entered a new phase in its evolution, as players from oilproducing countries and high-growth developing markets take their places among the industry's leaders. These new players are focused on resource monetization and economic development—and job creation in particular, in a number of countries—rather than on traditional shareholder value, and they thus play by a different set of rules than do the industry's traditional leaders. As a result, the competitive landscape is changing. Incumbents must recognize the shift under way and adapt, while newcomers should build new capabilities to more fully deploy their strengths in the market.

As the world economy picks up speed after the crisis, senior managers are understandably preoccupied with navigating back to "business as usual." However, the shifts in the chemicalindustry landscape we have described above have arguably been accelerated by the crisis, as the major emerging economies have recovered faster than the developed ones. As a consequence, the window of opportunity for incumbents to engage with newcomers could close sooner than they might expect. The number of exceptionally resource-advantaged countries is finite, and major emerging markets such as China may pursue a policy of favoring domestic champions. Incumbents should use any momentum gained from recovery in their traditional businesses to advance their positions in the new industry landscape.

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