



Driven to differentiate

By R. John Aalbregtse

Chemicals companies are caught between energy cost volatility and customer consolidation. And as the industry matures, differentiation will be crucial to successful operation and high performance.

■ Chemical compounds are not exactly household names for most of us, but we literally wouldn't get far without them. Consider life without automobiles, which, to work properly, require antifreeze and brake fluids. Or imagine a world without plastics, which are derived from petrochemicals.

From health care to housewares, the products of the chemicals industry provide essential building blocks for much of modern life. Yet because this huge, diverse and vital industry is facing many challenges, there are important lessons to be learned from those companies that have managed to become high performers.

The industry's most serious problem is a familiar one—maturity, which we define as a state in which volume growth is equal to or less than GDP growth, and in which capacity is highly concentrated in the hands of a few competitors. Chemicals, to be sure, is an unusually heterogeneous sector. The industry's many subsectors are maturing at different rates, and a few are actually continuing to expand. More representative of the industry, however, is the petrochemicals subsector, which has reached maturity in the United States and Europe, and is expected to reach maturity globally by 2012.

A whole raft of other subsectors, including base chemicals like ethylene and fertilizers, are maturing rapidly as well (except in Asia, where demand is still growing, particularly in China). Even for agricultural chemicals, industrial gases, and many specialty and performance chemicals, growth prospects are shrinking.

Product commoditization is exacerbating the problem, steadily eroding profitability across the industry. What's more, consolidation among

chemicals customers, especially in the retail sector, has intensified the squeeze on margins.

There are external factors affecting the industry as well. Take the impact of soaring energy prices. The US chemicals industry as a whole incurs \$4.2 billion in additional operating costs for every \$1 increase in the price of natural gas; the methanol, nitrogenous fertilizer and synthetic rubber subsectors, where energy expenditures exceed 25 percent of total material costs, have been especially hard hit.

The industry's response, predictably enough, has been to accelerate its own consolidation. The rate varies across subsectors. For example, concentration is high for a number of petrochemicals intermediates, such as acetic acid, but lower for many base petrochemicals. However, despite the mergers and acquisitions, today there are probably as many chemicals companies in the world as there were 10 years ago (and, counting the Chinese companies, probably more)—the net effect of spinning off businesses as these companies struggle to come to terms with multiple challenges. The number of players still in the game only serves to intensify price pressures.

For most, it's been an uphill struggle. A few, however, are what we define as high-performance businesses in the chemicals industry: 12 companies that have managed to consistently deliver superior returns to their shareholders over many years and are likely to continue to do so (see "About the research," opposite).

The heterogeneity of the industry is mirrored in the diversity of the business models these companies

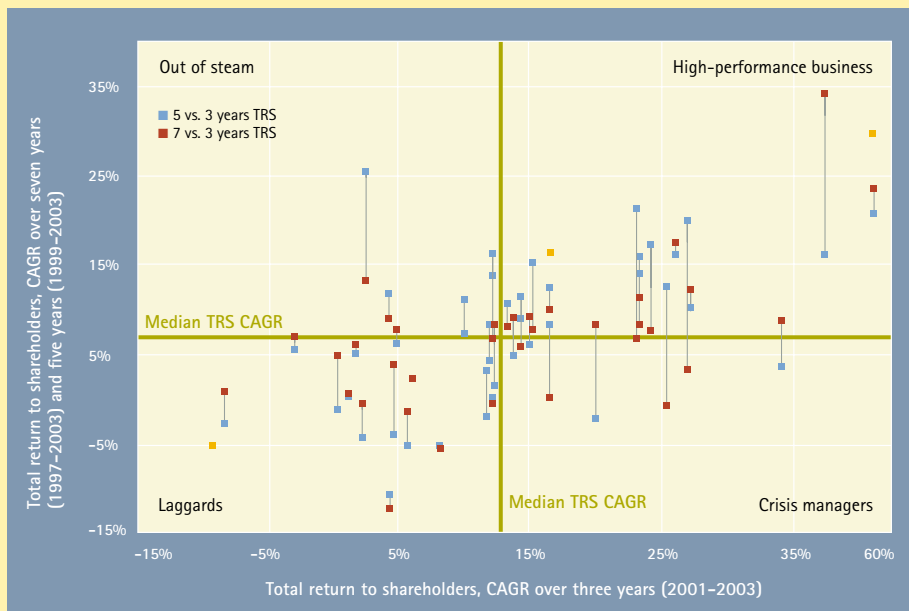
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About the research

Accenture's investigations into how well the chemicals sector serves its shareholders predate the companywide analysis of high performance in specific industries and were a model for the current approach. Originally, we looked at the performance of some 105 chemicals companies worldwide—essentially, the total universe of companies with revenues of more than \$1 billion—over a 15-year period, from 1985 to 2000.

In the first phase of the analysis, we looked at performance longevity and positioning for the future. We examined both historical returns—total return to shareholders over three separate five-year periods—and future growth prospects. We derived the latter by first calculating a growth ratio of current earnings to enterprise value for the last two years of our analysis time frame. Future growth prospects were estimated by comparing the enterprise value (market cap plus long-term debt minus cash) of the company with the present value of the current earnings stream.

Thirty companies emerged from that process as value growth leaders, at which point we applied some of the Accenture core metrics for assessing performance longevity. We then calculated the total return to shareholders, on a compound annual growth rate basis, over three, five and seven years. Finally, for the 30 value growth leaders, we identified 12 companies whose performance exceeded the mean.



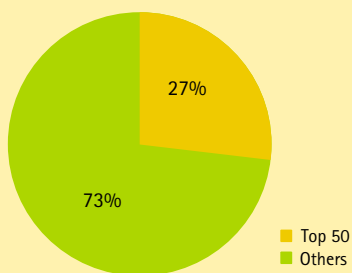
SOURCE: COMPUSTAT; ACCENTURE ANALYSIS

A complex picture

The chemicals industry is highly fragmented. The top 50 companies account for only a little more than a quarter of total sales.

Top 50 chemicals companies sales share, 2003

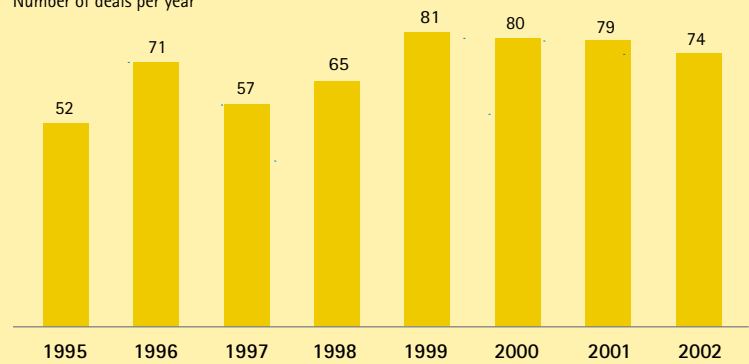
Total chemicals sales \$1.74 trillion



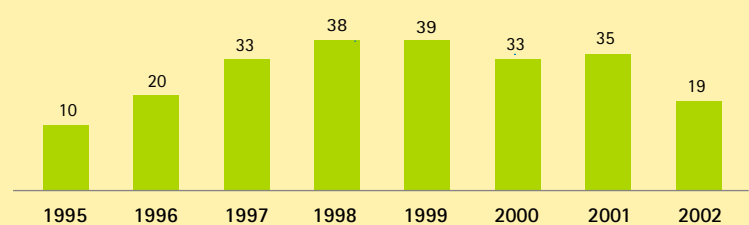
There has been a trend toward consolidation, with more than 50 M&A deals per year from 1995 to 2002, worth more than \$200 billion. But there are still many players . . .

M&A transactions, 1995-2002

Number of deals per year

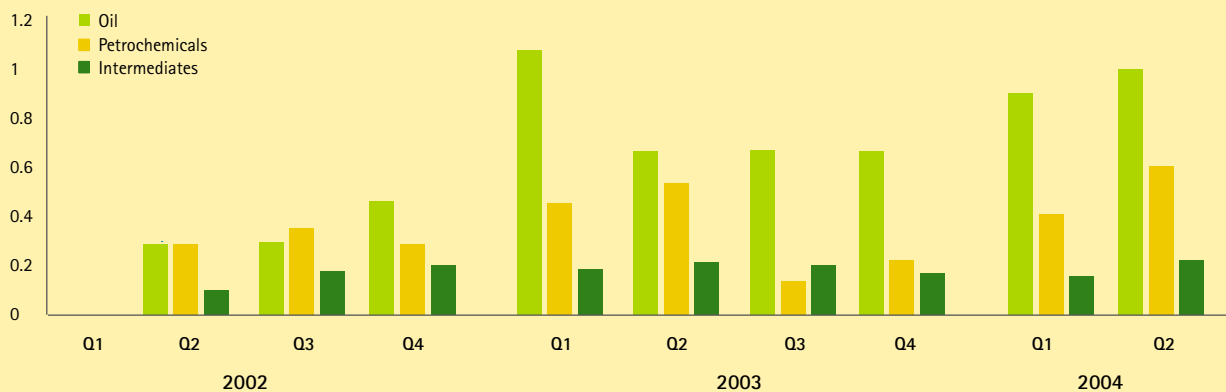


Value of deals per year (in \$ billions)



... which keeps companies from being able to raise prices. Since 2002, none of the major industry subsectors—oil, petrochemicals or intermediates—have been able to raise prices more than 1 percent ...

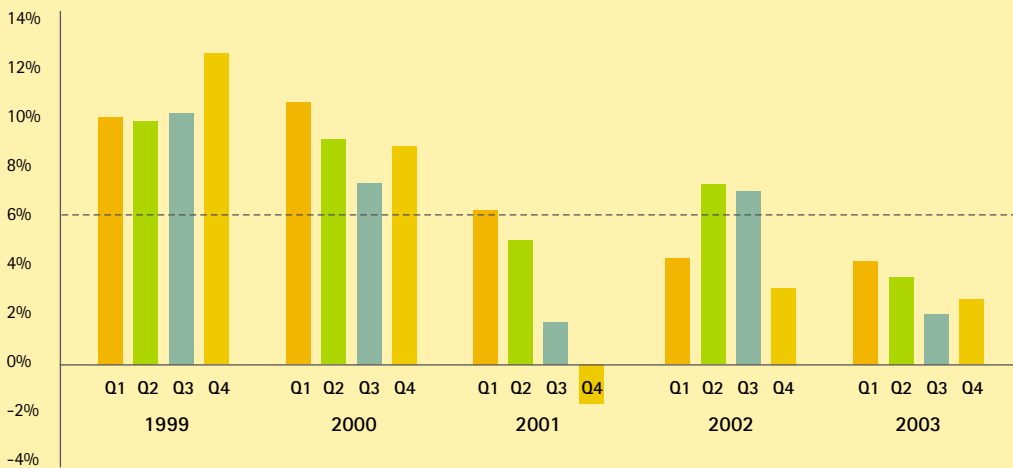
Percent change in chemicals prices, second quarter 2002—second quarter 2004
Index rebased



SOURCE: TECNON; CMAI

... and margins have suffered from these trends as well as from the rise in oil prices.

Gross margins in plastics subsector



Note: Broken line signifies mid-cycle level

SOURCE: TECNON; CMAI

The Dow Chemical Company: A nimble giant

At first glance, Dow is a surprising high performer. One of the largest chemicals companies in the world with a presence in just about every conceivable industry subsector, from polymers to plastics, as well as in most geographies, it doesn't look like a particularly differentiated enterprise. Closer examination, however, reveals the opposite to be true.

Dow differentiates through both scale and customer insight. The company is especially adept at leveraging its standard processes globally to build and maintain a low-cost position in the markets where it operates and to facilitate the integration of its numerous acquisitions. It's also very good at identifying and managing its customers' needs.

The company focuses on sales and marketing capabilities that enhance the customer experience as well as on better tailoring products and services to meet customer demands. By offering multiple channels to market, Dow cuts the costs of

servicing its overall customer base, and Internet-based channels like myaccount@dow offer round-the-clock access to account information and transactional e-commerce capabilities with minimal effort.

Dow also uses IT very well—a key enabler when it comes to turning insight into action (see story). The company has developed a global database that provides such information as which customers are most profitable, which products are fast movers and where sales are trending in different markets.

The company's culture is a significant contributor to its high performance. Dow is continuously building capabilities within its organization. It offers employees exceptionally robust training programs, both in person and through the Internet, and the company's value-based performance management skills are second to none.

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have developed to achieve this status. Two are scale-driven operators, competing globally but in selected geographies; three are solutions providers, focusing on specific services that are uniquely tailored to selected customers. Most of the companies, however, use a differentiated operator business model in which they set themselves apart through product innovation or customer relationship management, or through some special services combining an exceptionally acute understanding of their customers' needs with highly focused product innovation.

Differentiation, indeed, is the one quality common to all the high performers in this industry. Several high-performing companies differentiate themselves by combining two or more success factors: scale, innovation, customer insight or service/solution. But what distin-

guishes all 12 as a group is the recognition that some form of differentiation is fundamental to their success. Their choice of business model always supports that drive to differentiate.

In addition, all the high performers we have identified share a number of attributes with high performers in other industries. They all demonstrate the sort of financial flexibility and acumen that resonates well with financial analysts and allows the companies to make counter-cyclical investments. Their portfolio management skills are top-notch too. And they are unsurpassed when it comes to operational management capabilities.

But it is their mastery of three key capabilities in particular that clearly distinguishes high-performing chemicals companies.

Translating insight to action
High performers in chemicals

Ecolab: Cleaning up

Minnesota-based Ecolab was founded more than 80 years ago as a traditional specialty chemicals company producing industrial detergents. Today, through exceptionally active portfolio management, Ecolab has turned itself into a solutions provider that delivers detergents, equipment and consulting services to customers worldwide.

The company is a leading innovator in terms of both product and equipment R&D. By listening carefully to its customers, via both its 9,300-plus global sales force and its MyEcolab.com Internet channel, it translates insight into action, designing and managing custom-cleaning programs that meet the total sanitation needs of customers providing broad solutions that include food safety, pest management and equipment maintenance.

Ecolab trains 2,700 sales associates annually and provides both training and consulting services to its customers. Indeed, the company has based a highly differentiated performance culture on the concept of the "Ecolab Difference." Its organization is flexible, responsive and results-oriented. Leadership encourages appropriate risk taking and learning from mistakes. And the company's very decentralized organization enables fast decision making and superior execution.

recognize shifts in the competitive landscape almost before they happen—and respond with alacrity. Their ability to quickly innovate and commercialize new customer ideas in response to these shifts hinges on having systems in place that can actually produce insight, rather than just process information.

One of the industry's high-performing scale operators, for example, effectively leverages its IT systems to develop crucial insights by gathering all its global customer data into one strategic network. Another aligns and connects front- and back-end operations exceptionally efficiently, ensuring that insight about customer demands is immediately communicated to its production and R&D divisions, whose functional excellence, in turn, ensures a swift response.

Insight, moreover, is translated into higher customer retention rates and barriers to entry. One of the high

performers we identified, a solutions provider, was the first in its industry subsector to respond to customer demands for a more consultative sales process. Today, the quality of its 9,000-strong sales force is unparalleled.

Customer orientation

It might seem a truism to say that customer orientation is critical to high performance, but all of the high performers we identified do, in fact, display an unusual degree of customer focus and understanding. This springs, apparently, from a clear initial decision, based on profitability and growth potential, to select just which customers they want to serve—another form, of course, of differentiation.

High performers are adept at deepening these customer relationships. Some have taken a collaborative approach, embedding themselves in the customer's supply chain or working closely to develop tailored

Air Liquide: The right customers

With global sales of \$10 billion, Air Liquide leads the \$35 billion world market for industrial gases, a highly concentrated subsector of the chemicals industry. As Ron LaBarre, vice president of large industry markets for the company, observes, "Because it is not cost-effective to ship our products long distances, industrial gases is a follower industry—we go where the customers go." However, the industrial gas companies can choose who to follow and where.

Paris-based Air Liquide has excelled at selecting the customers with the greatest potential to contribute to its growth and profitability. Its deep understanding of its customers' needs and processes is second to none. And more than half its revenues come from high-growth markets.

The company operates a hybrid business model with a mix of differentiated product and solution offerings. It focuses on growing its customer base by innovating—a process dependent on very collaborative relationships that involves partnering

with customers in key markets. Take, for instance, electronics, where the company partners with Texas Instruments to manage elements of its chip fabrication operations.

The company's highly decentralized organizational structure—Air Liquide has more than 250 subsidiaries worldwide—encourages an exceptionally strong culture that does not shrink from risk taking, yet which demands clear accountability for results. "We measure each person based upon their own performance trends and their self-motivation, not on internal competition," explains John Glen, vice president of finance and administration. A constant process of reevaluating goals and achievements continually challenges the company's executives and employees to do still better.

products—as The Dow Chemical Company did with one major retailer by developing a plastic garbage bag specifically for that company (see page 32).

Thanks to their sales forces, solutions providers are especially good at customer loyalty and retention. And all high performers excel when it comes to understanding the particular value of their products to each customer, leveraging knowledge of a customer's unique needs to differentiate their own brands. Even a chemical as commoditized as salt can be differentiated depending on its use—say, in highway maintenance, for water softening or in the kitchen.

High performers also excel when it comes to expanding their customer base in pursuit of profitable business. Some do so thanks to the rigor of their systems for identifying customer segments and new potential within them, others by placing

bets on key growth markets. For example, one high-performing company developed systems to track opportunities for substituting plastics (its product) for steel and other materials across a number of end markets, such as automobiles, appliances, electronics and construction, and has been remarkably successful in persuading manufacturers to make the switch.

A performance culture

All high performers in this industry exhibit special internal strengths. Their leadership teams are remarkably stable; although recent CEO turnover in the chemicals industry overall has been high, the average length of CEO service at high-performing chemicals companies is more than five years. In addition, these high-performing leaders don't shrink from taking measured risks.

High performers also benefit from robust organizational structures

that allow their leaders to take a big-picture approach to both corporate objectives and employee performance in fulfilling them. Air Liquide, for example, expects high performance from its executives, but as one company executive puts it, "Accountability is based upon differences in culture, geography and causality." The leadership always considers whether something beyond the executive's control had an impact on business performance.

High-performing cultures are always open to change and always encourage new ideas about how to improve their operations. They ensure that the right people are in the right positions, decentralizing work that requires local knowledge. But they are also very good at centralizing, automating or outsourcing work that is easily standardized and shared. All these companies consistently follow through on business and individual executives' objectives, and have systems in place that can consistently measure the results.

Differentiation is plainly crucial to operating successfully in maturing chemicals markets. All high-performing companies have successfully differentiated their products and services to satisfy specific customer needs. What's more, the best blueprint for future success lies in the development of a differentiated operator business model; few companies will be able to make the transition to successful scale or solution business models.

As chemicals companies struggle with the onset of maturity, a differentiated approach will continue to widen the gap between industry leaders and those caught in the relent-

less squeeze of energy cost volatility and customer consolidation. ■

About the author

R. John Aalbrechtse, a Chicago-based partner, heads Accenture's Chemical Strategy practice. With more than 20 years' consulting experience, he has helped major chemicals clients create business strategies, ranging from developing new channels to market to constructing completely new business models focusing on aggressive growth. Mr. Aalbrechtse has also led industry studies on creating shareholder value, CRM capabilities, e-commerce perspectives and the impact of new business models on the global chemicals industry.

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