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CONSUMER

Coping with the Commodities Crisis

■ *The high levels of volatility that we have seen in commodity prices haven't been witnessed in 30 years—and they are here to stay for some time*

■ *Consumer goods companies must understand this "megacycle" in their own industries, how it could affect their businesses, and what they can do to address the dual challenge of risk management and cost containment*

■ *Procurement organizations will need to use tools such as target economics in order to identify structurally advantaged supply regions, inform make-versus-buy decisions, and predict long-term prices for inputs that affect decisions about end-product formulations*

■ *Companies able to understand and anticipate the new dynamics of their commodity markets will be rewarded with less volatility and a much stronger competitive position*

To say that the world's commodity markets have changed drastically in the past year is a huge understatement. We're not talking about the ordinary ups and downs that are inevitable in any market. The rampant volatility in commodity prices that companies have experienced—and will be experiencing for some time—might be described as a "megacycle," the likes of which haven't been seen in more than 30 years. What a ride! Coupled with the evolving financial crisis, the current commodity environment represents a unique challenge.

It is absolutely critical for today's managers to understand this extraordinary trend in their own industries, how it could affect their individual businesses, and the steps they can take to survive it. This formidable challenge gets even tougher when you consider that business careers typically span about 30 years, which means that most managers—regardless of level or functional experience—have never encountered anything like this before. And to make matters worse, they don't have a lot of time to study the problem. They need immediate answers to questions such as the following: What's going on in our supply markets? Will the volatility be temporary or permanent? How will it change our long-term economics? Will our competitors be better positioned than we are? What can we do in the short and long terms?

Some companies are hoping that business as usual will take hold again and that they will be able to go back to the old ways of dealing with commodity suppliers. Don't bet on it.

Companies need to prepare for a very different world—both for the duration of the crisis and for when things have begun to settle down. Here's a quick primer on how the current situation arose and what companies can do to address the dual challenge of risk management and cost containment.

A Long Time Coming

After a few decades of deflationary prices, we saw exceptionally high levels of commodity inflation in the past few years. In energy, price increases from 2007 until earlier this year—more than 100 percent for some types of coal and nearly 75 percent for crude oil—were astronomical compared with those from 2006 to 2007. Prices of food also skyrocketed—for nuts, cooking oil, wheat, soybeans, corn, and other grains, in particular, but also for bananas, coffee, and oranges. Metals—including iron, aluminum, and copper—saw similar increases. Although some of the recent price declines, especially for oil, have provided welcome relief, the commodity markets are far from giving an all-clear signal.

Since 2004, commodity prices have also been experiencing unprecedented volatility—in both futures and spot prices—a trend indicating that the uncertainty in the markets is making it difficult for buyers and traders to estimate the risk that prices will rise. (See Exhibit 1.) This combination of factors has had a tremendous impact on the profitability of most consumer-packaged-goods companies. From September 2006 through December 2007, the weighted-average gross margins of 13 major packaged-goods companies in the United States decreased by more than 1.5 percentage points, or $3 billion. One company saw the prices of two of its major commodities surge 200 to 300 percent in the second half of 2006 alone.

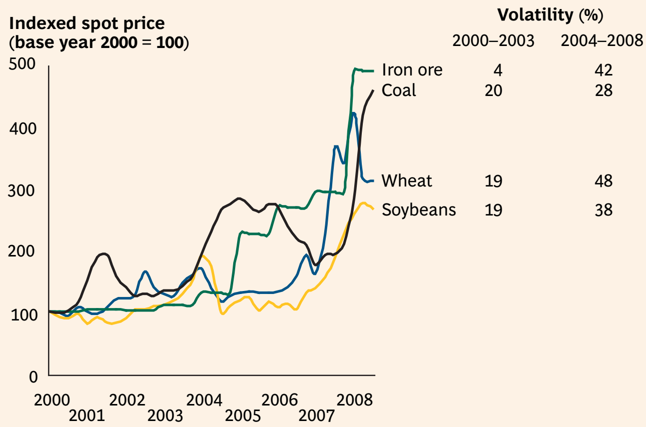
Such drastic change can't be attributed entirely to the weakness of the U.S. dollar, which accounts for only about 30 percent of commodity price increases since 2003. A series of short-term shocks in the largest commodity-producing markets have also been responsible for spikes in global prices, although such shocks are a fairly consistent factor in global commodity markets.

A number of long-term factors have come into play as well. For one thing, energy is a major cost component for some commodities, creating a ripple effect in price increases. The high energy costs of the recent past had significant second-order effects on commodity markets as new substitution patterns took hold and influenced commodity economics. For example, the cost of corn and other animal feeds in the United States increased dramatically because supply was squeezed by the demand for ethanol and biodiesel fuels.

But the long-term factor that has had the biggest impact is the imbalance between global supply and demand. Demand for commodities has risen significantly in the past ten years, whereas the available supply has increased only modestly, putting immense pressure on prices. Even if there is a slowdown in demand in response to the current financial crisis, it will not right the imbalance in many commodity markets. The principal cause of this imbalance is China's (and, to a growing

Exhibit 1. Commodities Have Experienced a Period of Remarkable Price Inflation and Volatility

Price and volatility trends for select commodities



Sources: Bloomberg, BCG ValueScience Center, BCG analysis.
Note: All prices are quarterly, except for iron prices, which are annual. Data are through the third quarter of 2008. Volatility is represented by the standard deviation.

degree, India's) intense demand for commodities to fuel industrialization. This demand increased exponentially over the past five years. To illustrate, annual growth in the per capita gross domestic product (GDP) of Germany, Japan, the United Kingdom, and the United States ranged between 0.5 and 2 percent from 2001 through 2005, while the annual growth in energy consumption per capita ranged between -0.5 and 0.5 percent. China, by contrast, saw its per capita GDP rise an average of 9 percent per year and its energy consumption per capita grow at an average of 11 percent per year in the same period.

In the deflationary environment that prevailed until a few years ago, it was difficult to justify major, long-term capital investments with no significant returns in sight. Although everyone expected China to grow, no one planned for such an extended or intense boom—and few managers were willing to stake their careers on aggressively adding capacity to serve a "hockey stick" pattern of future demand. Now, spurred by a wave of likely shortages and high prices over the long term, capacity will be added, but it will take time.

What's Next?

Dramatic volatility in the prices of commodities is not going to disappear. China's demand for commodities will continue to grow, and India will follow hard on its heels. Although the dollar's partial recovery may have helped relieve the pressure for some companies, the underlying dynamics have not changed. Capacity planners will be unable to estimate with true precision the investments needed, and the current credit crisis is likely to make them even more gun-shy when it comes to long-term investments. Even if a slowdown in demand corrects some of the short-term imbalance in supply and demand, the overall uncertainty in the economy will continue to contribute to repeated imbalances over time. That will result in price volatility, which will cycle through the various commodity sectors.

What It Takes to Survive and Thrive

Even in an uncertain environment, there are six critical actions that companies can take to protect themselves with a well-designed commodities strategy.

Focus on key commodities. First, companies should understand the appreciation of their historical unit costs, the changes in volatility of their key commodities, and the type of risk—structural, nonstructural, price, or supply—that they are facing. It is also important for companies to understand the cycles of supply and demand of their commodities from a macroeconomic perspective—taking into account social and political factors and the potential for substitutions. Such an understanding should help in identifying commodities that could create either a competitive advantage or a competitive disadvantage, depending on the company's positioning and business strategy.

Calculate target economics. Second, companies should understand the economics of their suppliers, specifically, their cost plus a reasonable return on capital. We refer to this calculation as their *target economics* or *should cost.* Over the long term, target economics track with long-term average prices, but in the short term, market prices fluctuate above or below target economics. (See Exhibit 2.) When market prices are above target economics, excess profits encourage suppliers to add capacity and new suppliers to enter the market, resulting in a downward pressure on prices. When market prices are below target economics, high-cost suppliers are forced to exit the market or postpone capacity additions, resulting in reduced supply and an upward pressure on prices. The long-term trend line for target economics stays relatively constant in slope but can change as a result of disruptions in underlying macroeconomics (such as higher long-term energy prices).

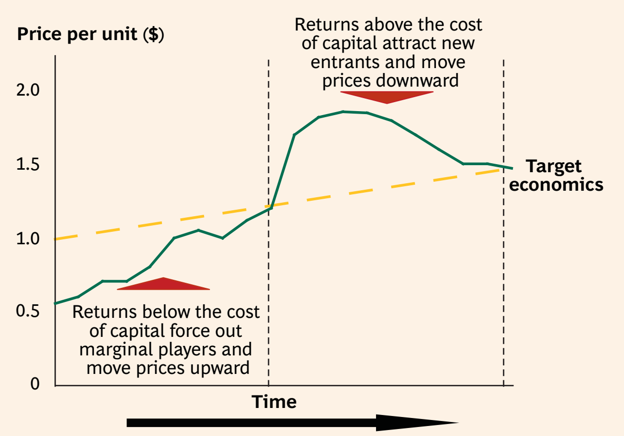
Using target economics to understand a supplier's long-term price curve can help determine the optimal mix in the portfolio of supplier contracts in two ways. In the short term, it can help companies assess current prices by evaluating them against target economics. This analysis, in turn, can be useful in determining the best mix of short- and long-term contracts in the portfolio and in selecting suppliers (or pursuing options such as partnerships with suppliers that have advantaged target economics). Target economics can also bring to light long-term strategic opportunities, such as vertical integration or outsourcing. By disaggregating the economic drivers in an industry, it can identify structurally advantaged supply regions, inform make-versus-buy decisions, and predict long-term prices for inputs that affect decisions about end-product formulations.

Model supply and demand. Third, companies should develop long-term supply-and-demand models for critical commodities, not only in order to determine availability but also to add granularity to predictions of how pricing will evolve. For instance, forecasts of supply shortfalls may call for strategic long-term contracts or insourcing to protect critical inputs. In addition, a good understanding of supply and demand can help managers predict the evolution of marginal suppliers—critical information for forecasting market prices using target economics. In consolidated supply markets, target economics and a robust supply-and-demand forecast can be used to project expected prices by year and to quantify the likely returns of different vertical-integration options.

Qualify numerous suppliers. Fourth, companies should qualify a large number of viable suppliers in order to avoid having to rely on only a few. This can also help determine whether differences between the com-

Exhibit 2. Target Economics Can Help Companies Understand Supplier Pricing

Price of a hypothetical commodity over time



Source: BCG analysis.

pany's and the supplier's views of the market have created an arbitrage opportunity. For example, if a lot of underutilized capacity has driven market prices below target economics, then the company should lock in a long-term contract. Finally, companies should consider how they can work with select suppliers to help them reduce their costs below current target economics and thereby secure an advantaged price position.

Balance risks and returns. Fifth, companies should develop the capability to monitor and update target economics. Although most procurement organizations are populated with strong negotiators, only a few have people with the analytical skills needed to assess and balance risks and returns in the procurement portfolio. Managers with such skills can determine whether a company should be using substitute materials when commodity prices are high or whether new formulations for end products might increase the choice of suppliers. A procurement organization that lacks these capabilities—as many of them do—ends up relying on little more than instinct or so-called trend models to make critical decisions on prices, contract duration, contracting partners, and make-versus-buy options. As a result, it is forced to take large positions—often totaling billions of dollars—in hyperinflationary, volatile markets, with the decision makers remaining relatively free of the scrutiny of senior managers, who are often unaware of the potential implications of these positions. To succeed rather than just survive in this environment, companies must invest in procurement processes and people.

Prepare for the future. Finally, companies should develop dynamic pricing models and alternative formulations for end products, not just in order to respond to commodity price shocks but to anticipate them as well. Such tools make it possible for contracting strategies to take into account how long it will be before a company increases prices or changes formulations. Companies also need to vary their cost structures without paying significant scale penalties. And they need to establish partnerships on mission-critical commodities, preferably through virtual integration, since vertical integration should be chosen only as a last resort.

The stable commodity markets to which consumer goods companies have grown accustomed are behind us. Volatile and often inflationary markets are here for some time. To help ready your company to compete in this environment, we suggest that you answer the following set of questions:

- Have we identified the commodities at risk, assessed the type of risk, and determined the potential impact on our business strategy?
- Have we analyzed the economics of our current suppliers for every category of commodities at risk?
- Have we studied the balance of supply and demand, now and for the future?
- Have we qualified several viable suppliers in order to increase our leverage?
- Have we aligned our supply strategies in order to deliver the greatest value with an acceptable amount of risk?
- Have we aligned our organizational capabilities with the demands of the new environment for commodities?
- Have we implemented dynamic models for product pricing and end-product formulation in order to reduce cost and risk?

Companies that continue to play roulette with the commodity markets will see their cost structures surge, their profits plummet, and their competitive advantage erode. Yet it's not too late for senior managers to address the new dynamics of these markets. In doing so, they will be rewarded with less volatility and a much stronger competitive position.

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