In today’s roller coaster ride of raw material pricing, firms that master the volatility can improve earnings margin by 2 to 5 percentage points, increase security of supply, and improve supply chain operations.

In early 2008, raw material prices spiked to unprecedented heights. Just three years before, prices were half to one-third of the 2008 level. At the same time, price volatility was on the rise. In 2005, the average spread between observed minimum and maximum prices throughout the year was 40 percent, while in 2008 the spread was 163 percent for a basket of select raw materials (see figure 1 on the following page).

Companies were caught off guard by the price hikes and struggled to lessen the impact on profits. Then, by the fall of 2008, in the aftermath of the financial crisis, demand for raw materials dropped drastically and so did prices. The sigh of relief heard around the world was that of CEOs, CFOs and CPOs who thought they could return to “business as usual.” Nothing, however, could have been further from the truth. The roller coaster ride of raw material pricing was just beginning.

The Game Has Forever Changed
Since hitting rock bottom in the fall of 2008 and early 2009, raw material prices have regained their strength, and the game has forever changed. During 2010, the three largest iron ore mining companies—Vale, Rio Tinto and BHP Billiton, which control approximately two-thirds of the seaborne iron ore trade—forced steel suppliers away from their historic one-to-two-year contracts and into quarterly or even monthly contracts. By early 2011, price contracts for coking coal, a key raw material in steel production, were also being adjusted quarterly or even monthly from the previous yearly price adjustments. With new pricing rules, and significant consolidation of the raw material supply base, steel manufacturers are looking for ways to reduce their exposure to short-term price volatility.

What impact do the new rules of the game have on the manufacturing
industry? A typical original equipment manufacturer has around 15 to 20 percent of its total costs directly derived from raw materials, while in process industries, raw materials make up 50 to 60 percent of costs.

The ability to effectively manage raw material prices and supply is essential to managing overall company operations and risks. Addressing raw material risk and price volatility on an ad hoc basis is one thing; really grasping and actively managing the full implications of raw material price changes on income and balance sheets is another.

A Structured Approach to Managing Raw Materials

From our work in this area, we understand the need for a structured approach to raw material management—using the available tools and techniques—to create a competitive advantage. Firms that master raw material management can improve earnings margin by 2 to 5 percentage points, increase security of supply, and improve supply chain operations, among other things. For companies that preemptively manage these risks, effective raw material management can be a source of competitive advantage.

We have worked with clients in several industries to develop successful raw material management strategies, at the same time dispelling a number of myths about the market (see figure 2). The following provides a summary of our proven four-pronged strategy.

1. Define a strategic raw material agenda. Raw material management begins with an industry-specific strategic agenda that is closely aligned to a company’s overall business strategy, market situation and raw material exposure. The agenda defines primary objectives, including, for example, the implications of the raw material situation for a company’s overall business strategy and growth plan; raw material supply security and price volatility; level of backward integration required (or exists) among competitors; and raw materials needed for future products. Managing raw material price volatility does not necessarily reduce exposure to volatility. The agenda is thus designed to identify concrete targets to meet a desired risk profile and upside potential, balancing risk and volatility with benefits.

2. Establish supply chain and market transparency. A raw materials management strategy provides visibility into the fundamental forces of the market—supply, demand and factors concerning key inputs. For example, in the steel industry, we use our raw materials indicator to obtain an overall view of factors concerning the relevant steel grades, such as hot rolled coil,
cold rolled coil and plate. Generally, a raw material indicator provides a view of the following:

Supply situation for each product family by region and country, including current available capacity, import and export flows, import and export duties effect on supply, and the inventory situation at steel service centers and manufacturers.

Demand situation, including economic activity, regional investment levels, activity level in key markets segments, and shifts in demand driven by prices of substituting products.

Key inputs and all factors concerning raw materials, for example, in steel, the indicator offers details on iron ore, scrap, coal and coke, and alloys. In addition, it provides information about situations that influence the supply chain, such as capacity at steel mills in relevant regions, bulk transport capacity and even flooding, which could affect mining activities in key raw material supply markets such as Australia.

3. Manage raw material risk.
A.T. Kearney’s Purchasing Chessboard® finds the right strategies for every supply-demand power situation. The following strategies from the chessboard, tailored for the raw materials used and quantities manufactured, are employed to manage raw material risk.

- Define the deal, intelligently. A raw materials deal requires the following actions:
  - Define purchasing prices based on input costs while excluding supply-demand power imbalances; in this way, you avoid price dictates such as those of, for example, the London Metal Exchange.
  - Use A.T. Kearney fingerprint methodology for various raw materials, with related price mechanisms, to reduce exposure to market changes and generate benefits.
  - Deploy hedging strategies and instruments to determine desired price fluctuations risk exposure.
  - Structure customer contracts intelligently to enable timely pass-through of raw material price fluctuations and risks to your customers.

Build strategic alliances. Companies that build strategic alliances with long-term agreements can obtain a lasting, low-cost supply in return for securing a base for suppliers’ new capacity coming on stream.

Develop a supplier base. Develop relationships with new suppliers—for instance, for special raw material grades—to decrease incumbent supplier’s pricing power and ensure lower-cost supply.

Integrate vertically. Backward integration along the value chain will limit exposure to price hikes and reduce price volatility; this is precisely why steel mills are backward integrating into iron ore or coke and coal mining.

Redefine demand. Change product design or manufacturing setup to reduce dependence on supply-constrained raw materials.

4. Create a strategic organization and processes. Managing raw material risks requires embedding key activities and processes into your day-to-day operations. This is accomplished by establishing a department within finance to monitor underlying raw material risk and determine what company “value”—top-line and external spend constraints—is at risk.
A similar function within procurement should be set up to monitor and analyze developments in the raw material market (using the raw material indicator discussed in point 2 of this paper). Meanwhile, treasury can analyze the effect of raw materials on your income statement, cash flow and balance sheet. The analysis considers both historic raw material developments and expected future market scenarios. A well-designed training curriculum will increase understanding of various raw material market dynamics and thus allow for developing the right strategies to manage fluctuating raw materials. Finally, a financial hedging mechanism will allow for the management of all raw material hedging activities.

**Mastering Volatility**

The volatility of the raw materials markets is here to stay. With a significant share of overall costs related to raw materials, it is essential for manufacturing companies to master this new, more volatile world. Applying the right tools to manage raw material risk effectively will go a long way to ensure lasting competitiveness.

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