Oil Price Volatility and How to Avoid It

From 1949 until 1973, the average annual price of oil fluctuated within a 7% band, but from 1981 through 2009 the variation leapt to almost 10 times that amount. A range of factors has contributed to the most recent volatility, including political crises, financial speculation, and a sharp increase in demand from developing economies.

Regardless of the reason behind the initial shocks, the variation from a steady state historical demand induced the "bullwhip effect" in which small changes in demand cause oscillating and increasing reverberations in production, capacity, and inventory throughout the supply chain for oils and gas field machinery and equipment such as turbines, generator sets, motors, and electrical equipment, among other equipment and supplies.

This bullwhip effect has caused four types of economic inefficiency at oil companies and their equipment suppliers:

- Oil companies paid higher prices when markets are overheated and not rolled back when recession hits.
- Equipment manufacturers held excess inventory during the boom and took a long time to draw it down when the recession hit.
- Equipment manufacturers made excessive capacity investments near the peak and suffered a low or negative return on investment.
- Component and parts suppliers lost orders that they were not able to fulfill at the peak due to inadequate capacity and long lead times caused by large backlogs.

Over the long term, this volatility costs the equivalent of 10% of the cost of producing a barrel of oil, according to Boston Strategies International's 43-year simulation of two scenarios involving a flat oil price compared to a volatile oil price.

Smoothing volatility in demand and prices would result in steadier and more profitable scenarios involving a flat oil price compared to a volatile oil price.

What can oil companies and their equipment suppliers do? Passing all risk to suppliers is not an option. Second, oil companies paid higher prices that were set when markets are overheated and not rolled back when recession hits. Smaller R&D investments would result in greater oilfield productivity. More stable R&D investments would result in greater oilfield productivity.

If you "go long," be sure to sign long enough agreements to bridge the up-and-down cycle. Many buyers think a long-term agreement is 3-5 years in duration. Because this is much longer agreement in order to fully mitigate the impact of production-inventory-capacity cycles. And the optimal length varies according to the category of purchased equipment or services.

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