A managed-risk approach to energy sector hedging: Are you ready for the next market move

Energy markets are unpredictable. Nevertheless, a familiar pattern tends to repeat itself concerning oil and gas and other energy commodities. Periods of relative stability lull buyers and sellers into complacency until a precipitous price drop, or a rapid run up, tests their mettle. This is exactly what happened in the latter half of 2014 as a sharp decline in oil prices caught many companies by surprise. Some have come out on the winning side of this sudden directional shift, although they should now ask if their good fortune was by luck or by design. Others have been forced to answer tough questions from investors, boards, and executive risk committees about why they were not better prepared. Either way, the recent market volatility has thrust the topic of energy risk hedging and what constitutes an effective strategy into the spotlight. For energy-intensive companies, now is a good time to consider:

• Does our organization have a clearly defined hedge strategy. If so, did it produce the desired results amid the price volatility of recent months?
• Does our company understand the potential impact of higher and lower prices going forward and what that could mean in terms of revenue, cash flow, and execution of business strategy?
• Is our hedge strategy tightly aligned to the company’s overall financial objectives and risk management program?
• Do we conduct scenario analyses and stress tests to determine quantitatively how potential outcomes of different hedge strategies compare to objectives?
• Do we have appropriate governance and risk oversight processes in place?

If the answer is “no” to some of these questions, then your organization may not be adequately prepared to navigate the next market move.

Market view vs. managed-risk perspective
Companies engaged in commodity transactions have deep and well-developed insights into current market conditions, past cycles, and future trends in pricing and volatility. But this “market view” by itself does not offer a sound foundation for a hedge strategy. The problem with relying solely on a market view is that it leads people to make assumptions about the future based on what they’ve experienced before. This, in turn, can result in emotional decision making. In extreme cases, it can turn hedgers, those who transact to manage risk, into speculators, those who transact to make a profit. The reactions of some to the spike, and then plunge, in natural gas prices during the financial crisis of 2008 offer an example.
Establishing quantitative metrics to measure a company’s
Developing or refining the hedge program by selecting
Using scenario analyses and stress testing to evaluate the under the rules and regulations of
not be available to attest clients
subsidiaries. Certain services may
detailed description of the legal
please see www.
deloitte.com/us/about for a
Deloitte LLP . Please see www.
deloitte.com/us/about for a
entities are separate subsidiaries
public accounting firm. These
Deloitte Advisory roadmap defines five basic steps for developing a proactive, structured hedge strategy based on a managed-risk approach:
Step 1: Establish a proactive risk-management culture
A good hedge strategy is anchored in organizational culture: the company believes that it is important to manage its energy risk exposure over the long-term in both a practical and consistent way. This belief should be present before doing anything else.
Step 2: Undertake a qualitative and quantitative risk assessment
This assessment should consider the maturity of the current hedge program and infrastructure as well as evaluate and quantify the exposures themselves (i.e., what they are and how big they are). Through this process, the organization can assess its risk appetite, or tolerance for risk, which should ultimately be discussed and committed to at the CEO and board level.

Starting in January 2008, the New York Mercantile Exchange (NYMEX) natural gas contracts started to rise sharply. Through July 2008, the market set record prices for natural gas, with NYMEX gas contracts settling for the months of May, June, and July at $11.28, $11.92, and $13.11, respectively.1 During this price run-up, some hedgers were reluctant to act because they could have hedged at lower prices a month prior but didn’t. The rationale was that prices were insupportably high and couldn’t continue to move higher. But prices did continue to rise. Finally, when the financial burden of higher prices was intolerable, they took large hedge positions. Then, news of the financial crisis started to spread and commodity markets, including those for natural gas and crude oil, began to fall. NYMEX gas contracts for November 2008 settled at $6.46, nearly one-half their price during the summer.2 During this time, a market view generally prevailed. Many buyers moved to take advantage of what they saw as a historically low dip in prices and increased the size of their hedge positions even further. However, prices continued to slide for the next nine months, with gas contracts for September 2009 settling at $2.84.3 Hedge losses were widespread and deep among energy-intensive companies, jeopardizing their financial viability.

This situation, while slightly dated, illustrates why developing a hedge strategy based solely on a market view is not enough. In developing a strategy, companies need to protect the organization against unfavorable market movements, whether up or down, and manage to a well-defined set of risk metrics. A managed-risk perspective, which is typically part of a broader risk-management program, measures and monitors the market risk of the portfolio against multiple criteria, (e.g., revenues/costs, liquidity, hedge losses, and credit and collateral) and defines mitigating activities consistent with the stated objectives and risk criteria. Many organizations could have been better prepared to navigate the aforementioned situation if they had adopted a managed-risk perspective. It would have largely prevented knee-jerk reactions since it is based on proactively measuring the potential for hedge losses and other risks and taking predefined actions to mitigate them. In this case, those pre-defined actions could have been buying calls instead of fixed price contracts, purchasing puts as prices dropped, unwinding contracts, or some combination thereof.

What it means to take a managed-risk approach
A managed-risk approach is methodical and quantitative as opposed to being reactive and qualitative—and that is where its effectiveness lies. Taking a managed-risk approach to developing a hedge strategy generally means:

- Establishing quantitative metrics to measure a company’s exposure to energy risk
- Using scenario analyses and stress testing to evaluate the hedge strategies available for managing that risk
- Developing or refining the hedge program by selecting the strategies that most closely align with the company’s financial and strategic objectives
- Executing the tactics as prescribed in the hedge strategy whenever metrics exceed pre-defined thresholds

Like a rudder, a managed-risk approach steadies the boat in choppy seas. With it, a company can make incremental hedging decisions based on the risk impact energy prices have upon its objectives, as opposed to making bigger bets based on where someone thinks the market is heading.

Basic roadmap to a proactive hedge strategy
A hedge strategy based on a managed-risk approach provides discipline and helps steer the organization away from trying to guess at whether a commodity will bottom out, or conversely peak, at an arbitrary price point. The Deloitte Advisory roadmap defines five basic steps for developing a proactive, structured hedge strategy based on a managed-risk approach:

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1 Chicago Mercantile Exchange
2 Ibid.
3 Ibid.
Step 3: Define hedging objectives to reflect corporate goals
Based on its risk appetite, the company can then define its hedging objectives within the context of its overall corporate goals. For instance, from a hedging standpoint, the corporate goal may be to protect against earnings erosion, or at least to keep the earnings within the company’s range of expectations. For capital-intensive companies, an additional corporate goal may be to make sure that cash flow is sufficient to cover near-term obligations.

Step 4: Develop or refine the hedge strategy through stress testing
Once hedging objectives have been defined, the organization can conduct multiple scenario analyses and stress tests using historical pricing and other data to quantify the potential outcomes of different hedge strategies. This testing can demonstrate that Action X produces Result Y—at least based on historical data—and whether the result falls within the stated risk tolerance. The key to this approach is testing each strategy across a wide range of potential market states, including extreme ones such as the winter spike in natural gas prices and the mid-year plunge in crude oil prices in 2014.4

Step 5: Establish governance processes and a risk-oversight structure
Governance processes are needed so the organization can monitor its responses to market volatility to make sure they align with the strategies set forth in its hedge strategy. A well-conceived risk oversight structure is important to maintaining this alignment. This structure should outline and authorize roles and responsibilities, including creating a risk-oversight function in the middle office. The structure should also define segregation of duty requirements, limits to be monitored, and protocols for authorizing transactions.

4 Chicago Mercantile Exchange, Henry Hub and WTI futures contract price histories.
**Important observations**

At its core, hedging is about trade-offs. In order to build an effective hedge strategy, companies should acknowledge that the risk is polar: if they do not hedge, price movements may lead to increased costs or decreased revenues; and if they do hedge, they may not be able to participate in favorable price movements. Through the use of options and fixed price instruments, a company can mitigate the extremes of these risks, but these instruments introduce other trade-offs, for example in the form of the budget requirements needed to purchase the options. This is why taking a managed-risk view is so important: it gauges the market risk of the portfolio against multiple dimensions, such as revenue, cost, liquidity, and the organization’s risk appetite, as well as measures the trade-offs with each. For example, when hedging to protect revenues, a hedge strategy built on a managed-risk approach will also assess the potential for hedge losses and deploy pre-defined protocols to mitigate that exposure when it exceeds predetermined thresholds.

**Leading companies are better prepared and deliberate about their hedge strategy**

The energy industry—including the oil and gas and power and utility sectors—is one of the more mature industries as it relates to hedging activities. Nonetheless, for many organizations, reactions to short-term events are often inconsistent and a long-term strategic view is frequently missing. As a result, many companies, even those where energy consumption and/or production is core to their businesses, do not manage commodity price volatility as well as they could. This implies that a tremendous opportunity for improvement exists in this space. While one can’t predict, one can prepare. Leading companies proactively plan for the next market move by taking a managed-risk approach to hedging, which can lead to more stable cash flows, a lower cost of capital, and smoother stakeholder relations. And in extreme market conditions, it can avoid the painful question, “Why weren’t you better prepared?”
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