

# Dynamic or static?

*Chris Thorpe of HCEnergy explains why companies need to decide if static or dynamic hedging is the better fit for their commercial needs*



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HCEnergy is a dealer of commodity options, swaps and futures with a focus on energy. The firm has offices in New York, Singapore and Zug, Switzerland, servicing counterparty clients that use regulated exchanges as the principal clearing platform for trades. Regulated exchanges are being strongly supported by US and UK/European legislation currently under consideration.

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**T**here are two categories or philosophies of risk management. The first is the use of available insurance, which is purchased regularly to protect assets or to address the risk of volatile costs. This kind of insurance is typically left untouched for specific periods and is what I call a specific or static hedge strategy. Often, project financing for energy producers is dependent upon a static hedge made at the time of an investment. The second approach to risk management hedging is using a dynamic style which adapts to changing inventory or market conditions. The dynamic approach appears on the surface to be a trading philosophy and is often misclassified by business managers. In this context, hedging often is misunderstood or wrongly labelled as speculative. It is important to analyse the risks and rewards of both methods before entering into a hedging programme.

In my first job out of college, I worked for a commodity chemical company. The company was largely composed of production engineers, accountants, financing and logistics personnel. And then there was the solitary Risk Manager who rarely left his office. I believe very few people understood what he did, including me. Eventually, I learned that he mostly managed the purchase of insurance policies and the management of adjusters and claims. Insurance policies in manufacturing and shipping are common, such as mandatory P&I Clubs for shipping. Of course, policies that covered catastrophic insurance and third party liability were also standard. Because the Risk Manager was charged only with buying insurance, his job was clearly defined as non-speculative.

Unsurprisingly, the Risk Manager had nothing to do with interest rate or currency risks, which were the responsibility of the Chief Financial Officer (CFO). Ensuring that there was a cap on interest rates or foreign currency exchange rates for a period of time was considered appropriate hedging. There was never any implication that hedging currency or interest rates was speculative as it was in the strategic interest of the company as defined by senior management. In fact, some of the largest speculative decisions in recent history have involved foreign exchange and interest rates.

In the consumer products world of the 1980s and 1990s, hedging of key feedstock or fuel costs was typically a secondary concern with respect to business strategy. And as energy prices escalated and fuel hedging increased, critical decisions in feedstock and

fuel cost management were left to the plant managers and physical purchasing agents. After a few bad decisions, energy hedging quickly became mislabelled as speculating.

The assumption that the use of derivatives is inherently speculative is clearly wrong. Assuming that the reader believes that hedging tools can be quantified, managed and controlled to suit the corporate strategy (which is beyond the scope of this article), he or she needs to grasp the parameters of risk and reward payoff that fits existing goals. If the goal is to ensure that the price of crude oil does not go below a certain price, it would be a clear case for a static hedge, which could use a *put* option – if affordable, given market conditions. This is often the case for crude oil producers, which are often compelled to hedge by their banks and lenders. In this case, the risk is that insufficient cash flows are generated to pay interest and principal, while the near term reward is completing the project financing.

The more complex risk reward formula is when dynamic hedging is used. As the market changes day to day, it is difficult to call when exactly hedges should be executed. Often, we hear of corporate hedgers who have left a committee meeting on a Friday with market price expectations and a budgeted premium allocation, only to find a completely different set of market conditions on a Monday morning. Hedging by committee, therefore, often leads to disappointment, even if a correct strategy is being followed. A more effective hedging programme would start with limits and strategy from the risk committee to be executed within defined boundaries, including timing regularity, allowable modification over time and price ranges acceptable within the overall business model. In 2008, we witnessed one very successful consumer hedger unwind its long positions very quickly before the market fell below \$100 a barrel, saving hundreds of millions of dollars based on the eventual price drop.

The most important principle for dynamic consumer hedgers to realise is that they always want to be able to profit from lower fuel prices if possible. We have found that the best technique for consumer hedging is to use consistent and regular strategies that are dynamic, meaning that they can be modified by senior management through the course of the hedging period. In practice, we witness the opposite behaviour in the market.

When a hedge has been very successful it is common to see companies refuse to consider revision of the hedge strategy, due to a policy which forbids alteration of

an existing hedge or requires holding the hedge to expiration. Consider this example: a certain US airline was hedged with a *call* option at \$50 a barrel as the market soared past \$100 a barrel in 2007. The company was thrilled that its hedge programme worked to offset the rising price of jet fuel, resulting in a hedge value of close to \$200 million. However, the hedge itself was at risk because if fuel prices were to drop, the value of the hedge would drop in lock step. The hedge no longer had any optionality: it was no longer solely a hedge against upside risk, with full participation in lower prices. The hedge had become a deep-in-the-money swap, in effect exposing the airline to severe downside derivative losses, which from a financial perspective is equivalent to sitting on a large amount of massively appreciated physical inventory. The risk and reward of the original hedge had changed, resulting in the imperative to modify the

hedge so that the strategy of benefiting from lower fuel prices still held given the hedge in place. If the call option had been sold and exchanged for an option closer to the current market, the airline would have monetised the hedge: it would have maintained a hedge against further upside price risk while fully benefiting from lower prices if a decline in prices occurred. Eventually, prices did revert to lower levels, eliminating a large portion of the \$200 million hedge value.

We witnessed a similar case for an investment firm that had executed a large crude oil hedge to protect the value of oil wells that were purchased when the market was over \$120 a barrel. When the market went below \$40 a barrel in 2009, the management was reticent to 'roll the hedge down' to current market conditions and monetise close to \$80 a barrel. Their rationale was that a negative tax event would be triggered, an objection which seemed to cloud the point of re-

hedging after a significant market change. No action was taken and since then, the hedge has lost half its value. I would argue that even in this case, where a static hedge was chosen, a regular review of its usefulness over time is necessary. If the strategy had been dynamic, I don't believe the tax argument would have emerged.

The reality is that some hedge characteristics change over time because the market has moved sharply, implied volatility has changed or because time has eroded their usefulness. Thus the risk and reward calculation is not a singular event compared to an annual decision in insurance or a price floor set for a given project financing. If a hedging strategy is part of a business management policy, both static and dynamic hedging risks and rewards can be quantified. In most cases, a regular review (monthly if not weekly) of hedging positions is necessary for a complete dynamic programme.

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