

SPECIAL REPORT: RISK

Hedging in Oil Markets — Challenges in 2009 and Beyond

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After the Fall – How Hedgers are Adapting Their Strategies in Oil Markets in 2009

The outlook for hedgers offers a radically different view in 2009 than at this time last year. Prices may have stabilized but the challenges faced by the industry in managing risk have shifted, with credit and counterparty risk supplanting price risk as the greatest concern.

The rapid fall in prices in the second half of last year and the shock of the global credit crisis have forced companies with an exposure to oil prices to urgently reassess previously well established processes, from who they can trade with, to revising their longer term view of price.

There will always be and still is a need from end-users, producers and intermediaries to manage price risk. The slump in demand for oil and refined products has not meant an automatic stop to hedging but these new challenges have certainly called for a change in thinking.

This report will focus primarily on hedging and how companies are responding to this tougher environment so that they can continue to effectively manage their exposure to price risk and their counterparties.

Has hedging activity diminished as much as people suggest it has done as a result of rapid price change and the credit crunch? Has the experience of 2008 deterred companies from implementing hedging programs aggressively in 2009, and how are companies adapting their approach to counterparties?

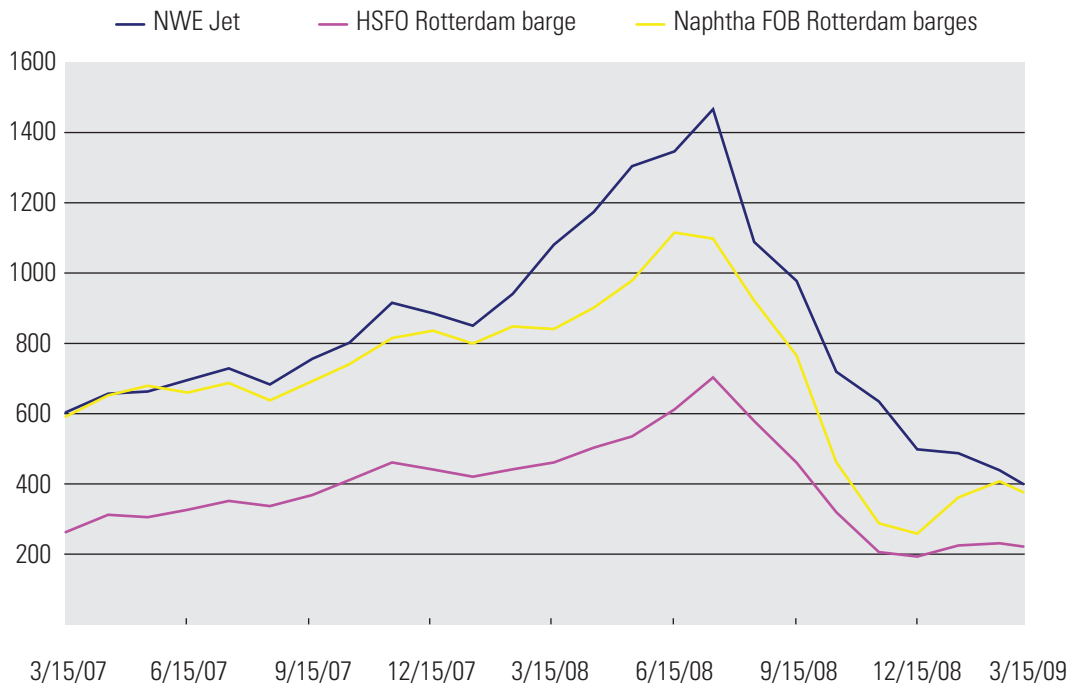
2008 - Price Shock

2008 saw a rash of so-called ‘panic hedging’ as companies sought to protect themselves against higher prices that did not sustain or never actually materialized.

There have been some well documented cases, particularly in the airline industry, of the difficulty of finding an appropriate level to enter hedge programs with such a vast range of prices seen throughout the year. Airlines ended up paying well above market price, having entered into hedges with a forward view of oil above \$100/barrel, only to see prices fall away.

As an example of the ranges seen in 2008, European CIF cargo jet prices on July 3 had surged to an all-time high of \$1,466.50/mt. By late December outright cargo prices for jet fuel in Northwest Europe had plummeted to \$483.00/mt, the lowest level since February 18, 2005.

Exhibit 1: HSFO Rotterdam barge and naphtha FOB Rotterdam barges and Jet



Source: Platts

Asian jet prices experienced a similar upward trajectory, before slumping on a supply overhang. Jet loading in Singapore was assessed at \$56.82/barrel by December 23, 2008, slightly above the previous low of \$56.51/b on February 23, 2005, Platts data showed.

Airlines would typically hedge 40-60% of their year-ahead jet fuel consumption, while leaving the remaining amount unhedged to take advantage of better spot prices should values fall.

However, this did not always work out as intended nor offer protection against higher prices.

US air carrier Southwest Airlines, broadly praised in recent years for buying relatively cheap oil futures over the years and offering cheaper plane tickets than its competitors as a result, said in October last year it had written off about \$272 million in the value of its oil derivatives in the third quarter, pushing it into a loss.

Last November, Air China said it had seen its jet fuel hedge slump to almost half a billion dollars in the red, losses that would be slowly realized unless oil prices rallied sharply.

There was even criticism at the time that airlines were not hedging or managing cost but rather taking speculative positions in oil markets.

"If you are simply price-setting, fine ... what they have been doing has been non-speculative. Every other airline in Asia [except Singapore Airlines] has been taking a view on oil, and once you do that, you are speculating," the head of Asia transport research at Swiss bank UBS, Damien Horth, told a meeting of the world's airlines organized by IATA in Shanghai, China last November.

"I would be of the view that hedging is a waste of time," said Horth. "Most of the hedging I have seen in the last two to three years has been speculative."

Adding to the volatility in price was a rapidly deteriorating credit environment. As the global financial crisis began to take hold, particularly after the demise of US investment bank Lehman Brothers in September, cash flow became a bigger issue. Hedgers were unable to have open credit lines and their ability to operate freely was severely restrained.

2009 - An Outlook

Prices have now stabilized across the oil market with greatly reduced intraday ranges versus a few weeks ago. Creating a forward view of the oil market is now perhaps a little easier than last year and players have had a chance to readjust to the new trading environment.

After a turbulent end to 2008, what are the main challenges for hedgers going into 2009?

Unsurprisingly it is credit and counterparty risk that tops the list of concerns amongst energy professionals when talking about managing cost. Almost without exception it is these two themes that are at the forefront of everyone's mind.

Market risk is still prevalent, but it has taken a backseat to credit as the major influence on decision making.

"Counterparty risk and credit risk are still the big areas to look at. Banks cannot necessarily sustain all of their back to back hedges. Who can you go to?" a market analyst said. "With counterparty risk – who will be there in a few months time? People are trying to aggregate credit risk rather than market risk now."

"The overall feeling is that industrial end-users have been heavily affected by the economic environment. There are 2 outstanding issues currently. First, their business is down perhaps 10-30% on a yearly basis, consumption therefore would certainly be different; and secondly, their cash position – cash flow and credit. If they want to use derivatives then they have to start to post margin," a risk manager at an oil major who did not want to be named, said.

The reduction in available credit has manifested itself in several different ways. Market participants have had to shorten their horizons and hedge only a few months forward, rather than hedging further out or hedging aggressively. A reduced hedging program may also be due to end-users taking advantage of current lower spot values. Once prices start to move up there will be a corresponding increase in the amount of hedging taking place. However, most sources agree that the main influence on size of hedging programs currently is credit.

There has also been a decrease in the number of institutions offering risk management tools to the market, as they are unable to extend those services to the market place through lack of credit.

"It depends very much on the risk profile of the company but hedging is very active but it is in the shorter term. The number of counterparties offering hedging products has fallen, while the number of people looking for products has increased, therefore there are fewer competitive rates," an energy risk manager said. "This will reduce the number of people hedging in an aggressive way."

"Volume has not declined by as much as people thought but the availability of credit has changed massively," he added. "Open credit lines are a thing of the past."

Another important aspect is the recalculation of credit risk, sources have said. Value-at-Risk (VaR) models now factor in a \$100/barrel move in the price of oil.

Under the 1996 BIS Amendment (Basel Committee on Banking Supervision) financial institutions are required to report daily their VaR at a 99% confidence level over a given time period. The Amendment covers both market *and* credit risk. The VaR calculation determines the capital that must be kept to cover the risks the institution is bearing. This applies to banks as well as OTC derivatives dealers.

The capital the institution is required to hold is multiplied by a certain factor, chosen by the regulators. Historically it has been by a factor of 3 or 4. The regulator will look for the number of 'exceptions' over a certain period, namely the number of times the risk measured was greater than the actual trading outcome. The greater the number of these exceptions the higher the amount of capital required. This can have a direct impact on the balance of capital a company has available against the amount it has to withhold.

'Backtesting' or historical simulation methods now includes oil at nearly \$150/b and at \$40/b within a few months. It is not the net move so much as the volatility that is now incorporated into modeling of risk. Extreme moves now constitute a large number of days from last year. The data history shows that to survive such a move again a company would need more capital than before.

These regulatory requirements have been updated further under the revised Basel II Framework which aims to provide a new set of standards for measuring risk and minimum standards on capital adequacy. The Committee has made several proposals to enhance the three pillars of the Basel II Framework.

"People are discussing and looking at several solutions to the current situation. People are still hedging that has not changed, no major change at all," a risk manager at a large European utility said. "But everyone is looking for counterparties and trying to spread the risk amongst them."

"One year ago, if it was Bank A versus Bank B for your business and Bank B had a credit rating a whole grade above Bank A, then you would go to Bank B, as it had a better rating but that has changed radically," the energy risk manager said.

"Previously, you'd give all your business to a funding bank, but now they can't lend you money," he added.

As well as looking for several counterparties to avoid an over reliance on one source of risk solutions, risk managers are also looking at the details of the contracts themselves.

"We are looking at renegotiating agreements or how we negotiate new contracts," the utility risk manager said. "Possible solutions would be CSAs (credit support annex) or prepaid swaps, and we would look closely at margin agreements and also netting agreements, there is a lot more scrutiny around the detail."

A credit support annex aims to provide credit protection by laying out rules about the posting of collateral between counterparties ahead of a derivatives trade. The trade would be documented under the standard Master Agreement created by the International Swaps and Derivatives Association (ISDA). The counterparties must sign this agreement before trading. Essentially a CSA attempts to cap risk at a certain level by posting collateral.

A bunker supplier in Rotterdam noted the new reality of tightening up procedures in how business is done.

"The general terms of agreement are very difficult to negotiate nowadays. First of all there are credit lines. If you have a big credit line with someone, they want to reduce it and their credit risk. Because of that, finance costs have gone up as credit lines have decreased. But usually this is a problem for the customer or a very big company."

"Secondly, there are contracts: general terms are now much more specific and they have clauses inserted to renegotiate credit issues. Previously, credit agreements would apply for the duration of the contract or trade; but now there are clauses that mean credit agreements can be amended during the trade or contract. And this takes a lot of time to negotiate."

Have Volumes in OTC Derivatives Diminished in 2009?

This is very much dependent upon who you speak to and the profile of the company. Sources say that at the end of 2008 there was heavy activity in the swaps market, as players looked to square positions off ahead of year-end, or unwound hedges as prices were in freefall. There was also some renewed hedging activity in the power and gas markets, which use crude and related products in gas indexation.

Some sectors report a drop off in liquidity, certainly at the backend of the curve, while other say volumes have remained steady, in line with hedging needs.

The Rotterdam bunker supplier said “Demand on hedging is very much reduced. Any hedger at the moment has such a big credit risk ... very difficult to assess that right now, you wouldn’t want to over hedge. So everyone is taking a breather until it stabilizes. Also why would you want to hedge with prices as low as they are now?”

“My expectation is that for the next few months hedging will be quiet, except on the short term maturities. The oil price will stabilize and as shippers have a more stable market they will start to hedge. It is \$220/mt for Rotterdam barges at the moment. No one thinks that it will go back down to \$100/mt but it will go up I think, the upside is greater.”

“For fuel oil I don’t think there was as big a loss in liquidity as people like to think,” a Geneva-based trader at a bank said. “There was no Himalaya effect, with steep peaks and troughs, it was much more subtle than that.”

Market participants were also asked whether there had been a shift away from exotic derivatives towards plain vanilla swaps and options, in order to reduce risk and up front costs.

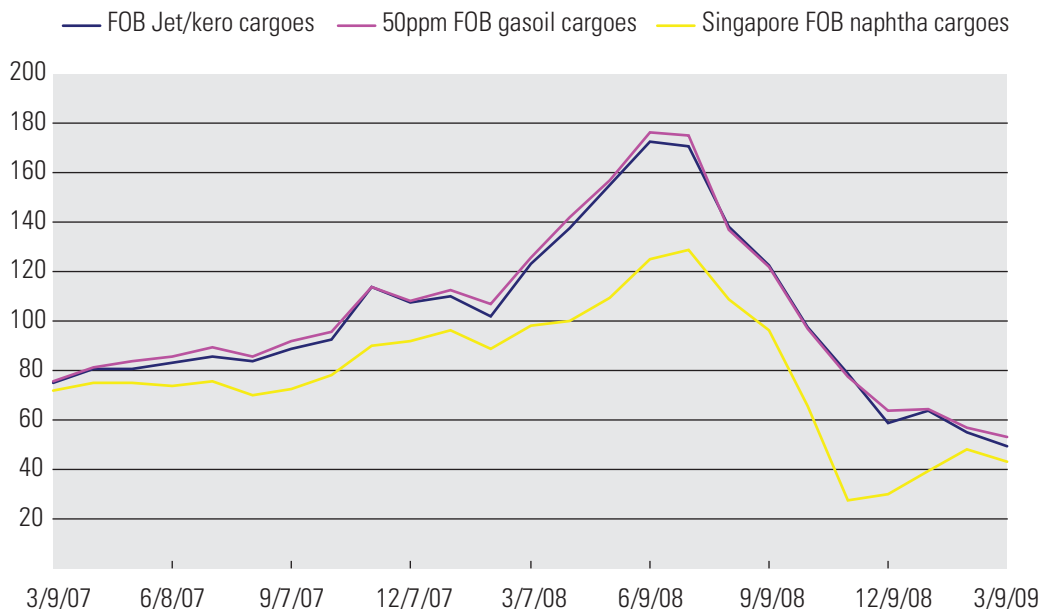
The answers depended on the type of company and hedge accounting regimes as well as region.

Generally, European and US end-users have not used exotic derivatives extensively, relying instead on plain vanilla swaps and options. So there has been no mass migration towards vanilla because they represented a bulk of the hedging programs already.

In Asia, and in particular for airlines, the use of exotic derivatives appears to have been more heavily used. What the status of this is now in the region is difficult to ascertain.

“We have never traded any exotic structure,” a risk manager at a leading European airline said. “An exotic structure bears a huge risk and you cannot evaluate them easily, you are always dependent on the counterparty.”

Exhibit 2: Singapore FOB naphtha cargoes, 50ppm FOB gasoil cargoes and FOB Jet/kero cargoes and NWE Jet



Source: Platts

“European carriers are more restrained in the use of exotic derivatives, but they can be used,” another risk manager said. “In Asia there tends to be far more exotic options used.”

“It is not that exotic derivatives are out of favor, it is more the case that vanilla swaps and options are less costly as far as credit is concerned. It is the ability to hedge at a reasonable price,” he added. “Extendable collars, swaptions – these are tougher to agree what the price is. ‘Knock-outs’ for example are very difficult to value.”

Conclusion

Approaches towards hedging and how companies have dealt with the changed environment vary greatly. It is very dependent on the type of company and the risk profile that it has. This will have a direct bearing on their risk appetite and who they can use as counterparties.

Risk managers are tightening up internal procedures to reduce credit risk and perhaps not taking previously established protocols for granted.

There does not appear, at least anecdotally, to have been a substantial reduction in the volumes traded in OTC markets, except that the horizon is far shorter than it has been in recent years. The loss of end-user demand with the slowing down of the global economy has taken away some of the need to hedge further forward and companies are taking advantage of lower prices.

What is clear, is how pervasive the credit crisis has become within energy markets and it clearly represents the biggest challenge to hedgers in how they manage risk. Having adequate funding filters into each aspect of hedging, in the flexibility it gives hedgers to operate and who can take an alternative view and warehouse that risk.

But what is equally clear, is that hedging price risk is still a necessity and those with exposure to price will always hedge and will find ways to do so.



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