



Murky times: uncertainty over oil prices is causing concern that the risk management practices of energy traders are insufficient

A RETHINK ON RISK MANAGEMENT

Energy trading

The fluctuating energy prices over the past year have caused problems for financial and non-financial energy trading firms alike, leading to a greater focus on their risk management practices. **WRITER** *Michelle Price*

HIGH VOLATILITY IS OFTEN an attractive characteristic of commodities markets, in particular energy commodities such as oil, gas and power. Even so, the extreme volatility seen in several energy commodities prices during the past year has rattled even the most seasoned industry experts, who fear that risk management practices among energy market players may not be able to cope.

The figures are heart-stopping: annual volatility in US national gas reached 49% in 2008, while the year saw record increases in spot prices of well over 100% for several types of coal. Oil price fluctuations, meanwhile, are now a matter of popular controversy: sharp volatility throughout much of 2008 saw the commodity hit record highs on a consistent basis, leaping to \$147.29 per barrel in July 2008 before plummeting to less than \$60 per barrel in early July this year. Policy-makers globally have become so disconcerted by what the G-8 referred to in its July 2009 communique as “excessive” price instability that the Commodity Trust Futures Commission

(CTFC) is now exploring the possibility of limiting energy trading activity.

LONG-TERM UNCERTAINTIES

There may be little regulators and policy-makers can do in the long-term, however, to curb price spikes. Energy commodity prices are increasingly subject to discontinuities in supply and demand, gyrations in global policy decisions, changing regulatory rules, and the expanding energy commodities investor base. These market uncertainties are being compounded by the rise of energy insecurity, driven by increasing fossil fuel scarcity, the ongoing deferral of critical energy infrastructure investment decisions, and rising geopolitical risk: in short, it is a finely balanced, febrile marketplace – and one that is likely to become more volatile, not less. While the shorter-term dislocations in the financial markets and the resulting global economic slump have undoubtedly driven volatility over the past year, the long-term outlook is nothing short of “punishing”, says Aily

Armour Biggs, advisory CEO at Global Energy Advisory (GEA), an independent energy sector think tank and risk practice.

In any market, of course, traders can and do make failed bets on the direction of instrument prices. But where the underlying commodity is highly volatile, fatal losses can accumulate at breakneck speed: when ill-fated \$9bn hedge fund Amaranth Advisors entered into its terminal downward spiral after its natural gas position went disastrously awry, for example, it racked up an eye-watering \$560m in losses in just one day. In certain asset classes, energy commodities are also prone to extreme illiquidity, which means exiting a hedge position that has moved into reverse may not be possible before losses become irrevocable. As such, it is the speed of market changes that can, and likely will in future, prove “horrendous”, says Ms Biggs, a former physical energy trader. Yet many players in the energy markets are simply not properly equipped to manage the systemic credit risk associated with fierce volatility: contagious credit defaults could become an “endemic” feature of the energy trading landscape, Ms Biggs warns.

BEYOND THE BANKS

The erratic energy markets have already claimed a catalogue of casualties since Amaranth Advisors shut up shop, among them other hedge funds and bank commodities desks. For many market-watchers, however, the financial players are not the focus of concern: rather, there is growing band of non-financial energy players – including producers, large dedicated commodities trading houses and utilities – who are becoming increasingly influential in the energy trading markets. Many of these institutions have built-out large internal corporate hedging, asset-backed and proprietary trading operations, as well as client-facing businesses in the form of financial marketing arms that structure financial products and hedge vehicles for clients, much like a bank.

Dedicated commodities trading houses, in particular, are growing in influence. The capital-intensity associated with volatile energy markets is prompting some financial institutions to retreat from the business: Bank of America, UBS, and BNP Paribas and have all pulled back from certain energy sectors. This development is allowing some dedicated trading houses to become more important to the energy commodity marketplace, says Paul Newman, managing director at ICAP Energy. “Many of these are privately owned companies, and while their financial profiles are often not as transparent as a pub-

lic company's, they frequently dominate sectors of the oil trading markets, derivative as well as physical, with the same authority that a bank can command."

Indeed, banks increasingly find themselves competing for clients with these trading operations. Such players, it is often argued, boast an information advantage due to their integration in the physical energy markets which allows them to develop sophisticated hedging strategies. Many market-watchers are not convinced, however. Gavin Lavelle, CEO of Brady, a commodities trading software provider, says that the risk management discipline among non-financial energy trading firms is sorely lacking when compared to the banks. "Risk management is nowhere near as sophisticated and yet the positions they take are very large," says Mr Lavelle. "I think the question we should be asking in the commodity space is this: how strong is the risk management practice, and do we have similar frameworks and disciplines associated with the business?"

BANKRUPTCY BLOWS

The rising incidence of losses and bankruptcies emerging from the non-financial sector of the energy markets over the past year indicates that there is room for improvement. Take oil-trading giant SemGroup, for example. Founded less than 10 years ago, SemGroup rapidly expanded to become, at one time, the 12th largest privately owned company in the US. In July 2008, however, the firm was forced to file for Chapter 11 bankruptcy after \$3.2bn in losses on oil futures and derivatives trades proved too great to bear. The collapse, which came as a major shock to market-watchers, could leave the firm's creditors some \$3.5bn out of pocket, Moody's warned last July.

The final report on the bankruptcy filed in April 2009 by Louis Freeh, the bankruptcy court examiner in this case, reveals a company engaged in an active and complex options trading strategy, run by the group's co-founder and chief executive, Tom Kivisto. Aspects of Mr Kivisto's strategy, which assumed oil prices would always return to a "normalised" price range, were increasingly speculative. This strategy, "when coupled with the unprecedented rise in and volatility of the price of oil in 2007 and 2008, led to the filing of the debtors' bankruptcy petitions", Mr Freeh writes. Given the nature of its trading strategy, the group's risk management framework was insufficient, notes Mr Freeh, who identifies the group's overall failure to develop or implement a suitable risk



From the top: Aily Armour Biggs, advisory CEO at Global Energy Advisory; Ian Slogget, director of the energy division at Temenos

management policy as central to the firm's downfall.

UNCLEAR CREDIT

Much of this energy trading activity deploys the 'Enron loophole' (so-called because the energy giant lobbied for its introduction under the Commodities Futures Modernization Act of 2000) which exempts a large proportion of over-the-counter (OTC) energy trades and trading on electronic energy commodity markets, such as the InterContinental Exchange, from regulatory scrutiny. Nor are these trading desks subject to mandatory capital adequacy requirements or loss-absorbing buffers. As a result, says one financial energy trader, there is a lot of "unclear credit" in the marketplace – as Fortis Bank discovered to its cost: SemGroup went bust owing the Belgian bank more than \$300m, mostly in the form of interest rate and commodity swaps, and a further \$80m under SemGroup's working capital and revolving credit facilities.

It is this type of credit contagion that has market-watchers rattled. Many of the big trading businesses rely heavily on financing and counterparty credit lines. This is particularly true of physical trading, where settlement occurs some 30 days after delivery. In order to underwrite future settlement, many counterparties in the physical markets will deploy a letter of credit, frequently provided by what GEA regards as an over-concentrated bracket of banks. Historically, however, counterparty credit exposure calculations have not taken into consideration data on the entity underwriting the credit line, says Ian Slogget, director at the energy division of Temenos, which provides credit risk management software products. For players relying extensively on letters of credit, the collapse of Lehman Brothers provided a salutary lesson, he continues. "They must really ramp up their credit processes regarding exposure to all counterparties. Even some of the more sophisticated players are now learning that they have got to apply proper credit risk management to all counterparties regardless of reputation or size."

To some extent, failings in this regard have been a function of poor technology: automated, integrated credit risk management systems of the type deployed by banks are not yet widely used among energy trading desks, says Mr Slogget. This might sound a little self-serving, were it not a commonplace complaint. Reports recently issued by Celent and PA Consulting Group highlight the operational and technological insufficiencies that characterise credit risk management in >>



[OIL AND GAS PRODUCERS] HAVE PRODUCTION ASSETS THAT WILL DELIVER AGAINST FORWARD HEDGES AND IF WE ASK THEM FOR MARGIN THEN IT MEANS THAT THEY DO NOT HAVE THE CASHFLOW TO PRODUCE THE OIL AND GAS THAT THEY WILL DELIVER AGAINST THEIR HEDGES

Martin Fraenkel ●●

the energy trading space. "These data and tools, when they exist, have been mostly deployed in isolation at various business units or related to only a sub-set of trading activities," says the report by PA Consulting. As a result, it continues, "energy market participants are exposing themselves to unforeseen risks of large unexpected losses and inefficient use of scarce risk capital".

This shortcoming in technology capability has also left some players unable to properly calculate and anticipate margin calls. The problem was underlined in August last year when Constellation Energy, the US's largest independent power generator and marketer, revealed that it had dramatically underestimated its collateral liabilities by \$1.6bn in the event of a downgrade. This "lapse in the company's risk management and control processes", as S&P described it, prompted the feared downgrade and with it a liquidity crisis in the company's energy trading business which ultimately forced the company to make divestments of its nuclear energy assets. In the meantime, Constellation Energy cut its credit line to US gas marketer Catalyst Energy, which subsequently collapsed.

INTEGRATED PERSPECTIVES

In his rebuttal of Mr Freeh's damning analysis, Mr Kivisto blamed a lack of credit facilities which prevented SemGroup from riding out its losses until the oil price "normalised" making good its hedges. From a risk management perspective, however, this is the wrong defence: if SemGroup did not have enough cash to ride out its position, says one banker, then the position was simply too big. As Jonas Abrahamsson, CFO of E.ON Energy Trading, the trading subsidiary of European energy generation and marketing giant E.ON, points out, it is precisely this related cashflow risk that firms have to get right. "It is fine to lay off the commodity risk, but then you sit with a credit risk or a cashflow risk: if you don't have an integrated perspective on this you could end up in trouble," he says. It is particularly worrying that some energy trading desks may not be able to accurately calculate their collateral liabilities, since extreme underlying volatility can quickly put a strain on liquidity. "Liquidity problems can come about very quickly and aggressively in our markets," says Martin Fraenkel, global head of commodities at Caylor.

In markets that are not system critical, bail-outs are not an option. For this reason, GEA is calling for energy firms to hold reserves against unexpected losses and ensure they have capital adequacy to withstand any disastrous risk that could result in insolvency inducing

losses. Industry association the European Federation of Energy Traders did not respond when approached for comment on this issue.

IMPORTANT STEPS

Advances are being made, however. According to Sid Jacobson, managing consultant in the global energy practice, energy trading and risk management at PA Consulting Group, a recent flurry of consulting requests suggest credit risk management is now a priority. E.ON Energy Trading is a leader in this regard. The organisation has made extensive efforts to consolidate the management of all its commodity risk across all geographies. "Now we have a single, integrated view of what's happening. I think it is crucial in volatile markets where things shift very quickly, to have one view and one point of decision-making to manage those risks," says Mr Abrahamsson. "Given the group's wide geographical footprint, which covers a large area of Europe, this has been a really important step for us and we have already seen the benefits in light of what has happened during the past year," he adds.

Elsewhere in the market, bilateral margining agreements are also growing in prevalence, says Mr Fraenkel. Although the practice imposes discipline on counterparties, it is not a panacea, he warns. For producers of oil and gas, it typically does not make sense to ask for margin if they are selling forward their production. "They have production assets that will deliver against those forward hedges and if we ask them for margin then it means that they do not have the cashflow to produce the oil and gas that they will deliver against their hedges." Most banks which have experience in the oil and gas sector do not typically ask their clients for margining, but the practice is not uncommon.

Following Lehman Brothers' collapse, the energy markets, like other derivative markets, saw a shift to clear trades centrally on facilities such as the New York Mercantile Exchange Clearport platform. E.ON is now publicly pushing for better regulation of the OTC energy markets and the increased movement to these types of centralised market infrastructures. "Bilateral margining will play a role and in some cases it is healthy for the market, but is it the silver bullet? No. Exchanges and clearing houses, particularly when it comes to standard products, are among the most efficient solutions," says Mr Abrahamsson.

In the face of tremendous future price shifts, however, these types of measures may not be enough, says Ms Biggs. "Everyone is going to have to raise their risk management game tenfold." ●