

Putting Knowledge Into Action



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Energy Trading and Risk Management 2.0

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Energy trading on a futures exchange began in New York with the NYMEX heating oil contract in 1978. It's almost 30 years later and energy trading is still an immature financial market. Today energy is a \$5 trillion global, physical business with most companies still not hedging their price risk. Commodity trading of energy in all structures is estimated to be north of \$3 trillion in notional value by our Energy Hedge Fund Center. Commodities usually trade six to twenty times the physical market so we have a long way to grow, especially with rising fossil fuel demand globally.

What is now occurring is a rapid financialization of the energy complex. Compared to the \$450 global derivatives market in foreign exchange, interest rate, and credit derivatives, energy is a stepchild to the world financial markets while ironically it is the world's largest and most capital-intensive business.

The New Market Drivers of Energy Price Volatility

Higher energy prices are here to stay as the world consumes more fossil fuels and more rapidly industrializes. This puts stress on the energy supply as demand driven markets will continue to drive markets higher. What is not consciously reported by the mainstream press is that "energy traders trade volatility," not price only. We now have more price volatility in this new global energy market. That volatility is driven by several factors. The most underreported is that electronic energy trading makes prices more volatile. The loss of the trading floor in London two years ago took away much valuable information from the human beings on that floor. The continuing decline of the Nymex trading floor in New York will take even more value information out of the market. In March 2007, NYMEX's benchmark WTI crude oil futures contract has moved to over 80 percent electronic trading (it was 20 percent last September). The loss of floor trading has taken out more valuable trading information and has been more conducive to hedge fund trading which likes that trading anonymity.

The name of the trading game is “information arbitrage.” Today, the investment banks have been unleashed into the physical energy markets. They are acquiring oil, gas and power assets but more importantly are gaining access to deep pools of information called market intelligence. That information is invaluable in illiquid markets as it leads to price discovery. Thus, the playing field is changing. We are now seeing the convergence of the physical energy markets with the futures and OTC markets. This has never happened before.

Information arbitrage in cyberspace is where this is all going, and VaR, or as some traders call it “Voodoo at Risk,” means that more energy trading blowups will occur. Leverage by some of the funds will make this risk even more endemic to the newly established global energy trading systems and electronic platforms.

Energy is a Risky Business

While most attention is paid to managing energy price risk, the reality is that the energy complex is rife with risks. Besides price, we have credit, performance, regulatory, weather, geopolitical, environmental, liquidity, foreign exchange, and operational risk to name a few. With such a myriad number of risks, it would seem that energy risk management would be more progressed than it is. It is not as well developed as foreign exchange, interest rate or credit derivatives trading. Part of the reason is lack of skills and understanding of the underlying physical energy business. This is a globally complex physical business that runs 24/7 and requires proactive risk management all the time. The reality is that this does not happen. It is a market where knowledge is king.

The Risk of Energy Commodity Hedge Funds

When Enron and energy merchants collapsed, the first wave of energy trading talent was picked up by very astute hedge funds and banks in 2002 and 2003. We are now in year 4 of higher and more volatile energy prices. Today, we are tracking 564 energy and environmental hedge funds through our Energy Hedge Fund Center. Of that universe, 182 are commodity only and 41 trade both commodity and equities. That number is rising as are funds in natural resources. The greatest commodity bull market of all time is driving more investment into the energy sector as an asset diversification play.

What should always be remembered is that hedge funds trade volatility. They like the opaque and financially immature energy complex. They are here to stay. We are seeing 10 to 15 new fund launches each month, and most of that activity is in North America and Europe. But energy growth is being driven by Asia so we expect more fund development there as well as those markets move to more proactive energy price risk management rather than focusing on security of supply issues as it presently does.

The Energy Exchanges: The Battle of the Energy Titans

The major beneficiary of all this trading activity are the two dominant energy futures exchanges: the New York Mercantile Exchange (NYMEX) and the Intercontinental Exchange (ICE). They are now both public companies and their stocks have been spectacular performers. (In fact, so spectacular that some hedge funds have decided to buy the exchange equities rather than invest in commodity hedge funds i.e. this includes

energy and agricultural commodities). Both exchanges have robust electronic platforms with ICE offering more products and NYMEX still offering floor trading. These two exchanges also have linkages to many other exchanges and trading platforms through their Over-the-Counter clearinghouses where the greatest growth is exploding.

The key is that there is competition in the energy exchange trading space. The larger issue is who will develop this energy trading complex to join with the agricultural markets, the second largest commodity markets after energy. ICE bought the New York Board of Trade, which trades coffee, sugar and cocoa, and is now trying to buy the Chicago Board of Trade (CBOT), the largest agricultural futures exchange. NYMEX has a strategic alliance with the Chicago Mercantile Exchange (CME), the world's largest financial futures exchange, and the CME is trying to buy the CBOT as well. How this plays out will align energy, agriculture and environment. It remains to be seen who buys the CBOT. This will lead to more exchange consolidation as major stock exchanges are eyeing the explosion in derivatives growth globally (\$450 trillion will attract that kind of attention).

Carbon: The Next Market for Risk Management

While energy is immature, environmental financial markets are even less mature than the energy complex. The carbon market is a \$30 billion business and doubling every year. It could be a \$3 trillion commodity market in 20 years. It is also a natural extension for the energy trading complex, as fossil fuels make emissions. This cross commodity arbitrage component has attracted both investment banks and hedge funds. Today, emissions are traded by over 40 hedge funds, and Morgan Stanley and JP Morgan are very active in the SO₂ (acid rain) allowance market. We expect a greater uptick in trading when the United States begins its mandatory carbon regime (the question is “when” not “if”). It has already happened in Europe. Financial house energy companies and hedge funds are market makers in carbon trading and finance in Europe under the EU Emissions Trading Scheme. Since the United States is 23 percent of greenhouse gases, its imminent participation in these markets will enlarge trading liquidity creating more global arbitrage opportunities. Carbon trading will emulate oil trading as a metric tonne of CO₂ equivalent as a fundable commodity.

The Trading Bottom Line

The convergence of energy and environmental financial markets offer many opportunities for arbitrage, hedging and risk management, and asset management through structured finance and products. Risk capital is readily available to be deployed. The complex is poised for many more years of robust growth as the markets further globalize. It's a great time to be in the energy and environmental risk business. The downside is that risks are more pervasive and more blowups are inevitable despite the best software systems and risk controls. A complex industry has just become even more complex when it comes to risk management as the convergence of the physical and financial markets bring an order of magnitude of complexity to the energy risk management complex. Risk and reward are a double-edged sword which means more winners and losers in this highly risky business called energy trading.

Peter C. Fusaro is chairman of Global Change Associates in New York and advisor to energy companies, banks and hedge funds on energy trading and risk management. On June 14th, he is holding a seminar on carbon trading and finance in New York City and June 27th will offer a carbon market Webinar (www.pgsenergy.com).



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