

TESTIMONY OF DR. VINCENT KAMINSKI

Rice University, Jesse H. Jones Graduate School of Management
Before the Permanent Subcommittee on Investigations of the
Committee on Homeland Security and Governmental Affairs

June 25, 2007

Mr. Chairman and members of the Subcommittee, my name is Vincent Kaminski and I work currently at Rice University in Houston where I teach courses related to energy markets, energy derivatives and energy risk management.

My testimony today will address some of the issues that you identified in your invitation letter to this hearing. Those issues deal with the organization of the US natural gas markets and the scope and consequences of excessive speculation I witnessed over the last few years in those markets. My opinions are based on 14 years of experience of working for energy trading operations, including merchant energy companies, an independent power producer, a hedge fund, and a very big financial institution. I have been also consulting recently for FERC, helping the staff to analyze market related issues.

The Importance of Efficient Energy Markets

The energy markets have undergone a fundamental transformation during the last 14 years I spent working in the merchant energy business. In 1992, the year in which I made a transition from a Wall Street fixed income business to energy trading, the markets for different energy commodities were relatively isolated, with limited linkages between different locations and physical products. Today, the landscape of the energy business is much different:

1. Energy markets are evolving towards a highly integrated, global system, with shocks propagating across different local markets and markets for specific physical commodities at a very high rate and through rapidly changing transmission channels. A proverbial "rain in Spain" may affect natural gas prices in the United States and in the North Atlantic Basin.
2. The energy markets represent a network of related physical, financial and credit markets, with very complex interactions and interdependencies.
3. Price formation in the physical markets cannot be analysed in isolation from the financial markets and vice versa. Many physical transactions are hedged with derivative instruments (swaps, options, and swaptions) and the prices established in the physical markets are used as benchmarks for settlement of derivative transactions.
4. The distinction between different types of trading platforms becomes increasingly fuzzy. Transactions that are structured as mirror images of the NYMEX contracts are traded actively on ICE and in the OTC markets. NYMEX Clearport platform, a great contribution made by this exchange to the US energy markets, allows the transformation of a variety of OTC transactions into functional equivalents of the futures contracts.
5. Techniques developed for the valuation of financial derivatives are increasingly used for the valuation of physical assets.
6. Growing volatility and levels of energy prices have resulted in increased public awareness of the importance of energy markets and will increase the level of scrutiny these markets receive in the media.
7. Energy markets are still relatively immature and are vulnerable to manipulation. The specific strategies may vary from market to market, but in recent years they have become more effective through the use of multiple trading platforms and leverage offered by derivative instruments.
8. The US regulatory infrastructure had been lagging for a long time behind the evolution of the energy markets, and its fragmented and balkanized design did not recognize the accelerating integration of the merchant energy industry and complex interactions between the physical and financial markets. The Energy Policy Act of 2005 went a long

way to address and fix this problem but some imperfections still exist. The most serious challenge is the existence of blind spots in data collection about the volumes of transactions executed on the different trading platforms (ICE and OTC) that makes early detection of potential market abuses more difficult.

In the coming years, the energy markets will be affected by growing demand pressures from the fast growing emerging economies and the necessity to access more costly supply alternatives. The upward pressures on prices will increase the importance of efficient and transparent energy markets as sources of information about the costs and relative scarcity of different energy commodities and benefits of alternative production technologies. Given growing integration of the markets, any distortions of the price formation process will propagate and reverberate across the entire system and will affect both investment and consumption decisions. Well functioning energy markets will become ever more critical not only to the welfare of the US citizens but also to the energy security of the United States. The integrity of energy markets deserves the same level of protection as the pipelines, refineries, ports and other components of the physical infrastructure.

The energy markets and the commodity markets in general, given their complexity and rapid transformation, are often vulnerable to market manipulation and the nature of manipulation changes over time as the markets evolve. Based on my experience in the industry I can identify several patterns of manipulation in the energy markets.

1. Exploitation of market power that exists through the control of physical assets and / or physical supply. The most obvious example is withholding physical supply from the market or denying access to storage and transportation facilities to the other market players. The critical aspect of this form of manipulation is that even a relatively small company can acquire local market power by exploiting rigidities and imperfections of the physical infrastructure. Any rational manipulator will try to influence the market outcome under the conditions of low inventories and supply disruptions, which in turn will offer a convenient excuse for any subsequent increase in prices.

2. Very aggressive rapid fire and large volume trading close to specific contract expiration time in certain markets which are used as benchmarks for settlement of derivative contracts which can be established in other parts of the market, subject to very limited and partial regulatory scrutiny. For example, a company may take a huge position in the OTC derivatives or ICE derivatives with a cash settlement based on a monthly natural gas index, and then engage in massive trading in the market which sets the index, minutes away from the end of trading, when the volume dries up. One of the most important markets, critical from the point of view of price discovery, is the NYMEX natural gas contract and I will make additional comments on this subject later.

3. Abuse of obsolete and balkanized regulatory infrastructure, which uses different levels of oversight and routine data collection for different segments of the markets. In the past, the design of the regulatory system relied on the false distinction between the physical and financial markets, which failed to recognize the growing integration of the energy markets and interactions and linkages between these two markets. The regulatory system could be compared to an arrangement under which state troopers are authorized to chase red cars and the local police are allowed to chase green cars. If a car is painted red on one side and green on the other, we would have had endless debates over jurisdiction. A red car with green polka dots would be probably allowed to speed at will. These flaws have been addressed to a large extent in the last few years but, to use my speed limits analogy one more time, many sections of the highways are still not patrolled on a regular basis. Some trading platforms are exempted from the same, or similar, reporting requirements as NYMEX, to the disadvantage of this exchange.

4. Submission of false price reports to the newsletters publishing price indices. This form of manipulation, at some point in time endemic in the energy markets, has been stopped due to the efforts of the FERC Market Oversight and Investigations unit.

5. Dissemination of rumors, false news, etc. This form of manipulation is as old as the markets and will never be fully eradicated.

Some market manipulators will combine different types of strategies. For example, they can take a position in options, exploiting the advantages of leverage inherent in these instruments, and then push the market, through aggressive trading or by spreading rumors, in the desired direction. A significant change in market prices starts a process that feeds on itself. The stop loss orders are triggered and the option sellers rebalance their hedge positions, engaging in the so-called delta trades. Such forms of manipulation are difficult to track down because they span multiple trading platforms.

NYMEX Trading

Ability to manipulate a market is a combination of the specific market design (market microstructure) and financial resources of an entity engaging in market manipulation. In the case of natural gas NYMEX contracts, the settlement price of an expiring contract is determined as a weighted average of the transaction prices taking place during the last 30 minutes of trading between 14:00:00 and 14:30:00 EST. Based on my experience and years of immersion in energy business, the trading on the last 30 minutes of trading on the expiration day is often characterized by a very high concentration of trading volumes on both the buy and sell side, with more concentration observed on the buy side. In other words, a few big players tend to dominate the markets. Most of the big players accounting for the significant percentage of volumes represent pure financial players who are unable to take their positions to physical delivery, either at Henry Hub, or at other locations (through ADPs or EFPs). In my view, many of the high volume players are transacting in their own proprietary accounts, and not on behalf of clients. A high degree of volume concentration on the buy side produces an upward pressure on prices which can be on some occasions offset by the countervailing pressure of highly concentrated selling.

The Consequences of Excessive Speculation

A market based exclusively on speculation is not viable in the long run. In the long run, a healthy and sustainable market requires active participation of the end-users and producers of energy. The market makers make money by selling financial instruments used for risk management and by assisting the physical players in management of the supply and distribution chains. Excessive speculation crowds out the natural hedgers from the market. This happens for a number of reasons but the most important factor is related to the practices used by the industry in management of credit risk. A hedging entity that incurs losses on its hedge positions (which may cover a period of a few years) has to post collateral equal to the entire unrealized hedging loss (or a significant part of it), the unrealized loss incurred across the entire time interval of the hedge and resulting from the changes across the entire spectrum of the forward prices. Of course, the hedging loss is offset (if the hedge is well designed) by the gains related to the hedged item. The problem is that the gains on the underlying position are realized one day at a time, and the collateral has to be posted for the entire time horizon of the hedge. The cash flow consequences of the hedges are amplified by increased price volatility and produce adverse consequences in the US energy industry. Sudden request for additional collateral when forward prices become distorted through market manipulation may result in a liquidity crisis and a forced liquidation of the hedges, which transforms unrealized losses into realized losses. As a result, many firms abandon hedging as a corporate policy or negotiate credit facilities with their financial institutions which extend automatic loans to allow their clients to meet collateral requirements. In either case, this is not an optimal outcome: the result is a financially weakened entity, either with a higher level of debt or no hedges.

What Can Be Done?

The efficiency and transparency of the US energy markets can be increased without sacrificing the risk taking culture and the spirit of innovation. The critical element of the market reform is, in my view, an improved access to information. Such initiatives may be initially opposed by many industry participants but in the long run the industry will benefit from them. Less opaque markets grow and flourish in the long run, as evidenced by the example of the NASDAQ market. My recommendations include:

1. Regular reports of large transactions executed in the OTC markets comparable to the weekly reports of the NYMEX futures positions compiled by the CFTC
2. Elimination of the "Enron exemption" that currently limits the extent of the CFTC oversight over important and growing segments of the energy markets
3. Regular reports of trading activity on the ICE exchange, available to the trading community