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CRS Report for Congress

Regulation of Energy Derivatives

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Summary

After the collapse of Enron Corp. in late 2001, that company's activities came under intense scrutiny. Much of its business consisted of trading financial contracts whose value was derived from changes in energy prices. Enron's derivatives trading was largely "over-the-counter" (OTC) and unregulated: little information about transactions was available. Trading in energy derivatives rebounded after a post-Enron slump, and much of the market remains unregulated. This "regulatory gap" strikes some observers as dangerous for two reasons. First, the absence of government oversight may facilitate abusive trading or price manipulation. A June 2007 report by the Senate Permanent Subcommittee on Investigations concluded that excessive speculation by the Amaranth hedge fund, which failed in 2006, had distorted natural gas prices. Second, the failure of a large derivatives dealer could conceivably trigger disruptions of supplies and prices in physical energy markets (though the effect was minor in the Enron case).

A number of bills before the 110th Congress would give the Commodity Futures Trading Commission (CFTC) enhanced authority to regulate certain energy trades on markets other than the regulated futures exchanges. H.R. 2419 (the Farm Bill), enacted as P.L. 110-234 on May 22, 2008, over the President's veto, will impose exchange-like regulations on electronic over-the-counter markets that play a significant role in setting energy prices. This report summarizes energy derivatives regulation and proposed legislation. It will be updated as developments warrant.

Energy derivatives — financial contracts whose value is linked to changes in the price of some energy product — are traded in several kinds of markets: the futures exchanges and the off-exchange, or over-the-counter market. The New York Mercantile Exchange (Nymex) is the leading U.S. market for futures contracts based on prices of crude oil, natural gas, heating oil, and gasoline. Futures exchanges — called "designated contract markets" — are regulated by the Commodity Futures Trading Commission (CFTC) under the Commodity Exchange Act (CEA). The CEA imposes a range of mandates on the exchanges (and on futures industry personnel) regarding record keeping (including an audit trail for all trades), registration requirements, market surveillance, financial standards, sales practices, handling of customer funds, and so on.

The second trading venue for energy derivatives is the off-exchange, or over-the-counter (OTC) market. Unlike the futures market, there is no centralized marketplace for OTC derivatives. Instead, a number of firms act as dealers, offering to enter into contracts with others who wish to manage their risk exposure to energy prices. OTC contracts based on energy products are generally exempt from regulation under the CEA, so long as the contracts are offered only to "eligible contract participants," defined as financial institutions, professional traders, institutional investors, governmental units, and businesses or individuals who exceed various asset and income thresholds. The law assumes that sophisticated parties such as these do not need the investor protections that government regulation provides for small public customers of the futures exchanges.

In recent years, a hybrid form of market has emerged, which resembles the exchanges in that multiple parties can trade on an electronic platform, but which has been largely exempt from CFTC regulation. These markets, known as "exempt commercial markets," must notify the CFTC before they begin operations, and provide certain basic information about themselves, but they are not required to monitor trading, publish data on trading volumes or prices, or enforce CEA prohibitions against fraud or manipulation. Before the passage of P.L. 110-234, the CFTC had limited jurisdiction, other than enforcement authority over manipulation and fraud.

To traders, whether they are speculating on price changes in search of profit or using derivatives to protect themselves from the price risk associated with producing or purchasing physical energy commodities, these markets are basically interchangeable.

Historical Development of Derivatives Regulation

In 1974, Congress observed that derivatives trading was about to expand from its traditional base in farm commodities into financial futures — contracts based on bonds, interest rates, currencies, and so on. To ensure that derivatives traders received the same protections whether they were trading pork bellies or T-bonds, P.L. 93-463 created the CFTC to oversee all derivatives trading, regardless of the nature of the underlying commodity. The CFTC was given exclusive jurisdiction: all contracts that were "in the character of" futures contracts had to be traded on a CFTC-regulated futures exchange.

There were two major exceptions to this exchange-trading requirement. Forward contracts, where actual delivery of the commodity would take place at the expiration of the contract, were considered cash sales and not subject to the CEA. Second, the so-called Treasury Amendment (part of the same law that created the CFTC) specified that contracts based on foreign currencies or U.S. Treasury securities could be traded off-exchange. Existing markets in these instruments had long used futures-like contracts and appeared to function well without direct government regulation; Treasury saw no public interest in bringing them under the new CFTC.

During the 1980s, a market in OTC derivatives evolved, utilizing swap contracts that served exactly the same economic functions as futures. The first swaps were based on currencies and interest rates; later, OTC contracts based on commodity (including energy) prices were introduced. These OTC markets were well established before the CFTC made any move to assert its jurisdiction, despite the fact that swaps were clearly

"in the character of" futures contracts. The potential CFTC jurisdiction, however, created legal uncertainty for the swaps industry: if a court had ruled that a swap was in fact an illegal, off-exchange futures contract, trillions of dollars in outstanding swaps could have been invalidated. This might have caused chaos in financial markets, as swaps users would suddenly be exposed to the risks they had used derivatives to avoid.

The CFTC issued a swaps exemption in 1989, holding that the CEA gave it authority to regulate swaps, but that it would not do so as long as they differed from futures contracts in certain enumerated respects. In 1992, Congress gave the CFTC additional authority to exempt OTC contracts (P.L. 102-546). In response, the CFTC modified the 1989 swaps exemption in 1993, and also issued a specific exemption for OTC derivatives based on energy products.[1] Under the 1993 exemption, OTC energy derivatives would not be regulated if all trading was between principals whose business involved the physical energy commodities underlying the derivatives, if all contracts were negotiated as to their material terms (unlike futures contracts, where terms are standardized), and if all contracts were held to maturity (rather than traded rapidly, as futures are).

This exemption was a matter of regulation, not statute. In May 1998, the CFTC issued a "concept release" that indicated that it was considering the possibility of extending features of exchange regulation to the OTC market. The release solicited comments on whether regulation of OTC derivatives should be modified in light of developments in the marketplace. Among the questions were whether the existing prohibitions on fraud and manipulation were sufficient to protect the public, and whether the CFTC should consider additional terms and conditions relating to registration, capital, internal controls, sales practices, record keeping, or reporting.

The concept release drew strong opposition from the swaps industry and from other regulators, especially the Federal Reserve. In December 1998, Congress included in the Omnibus Appropriations Act (P.L. 105-277) a provision directing the CFTC not to propose or issue any new regulations affecting swap contracts before March 31, 1999. In November 1999, the President's Working Group on Financial Markets issued a report entitled "Over-the-Counter Derivatives Markets and the Commodity Exchange Act." The report recommended that, to remove uncertainty about the legal and regulatory status of the OTC market, bilateral transactions between sophisticated parties that do not involve physical commodities with finite supplies should be excluded from the Commodity Exchange Act; that is, the CFTC should have no jurisdiction. While the Working Group's report made a distinction between financial commodities and those with finite supplies, and suggested that continuing CEA jurisdiction was appropriate for the latter, the report did *not* recommend that the CFTC should rescind its exemption of OTC energy derivatives. In other words, the Working Group saw no immediate problem with the unregulated status of OTC markets in energy derivatives.

In 2000, Congress passed the Commodity Futures Modernization Act of 2000 (P.L. 106-554, H.R. 5660). That legislation established three classes of commodities. First, financial variables (interest rates, stock indexes, currencies, etc.) are defined as "excluded commodities," and OTC contracts based on these are not subject to the CEA (provided

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[1] "Exemption for Certain Products Involving Energy Products," *Federal Register*, vol. 58, April 20, 1993, p. 21286.

that trading is restricted to "eligible contract participants," that is, not marketed to small investors). Second, there is no statutory exemption for derivative contracts based on agricultural commodities: these remain under CFTC jurisdiction. Finally, there is an "all other" category — "exempt commodities" — which includes energy products. Contracts in exempt commodities can be traded in the OTC market without CFTC regulation provided that no small investors participate. However, certain antifraud and antimanipulation provisions of the CEA continue to apply. If an OTC exchange is created — defined in the law as an "electronic trading facility" where multiple buyers and sellers may post bids and trade with each other — the CFTC has some oversight jurisdiction and may require disclosure of certain market information.

In summary, the OTC energy derivatives market developed outside CFTC jurisdiction in the late 1980s and early 1990s, despite the CEA's apparent prohibition of such a market. As with financial OTC derivatives, however, the CFTC never challenged the legality of this off-exchange market. As concerns about legal uncertainty mounted, the CFTC in 1993 issued an exemption stating that certain OTC energy transactions did not fall under the CEA. In 2000, Congress essentially codified this exemption, by including energy in the category of "exempt commodities." This removed them from even the possibility of CFTC regulation, except for a limited antifraud and manipulation jurisdiction and some oversight if the market for OTC contracts should evolve into an exchange-like market. Thus, the 2000 legislation did not deregulate the OTC energy derivatives market; that market had been unregulated since its beginnings.

Manipulation in Energy Markets

Since the value of derivatives contracts is linked to the price of the underlying commodity, traders who can manipulate commodity prices can reap huge profits. Manipulative strategies may involve either physical (spot) or derivatives markets, or both. Since the Enron scandal, regulators have taken numerous actions against several types of manipulation in energy markets.

In 2003, the CFTC charged Enron with manipulation of natural gas prices. The strategy was simple: Enron purchased an unusual number of contracts for spot gas, driving up prices by simultaneously increasing demand in the marketplace and making other traders think that there was some fundamental factor that favored higher prices. Enron settled CFTC charges by agreeing to pay a $35 million fine in 2004.

Ten energy companies have paid a total of $180 million in fines to settle CFTC charges that they manipulated natural gas prices in 2001 and 2002 by providing false data about supply levels to Platts, a private source of information on energy market conditions. The affected Platts reports sent false signals to other market participants that supplies were significantly tighter than expected, and prices rose (sharply, but briefly) as a result.

Enron and a number of other firms admitted to "gaming" the marketing system for electrical power in California in 2000, exacerbating price increases and shortages. The strategies included deceptive reporting of energy supplies on hand (to create the impression of shortages to drive up prices), disguising the source of electricity (to take advantage of variable pricing for in-state and out-of-state power), and in some cases

actually closing power plants during times of tight supplies to drive up prices. Numerous firms and traders faced civil and criminal charges as a result of these manipulations.

In August 2006, the Amaranth hedge fund lost $2 billion in natural gas derivatives, and liquidated its entire $8 billion portfolio. A June 2007 staff report by the Senate Permanent Subcommittee on Investigations ("Excessive Speculation in the Natural Gas Market") found that the fund's collapse triggered a steep, unexpected decline in prices, and that Amaranth's large positions had caused significant price movements in the months before it failed. The report concludes that Amaranth was able to evade limits on the size of speculative positions (a key feature of the futures exchanges' anti-manipulation program) by shifting its trading from Nymex to exempt and unregulated markets.

As energy (and agricultural) commodity prices reached record highs in 2008, there was concern that financial speculators were driving prices up to levels not justified by fundamentals of supply and demand. It is common to speak of a "speculative premium," or a "bubble," in the price of oil, but there is no sure methodology for determining what a commodity price "ought to be" based on the fundamentals. Some analysts believe the price of oil is headed higher; others think a sharp fall is possible.

Legislative Proposals on Derivatives Regulation

Since Enron, the regulatory status of OTC energy derivatives has been much debated. In the 110th Congress, H.R. 594 would enhance the CFTC's authority over the OTC energy market and require reporting of trade data necessary to prevent price manipulation. H.R. 3009 would impose reporting requirements on certain natural gas traders. H.R. 4066, S. 577, S. 2058, and S. 2991 would require the reporting of large positions in energy commodities by traders in the OTC market and on foreign futures exchanges that are accessible via terminals located in the United States. S. 2058 and H.R. 4066 authorize the CFTC to establish core principles for exempt commercial markets like ICE, which would require them to monitor and enforce rules against manipulation and excessive speculation.

On May 22, 2008, Congress enacted the farm bill (H.R. 2419; P.L. 110-234) over the President's veto. Title XIII included provisions reauthorizing the CFTC and creates a new regulatory regime for certain OTC energy derivatives markets, subjecting them to a number of exchange-like regulations. The provisions apply to "electronic trading facilities" — markets where multiple buyers and sellers are able to post orders and execute transactions over an electronic network. If the CFTC determines that these markets, currently exempt from most regulation, play a significant role in setting energy prices, they will be required to register with the CFTC and comply with several regulatory core principles aimed at curbing manipulation and excessive speculation (including the establishment and enforcement of position limits). They will be required to publish and/or report to the CFTC information relating to prices, trading volume, and size of positions held by speculators and hedgers.

These new regulatory requirements apply only to electronic markets that have come to resemble the regulated futures exchanges. Bilateral OTC derivative contracts between two principals (e.g., between a swap dealer and an institutional investor), that are not

executed on a trading facility where multiple bids and offers are displayed, will continue to be largely exempt from CFTC regulation.

S. 2991 would raise the margin requirements for crude oil futures contracts. Margin is the amount of money that a trader must post with the exchange to buy or sell a single futures contract: for crude oil, the Nymex margin is currently $10,463 per contract (each contract represents 1,000 barrels of oil). (Margin requirements are normally set by the futures exchanges.) Higher margins raise the cost of trading: the theory is that higher costs will drive out speculation, moderating price volatility, and perhaps easing upward pressure on prices themselves. Empirical research, however, has not established a strong link between margin levels (or speculation in general) and price volatility.

Current concerns about excessive speculation in energy raise basic issues about derivatives markets. The CFTC does not believe that energy markets are being manipulated, but that they are responding to traders' expectations of future prices, which is their proper function. The CFTC's conception of manipulation, requires that a single trader (or group of traders) amass a market position that enables them to willfully distort or dictate prices in defiance of the fundamentals. The CFTC's observation that it cannot detect any elements of such a classic "corner" or "squeeze" behind today's high prices, and that therefore the markets are functioning well, does little to reassure the many observers who believe that a flood of money from hedge funds, Wall Street firms, pension funds, endowments, and other institutional investors has driven prices artificially high. To these observers, excessive financial speculation is in itself a form of manipulation, even though it does not meet the legal definition.

A fundamental issue is whether speculation causes prices to become more volatile. Empirical research suggests that *in general* it does not, but financial markets in recent years have witnessed several episodes of price bubbles — dot.com stocks, residential real estate, mortgage-backed bonds — indicating that markets at times generate prices that are not supported by fundamental factors of supply and demand. Attempts to limit the influence of speculators include S. 2991's call for higher margin requirements in energy futures. More stringent measures are available: India recently banned trading of agricultural futures contracts. It is not certain, however, that a market where speculation is restrained will be less volatile than the ones we have now, nor that we have a better model for setting prices than a market where traders of all kinds pool their information by taking risky financial positions based on their expectations of future price trends.