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ENERGY DERIVATIVES

Preliminary Views on Energy Derivatives Trading and CFTC Oversight

Statement of Orice M. Williams, Director
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Highlights of [GAO-07-1095T](#), testimony before Subcommittee on General Farm Commodities and Risk Management, Committee on Agriculture, House of Representatives

Why GAO Did This Study

Energy prices for crude oil, heating oil, unleaded gasoline, and natural gas have risen substantially since 2002, generating questions about the reasons for the increase. Some observers believe that the higher energy prices were solely due to supply and demand fundamentals while others believe that increased futures trading activity may also have contributed to higher prices. This testimony highlights GAO's preliminary findings related to (1) trends and patterns in the futures and physical energy markets and the effect of these trends on energy prices and (2) the Commodity Futures Trading Commission's (CFTC) regulatory and enforcement authority over derivatives markets.

GAO analyzed futures and large trader reporting data; trading data obtained from the New York Mercantile Exchange (NYMEX) for crude oil, heating oil, unleaded gasoline, and natural gas; and various other sources of energy-related data. GAO also analyzed relevant academic and other studies on the subject and interviewed market participants, experts, and officials at relevant federal agencies.

What GAO Recommends

This testimony is based on an ongoing engagement, and therefore GAO is making no recommendations at this time.

www.gao.gov/cgi-bin/getrpt?GAO-07-1095T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Orice M. Williams at (202) 512-8678 or williamso@gao.gov.

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Preliminary Views on Energy Derivatives Trading and CFTC Oversight

What GAO Found

Rising energy prices have been attributed to a variety of factors, and recent trends in the futures and physical markets highlight the changes that have occurred in both markets from 2002 through 2006. Specifically:

- Inflation-adjusted energy prices in both the futures and physical markets increased by over 200 percent during this period for three of the four commodities we reviewed.
- Volatility (a measurement of the degree to which prices fluctuate over time) in energy futures prices generally remained above historic averages during the beginning of the time period but declined through 2006 for three of the four commodities we reviewed.
- The number of noncommercial participants in the futures markets including hedge funds, has grown; along with the volume of energy futures contracts traded; and the volume of energy derivatives traded outside traditional futures exchanges.

At the same time these changes were occurring in the futures markets for energy commodities, tight supply and rising demand in the physical markets pushed prices higher. For example, while global demand for oil has risen at high rates, spare oil production capacity has fallen since 2002, and increased political instability in some of the major oil-producing countries has threatened the supply of oil. Refining capacity also has not expanded at the same pace as the demand for gasoline. The individual effect of these collective changes on energy prices is unclear, as many factors have combined to affect energy prices. Monitoring these changes will be important to protect the public and ensure market integrity.

Based on its authority under the Commodity Exchange Act (CEA), CFTC primarily focuses its oversight on the operations of traditional futures exchanges, such as NYMEX, where energy futures are traded. However, energy derivatives are also traded on other markets, namely exempt commercial markets and over-the-counter (OTC) markets—both of which have experienced increased volumes in recent years. Exempt commercial markets are electronic trading facilities that trade exempt commodities between eligible participants, and OTC markets involve eligible parties that can enter into contracts directly off-exchange. Both of these markets are exempt from general CFTC oversight, but they are subject to the CEA's antimanipulation and antifraud provisions and CFTC enforcement of those provisions. Because of these varying levels of CFTC oversight, some market observers question whether CFTC needs broader authority over all derivative markets. CFTC generally believes that the commission has sufficient authority over OTC derivatives and exempt energy markets. However, CFTC has recently taken additional actions to clarify its authority to obtain information about pertinent off-exchange transactions.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss our preliminary views on the trading of derivatives for energy commodities such as natural gas and crude oil. As energy prices have increased in recent years, the trading volume of exchange-traded futures, off-exchange traded swaps, and other types of derivatives have also experienced significant growth.¹ Increased energy prices generally have been attributed to normal market forces of supply and demand, but these trends in energy derivatives markets have raised questions about whether this trading activity has placed additional upward pressure on the prices of physical energy commodities. The prices of futures contracts, like those of all derivatives, are in large part based on prices in the physical spot (cash) market where commodities are sold. At the same time, buyers and sellers of natural gas, crude oil, gasoline, and other energy products use exchange-traded futures prices, which are published daily, when determining prices in the physical markets. The extent to which off-exchange prices are used for determining prices of the underlying commodity, however, is unclear. The growth in energy futures trading since 2001 has in part been fueled by new market participants such as hedge funds and by increased investment in commodity index funds, which are funds whose prices are tied to the price of a basket of various commodity futures.

My testimony today is based on an ongoing engagement on trading activity in energy derivatives markets—primarily the futures market—and the oversight role of the Commodity Futures Trading Commission (CFTC). Because of the broad interest in this subject, our ongoing work has been initiated under the authority of the Comptroller General. My remarks today present our preliminary views on (1) trends in the energy derivatives and physical markets and the effect of those trends on energy prices, and (2) the regulatory structure of the various markets where energy commodities and derivatives are traded.

In conducting this work, we obtained and analyzed energy futures prices and trading volumes from the New York Mercantile Exchange, Inc. (NYMEX). Specifically, we collected data for crude oil, heating oil, natural gas, and unleaded gas for the period January 2002 through December 2006. We also obtained and analyzed data on market participants and the

¹Our analysis of energy prices and energy financial markets is generally limited to the time period fromf January 2002 to December 2006.

outstanding trading positions of different categories of traders from CFTC. In addition, we reviewed publicly available information, including academic studies and reports and market data. Finally, we interviewed a broad range of market participants and observers, representatives of energy trading markets, and government regulators and agencies involved with the energy markets. This work is being done in accordance with generally accepted government auditing standards.

In summary, derivatives and physical markets for crude oil, unleaded gasoline, heating oil, and natural gas have experienced substantial changes in recent years. From January 2002 to July 2006, monthly average futures and spot prices for crude oil, gasoline, and heating oil registered increases of over 200 percent.² The volatility of energy prices also generally remained above historic averages for most of the period but declined during 2006 to levels at or near the historical average. At the same time, trading volumes for futures increased, at least in part because a growing number of managed-money traders (including hedge funds) began to see energy futures as attractive investment alternatives. While these changes were occurring, the physical market was experiencing tight supply and rising demand from increasing global demand, ongoing political instability in oil-producing regions, limited refining capacity, and other ongoing supply disruptions. Some observers believe that higher energy prices were solely the result of supply and demand fundamentals while others believe that increased futures trading activity may also have contributed to higher prices. But the effect on energy prices of individual changes in these markets is unclear, as many factors have combined to affect energy prices. Monitoring these changes in the future will be important in protecting the public and ensuring market integrity.

Energy derivatives are traded on futures exchanges, exempt commercial markets, and over the counter (OTC). Some of these markets are subject to CFTC oversight and some are largely unregulated. Under the Commodity Exchange Act (CEA), CFTC regulatory oversight is focused on the surveillance of futures exchanges, protecting the public, and ensuring market integrity. CFTC does not, however, have oversight authority over exempt commercial markets—electronic trading facilities that trade exempt commodities, including energy commodities, on a principal-to-principal basis solely between persons that are eligible commercial

²To account for the effects of inflation on prices, prices are adjusted to reflect prices in the base year of 2006.

entities—and the volume of off-exchange transactions has increased significantly in recent years. Also, certain parties—those who qualify as eligible contract participants—can enter into contracts directly (over the counter). Both the exempt commercial market and the OTC market are exempt from general CFTC oversight. However, both markets are subject to CFTC’s enforcement of the CEA’s antimanipulation and, where applicable, antifraud provisions. Because of these varying levels of CFTC oversight, some market observers question whether CFTC needs broader authority over all derivative markets, particularly those involving exempt commodities. CFTC generally believes that the commission has sufficient authority over OTC derivatives and exempt energy markets. However, CFTC has recently taken additional actions to clarify its authority to obtain information about pertinent off-exchange transactions.

Background

Energy commodities are bought and sold on both the physical and financial markets. The physical market includes the spot market where products such as crude oil or gasoline are bought and sold for immediate or near-term delivery by producers, wholesalers, and retailers. Spot transactions take place between commercial participants for a particular energy product for immediate delivery at a specific location. For example, the U.S. spot market for West Texas Intermediate (WTI) crude oil is the pipeline hub near Cushing, Oklahoma, while a major spot market for natural gas operates at the Henry Hub near Erath, Louisiana. The prices set in the specific spot markets provide a reference point that buyers and sellers use to set the price for other types of the commodity traded at other locations.

In addition to the cash markets, derivatives based on energy commodities are traded in financial markets. The value of the derivative contract depends on the performance of the underlying asset—for example, crude oil or natural gas. Derivatives include futures, options, and swaps. Energy futures include standardized exchange-traded contracts for future delivery of a specific crude oil, heating oil, natural gas, or gasoline product at a particular spot market location. An exchange designated by CFTC as a contract market standardizes the contracts, which participants cannot modify. The owner of an energy futures contract is obligated to buy or sell the commodity at a specified price and future date. However, the contractual obligation may be removed at any time before the contract expiration date if the owner sells or purchases other contracts with terms that offset the original contract. In practice, most futures contracts on NYMEX are liquidated via offset, so that physical delivery of the underlying commodity is relatively rare.

Options give the purchaser the right, but not the obligation, to buy or sell a specific quantity of a commodity or financial asset at a designated price. Swaps are privately negotiated contracts that involve an ongoing exchange of one or more assets, liabilities, or payments for a specified time period. Like futures, options can be traded on an exchange designated by CFTC as a contract market. Both swaps and options can be traded off-exchange if the transactions involve qualifying commodities and the participants satisfy statutory requirements. Options and futures are used to buy and sell a wide range of energy, agricultural, financial, and other commodities for future delivery.

Market participants use futures markets to offset the risk caused by changes in prices, to discover commodity prices, and to speculate on price changes. Some buyers and sellers of energy commodities in the physical markets trade in futures contracts to offset, or “hedge,” the risks they face from price changes in the physical market. Exempt commercial markets and OTC derivatives can serve the same function. Price risk is an important concern for buyers and sellers of energy commodities, because wide fluctuations in cash market prices introduce uncertainty for producers, distributors, and consumers of commodities and make investment planning, budgeting, and forecasting more difficult. To manage price risk, market participants may shift it to others more willing to assume the risk or to those having different risk situations. For example, if a petroleum refiner wants to lower its risk of losing money because of price volatility, it could lock in a price by selling futures contracts to deliver the gasoline in 6 months at a guaranteed price. Without futures contracts to manage risk, producers, refiners, and others would likely face greater uncertainty.

The futures market also helps buyers and sellers determine, or “discover,” the price of commodities in the physical markets, thus linking the two markets together. Price discovery is facilitated when (1) participants have current information about the fundamental market forces of supply and demand, (2) large numbers of participants are active in the market, and (3) the market is transparent. Market participants monitor and analyze a myriad of information on the factors that currently affect and that they expect to affect the supply of and demand for energy commodities. With that information, participants buy or sell an energy commodity contract at the price they believe the commodity will sell for on the delivery date. The futures market, in effect, distills the diverse views of market participants into a single price. In turn, buyers and sellers of physical commodities may consider those predictions about future prices, among other factors, when setting prices on the spot and retail markets.

Other participants, such as investment banks and hedge funds, which do not have a commercial interest in the underlying commodities, use the futures market strictly for profit. These speculators provide liquidity to the market but also take on risks that other participants, such as hedgers, seek to avoid. In addition, arbitrageurs attempt to make a profit by simultaneously entering into several transactions in multiple markets in an effort to benefit from price discrepancies across these markets.

Multiple Factors in the Derivatives and Physical Markets Have Impacted Energy Prices

Both derivatives and physical markets experienced a substantial amount of change from 2002 through 2006. These changes have been occurring simultaneously, and the specific effect of any one of these changes on energy prices is unclear.

The Energy Futures Markets Experienced Rising Prices, High Volatility, Increased Trading Volume, and Growth in Some Types of Traders

Several recent trends in the futures markets have raised concerns among some market observers that these conditions may have contributed to higher physical energy prices. Specifically from January 2002 to July 2006, the futures markets experienced higher prices, relatively higher volatility, increased trading volume, and growth in some types of traders. During this period, monthly average spot prices for crude oil, gasoline, and heating oil increased by over 200 percent, and natural gas spot prices increased by over 140 percent.³ At the same time that spot prices were increasing, the futures prices for these commodities showed a similar pattern, with a sharp and sustained increase. For example, the price of crude oil futures increased from an average of \$22 per barrel in January 2002 to \$74 in July 2006. At the same time, the annual historical volatilities—measured using the relative change in daily prices of energy futures—between 2000 and 2006 generally were above or near their long-term averages, although crude oil and heating oil declined below the average and gasoline declined slightly at the end of that period. We also found that the annual volatility of natural gas fluctuated more widely than that of the other three commodities and increased in 2006 even though prices largely declined from the levels reached in 2005. Although higher volatility is often equated

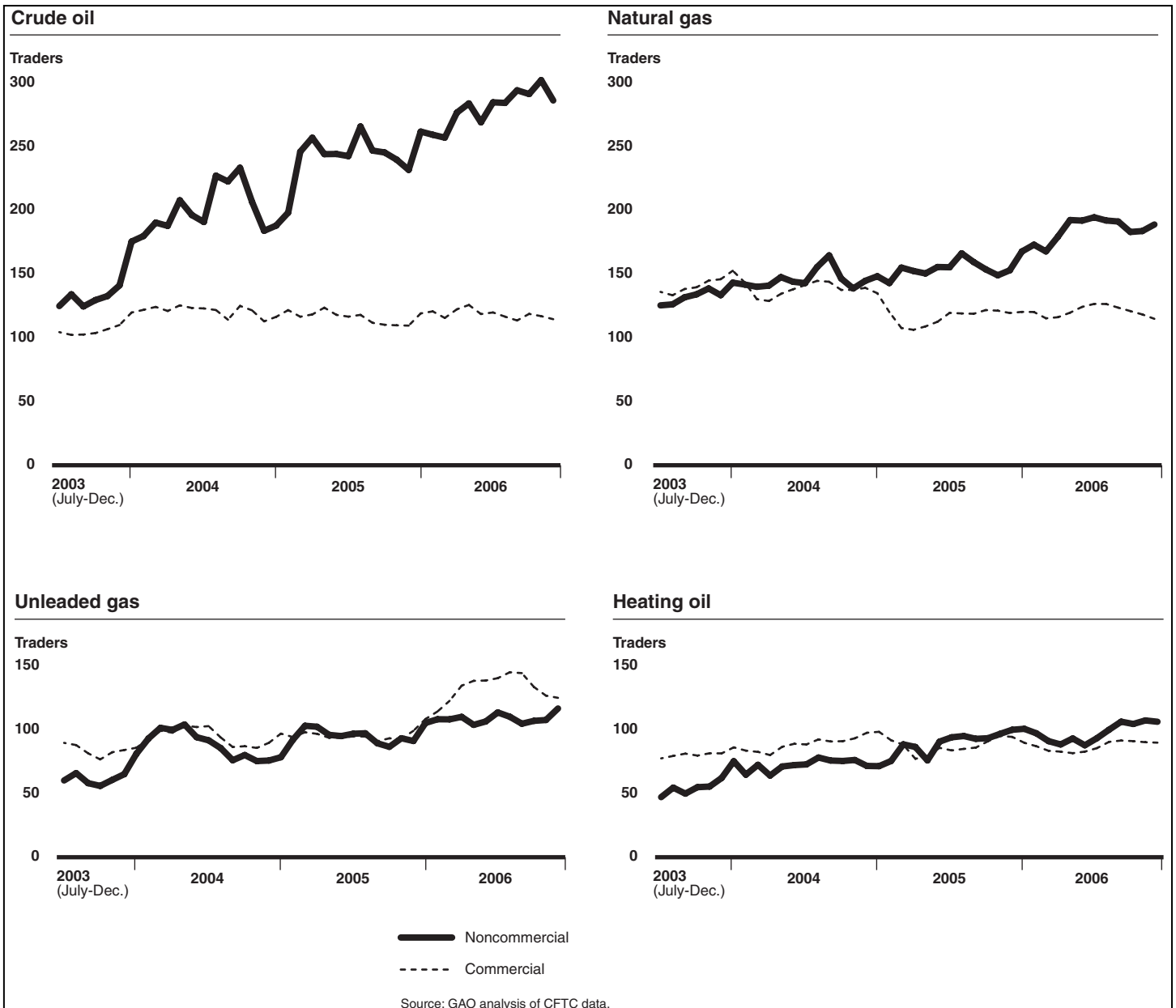
³To account for the effects of inflation on prices, prices are adjusted to reflect prices in the base year of 2006.

with higher prices, this pattern illustrates that an increase in volatility does not necessarily mean that price levels will increase. In other words, price volatility measures the variability of prices rather than the direction of the price changes.

We also observed that at the same time that prices were rising and that volatility was generally above or near long-term averages, futures markets saw an increase in the number of noncommercial traders such as managed money traders, including hedge funds.⁴ The trends in prices and volatility made the energy derivatives markets attractive for the growing number of traders that were looking to either hedge against those changes or profit from them. Using CFTC's large trader data, we found that from July 2003 to December 2006 crude oil futures and options contracts experienced the most dramatic increase, with the average number of noncommercial traders more than doubling from about 125 to about 286. As shown in figure 1, while the growth was less dramatic in the other commodities, the average number of noncommercial traders also showed an upward trend for unleaded gasoline, heating oil, and natural gas.

⁴CFTC collects data on traders holding positions at or above specific reporting levels set by the Commission. This information is collected as part of CFTC's Large Trader Reporting System.

Figure 1: Average Daily Number of Large Commercial and NonCommercial Traders per Month, July 2003 through December 2006



Not surprisingly, our preliminary work also revealed that as the number of traders increased, so did the trading volume on NYMEX for all energy

futures contracts, particularly crude oil and natural gas. Average daily contract volume for crude oil increased by 90 percent from 2001 through 2006, and natural gas increased by just over 90 percent. Unleaded gasoline and heating oil experienced less dramatic growth in their trading volumes over this period.

Another notable trend, but one that is much more difficult to quantify, was the apparently significant increase in the amount of energy derivatives traded outside exchanges. Trading in these markets is much less transparent, and comprehensive data are not available because these energy markets are not regulated. While the Bank for International Settlements publishes data on worldwide OTC derivative trading volume for broad groupings of commodities, this format can be used only as a rough proxy for trends in the trading volume of OTC energy derivatives.⁵ According to these data, the notional amounts outstanding of OTC commodity derivatives excluding precious metals, such as gold, grew by over 850 percent from December 2001 to December 2005.⁶ In the year from December 2004 to December 2005 alone, the notional amount outstanding increased by more than 200 percent to over \$3.2 trillion. Despite the lack of comprehensive energy-specific data on OTC derivatives, the recent experience of individual trading facilities further reveals the growth of energy derivatives trading outside of futures exchanges. For example, according to its annual financial statements, the volume of non-futures energy contracts traded on the Intercontinental Exchange, also known as ICE, including financially settled derivatives and physical contracts, increased by over 400 percent to over 130 million contracts in 2006.

Further, while some market observers believe that managed money traders were exerting upward pressure on prices by predominantly buying futures contracts, CFTC data we analyzed revealed that from the middle of 2003 through the end of 2006, the trading activity of managed money participants became increasingly balanced between buying (those that expect prices to go up) and selling (those that expect prices to go down). That is, our preliminary view of these data suggests that managed money

⁵The Bank for International Settlements (BIS) is an international organization that fosters international monetary and financial cooperation and serves as a bank for central banks.

⁶The notional amount is the amount upon which payments between parties to certain types of derivatives contracts are based. The notional amount is not exchanged between the parties but instead represents a hypothetical underlying quantity upon which payment obligations are computed. The BIS data on OTC derivatives includes forwards, swaps, and options.

traders as a whole were more or less evenly divided in their expectations about future prices than they had been in the past.

We found that views were mixed about whether these trends had any upward pressure on prices. Some market participants and observers have concluded that large purchases of oil futures contracts by speculators could have created an additional demand for oil that could lead to higher prices. Contrary to this viewpoint, some federal agencies and other market observers took the position that speculative trading activity did not have a significant impact on prices. For example, an April 2005 CFTC study of the markets concluded that increased trading by speculative traders, including hedge funds, did not lead to higher energy prices or volatility. This study also argued that hedge funds provided increased liquidity to the market and dampened volatility. Still others told us that while speculative trading in the futures market could contribute to short-term price movements in the physical markets, they did not believe it was possible to sustain a speculative “bubble” over time, because the two markets were linked and both responded to information about changes in supply and demand caused by such factors as the weather or geographical events. In the view of these observers and market participants, speculation could not lead to artificially high or low prices over a long period of time.

Various Patterns in the Physical Markets Also Explain Rising Energy Prices

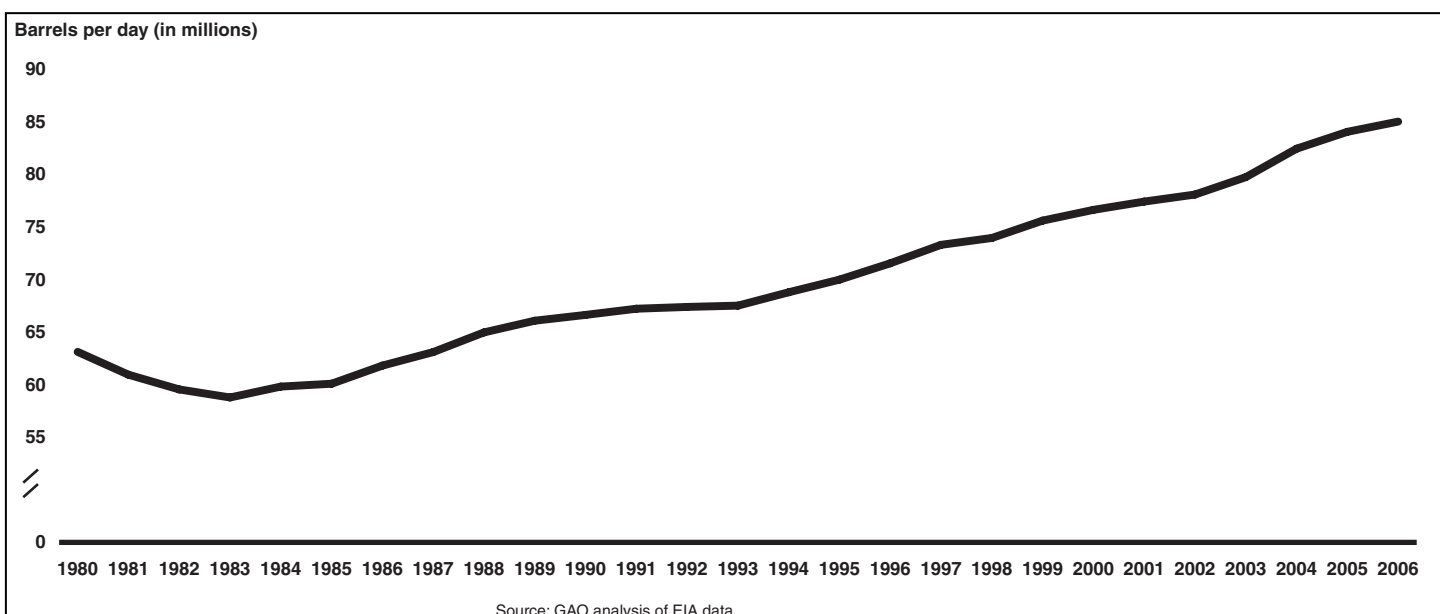
The developments in the derivatives markets in recent years have not occurred in isolation. Conditions in the physical markets were also undergoing changes that could help explain increases in both derivative and physical commodity prices. As we have reported, futures prices typically reflect the effects of world events on the price of the underlying commodity such as crude oil.⁷ For example, political instability and terrorist acts in countries that supply oil create uncertainties about future supplies that are reflected in futures prices in anticipation of an oil shortage and expected higher prices in the future. Conversely, news about a new oil discovery that would increase world oil supply could result in lower futures prices. In other words, futures traders’ expectations of what may happen to world oil supply and demand influence their price bids.

According to the Energy Information Administration (EIA), world oil demand has grown from about 59 million barrels per day in 1983 to more

⁷See GAO, *Motor Fuels: Understanding the Factors that Influence the Retail Prices of Gasoline*, GAO-05-525SP (Washington, D.C.: May 2005).

than 85 million barrels per day in 2006 (fig. 2). While the United States accounts for about a quarter of this demand, rapid economic growth in Asia has also stimulated a strong demand for energy commodities. For example, EIA data shows that from 1983 to 2004, China's average daily demand for crude oil increased almost fourfold.

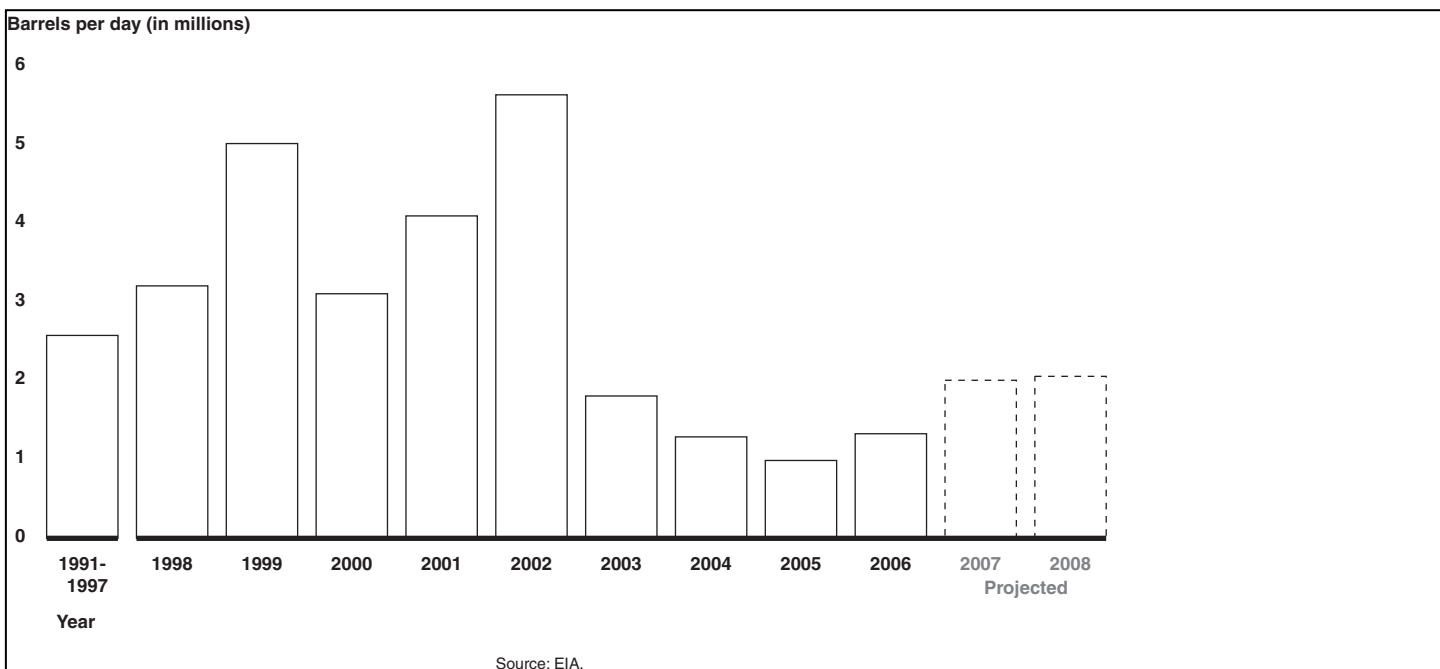
Figure 2: Increase in World Demand for Crude Oil, 1980-2006



Note: The world oil demand data for 2006 represent a preliminary estimate.

The growth in demand does not, by itself, lead to higher prices for crude oil or any other energy commodity. For example, if the growth in demand were exceeded by a growth in supply, prices would fall, other things remaining constant. However, according to EIA, the growth in demand outpaced the growth in supply, even with spare production capacity included in supply. Spare production capacity is surplus oil that can be produced and brought to the market relatively quickly to rebalance the market if there is a supply disruption anywhere in the world oil market. As shown in figure 3, EIA estimates that global spare production capacity in 2006 was about 1.3 million barrels per day, compared with spare capability of about 10 million barrels per day in the mid-1980s and 5.6 million barrels a day as recently as 2002.

Figure 3: Estimates of World Oil Spare Production Capacity by the Energy Information Administration



Note: The spare capacity data for 1991-1997 represent an average over those years.

Major weather and political events can also lead to supply disruptions and higher prices. In its analysis, EIA has cited the following examples:

- Hurricanes Katrina and Rita removed about 450,000 barrels per day from the world oil market from June 2005 to June 2006.
- Instability in major oil-producing countries of the Organization of Petroleum Exporting Countries (OPEC), such as Iraq and Nigeria, have lowered production in some cases and increased the risk of future production shortfalls in others.
- Oil production in Russia, a major driver of non-OPEC supply growth during the early 2000s, was adversely affected by a worsened investment climate as the government raised export and extraction taxes.

The supply of crude oil affects the supply of gasoline and heating oil, and just as production capacity affects the supply of crude oil, refining capacity affects the supply of those products distilled from crude oil. As

we have reported, refining capacity in the United States has not expanded at the same pace as the demand for gasoline.⁸ Inventory, another factor affecting supplies and therefore prices, is particularly crucial to the supply and demand balance, because it can provide a cushion against price spikes if, for example, production is temporarily disrupted by a refinery outage or other event. Trends toward lower levels of inventory may reduce the costs of producing gasoline, but such trends may also cause prices to be more volatile. That is, when a supply disruption occurs or there is an increase in demand, there are fewer stocks of readily available gasoline to draw on, putting upward pressure on prices. However, others noted a different trend for crude oil inventories. That is, prices have remained high despite patterns of higher levels of oil in inventory.

In addition to the supply and demand factors that generally apply to all energy commodities, specific developments can affect particular commodities. For instance, the growth of special gasoline blends—so-called “boutique fuels”—can affect the price of gasoline. As we have reported, it is generally agreed that the higher costs associated with supplying special gasoline blends contributed to higher gasoline prices, either because of more frequent or more severe supply disruptions or because the costs were likely passed on, at least in part, to consumers.⁹

Like the futures market, the physical market has undergone substantial changes that could affect prices. But market participants and other observers disagree about the impact of these changes on increasing energy prices. Some observers believe that higher energy prices were solely the result of supply and demand fundamentals, while others believe that increased futures trading activity contributed to higher prices. Another consideration is that the value of the U.S. dollar on open currency markets could also affect crude oil prices. For example, because crude oil is typically denominated in U.S. dollars, the payments that oil-producing countries receive for their oil are also denominated in U.S. dollars. As a result, a weak U.S. dollar decreases the value of the oil sold at a given price, and oil-producing countries may wish to increase prices for their crude oil in order to maintain the purchasing power in the face of a

⁸See GAO, *Energy Markets: Factors Contributing to Higher Gasoline Prices*, [GAO-06-412T](#) (Washington, D.C.: Feb. 1, 2006) and [GAO-05-525SP](#).

⁹GAO, *Gasoline Markets: Special Gasoline Blends Reduce Emissions and Improve Air Quality, but Complicate Supply and Contribute to Higher Prices*, [GAO-05-421](#) (Washington, D.C.: June 17, 2005).

weakening U.S. dollar. The relative effect of each of these changes remains unclear, however, because all of the changes were occurring simultaneously. Monitoring these trends and patterns in the future will be important in order to better understand their effects, protect the public, and ensure market integrity.

CFTC Oversees Exchanges and Has Some Authority over Other Derivatives Markets

Energy products are traded on multiple markets, some of which are subject to varying levels of CFTC oversight and some of which are not. This difference in oversight has caused some market observers to question whether CFTC needs broader oversight authority. As we have seen, under the CEA CFTC's regulatory authority is focused on overseeing futures exchanges, protecting the public, and ensuring market integrity. But in recent years two additional venues for trading energy futures contracts that are not subject to direct CFTC oversight have grown and become increasingly important—exempt commercial markets and OTC markets. However, traders in these markets are subject to the CEA's antimanipulation and antifraud provisions, which CFTC has the authority to enforce. Also, exempt commercial markets must provide CFTC with data for certain contracts.¹⁰

Futures exchanges such as NYMEX are subject to direct CFTC regulation and oversight. CFTC generally focuses on fulfilling three strategic goals related to these exchanges. First, to ensure the economic vitality of the commodity futures and options markets, CFTC conducts its own direct market surveillance and also reviews the surveillance efforts of the exchanges. Second, to protect market users and the public, CFTC promotes sales practice and other customer protection rules that apply to futures commission merchants and other registered intermediaries.¹¹ Finally, to ensure the market's financial integrity, CFTC reviews the audit and financial surveillance activities of self-regulatory organizations.

CFTC conducts regular market surveillance and oversight of energy trading on NYMEX and other futures exchanges.¹² Oversight activities include:

¹⁰17 C.F.R. § 36.3; see 7 U.S.C. § 2(h)(4)(D).

¹¹See 17 C.F.R. Parts 155, 166.

¹²NYMEX conducts its own surveillance activities and may bring enforcement actions when violations are found.

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- detecting and preventing disruptive practices before they occur and keeping the CFTC commissioners informed of possible manipulation or abuse;
 - monitoring NYMEX's compliance with CFTC reporting requirements and its enforcement of speculative position limits;
 - investigating traders with large open positions; and
 - documenting cases of improper trading.

In contrast to the direct oversight it provides to futures exchanges, CFTC does not have general oversight authority over exempt commercial markets, where qualified entities may trade through an electronic trading facility. According to CFTC officials, these markets have grown in prominence in recent years. Some market observers have questioned their role in the energy markets and the lack of transparency about their trading activities. Trading energy derivatives on exempt commercial markets is permissible only for eligible commercial entities—a category of traders broadly defined in the CEA to include firms with a commercial interest in the underlying commodity—as well as other sophisticated investors such as hedge funds. These markets are not subject to CFTC's general direct oversight but are required to maintain communication with CFTC. Among other things, an exempt commercial market must notify CFTC that it is operating as an exempt commercial market and must comply with certain CFTC informational, record-keeping, and other requirements.

Energy derivatives also may be traded OTC rather than via an electronic trading facility. OTC derivatives are private transactions between sophisticated counterparties, and there is no requirement for parties involved in these transactions to disclose information about their transactions. Derivatives transactions in both exempt commercial markets and OTC markets are bilateral contractual agreements in which each party is subject to and assumes the risk of nonperformance by its counterparty. These agreements differ from derivatives traded on an exchange where a central clearinghouse stands behind every trade.

While some observers have called for more oversight of OTC derivatives, most notably for CFTC to be given greater oversight authority over this market, others consider such action unnecessary. Supporters of more CFTC oversight authority believe that more transparency and accountability would better protect the regulated markets and consumers from potential abuse and possible manipulation. Some question how CFTC can be assured that trading on the OTC market is not adversely affecting the regulated markets and ultimately consumers, given the lack of information about OTC trading. However, in 1999 the President's Working

Group on Financial Markets concluded that OTC derivatives generally were not subject to manipulation because contracts were settled in cash based on a rate or price determined in a separate highly liquid market and did not serve a significant price discovery function.¹³ Moreover, the market is limited to professional counterparties that do not need the protections against manipulation that CEA provides to retail investors. Finally, the group has recently noted that if there are concerns about CFTC's authority, CFTC's enforcement actions against energy companies are evidence that the CFTC has adequate tools to combat fraud and manipulation when it is detected.¹⁴

The lack of reported data about off-exchange markets makes addressing concerns about the function and effect of these markets on regulated markets and entities challenging. CFTC officials have said that while they have reason to believe these off-exchange activities can affect prices determined on a regulated exchange, they also generally believe that the commission has sufficient authority over OTC derivatives and exempt energy markets. However, CFTC has recently begun to take steps to clarify its authority to obtain information about pertinent off-exchange transactions. In a June 2007 proposed rulemaking, CFTC noted that having data about the off-exchange positions of traders with large positions on regulated futures exchanges could enhance the commission's ability to deter and prevent price manipulation or any other disruptions to the integrity of the regulated futures markets.¹⁵ According to CFTC officials,

¹³The President's Working Group was established by executive order in 1988 following the 1987 stock market crash. Its purpose was to enhance the continued integrity, competitiveness, and efficiency of U.S. financial markets and maintain the public's confidence in those markets. See the Report of the President's Working Group on Financial Markets, *Over-the-Counter Derivatives Markets and the Commodity Exchange Act* (Washington, D.C.: 1999).

¹⁴June 11, 2003, letter signed by the members of the President's Working Group to the Honorable Senator Michael D. Crapo and the Honorable Zell B. Miller.

¹⁵According to CFTC, the purpose of the proposed regulation is to make explicit that persons holding or controlling reportable positions on a reporting market must retain books and records and make available to the Commission upon request any pertinent information with respect to all other positions and transactions in the commodity in which the trader has a reportable position, including positions held or controlled or transactions executed over-the-counter and/or pursuant to Sections 2(d), 2(g) or 2(h)(1)-(2) of the Commodity Exchange Act (Act) or Part 35 of the Commission's regulations, on exempt commercial markets operating pursuant to Sections 2(h)(3)-(5) of the Act, on exempt boards of trade operating pursuant to Section 5d of the Act, and on foreign boards of trade; and to make the regulation clearer and more complete with respect to hedging activity. 72 Fed. Reg. at 34413.

the commission has also proposed amendments to clarify its authority under the CEA to collect information and to bring fraud actions in principal-to-principal transactions in these markets, enhancing CFTC's ability to enforce antifraud provisions of CEA.

In closing, our work to date shows that the derivatives and physical markets have both undergone substantial change and evolution. Given the changes in both markets, causality is unclear, and the situation warrants ongoing review and analysis. We commend the Subcommittee's efforts in this area. Along with the overall concern about rising prices, questions have also been raised about CFTC's authority to protect investors from fraudulent, manipulative, and abusive practices. CFTC generally believes that the commission has sufficient authority over OTC derivatives and exempt energy markets. However, CFTC has taken an important step by clarifying its authority to obtain information about pertinent off-exchange transactions.

Mr. Chairman, this concludes my prepared statement. I would be happy to respond to any questions that you or other Members of the Subcommittee might have.

GAO Contacts

For further information about this testimony, please contact Orice M. Williams on (202) 512-8678 or at williamsso@gao.gov.

Staff Acknowledgments

Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Individuals making key contributions include John Wanska (Assistant Director), Kevin Averyt, Ross Campbell, Emily Chalmers, John Forrester, and Paul Thompson.

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