As news reports often say, oil prices are “notoriously volatile.” The figure on the next page plots the spot and futures price for West Texas Intermediate oil from 1994 through 2008. During this period, the spot price ranged from a low of just above $10 in the late 1990s to the high of over $50 seen in October 2004. The change in futures prices has been just as dramatic. In November 2003, the futures market expected prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be approximately $27 by December 2004, as indicated by the figure. It is important to note that these expectations had, in part, factored in the ongoing conflict in Iraq, which began in 2003. In November 2003, the futures market predicted prices to be...
the only attempt. Such uncertainty has led some to question the ability of Venezuela to continue to produce a steady flow of oil.

**Speculation**

In August 2004, Acting OPEC Secretary General Maizar Rahman estimated that speculation was adding between $10 and $15 to the oil price. In addition, the Aug. 21, 2004, issue of the *Financial Times* published an article that estimated that oil speculation was accounting for up to $10 of the current oil prices.

Federal Reserve Chairman Alan Greenspan also has asserted that speculation might be a factor in oil prices. In his September 2004 testimony before the House Budget Committee, Greenspan identified two sources contributing to high oil prices. One was a “pronounced increase in demand to hold inventory,” and another was “investors and speculators who took on larger net long positions in crude oil futures.”

To test Greenspan’s assertions, we turned to the U.S. Energy Information Administration’s September 2004 Short-Term Energy Outlook. This report shows commercial oil stocks for Organization for Economic Cooperation and Development countries beginning in January 2002 and projects oil stocks to November 2005. If the report offers an indication of future oil inventories, oil stocks would increase if Greenspan’s assertion were correct. However, the report does not show such an increase. In fact, the report states that oil inventories in both the United States and other industrialized countries were below normal and projects that oil stocks will be in decline from September 2004 to approximately March 2005. If oil inventories were considered to be below normal and the demand to hold oil inventories were “pronounced,” one would expect to see an increase in oil stocks in the coming months. The EIA report suggests that this is not the case.4

The second source of higher prices suggested in Greenspan’s testimony was speculators influencing prices by taking larger positions in crude oil futures. This would suggest that more active trading was taking place before and during the time period when oil prices were reaching record nominal levels. A cursory examination of petroleum futures volume data from the *Wall Street Journal* indicates that the volume of trades was up during this time period, suggesting that enhanced speculation did contribute to the increase in oil prices.

**Other Factors**

Because oil prices are so volatile, pinpointing only one or two factors that cause the price to change provides an incomplete picture of the situation. Besides market speculation and the traditional supply and demand factors, other variables also influence the price of oil. For example, the series of hurricanes experienced in Florida and other Southern states disrupted the flow of oil into the United States and damaged oil facilities. There is also the sporadic shutdown of oil refineries for maintenance, regulatory changes and other reasons. Although all of these variables can affect oil prices, as hurricane damage is repaired and oil refineries are reopened, these variables probably will have only a short-term impact. Significant changes in oil supply and demand behavior, however, would affect the price of oil for some time to come.

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**REFERENCES**


**Spot and Futures Oil Prices**

Monthly Average of Daily Data

**Spot Prices**

- $10

**Futures Prices as of November 2003**

- $15

**Futures Prices as of November 2004**

- $20

**Oil Price in Dollars**

- 2004

- 2003

- 2002

- 2001

- 2000

- 1999

- 1998

- 1997

- 1996

- 1995

- 1994

**ENDNOTES**

1 West Texas Intermediate is a domes-
tically produced light, sweet crude oil. Since light, sweet crude is the most actively traded oil contract, it is commonly used as a pricing benchmark. For more information, visit the New York Mercantile Exchange at www.nymerex.com.


4 In 2003, the United States consumed approximately 20 million barrels per day.

5 See these and other country summaries at the U.S. Energy Information Admin-istration’s Country Analysis Briefs.

6 Other countries include the former Soviet Union and Nigeria.

7 See U.S. Energy Information Admin-istration’s Iraq Analysis Brief.

8 See Greenspan (2004).

9 In other words, the changes in oil demand and supply for consumption purposes discussed earlier have played a much larger role in rising oil price increases relative to heightened demand to hold inventory.