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National Economic Trends

What Constitutes a High Price of Oil?

Economists have been concerned about oil price shocks since the 1970s and 1980s, when sharp increases in crude oil prices were associated with both declines in real output and increases in inflation in many industrialized countries. A run-up in crude oil prices over the last eighteen months has caused a good deal of concern that a new shock is in the making. A severe enough change in prices might be enough to end the long U.S. expansion and simultaneously raise inflation. But, what would "severe enough" be?

In a previous cover page (NET, April 2000), I argued that the "real" or constant-dollar price of crude oil—the spot crude oil price deflated by the consumer price index—was quite a bit higher in the past, peaking at more than $75 per barrel (in today's dollars) during the early 1980s, versus a price less than $30 per barrel as of March 2000. However, one might argue that the very high prices observed during the 1970s and 1980s are irrelevant today. U.S. firms and households may have become accustomed to the new, lower price of oil that has prevailed over the last decade and a half. If that is the case, then current prices may be moving out of that comfort zone. In particular, businesses and consumers may have become used to the very low crude oil prices associated with the Asian Crisis during 1998. So, are current prices unusual when compared to recent experience? The chart suggests that the answer is "no."

The chart shows the monthly average of the real spot price of a barrel of West Texas Intermediate crude oil from 1988 to the present, in today's dollars. The inflation-adjusted price has fluctuated around a mean of $23.50, represented by the flat line through the middle of the data. Of course, the price of oil is determined in a volatile global market, and one way to measure the volatility is to calculate a standard deviation, which is about $5.24 for these data. The two lines through the top and bottom of the data represent the mean plus or minus two standard deviations, respectively, a rule of thumb that can help us think about what would constitute an "unusually high" oil price. Observed prices outside these bands would be considered very unusual according to the rule of thumb.

According to the chart, there are only two periods of very unusual real crude oil prices during this period. One occurred during 1990-91, when the Gulf War caused prices to spike. The other occurred during 1998, when the Asian Crisis sent prices to very low levels. Current prices, by contrast, do not seem very unusual by this calculation, since they remain well within two standard deviations of the mean. Thus, while the real price of oil has increased substantially, much of the increase represents a return to the mean from very low levels experienced during 1998.

—James Bullard