Quarterly Energy Update

Second Quarter 2007

Energy Prices Rising as Markets Tighten Further

Oil Prices Strengthen

Since reaching lows of near $50 per barrel in January, oil prices have taken a decidedly upward trajectory—with the benchmark West Texas Intermediate (WTI) breaking through $60 in early March and $65 in late April (Chart 1).

Several factors account for rising oil prices. Overall market tightness has generally increased throughout the year because the growth of world oil consumption has been greater than the growth of oil production outside the Organization of Petroleum Exporting Countries (OPEC). Although the U.S. Energy Information Administration (EIA), the International Energy Agency (IEA), and OPEC have differing opinions about how much tighter the market is likely to be in 2007 than it was in 2006, they all see generally tightening market fundamentals since December 2006 (Chart 2). Geopolitical tensions, including a recently foiled attempt to attack Saudi Arabian oil fields, continue to raise concerns about the security of supply.

WTI: A Broken Benchmark?

Trading on the New York Mercantile Exchange (NYMEX), WTI has been the world’s premier energy contract for years, with active trading running into tens of billions of dollars daily. Recently, however, some oil market analysts expressed
concerns about the pricing of WTI crude oil versus other major benchmark crude oils. Although WTI is traded on the NYMEX, its physical delivery point for contract settlement is midcontinental North America (Cushing, Okla.). Relatively high levels of U.S. crude oil storage, congestion at some delivery points in the United States and an insufficient number of tankers to provide full world arbitrage have depressed the WTI price relative to other oil benchmarks such as Nigerian Bonny Light and UK Brent (Chart 3).

In a market where physical delivery is required to complete arbitrage, pricing relationships out of the norm can be sustained for relatively lengthy periods. Such pricing need not be indicative of anything other than a temporary lack of deliverability that is impeding arbitrage, and the weakness in WTI relative to other crude oils is likely to disappear as the impediments to the free flow of oil dissipate.

Gasoline Prices Head Upward
Pulling ahead of the gains in oil prices, U.S. retail gasoline prices have surged upward during the past two months—rising by about 70 cents per gallon to a recent high over $3 per gallon for regular unleaded. Higher crude oil prices, rising gasoline consumption in the first quarter (2.5 percent over a year earlier), refinery outages and low levels of gasoline imports have pushed gasoline inventories sharply downward and prices upward (Chart 4).

Nonetheless, both the futures market and the EIA are projecting slightly moderating gasoline prices for the summer. The current differential between gasoline and crude oil prices makes it profitable for refiners to boost gasoline output, and the EIA forecasts summer gasoline consumption running only 1.2 percent above a year earlier. Of course, unexpected refinery outages could result in temporarily higher prices in some regions of the country, as was seen recently in California.

Natural Gas Prices Likely to Slip?
Prolonged winter weather in many parts of the nation helped keep the Henry Hub price of natural gas well above $7 per million Btu. Nonetheless, natural gas inventories are plentiful, which suggests the possibility of price slippage as the heating season comes to an end. The futures market shows natural gas prices rising steadily through December, but a model developed by Dallas Fed economists Stephen P.A. Brown and Mine K. Yücel suggests that current
inventories, current crude oil futures prices and normal weather are likely to mean declining natural gas prices by early summer (Chart 5). The futures price for December natural gas would be roughly consistent with crude oil futures and normal weather—if inventory levels are reduced to normal, which implies that market participants may see the possibility of some combination of growing natural gas consumption and slipping natural gas production.

—Stephen Brown and Raghav Virmani

About the Authors

Brown is director of energy economics and microeconomic analysis and Virmani is an economic analyst in the Research Department at the Federal Reserve Bank of Dallas.