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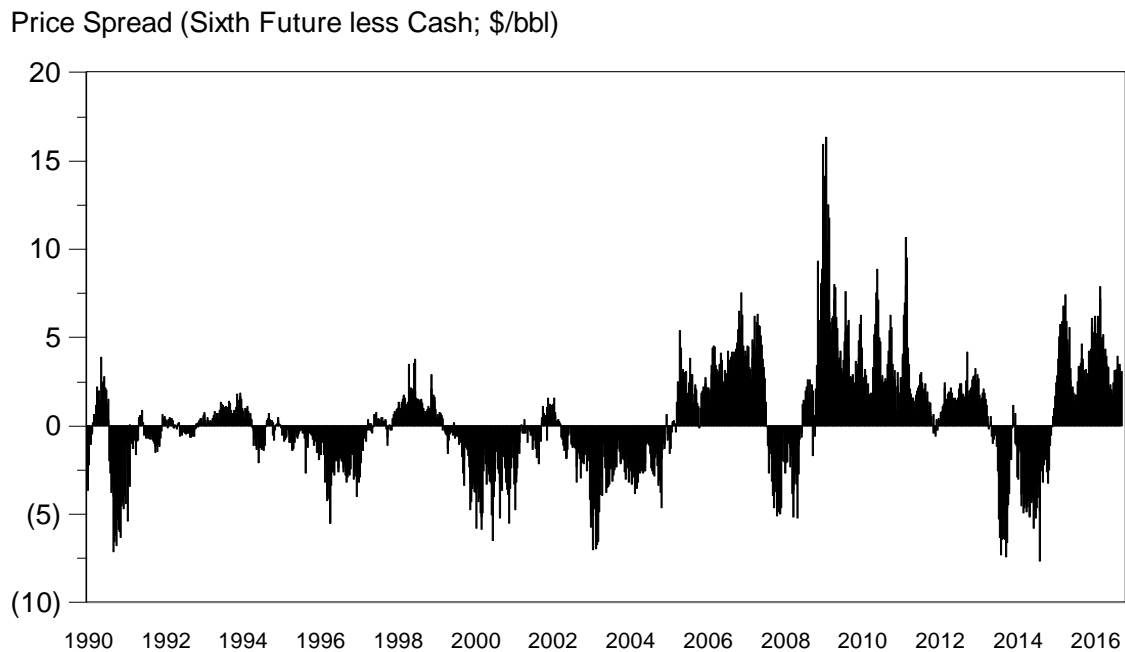
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Price Spreads and Price Dynamics

WTI Price Spread, Sixth Future Less Cash, Weekly Data, 1990 to 2016



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Price Spreads and Price Dynamics

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Summary

This issue of *The Petroleum Economics Monthly* is quite technical. It also celebrates the success of energy commodity markets, especially energy futures markets. Here we show how consumers in parts of the United States have benefited from lower gasoline prices thanks to the maturation of energy commodity and futures markets. The savings is on the order of twenty cents per gallon. Consumers in other parts of the country, particularly California, have not enjoyed such benefits. The cost to Californians will total perhaps \$2 to \$3 billion in 2016, according to our rough calculations. Alternatively, one can assert that Californians continue to pay as they have in the past, while consumers in much of the rest of the country will save between \$6 and \$7 billion in comparison this year.

The introduction of commodity market institutions and futures into the energy business, particular oil, can be likened to the introduction of cable TV or high-speed Internet to certain neighborhoods but not others. The US East Coast and Gulf Coast benefit from the commodity institutions. The US West Coast, particularly California, does not.

Commodity market institutions have also affected crude oil price developments over the last two years. As explained here, liquid and large commodity markets have differentiated the price collapse of 2014 from the earlier 1986 and 1998 declines. Cash prices fell precipitously in the latter episodes as supply exceeded demand. Investment fell, and oil production decreased. OPEC nations scrambled to cut output as they benefited from the lower investment. Prices then recovered partially in 1987 and very substantially in 1999.

The 2014 price plunge has been different because the well-developed market institutions helped build a supply buffer. Since then, consumers have seen an extended period of lower prices and will likely see continued lower prices in the long run. While the price decline has not been as large in the short run as in previous episodes (no \$10-per-barrel oil), the moderation will likely slow the rebalancing of supply and demand for years, possibly forever. Most who follow commodity markets, especially oil markets, do not understand. Futures markets, where they exist, pay dividends to consumers and producers in the form of more stable markets.

Ironically, the head of Russian's largest oil company, Rosneft, gets this point. Igor Sechin, a favorite of Vladimir Putin, has repeatedly attacked speculation in oil for driving down prices. He is correct. Speculation does depress prices by facilitating hedging. While hedging prevents prices from reaching extremely low levels, it also helps sustain prices at levels well below \$100 per barrel, much to the dissatisfaction of producers.

It is price spreads—the difference between forward and cash prices—that inform our analysis. Economic research has shown that price spreads provide the incentive to accumulate or liquidate inventories. Inventories rise—relieving pressures on cash prices—when forward prices increase. This occurs when there are many buyers of futures. Their activity directly facilitates storage and has made oil market movements over the last two years very different from previous periods. It has also effectively neutered OPEC.

Those familiar with economic history will not be surprised. Markets have overwhelmed efforts to sustain prices above marginal costs for centuries. Arbitrage between geographic locations or, as in this case, between the present and the future, is the fiercest weapon against high price volatility that exists.

Arbitrage between the present and the future, combined with technical change, promises to permanently change market behavior. Only in those rare locations such as California are consumers condemned to see price volatility and regularly higher prices. The situation will likely be sustained in these markets unless and until those having a strong interest in lower prices and more competitive markets take steps to create the necessary market institutions. As noted here, such institutions exist in some markets—such as heating oil, distillate, crude oil, and gasoline in the eastern US—but have not been introduced in other areas.