The Oil Drum
DISCUSSIONS ABOUT ENERGY AND OUR FUTURE

Why are oil (and gasoline) prices so low?

Posted by Gail the Actuary on October 22, 2008 - 11:10am
Topic: Economics/Finance
Tags: credit, demand, gasoline, oil, oil prices, original, peak oil, supply [list all tags]

We all know that oil prices are lower than they were in the recent past because supply is greater than demand. In fact, OPEC oil ministers are meeting this week to try to fix supply, so it will be more in line with demand.

All of this seems a little strange, though. We are going into the winter months, when demand for oil normally rises because many people around the world heat their homes with oil. We are using somewhat less gasoline in the United States, but apart from the hurricane disruptions, not very much less than earlier this year. While we are going into a recession, it doesn't seem to have hit with full force yet. What other factors may be involved in the current lower prices? In this post, I will discuss factors besides those we usually think of as supply and demand that may be involved.

Figure 1. EIA Chart of WTI oil spot prices - One measure of oil price

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While this post is primarily about oil prices, the decrease in oil prices can be expected to have an impact on gasoline prices as well. The drop in retail gasoline prices has not been quite as dramatic as the drop in oil prices because gasoline prices are affected by other factors in addition to the price of oil. Robert Rapier has a post talking about some issues affecting gasoline prices. See also my article from July Why isn't the price of gasoline even higher?, talking about the differential between gasoline and diesel prices.

Figure 2. EIA Chart of Weekly Gasoline retail prices

1. Credit problems of oil intermediaries

The oil industry has many more players than most of us are aware of. The International Oil Companies use contractors to do many functions that we think of as oil company operations. Oil is shipped by oceangoing vessels and by pipeline. Refiners are often separate from the oil company that produced the oil. Gas stations are often independently owned.

One of the issues is that sellers want to be sure that they are going to be paid for their product. They are unwilling to sell to buyers with poor credit. This is removing some players--and some demand--from the system.

According to Credit Woes Hit Supply Chain, Push Prices Down:

> "The credit crunch is putting on a brake at every level of supply," said Antoine Halff, deputy head of research at brokerage Fimat USA. "Levels of credit are evaporating, so producers and refiners are having a hard time selling--they want to make sure their customers are good for the money," Halff added.

Also, from the same article:

> Shippers - who bring tankers from the ports to consuming countries - are also seeing a reduction of available credit, with some of them going under as a result. . . [This is] leading to a scarcity of available capacity for shipping.

If an oil company can't ship the oil, it can't sell it. We also read that banks are involved in the process:

> To make matters worse, some of the major investments banks that are currently under stress--such as Morgan Stanley (MS)--are also an important part of the oil chain. "They hold storage, are active physical traders and some of them actively participate in the physical delivery process," said Petromatrix's Jakob.

2. Liquidation of positions by hedge funds and other speculators

Hedge funds have been under pressure from several directions to liquidate their positions in oil:

• Investors in the hedge funds have been disappointed in their performance, and are liquidating their positions. Oil futures are easy to sell, so the may be sold first.

• Hedge funds are highly leveraged. In the past month, many of them have received margin calls because of declining values of the securities they held (oil futures, stocks, bonds). Again, oil futures are easy to sell quickly.

• Banks are under pressure to reduce their lending because of their low reserve margins, and because of concern that hedge funds may not be good risks. They have been putting pressure on hedge funds to reduce their leverage.

Since hedge funds and speculators realized early this year that the price of oil was rising, most of them had net long positions. When there was a need to sell these futures contracts (because of margin calls or for other reasons), the sales of these contracts tended to bring down the price of oil.

3. Hedging of future oil prices by oil companies

Once oil prices reached high prices (say, > $120), even for long-dated futures, it made economic sense for oil companies to lock in future sales at those high prices. To the extent that oil companies locked in future sales using long-dated future contracts, this would add sellers to the long futures market, changing the balance in the futures market. The addition of sellers to the market would tend to bring down futures' prices.

I understand that long-dated futures contracts are quite illiquid, and that oil companies may not, in fact, be using them for these purposes. Does anyone have any real-life experience with oil companies using futures contracts to lock-in long term prices? It would seem strange to have contracts whose benefit is primarily for speculators.

4. Rise in the value of the dollar

We read in a Bloomberg article:

Oil Falls More Than $4 as Dollar Rally Dims Commodities' Appeal

> Oct. 21 (Bloomberg) -- Crude oil fell more than $4 a barrel as the U.S. dollar rose to its highest in more than a year against the euro, dimming the appeal of commodities as a currency hedge.
>
> Oil climbed earlier on expectations that OPEC, supplier of 40 percent of the world's oil, will reduce output at a meeting in Vienna this week. Investors looking for protection against the dollar's decline earlier this year helped lead crude oil, gold, corn and gasoline to records.

> ``The strengthening of the dollar is the main factor pushing most commodities lower, and oil is always the leader," said James Ritterbusch, president of Ritterbusch & Associates in Galena, Illinois.

Basically, the higher the dollar, the lower the price of a barrel of oil (measured in dollars). The dollar is high now, so the price of oil is low. One analysis showed that one quarter of the increase in the value of oil from $20 barrel in 2002 to $147 in July 2008 was because of the falling value of the dollar. Since july, the price of oil seems to decline as the value of the Euro declines relative to the value of the dollar.

5. Trend Trading or Systematic Trading

Many investors use computerized programs that attempt to analyze an investment's momentum, either up or down. These programs are designed to buy more of an investment, when the price of the investment seems to be heading upward, and to sell the investment short, when it is heading downward. If a large number of hedge funds, pension funds, and other investors have computer models that do the same thing, the simultaneous buy and sell orders will tend to reinforce the upward or downward trend in prices. These programs may have contributed to the unusually high oil prices seen earlier this year, and the big drop in the past month.

6. Drop in Asian growth

One of the reasons for the run-up in prices earlier this year was the concern that Asian demand was growing rapidly, and that world oil supplies could not keep up. There may have also been some stockpiling of oil prior to the Olympics. Now there are indications that growth in Asia is starting to cool, and we read articles such as this one:

Asian meltdown may force oil to tank

> The fact is, unlike many other commodities, “Asia is important for crude oil because its marginal demand is entirely coming from Asia,” said Michael Lewis, global head of commodities research at Deutsche Bank. The bank estimates that in 2009 as much as 360,000 barrels per day of oil will be required by China, which is lower than the 450,000 bpd for the current year. At that rate, “China will be responsible for 80 percent of global crude oil consumption growth,” said Lewis.
>
> Similarly, industry estimates put India’s oil demand at 100,000 bpd in 2008 and predict it to remain unchanged for 2009, even if the country’s gross domestic product were to slip marginally from its current 7.5 percent.
>
> Hoping that Asia and particularly China and India will not falter due to the global meltdown may be optimistic under the current conditions.

7. Small size of the oil (and other commodities) market, relative to the rest of the market

The amount of commodities for sale is tiny in comparison to the dollar value of stocks, bonds,

derivatives, and other investments. If investors get the impression that commodities are a good source of diversification, or are likely to rise more than other investments, it doesn't take very many of these investors to raise (or lower) prices in oil markets. Investors tend to read the same investment advice, and hear the same forecasts, so may tend to make similar decisions.

Research by Morgan Stanley indicates that commodity markets tend to move together. In the past, commodities have tended to follow long cycles, but "peak everything" may change this pattern.

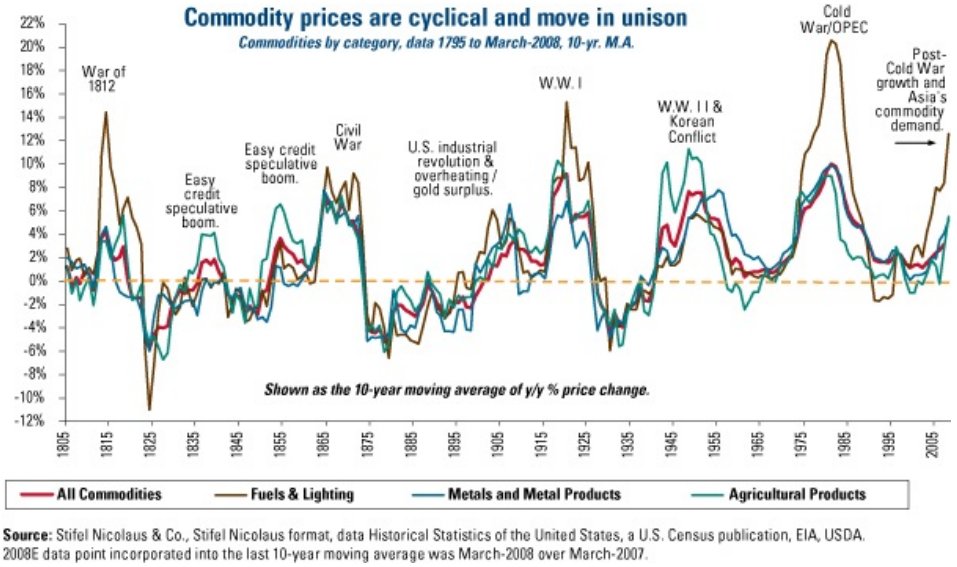

Figure 3. Graph of commodity trends by Morgan Stanley, shown in a Financial Sense University post.

8. Increased volatility when supplies are very tight

When supplies are very tight because of peak oil, both the supply curve and the demand curve are nearly vertical. A small change in demand (or supply) can result in a huge difference in price.

Many years ago, whale oil was used for lamps until it became depleted. Historical graphs show that its price was very volatile, once production passed its peak value. The price of petroleum is likely to be very volatile post-peak also.

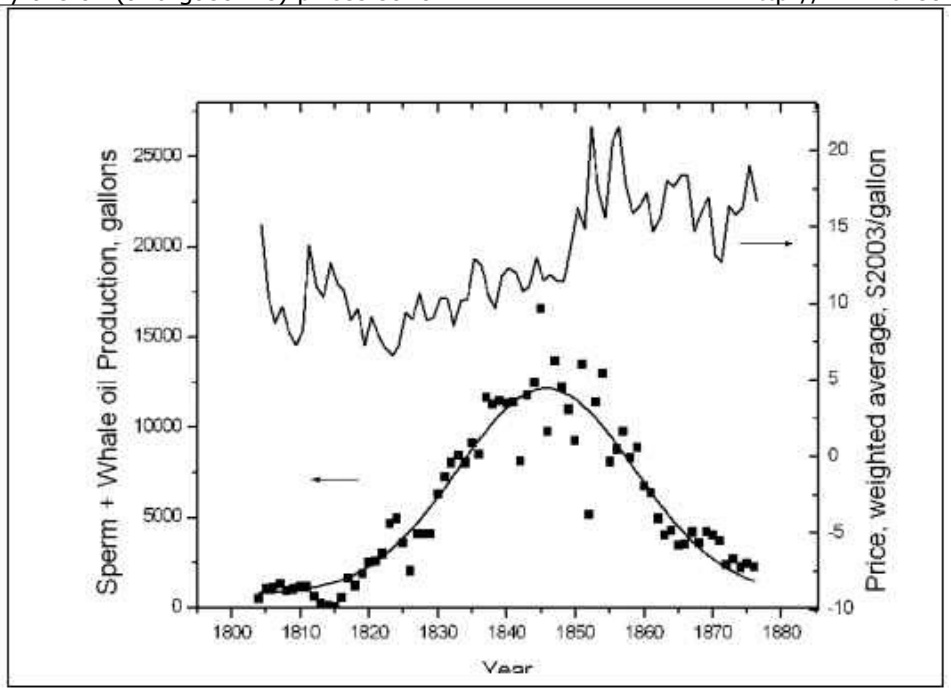

Figure 4. Price and Production of Whale Oil

What's Ahead?

Certainly, we can expect more volatility.

There is room for a difference of opinion on the course of the dollar near term. On one hand, the United States is doing less badly than some other countries in the current financial crisis. If this trend continues, the dollar could rise even higher than it is currently, as investors look for safely.

On the other head, we have been reading speculation about alternative currencies, such as this one, regarding a tri-polar currency. It seems likely to me that eventually some change will occur that will make the value of the dollar drop substantially, and raise the price of oil.

In the not too distant future, we can expect a fair amount of "shake out" among smaller companies in the oil business, with many of the less well capitalized being acquired by others or going out of business, as indicated by this article:

Falling Prices, Credit Woes Threaten Small Oil Firms:

> Most at risk are small outfits focused on exploration and production that urgently need cash to keep drilling. Even a few months ago, these companies had no trouble borrowing money and selling stock to finance operations, based solely on the value of their reserves. But with access to capital drying up, their funding opportunities are dwindling rapidly.

Between problems with credit, and the cutbacks from OPEC, the supply from oil is likely to drop significantly in the next few months. This drop in supply should put upward pressure on the price of oil.

All of the cutbacks related to credit are hard to follow through the system. There is a possibility that some of them will show up in unexpected places, leading to shortfalls and/or price spikes.

I do not expect the problem with long-term credit to ever really go away. (This is the subject for another post.) Because of this, long-term supply is likely to drop even faster than previous analyses have suggested. Assuming no major changes in the monetary system, this would seem to imply higher prices, long-term.

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