

The Coming Wave: Global Oil Price Volatility

Increased financial speculation plays a major role in oil's high price and its volatility. This change in the oil market's composition may in part be explained by softening US oil futures market regulations. If re-elected, President Barack Obama may attempt to introduce legislation to toughen market oversight and surveillance, which may help to mitigate market volatility.

By - Justin Dargin*

The international price of oil has gone through an extremely volatile period since the beginning of the twenty-first century. In the first four months of 2012 the price of Brent crude skyrocketed to approximately \$125/B. However, there was no structural basis for this rise, as demand remained relatively low and the OECD economies continued to stagnate. This volatility coincided with rising tension over Iran's nuclear program and its concomitant threats to close of Strait of Hormuz in the Gulf, through which close to a quarter of global oil passes. This fear of potential Iranian retaliation was compounded by the fallout from the Arab Spring in the Middle East and North African countries. These developments fueled speculation in futures commodities markets, which were betting on even higher long-term prices. As Iran-related tensions abated in May, the Brent price fell to around \$100/B (Click here to see Fig.1). Based on purely structural market demand forces, experts claimed that the real price of oil should have been in the region of \$60-70/B. From this, it is apparent that financial speculation played a major role both in the high price of oil and in its volatility.

ASSUMPTIONS ABOUT PRICE DETERMINANTS

The international price of oil has a self-referential logic that does not always correspond with external structural forces. There were four main factors leading to the rise in the oil price during the last two years:

- 1) The surprising economic boom in the Asian developing countries, despite the economic slump in the West.
- 2) The low spare production capacity of the OPEC members, as well as geopolitical risks in the Middle East and Africa associated with the Arab Spring and the Iranian nuclear negotiations.

3) The oil reserves balance in the wealthy OECD countries.

4) The intense wave of speculative activities in financial markets.

The last factor played a major role in the sudden rise in the price of WTI crude to \$145/B on 14 July 2008. Currently, despite low economic growth in the OECD countries and the danger of a new recession in the Eurozone, speculators in futures and options are taking advantage of the volatility of the four oil price determinants, betting on a future price increase. In this way, even if there is no structural cause for a price increase, the expectations of the majority of investors tend to become a self-fulfilling prophecy. A recent report by the Federal Reserve Bank of St Louis claims that speculation has added roughly 15% to the price of oil during its meteoric rise in 2008. Meanwhile, Goldman Sachs calculates that for every million barrels of non-commercial, speculative oil contracts (or paper barrels), the price increases by 10 cents.

Part of the explanation for increased oil price volatility has been that during the last decade a substantial number of players entered financial and commodity markets because of deregulation in Western markets. These actors principally invested in oil futures and options not to hedge against future supply shocks or a sudden price surge, but instead to benefit from price fluctuations without engaging in actual delivery contracts. As may be seen in figure 2 (Click here to see Fig.2), the number of oil futures contracts rose to approximately 1.6mn by the end of 2011 from approximately 450,000 in 2000. This excludes the less-transparent over-the-counter (OTC) market, where there is other major oil trading activity. Together with futures contracts, options have also increased because they insure non-financial investors against price volatility.

Although producers and refiners tend to trade short positions, especially in times



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of high spot prices, financial speculators prefer long calls, and if moderation does not prevail, there has been a tendency to create expectation bubbles on the basis of herd behavior. Moreover, uncertainty about the future opens the way for uncontrolled speculation that may undermine the influence of the structural factors on oil price formation.

CORRELATIONS AND FINANCIAL MARKETS

Traditionally, it was the case that the oil price was determined by the dynamics of supply and demand. However, the 2000s have witnessed a dramatic increase in the financialization of the global economy. In an attempt to fully hedge risks, market players opted for predictable investments in index-funds, in which trading occurs infrequently following pre-defined, usually broad-based indices. Many of those index-funds allow for exposure to a basket of commodities, the most important of which is crude oil. The share of oil in its different variants in the

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composition of the broad Dow Jones UBS commodity index is around 15%. Since most index-funds are “long only,” their value will increase only if the price of the underlying assets such as oil rises. As a result, investors avoid actual deliveries, instead rolling contracts forward, thereby pushing the price to even higher levels.

For other commodities, such as copper, this has led in the last five years to a major expansion of production, which ultimately resulted in a price crash. Something similar occurred with the price of oil in 2008–09 when the price had remained unnaturally high for a long period. Both OPEC and non-OPEC producers raised production to take advantage of the high prices. Expanded supply, together with the effects of the global financial crisis and the corresponding sharp drop in demand, led to the fall of the price of oil to \$40/B in December 2008.

Nonetheless, the slump in oil prices could not be maintained for long. The lack of sufficient spare production capacity in OPEC and geopolitical factors, as well as bullish economic data from developing Asian countries and supply fears, brought a new surge in prices and a corresponding interest in “long” commodity indices. However, caution is needed in drawing general conclusions about the relationship between financial investments and the oil price, because correlations could be caused by non-directly related common factors such as economic growth or a geopolitical risk premium. But, the spread between the oil price dictated by physical factors such as inventory balances, production levels and consumption and the actual traded spot price suggests that speculative forces are playing a significant role.

FINANCIAL ASSETS AND CURRENCIES

The surge in investment in commodities has resulted in a stronger correlation between the crude oil price on the one hand and the price of financial assets and foreign exchange rates on the other. The correlation became most visible after the financial crisis of 2008. The ensuing recession brought a closer link between financial activity and physical factors of growth, which usually affect crude oil prices. Figure 3 shows a large increase in the correlation between financial activity and the price of oil in the last four years, indicated by the darker tones of green and blue. There is a positive relationship between the price of stocks and the price of crude oil due to the interrelationship between economic growth and bullish markets.

At the same time, the price of crude oil exhibits an inverse relationship with the price of bonds and the foreign exchange rate. As the economy improves, bond prices go down and crude oil prices increase. Similarly, a strong dollar against a basket of foreign currencies would exert down-

ward pressure on crude. The converse is also true. A depreciating dollar would push demand for oil up and lead to a corresponding rise in the nominal oil price.

THE IMPORTANCE OF REGULATION

The change in the composition of the oil markets is not a coincidence and may be explained by the permutations of previous US oil futures’ markets regulation. Speculation is nothing new, and in fact is widely perceived as crucial for smoothing out and hedging risk. Speculation was a regulated and vital part of the global economy and worked without any disruption until 2000, when the Commodity Futures Modernization Act (CFMA) was introduced in the US. It softened regulation of risk management tools such as commodity-index funds and swaps, which led to a rapid financialization of the oil trade. Until this regulatory shift, the futures market was guided by the Commodity Exchange Act (CEA), which exempted only clear-cut hedging positions from investment limitations. At the time, over-the-counter markets were relatively small and strictly regulated, and most of the trading occurred at exchanges regulated by the Commodity Futures Trading Commission (CFTC).

The CFMA eased the requirements for participants and the limits on investment positions. It also allowed the creation of electronic exchanges, where trading became more and more dominated by non-delivery contracts that served only to capture beneficial, sometimes minute price fluctuations. Since the participants in the futures’ trading activity were not the actual producers and consumers of oil, distortions of price expectations rapidly emerged. The formation of foreign exchanges, for example in London, created another center of influence in the speculative formation of oil prices. Since they were not subject to the jurisdiction of the CFTC, speculators could avail themselves of foreign jurisdictions where regulation may have been lighter.

THE LONG-TERM VIEW: WHAT TO EXPECT?

Despite the gloomy picture of high oil prices sapping global growth potential, the long-term outlook for oil prices is bearish. The major players both on the consuming and producing side of the equation are aware that prices are abnormally high and believe prices will decline in the next three to five years. The economic boom in China is likely to subside in the coming two decades. In a recent report on China’s long-term growth outlook, the World Bank predicts that GDP growth rate will slow to 7% by 2016 and to under 6% in 2021. Similar projections have been made for India; while countries from the OECD are also likely to see sluggish growth rates until the end of the decade. Increased supply of oil from both conventional and

unconventional sources is also expected to exert downward pressure on prices. The International Energy Agency projects world oil supply to grow by 1% annually until 2030 as a result of a rise of OPEC production capacity, and the emergence of new unconventional oil reserves supplied by non-OPEC producers.

Apart from physical factors leading to a long-term decline in oil prices, a tightening of current oil futures market regulation on a global level could also push prices down. If President Barack Obama is reelected in November, he may attempt to introduce new legislation giving more power to the CFTC. His proposals include granting an additional \$52mn to the CFTC budget for oversight and surveillance of energy market activity. President Obama also wants an increase in civil and criminal penalties against what he terms “market manipulation.” The expanded package of fines and penalties would include fines increased from their current rate of \$1mn to \$10mn and assessed on a per-day basis rather than per violation. Moreover President Obama also wants Congress to grant the CFTC sweeping new powers to raise margin requirements in oil futures markets, as he felt that the new rules would “make sure (traders) have the money to make good on their trades.” However, if a Republican administration comes to power, reform of the current futures market legislation is unlikely.

Regardless of whether the US has a Democratic or Republican administration, it is difficult to imagine that speculation will simply disappear in practical terms. It is here to stay. And speculation does have an important role to play in the oil market. Nevertheless, as uncertainty about the security of supply persists and the number of non-commercial traders in financial markets expands, we are likely to experience much more price volatility in the mid-to-long term. Even if, due to supply/demand dynamics, the international price of oil decreases, increased fluctuation and volatility in the global oil market is now an integral part of the structure of oil price formation. ♦♦

*Mr Dargin is an Energy and Environment scholar at the University of Oxford. He was a former Research Fellow with The Dubai Initiative at Harvard University, where he won a Harvard award for his groundbreaking research into the Gulf energy/power sector. He is also a Fulbright Scholar of the Middle East and North Africa. Contact email: justin.dargin@ouce.ox.ac.uk

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