Group Economics

The Royal Bank of Scotland Group

Crude oil: When will the bubble burst?

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Executive Summary

Increased volatility in financial markets, ongoing geopolitical tensions and now financial and monetary uncertainties make it more difficult than usual to forecast oil prices. We anticipate a protracted tug-of-war: a loosening demand and supply balance will weigh on crude prices, while monetary and financial factors will prop them up, at least for a while. In the longer term, we expect fundamentals to gain the upper hand, as a strategy to use crude oil as a hedge while underlying demand is falling is unsustainable.

The main pitfall in forecasting is timing. We expect prices with 50% probability between $50 and $80 per barrel in one year's time. There is a 25% chance that prices will be above $80 but below $100 due to ongoing strong demand growth and underinvestment and a 15% chance that prices will be above $100. We assign the remaining 10% to a situation where a sharp economic slowdown and strong supply additions will drive prices below $50 per barrel.

Many forecasters have been caught by surprise by the extent of the latest crude oil rally. The first boost to crude oil prices occurred at the beginning of the current cycle, when rapid and unexpected demand growth, particularly in emerging markets, caught suppliers by surprise. Following the first phase, renewed confidence by National Oil Companies restricted investment in those fields that would have been the easiest to develop. To make matters worse, geopolitical turmoil intensified, threatening supply disruptions and embedding a significant risk premium in the price of oil.

Finally, as stocks are being replenished and demand growth, in developed economies at least, is flat, monetary and financial conditions have taken centre stage. Turmoil in credit markets is spilling over into equities and the swift response by the Federal Reserve reduces the return on fixed income securities, while putting pressure on the value of the dollar.

In this environment, crude oil offers attractive yields, at least given recent performance, and it is also an attractive inflation hedge. As crude oil futures emerge as an alternative asset class, the correction in crude oil prices is again postponed. Our forecast for moderating prices is based on the premise that eventually, fundamentals must reassert themselves. The imagination of speculators as to how high prices can climb is still tied to an underlying tightness in the supply of physical oil.

Crude oil prices have soared

- Crude oil prices have surpassed $110 per barrel, setting a new record high, even after adjusting for inflation. Part of the increase is due to a tight demand and supply

balance, emerging resource nationalism, which reduces investment where it is needed most, and geopolitical uncertainty, which continues to threaten supply disruptions. But supply and demand fundamentals alone fail to explain the rally in crude oil prices since last September. The most important contributor to the oil price rally has been investors' perception of a weaker dollar and further greenback depreciation yet to come.

- Crude oil prices were as low as $70 to $80 per barrel in August and September. Since then, the global economic outlook and with it expectations for demand growth have deteriorated, yet crude oil prices have soared. Measured in euros, crude oil prices have increased by a mere 15%, while dollar prices are up 40%.

Chart 1: Prices rise in tandem with stocks—financial considerations at play

Source: US Dept. of Energy; million barrels (L); $ per barrel (R)

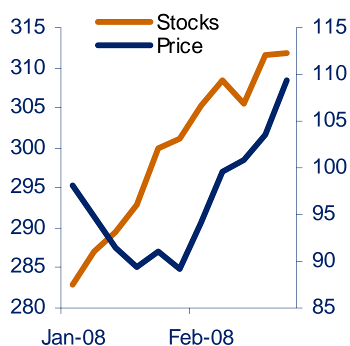
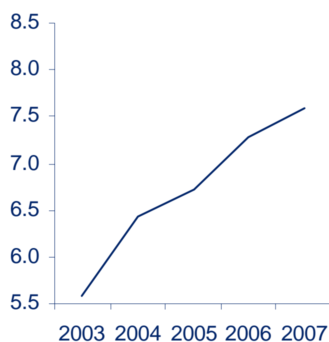


Chart 2: Unabated demand growth in China

Source: US Dept. of Energy, million barrels per day



Financial considerations matter

- Crude oil offers more attractive returns based on recent performance than bonds and equities. Turmoil in credit markets has spilled over into equity markets where volatility has increased and valuations have fallen. Meanwhile, lower interest rates and expectations of more rate cuts depress the yield of fixed income securities. In this environment, returns on commodities look attractive.

- Financial investors are using crude oil as a hedge against inflation and further dollar weakness. The timing of the recent rally is telling. Last week, the International Energy Agency and the US Energy Department both reported sizable additions to stocks (supply increased relative to demand), yet oil prices continued to rise as the US Federal Reserve hinted at further aggressive rate cuts. The first dent in the rally occurred when the Fed cut its target rate by 75 basis points rather than the 100 points markets had expected and when there were signs of dissent for the first time at the FOMC as two members voted against the policy measure. Trading data also suggest that financial considerations are paramount. Non-commercial interest in crude oil accounts for 90% of volume, as the trade in so-called paper barrels dwarfs the trade in physical oil. Net long positions by financial investors soared on the New York Mercantile Exchange during the second week of March.

- The weakening dollar also reduces the effectiveness of the price signal. Consumers paying in euros or sterling will reduce consumption by less than they otherwise would. At the same time, the purchasing power of dollar-denominated oil revenues for crude exporters is also diminished, prompting OPEC and other resource rich economies to seek compensation through more aggressive pricing or a refusal to increase production quotas.

Demand in emerging markets remains strong

- Demand from emerging markets remains solid for now. Crude oil consumption in China increased by 5.5% during the first three quarters of 2007 compared to the same period one year ago, while demand over the same period increased by 1.2% in non-OECD Asia. Strong growth is largely due to fuel subsidies, which insulate consumers and business from the full impact of higher prices, thereby reducing incentives to curb demand.

- So far demand growth has been supported by strong economic growth, as emerging Asia continues as an export powerhouse and is upgrading its infrastructure. The continued influx of foreign reserves has made it easy for the Chinese government to finance fuel subsidies.

- Demand growth from emerging markets is likely to slow. First, growth in China is highly inflationary and the Chinese government is eager to control inflation. Second, exports have accounted for a significant share of growth (by some estimate about 2-3 percentage points) and with slowing economies in the developing world, export growth will slow. Even a moderate slowdown in growth in China, say from the

Chart 3: Flat demand growth in the US

Source: US Dept. of Energy, million barrels per day

Chart 4: Rig count foreshadows future production

Source: Baker Hughes, Inc. # of rotary rigs

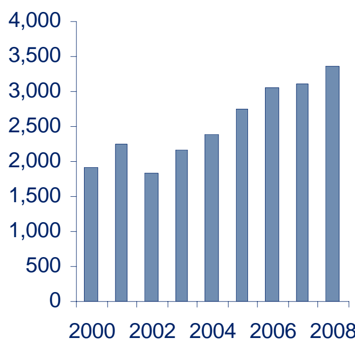
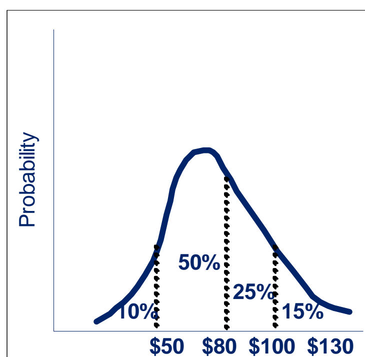


Chart 5: Our forecast calls for moderating prices

Source: RBS Group Economics



current 11 or 12% to closer to 8% would bring a measurable slowdown in demand growth for energy.

Weaker consumption in the West

- As the economic outlook is deteriorating in developed economies, demand for crude oil is likely to be flat, if not negative. Consumption growth over the first three quarters has been flat in the US, in line with a slowing economy.
- Higher prices have also played a role. US consumers and businesses feel the full impact of higher prices and have curtailed consumption in response. Further investment in energy-efficient technology will bring further demand reductions down the road.

We expect additional supplies

- On the supply side, OPEC has so far kept output stable. This move has been facilitated by the fact that there is little excess capacity while high prices have kept revenues up. Once lower demand brings additional spare capacity, OPEC's discipline will be tested yet again. Falling prices could make it all the more tempting to try to compensate falling revenues by boosting output. But if all members do, prices will fall further.
- Producers' lagged response to higher prices should bring additional supplies. Investment spending by the oil and gas industry outside areas controlled by National Oil Companies (NOCs) has continued near record high levels in 2007. The rig count, the leading indicator for future production remains in record territory. Some projects have been delayed because of high cost inflation (some 15-20% year-on-year) a shortage of drilling equipment and suitably qualified workers. However, these projects will be finished eventually, adding to supplies.

Our Forecast

- We see a new equilibrium price between where prices were at the beginning of the most recent expansion and where they are now. Elevated prices during the expansion were driven by strong demand growth in conjunction with very volatile geopolitics and emerging resource nationalism, which has prevented investment in some of the most promising regions. The shift in the balance of power in favour of NOCs will remain with us and investment spending below what we would expect in a competitive market will continue to support prices.
- But the increase in prices since the credit squeeze hit, are not justified by demand and supply fundamentals and will not last. With slowing demand expectations, price expectation will also become less bullish. Once price expectations begin to slow eventually, then some investors will be prompted to reduce their exposure to commodities. This could trigger a broader sell-off. We are confident this will happen, but it is difficult to get the timing right.
- We expect prices with 50% probability between $50 and $80 in one year's time. There is a 25% chance that prices will be above $80 but below $100 due to ongoing strong demand growth and underinvestment and a 15% chance that prices will be above $100, driven by further dollar weakness. We assign the remaining 10% to a situation where a sharp economic slowdown and strong supply additions will drive prices below $50 per barrel.

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