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What really drives crude oil prices?

Contrary to popular belief, changes in oil production are of secondary importance in explaining recent oil price developments. Rather, the decline has been mainly the result of unanticipated shifts in market sentiment.

This is the main finding of a recent study by Numera Analytics, a global provider of advanced business research and analysis. The internal study, conducted in the autumn of 2016, concludes that the changing mood of traders is just as important in pricing as market fundamentals. In fact, over the last two decades, shifts in market sentiment (shocks which cause participants' views to deviate from predictions based on fundamentals) have been the main source of volatility, accounting for about 75% of the overall variability in real oil prices; shocks to supply and global macro conditions (including exchange rate developments) explain only 25% of market volatility.

The study findings, as they relate to recent developments, are particularly interesting.

In the 18-month period prior to the recent peak (January 2013 to June 2014), the real price of crude edged up 5.4% despite rapidly expanding output from non-OPEC producers and the negative pull of weak economic growth in emerging markets. Chart 1 presents a decomposition of the change in real oil prices during this period. What supported prices during this period was OPEC restricting output just enough to offset higher shale oil supply. Together with stronger market sentiment, this more than compensated for a weak economy and a strong US dollar.

Chart 1: Before Peak (January 2013 - June 2014)

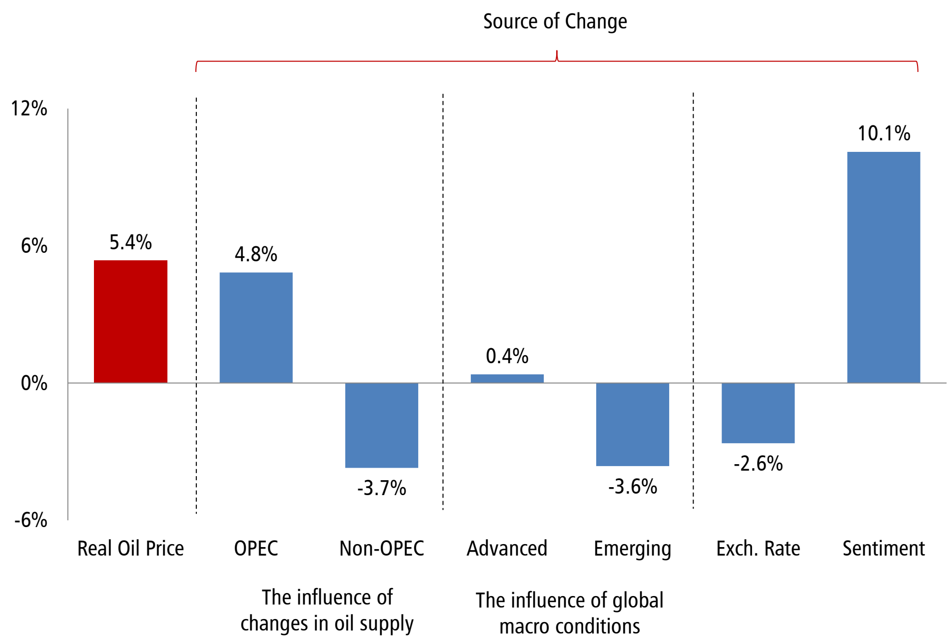
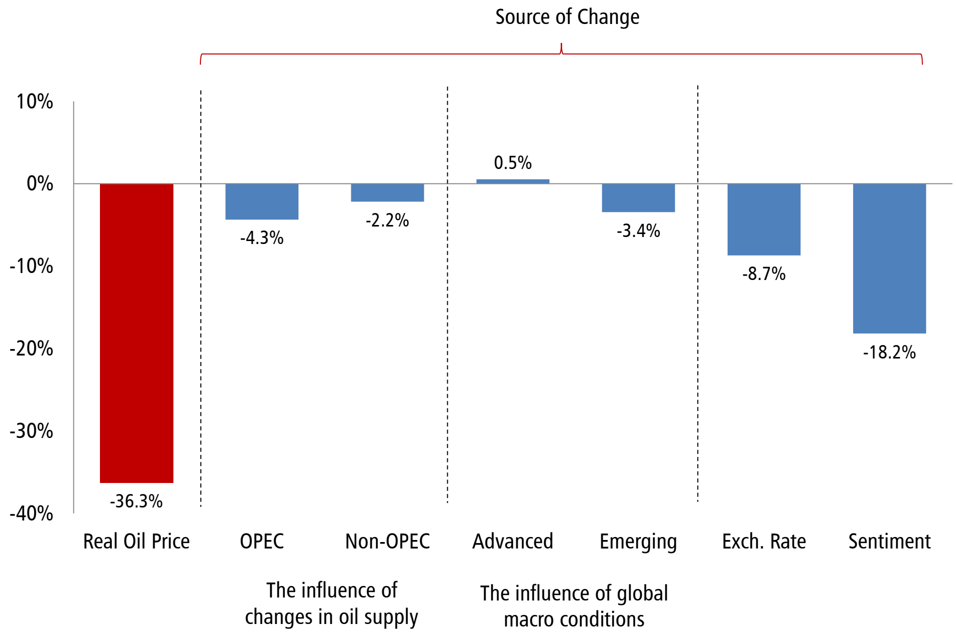


Chart 2: After Peak (July 2014 - July 2016)



Then the market turned and the real price of oil tumbled 36% (measured as the average price of Brent, WTI and Dubai deflated by an index of non-energy commodity prices). As seen in chart 2, which covers the 24-month period following the peak, the global economy was still a net drag on oil prices, but no more so than during the period leading up to the peak. What changed was OPEC – led by Saudi Arabia – shifting strategy and boosting production.

The direct influence on price was not that significant. Of the 36% drop in price, only 6.5 points can be directly explained by changes in oil supply. But the strategy change acted as a trigger, leading to a significant shift in market sentiment, in this case the belief that the market would remain oversupplied for a long period. This anticipation effect accounts for 50% of the drop in price since mid-2014, making it by far the most important factor over the past two years.

The other significant driver was the steady appreciation of the US dollar, which accounted for nearly a quarter of the drop in the USD price of crude since the summer of 2014.

What does Numera's analysis tell us about the future direction of oil prices? The model shows that lower supply by non-OPEC producers should remain supportive, but that will be largely offset by macroeconomic factors, in particular weak growth in emerging markets and a strong US dollar. If sentiment remains neutral, oil prices are unlikely to break out of their current trading range. However, should OPEC really curtail supply – even by a small amount – this could trigger a reversal in expectations about future shortfalls. What is needed, therefore, is an entrenched belief that oil production will be reduced, irrespective of the magnitude of the supply shift.

For questions on this report, contact Joaquin Kritz Lara at jklara@numeraanalytics.com. For information about Numera's economic and custom research service, contact Roman Hohol at rhohol@numeraanalytics.com.