



The oil price crash, why it happened and its impact on chemicals

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The interaction between oil price, oil supply, and oil demand is notoriously eccentric. None of the three can be relied upon to respond smoothly to changes in the other two. Demand is inelastic: price rises make little difference to motorists' habit of using their cars. Supply is inelastic: long lead times and giant investment costs mean both that new supply can be slow in arriving and uneconomic supply can be slow to be shut off.

Meanwhile, prices respond not to reality but to perceptions of reality: they rise because there might be a shortage of oil, not because there actually is one. And they fall only when perceptions change.

Arguably, then, the drop in benchmark Brent crude prices from a peak of some \$114/bbl in July 2014 to around \$50/bbl today was well overdue.

Oil demand in the western world and Japan has been stagnant or falling since the financial crisis of 2009 kicked in. Not only is economic growth flat, but also technological advances and the switch to alternative fuels are steadily eroding oil demand, in particular demand for automotive fuel in the West.

To that picture have been added growing stagnation in Asia, and most significantly a slowdown in Chinese growth, which has seen the annual rise

in oil imports to China fall below 10% every year for the past four years.

The notion that demand growth in China is not an inexorable straight line has come as something of a shock to forecasters who had built an ever-rising oil price into their predictions. For in effect, that ever-rising price was predicated on ever-rising Chinese growth.

IMPORT GROWTH

Indeed, the roots of the 2014 price crash lie arguably in the massive reduction in import growth in China for 2011, when import growth fell from 16.09% in 2010 to just 5.5%.

Chinese crude imports, too, tell only half the story. Thus, for example, while imports for 2014 were up 8% by the end of November 2014, actual Chinese demand for 2014 is forecast by ICIS China to be only 1.1% higher than in 2013.

The balance of the imports is either being re-exported as products or is contributing to China's aggressive strategic stockpile programme.

At the same time, crude oil supply has been building steadily with growth from Canada's oil sands and since the start of the US fracking boom. Nothing perhaps indicates this more clearly than the collapse in North American crude oil imports over the past six years. As "light tight"

shale oil has boomed, US and Canadian imports of crudes have essentially halved.

Oversupply first became seriously evident in 2012, and was only partially corrected in 2013. Meanwhile, over the past four years, according to IEA data, the world has built oil stocks by a net total of 90.4m bbl, almost a day's supply. 2011 saw a net drawdown in stocks of 146m bbl. Stocks built in 2012 by 73m bbl. 2013 again saw a modest drawdown of 19.2m.

But in the first three quarters of 2014 alone, stocks grew by an apparent 182.6m bbl. In particular, a stock build of over 100m bbl in the course of the summer appears to have tipped oil markets into full bear mode.

MACRO-ECONOMIC FACTORS

Oil supply and demand alone, however, cannot account for a greater than 50% drop in the price of crude in just a few months. Other macro-economic factors are at play, including:

- The effects of a likely end to quantitative easing on the value of the US dollar, which has surged against other currencies over the same period as oil has fallen. Since crude oil is priced in dollars, a higher dollar translates to a lower oil price;
- More general concerns about the stability of the Chinese economy; and

■ An imbalance in price ratios between oil and natural gas. Historically, as a rough-and-ready measure, oil in \$/bbl was typically around 9-12 times the price of natural gas in \$/mmbtu. Since the late 2000s, however, this ratio has moved a long way, with crude fetching at times 30-40 times the price of gas.

Since 2010, however, there has been a sea-change in international banks' and hedge funds' appetite for commodities markets, and early 2014 saw large-scale departures from commodities trading by major financial players.

It may be argued that the presence of the banks in the oil market artificially sustained prices at levels not warranted by supply-demand fundamentals because of their tendency to buy at the far end of the forward curve, sustaining an atmosphere of speculative shortage where none in fact existed. Banks priced in a shortage risk between 2003 and 2008 which turned out not to exist, in effect.

There has also been widespread speculation about possible political origins for the oil price crash.

OPEC's richer producers may not be averse to tolerating a period of low oil prices in the hopes of discouraging further widespread shale developments around the globe. OPEC's non-event meeting on November 28, 2014, at which the producers' group took no action, confirmed this view, and also took some \$6/bbl off the price of crude in a single day.

OPEC members are wary of the logic that suggests a 5% production cut may yield a 10% jump in the price. History has taught OPEC that whenever it cuts its output, other non-OPEC producers simply fill the gap. Indeed the 1970s-1980s OPEC strategy of pushing up prices by restricting supply is directly responsible for the development of most of the world's competing oil resources today. OPEC's high prices paid for the North Sea, and ultimately for the development of deepwater technology.

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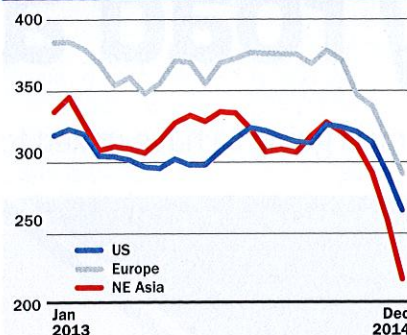
Thus, a production cut might simply reduce much needed revenues to countries like Iran and Venezuela, without substantially reversing the current price drop.

Encouraging the drop may also be an assortment of other political factors.

Strategically, it is evident that lower oil prices inflict economic pain on oil producer Russia – something Western governments are not averse to seeing, given their ongoing attempts to force Moscow to end its intervention in Ukraine.

Arab Middle East producers may be prepared to go along with a period of lower prices for

ICIS Petrochemical Index



SOURCE: ICIS

similar reasons: cheap oil weakens both Iran and the Russian-supported Assad regime in Syria.

Iran's role in the region, indeed, is a pivotal factor in determining what happens next. It is possible to argue that, until the summer of 2014, global crude prices were carrying an "Iran risk premium" of \$5-10/bbl, predicated on the stand-off between Tehran and much of the international community over its nuclear ambitions.

The arrival on the scene of the radical Sunni IS/ISIL group in Syria and Iraq, however, suddenly converted Shia Iran into a potentially useful ally for the West in the region, and the rapprochement with Iran has been evident in the tone of recent nuclear talks, even if the deadline for a resolution has been pushed into next year.

Thus, although Middle East tensions may be running high, and IS/ISIL threatens the stability of Iraq, its creation would ironically appear to have eased pressure on oil prices.

Meanwhile, of course, low oil prices also provide economic stimulus to oil-dependent economies, both in the West and in Asia, cutting the cost of industrial output and of trade, and providing politicians with convenient drops in inflation rates which they can then attribute to their recession-busting policies.

On paper there is nothing to prevent oil prices from settling in a \$45-65/bbl range for a period of several years.

NO END IN SIGHT

An end to Europe's economic problems is hard to see in the next 24 months, and there is a real danger that the collapsing rouble – and the serious economic problems in Russia that are already in evidence – will further impact Europe's chances of recovery.

Meanwhile, if China's economic difficulties persist to 2017, it is hard to see where in the world large-scale oil demand growth could come from in the years to 2020.

Investments already made in the development of natural gas, renewables and alternative energy vehicles are still filtering through the system, posing further challenges to oil's position as the must-have transportation fuel.

The medium-term switch to LNG as the primary fuel for the world's cargo shipping fleet will exacerbate this situation, potentially creating the "mother of all fuel oil lakes" by 2025 and necessitating some exceedingly expensive refining investment.

But although demand is unlikely to push oil prices back up, potential supply disruptions could still do it. The longer-term consequences of low oil prices for the Middle East, North and West Africa, and parts of Latin America are unpredictable. Starved of oil revenue, some governments in these regions may face a tough time holding on to power.

Political upheaval in the Persian Gulf – of the kind seen in Libya, Egypt, or Syria in recent years – would without doubt push oil prices back over \$100/bbl, or higher, in a very short space of time.

There has been a sea-change in international banks' and hedge funds' appetite for commodities markets

Effective action to cut production by OPEC, as discussed above, is meanwhile unlikely, but should not be altogether ruled out, particularly if the cartel's poorer nations can persuade themselves reduced output will bring actual economic gain in the form of a price spike.

If prices continue to slide past \$50/bbl, then such action could be taken as early as the second quarter of 2015, boosting prices, if not all the way back up, at least into the \$60s.

Lower crude prices have exacerbated the bearish sentiment on global chemical markets in 2014 with the impact most notable in Asia. Spot petrochemical prices on Asia markets reacted almost immediately to the falling price of crude and that of the primary petrochemical feedstock naphtha from after mid-year.

The ICIS Petrochemical Index (IPEX), which represents the price movements of 12 key petrochemicals, was on a downward trend in the second half and lost 23.2% of its value from June to December. Lower petrochemical prices will put downward pressure on other derivatives prices in 2015 as the impact of the oil price crash is translated downstream. ■

This article includes extracts from the ICIS oil price crash white paper published in December 2014 and the ICIS oil price update, which was published in January 2015. ICIS Insight editor Nigel Davis contributed to this article