

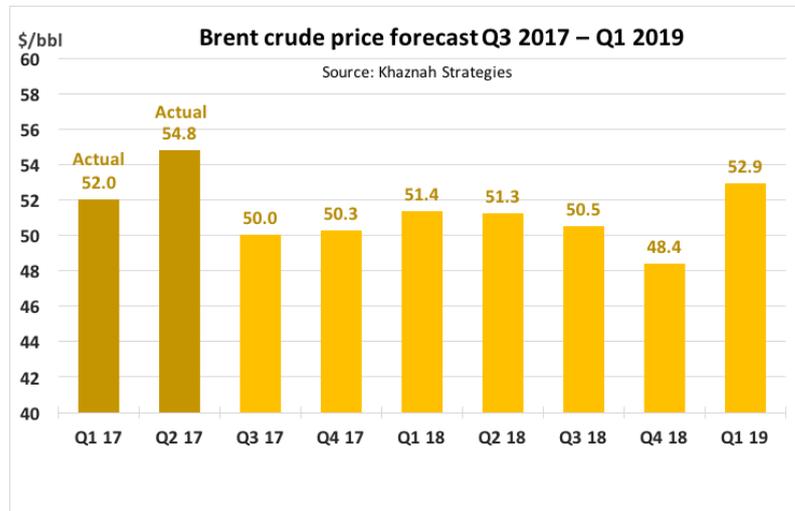
Resilience of Shale Companies and China's Plan to Boost Electric Vehicles Are Forcing Oil Producers Adjust to "Lower for Longer"

13 September 2017

Shell Chief Executive Ben van Beurden [shook](#) the market when he declared that his company is preparing for a "lower forever" oil price environment. Several factors point in the direction of lower crude prices lasting longer than producers had initially hoped for. Such factors include crude production growth in the U.S., diminishing influence of OPEC / non-OPEC cuts, and – in the longer run – the rise of electric vehicles, specifically in China.

Oil price forecast

- Our model forecasts that the price of Benchmark North Sea Brent crude oil will stay within the \$45 – \$55 corridor throughout 2017 and 2018 averaging \$51.8/b in 2017 and \$50.4/b in 2018 (a slight decrease since the last forecast). In Q1 2019 price is forecasted to be \$52.9.
- The 70% confidence interval for the Brent crude price is in the \$40 – \$70 corridor. We expect West Texas Intermediate (WTI) crude oil prices to average about \$1.5/b less than Brent.



Buoyancy of U.S. companies is putting pressure on oil producers worldwide

- If the Brent price stays above \$45, our model shows that by mid-2018 U.S. oil production will exceed 9.5 mln barrels per day (mb/d), and by the end of 2018 – 10 mb/d, above its historical peak level in 1970.
- This is due to the fact that U.S. companies have proven to be more adaptable to lower prices than previously thought. They managed to outperform other oil producers in cutting costs.
- The International Energy Agency [estimates](#) cost reductions at 15% in 2015 and 17% in 2016 among global oil companies, while among U.S. shale oil producers cost reductions were 30% in 2015 and 22% in 2016.
- The number of oil-directed active rigs in the U.S. has more than doubled since last year – it reached 733 compared to 316 in May 2016, as [reported](#) by the U.S. Energy Information Administration.
- The strong performance of U.S. companies has created pressure on other producers to adapt to lower prices. There is now an increasing number of projects world-wide that can break even at \$30/bbl and lower. As a result, significant production increases are expected beyond the U.S. (e. g. Canada and Brazil).

The influence of OPEC / non-OPEC production cuts on the oil price is diminishing

- Rising crude output in the U.S. and other countries is balancing the effect of OPEC / non-OPEC production cuts, lead by Saudi Arabia and Russia.
- There is a growing realisation (although most OPEC members won't admit it) that the policy of curtailing production is losing its edge: prices have increased less than expected since cuts were renewed in May.
- All of this is hurting discipline within the OPEC / non-OPEC coalition. Although nominally cuts of 1.8 mb/d were extended until March 2018, overall compliance is estimated at around 75 percent. Additionally, it is challenged by the fact that some participating countries, namely, Kazakhstan, Iran, Nigeria and Libya, have increased production, and some are planning to boost output in the near future.

Geopolitics: despite the Qatar stand-off a politically calmer oil market emerges (at least for now).

- Unity of oil producers was further undermined by a major falling-out between Arab states after Saudi Arabia, Egypt, UAE and Bahrain issued an ultimatum to Qatar, quickly followed by an embargo.
- Various historical precedents (from 1973 onwards) and the security sensitivity of the strait of Hormuz would suggest that a stand-off in the Gulf should boost the oil price. But no such reaction has followed.
- As OPEC's impact is diminishing, the centre of gravity of oil production is shifting from the Middle East to the U.S. It remains to be seen whether this new equilibrium – less sensitive to security threats – can be sustained. For now, the price of crude oil is largely unaffected by tensions in the Gulf region.

China and India will be the main drivers of global oil consumption

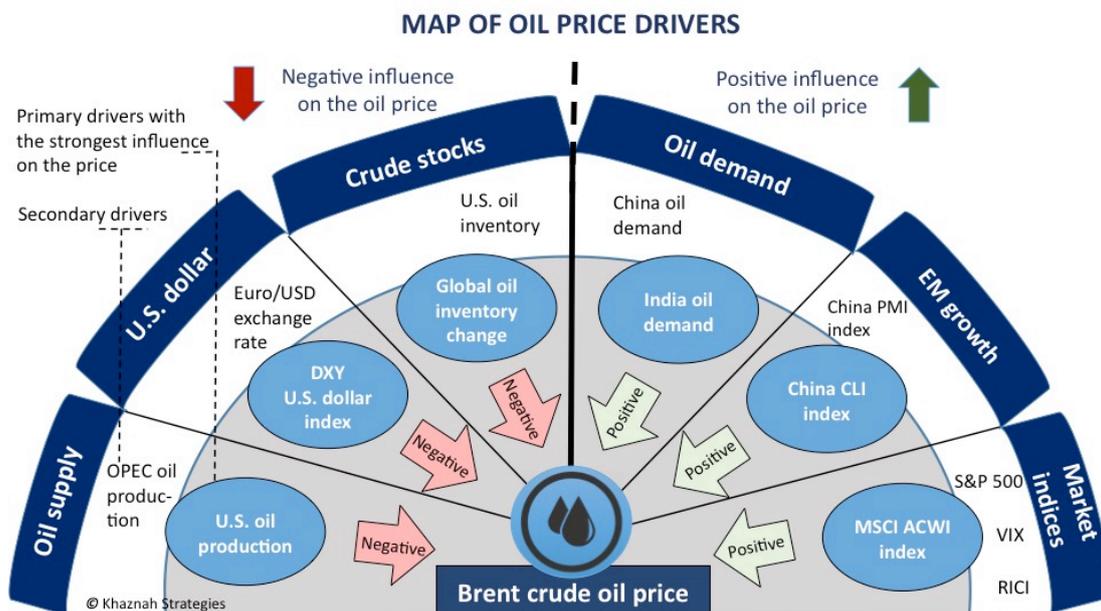
- China and India will generate half of the increase in world oil consumption in the coming years. As China is moving from an industrial towards a more services-based economy, its growth in hydrocarbon consumption is gradually slowing down. This trend will be reinforced by China’s plan to boost electric cars.
- This brings India to the fore of oil demand. The country is expected to maintain its position both as leader of global economic growth and the country with the fastest increase in oil consumption.

Stronger expectations for electric cars are curtailing long run oil demand forecasts

- Recent reports indicate that both governments and companies are advancing the rise of electric vehicles. Britain and France [announced](#) plans to ban the sale of new petrol and diesel cars by 2040, recently echoed by China’s unexpected [statement](#). Germany and the Netherlands are debating an even earlier phase-out.
- Reinforcing this trend, Volvo and Volkswagen [pledged](#) that all of their new models will have electric or hybrid motors by 2019-2020. Some oil companies have also followed suit, for example, Total invested in electricity storage by acquiring Saft, a battery manufacturer.
- In its recent [report](#) Bloomberg forecasts that cars with electric motors will make up 54% of all light-duty vehicle sales by 2040, which in turn will reduce global oil demand by 8mb/d.
- Although in the short term it is unlikely that electric vehicles will put significant downward pressure on the price of crude, in the medium to long run this seems to be inevitable.

Major oil price drivers

- Our updated map of oil price drivers (below) has not changed significantly since last quarter. Based on our model, the key factors influencing the oil price can be grouped into two major categories:
Negative influence on the oil price. U.S. oil production is the key primary factor. The other two are the U.S. dollar exchange rate (the DXY index) and global oil inventories.
Positive influence on the oil price. The two key drivers are oil demand in India and the China CLI index (a proxy for Chinese economic growth). The MSCI ACWI equity index is another primary factor (half of which is comprised of EM stocks) and a major sign of global financial conditions.



About our methodology

- The distinguishing feature of our *integral price forecasting* @ econometric model is that at the stage of initial evaluation it analyses the influence of over 100 external factors. They include supply, demand and inventory; and a variety of macroeconomic, FX and financial market indices. We develop a map of the most important primary and secondary oil price drivers, identifying signposts for a price change.

Disclaimer: © Khaznah Strategies 2017. All Rights Reserved. No duplication or redistribution of this document is permitted without written consent. Khaznah Strategies Ltd. (England and Wales registration number: 6935983) does not conduct “investment research” as defined in the FCA Conduct of Business Sourcebook (COBS) section 12 nor does it provide “advice about securities” as defined in the Regulation of Investment Advisors by the U.S. SEC. Khaznah Strategies Ltd. is not regulated by the SEC, the FCA or by any other regulatory body. This report has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research. The views and conclusions expressed here may be changed without notice. Khaznah Strategies Ltd., its partners and employees make no representation about the completeness or accuracy of the data, calculations, information or opinions contained in this report. Views expressed herein have not been influenced by any relationship to any entity referred to herein nor to any client of Khaznah Strategies Ltd.