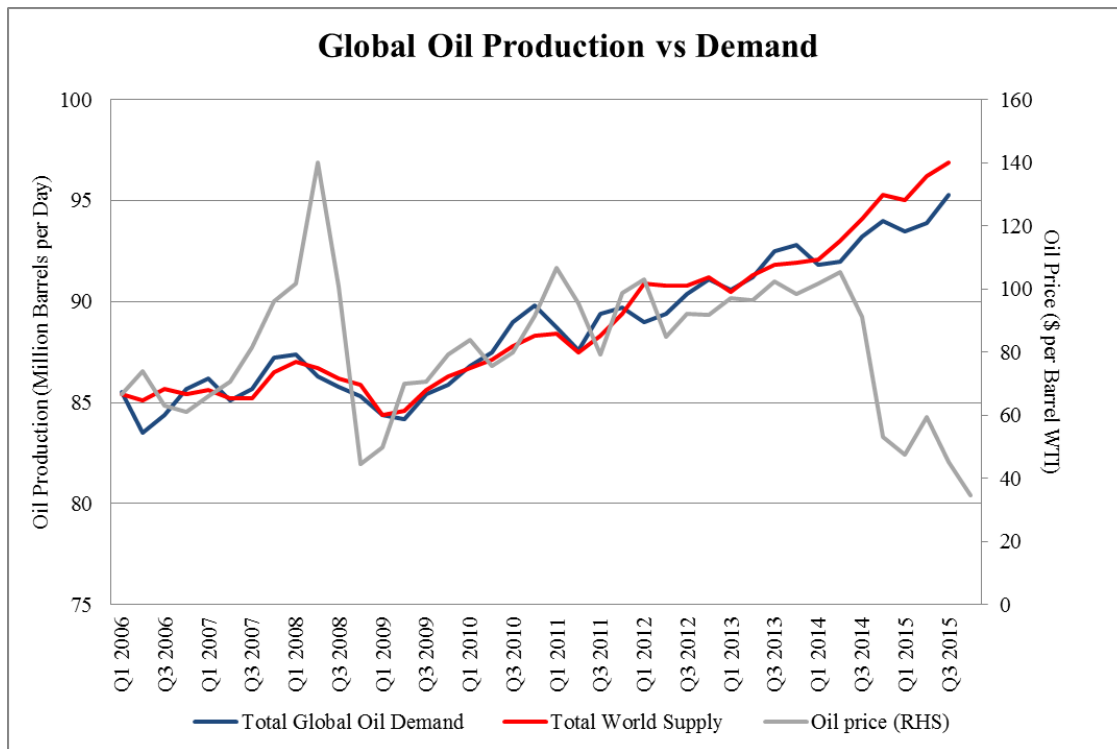


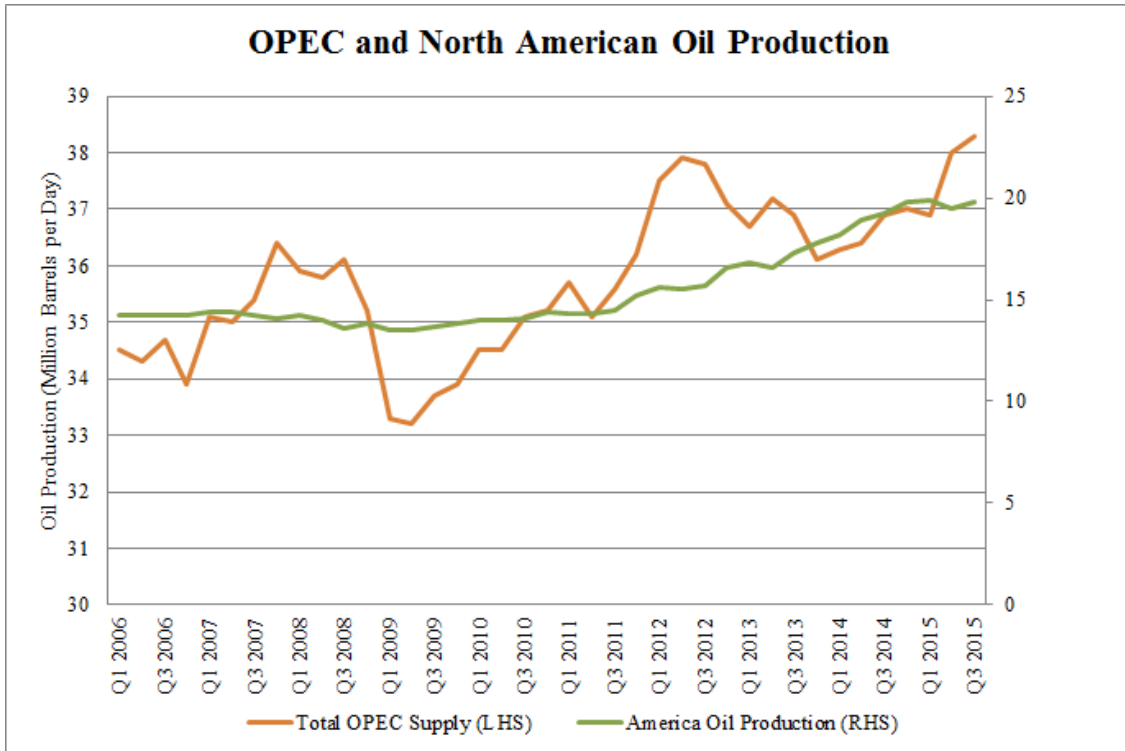
Oil – Where to From Here?

Having fallen sharply at the start of the year the oil price recovered in Q2 2015 rising from approximately \$50 per barrel to approximately \$60 per barrel by mid year. Since then, however, a combination of disappointing demand growth and strong OPEC supplies have seen the oil price fall back to levels last seen in 2004. Unlike the crash in oil prices in 2008, the collapse this time around appears to be largely manufactured by OPEC which has been very clear that it will not cede market share to new producers (e.g. shale, oil sands and deep water) by reducing their own production to maintain prices. The result has been a glut of supply at a time when demand growth from China and other major consumers has come under question.



Source: International Energy Agency Quarterly Report (IEA), Wellesley Investments & Pensions

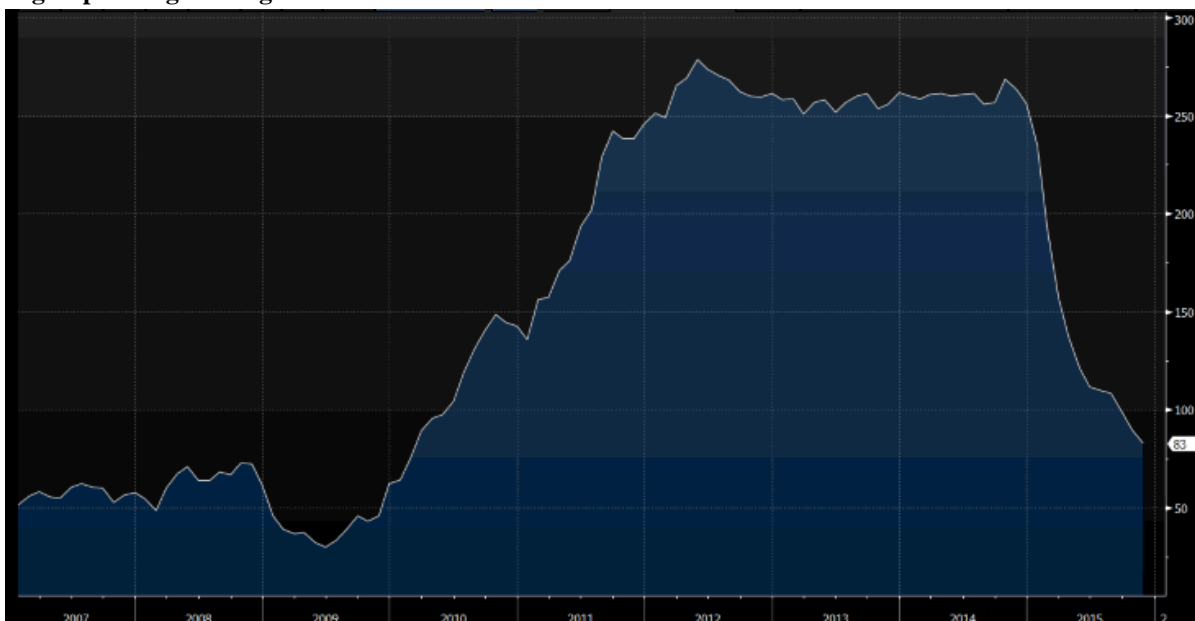
Despite the weakness in oil prices since mid 2014 the global oil market remains in a state of oversupply with a significant increase in OPEC production weighing heavily on prices. OPEC have traditionally adjusted production to balance oil prices when prices have fallen on weaker than expected demand. However, reacting to increased supplies from new sources such as North American shale and deep sea wells, the cartel has responded by effectively removing production limits on member countries which has resulted in further pressure on prices.



Source: IEA

OPEC’s targeting of investment in new oil production from shale and oil sands has had a significant impact on the sector. North American production growth has stalled with the closure of many rigs and a collapse in investment in the sector. The two largest shale oil formations in North America, Eagle Ford (Texas) and Bakken (North Dakota /Canada), have seen production fall by almost 350 thousand barrels per day since their peak in December 2014. Together these two formations accounted for production of almost 15% of American oil at the end of 2014.

Rigs Operating the Eagle Ford Shale Formation



Source: Bloomberg

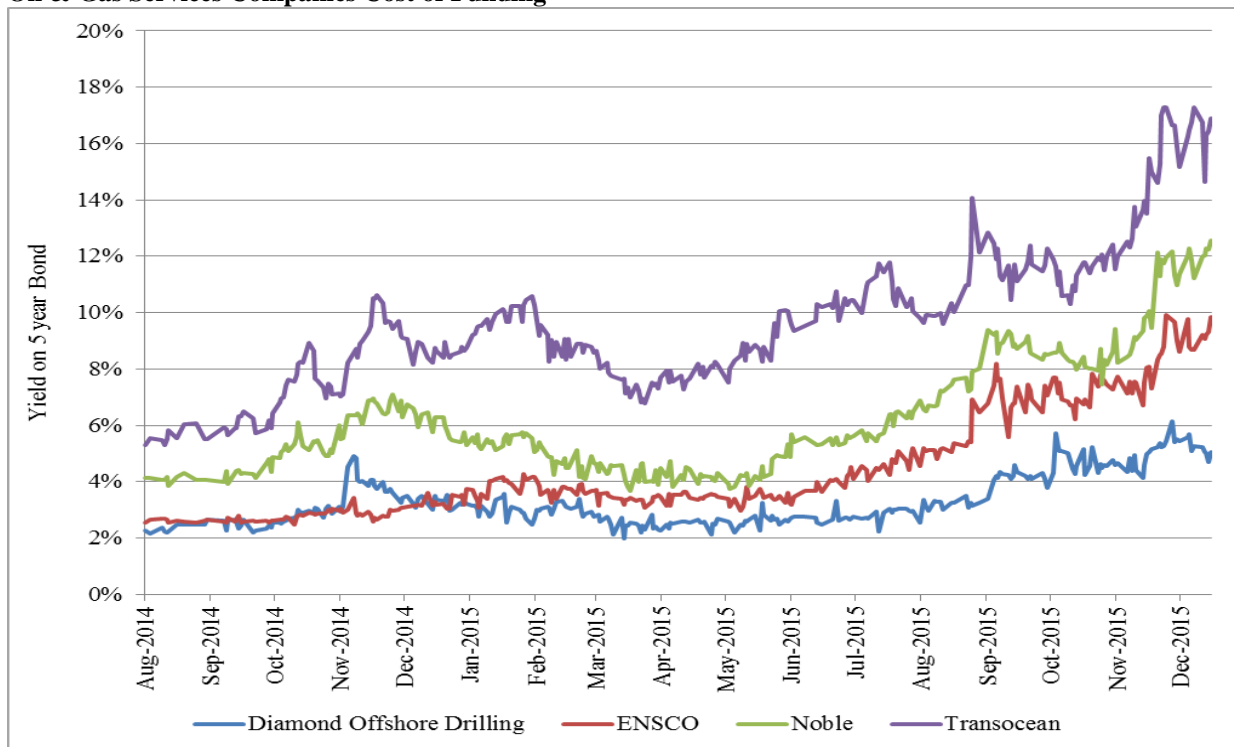
Investment Case

Medium Term Damage to Investment in Production Capacity

The severity of the recent correction in oil prices supports the longer term case for investing in the commodity. The destruction of investor capital in recent oil projects will, in our view, severely damage investors' appetite for supporting further investment in production capacity thus putting pressure on longer term supply growth. Investment in more expensive production, e.g. shale, deep water Gulf of Mexico, Arctic Ocean, etc. is likely to be particularly restricted in the medium term.

Funding costs for more speculative or higher cost exploration and production have soared as the oil price fell below \$50. Along with severely restricting investment in new production, higher funding costs will also feed through to production costs for wells that are efficient at lower oil prices.

Oil & Gas Services Companies Cost of Funding



Source: Bloomberg

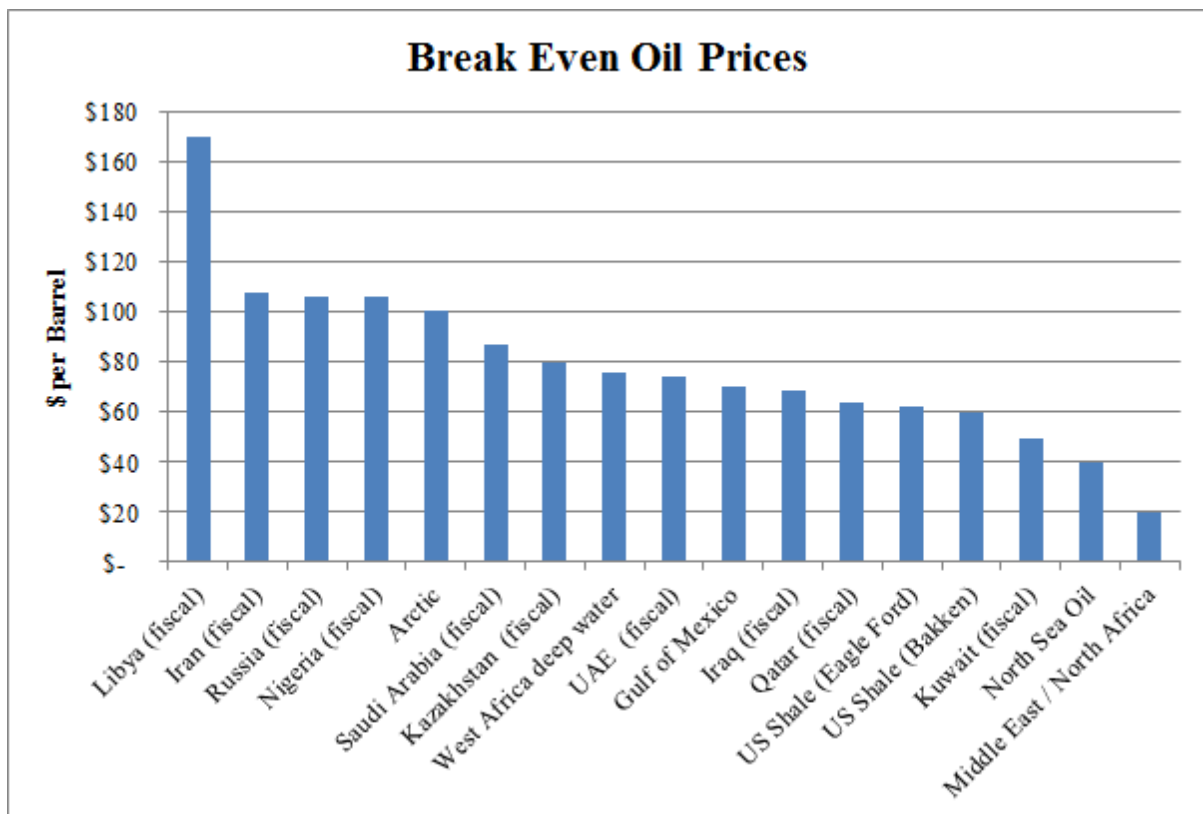
Oil Now Trading Well Below Cost of Production

In the short term, the marginal cost of production which will balance supply and demand is estimated to be considerably higher than the current price. Estimates of costs of production vary. However, it is generally accepted that while technological advances have significantly reduced fracking and horizontal boring costs, the cost of production for North American shale oil is still considerably higher than that of traditional vertically bored wells. The North Dakota Department of Natural Resources has estimated the break even cost of production for wells in the Bakken formation to be approximately \$40 per barrel; however, independent analysts have suggested a breakeven price closer to \$60-70 when transportation costs are properly accounted for. For wells in Texas with an easier route to market such as Eagle Ford, breakeven prices are also estimated to be around \$60 per barrel.

Smaller shale oil plays do not benefit from the same economies of scale in terms of transportation and route to market and so are likely to require a much higher breakeven oil price.

Canadian oil sands projects are estimated to require an average breakeven price of closer to \$80 per barrel and these projects were among the first to be mothballed following the recent fall in oil prices. Similarly, breakeven prices for deep water projects such as those in the Gulf of Mexico and West Africa were estimated by McKinsey to be between \$70 and \$76 per barrel in 2014.

For OPEC producers and in particular the traditional “low-cost” Middle Eastern players, actual production costs are estimated as being between \$15 and \$30 per barrel. However, the reliance of these countries on oil revenues to fund most aspects of their economies makes the cost of production less relevant than the oil price required to allow them fund their budgets. So-called “fiscal breakeven” estimates vary hugely with some estimates putting the equivalent costs of production significantly above those of North American shale. Clearly fiscal breakeven estimates require that, along with assumptions regarding actual costs of production, major assumptions are also made regarding all aspects of the producing country’s exchequer spending and receipts. As a result these may overstate breakeven costs to some extent. Nevertheless, it would appear that at current prices there are few if any producers who are not suffering significantly and for whom current crude prices are sustainable in the medium term.

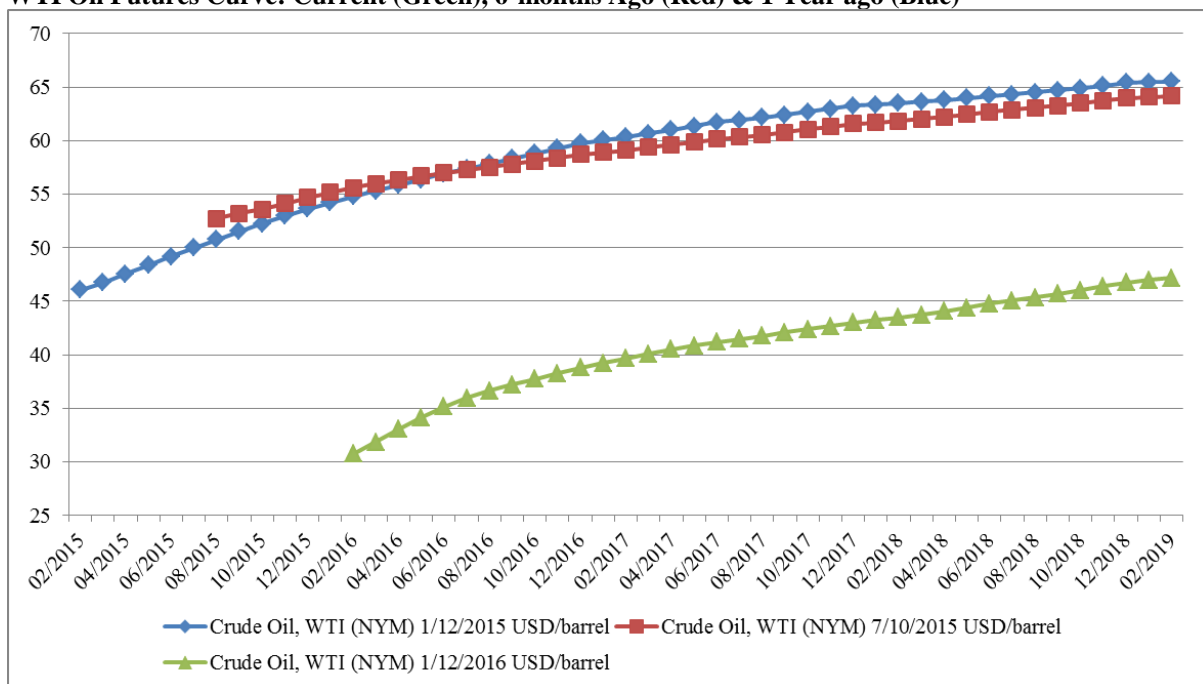


Source: IMF, IEA, McKinsey, Fitch

Oil Futures Curve

With US crude oil inventories at approximately 485 million barrels, 135 million barrels above their 5-year average, longer dated oil futures contracts are trading at significantly higher levels than prices on the near contract. High inventory levels and the corresponding scarcity of storage capacity has made it difficult to arbitrage prices back along the curve and the premium on oil futures expiring 6 months from now is currently 17% above the near contract compared to just 5% last summer. This unusually strong contango effect will reverse on any reduction in inventories further supporting front futures contract prices

WTI Oil Futures Curve: Current (Green), 6-months Ago (Red) & 1 Year ago (Blue)

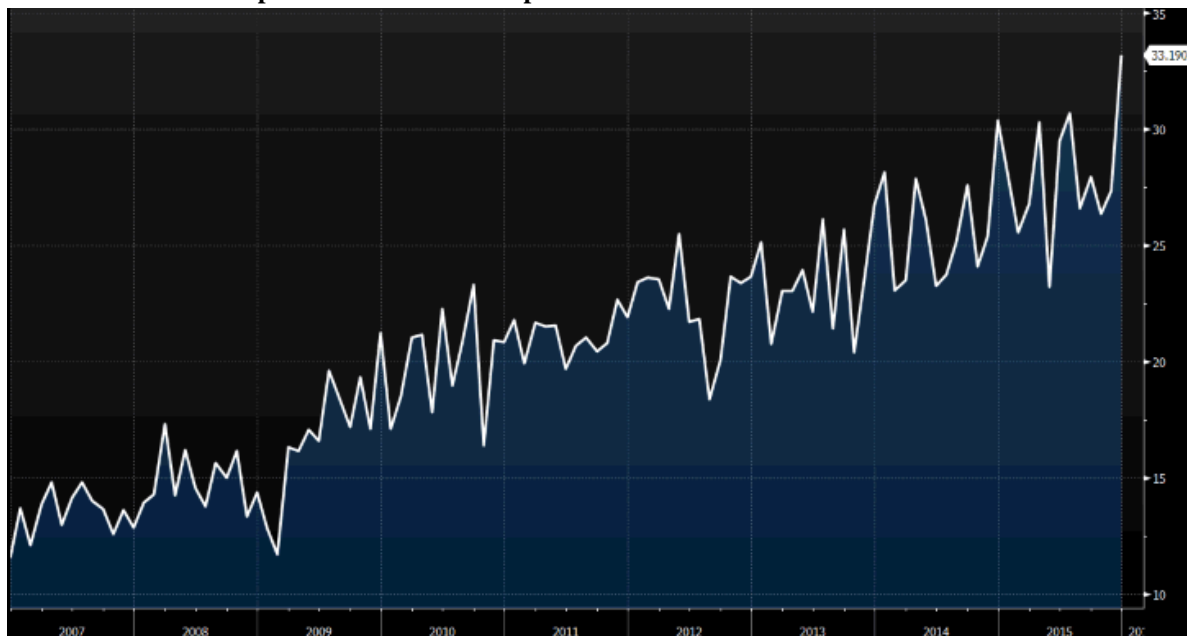


Source: Bloomberg, Wellesley Investments & Pensions

China

Recent concerns about Chinese economic growth have been cited as one of the factors in the recent slide in the oil price below \$35 per barrel. Since 2011, China has become the world's largest global energy consumer and the second-largest oil consumer behind the United States. In 2014, China became the largest net importer of crude oil and petroleum products. Concerns about Chinese economic growth have been suggested as a further risk to global oil demand growth. We believe, however, that the risks to oil demand of a Chinese slowdown are overstated. We believe that even if the Chinese economy does slow more than expected, the sensitivity of oil demand to changes in economic growth is much lower than that of other industrial commodities. Also, the most recent statistics for Chinese oil imports suggest, if anything, acceleration in demand growth over recent months despite the turmoil in the Chinese stockmarket and the depreciation of the Renminbi.

Chinese Crude Oil Imports – Million Tonnes per Month



Source: Bloomberg

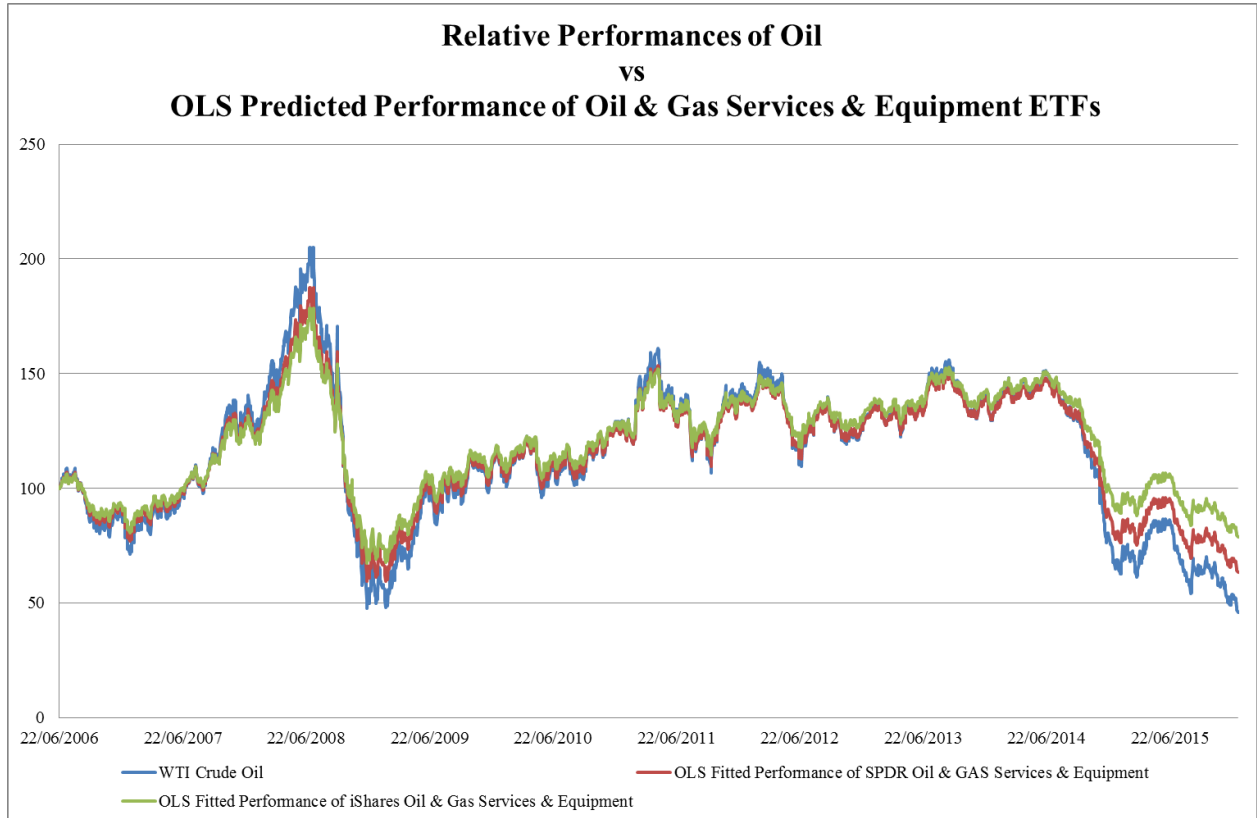
Conclusions

At the time of writing, West Texas Intermediate (WTI) is trading at \$31 dollars a barrel. Based on the above estimates of production costs, should prices remain on average at these levels for a period of time, almost all production with the exception of on-land fields on the Arabian Peninsula and North Africa would become uneconomical. The fiscal reliance of these producers on oil revenues to fund their budgets, however, requires a much higher oil price in the absence of very significant cuts in government spending. Globally, while increased capacity in the services and equipment sector will likely put some downward pressure on production costs, we find it hard to envisage oil remaining at these price levels for any significant period of time.

Investment Approach

The significant oversupply in the market in recent months has resulted in increased inventories utilising most available storage capacity. The result has been a sharp increase in the already expensive roll cost on oil futures as storage is not available to allow arbitrage across the curve. Historically the roll cost on WTI futures has averaged between 4% and 8% per annum. More recently, however, roll costs have soared with the current premium held by the January 2017 WTI contract over the January 2016 contract approximately \$8 or over 20%. Because of the high costs associated with direct investment in oil futures, we see equities in the oil services and equipment sector as a cost efficient proxy for oil. This sector has traditionally shown a very high correlation with the oil price including in periods of significant volatility such as the last oil price collapse in 2008.

We have examined the correlation between a number of different baskets of oil services and equipment stocks and the underlying oil price and the results suggest that the sector shows a relatively homogenous relationship to the oil price regardless of size, valuation or dividend yield bias.



Source: Wellesley Investments & Pensions

Wellesley Investments & Pensions Ltd.
January 2016

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