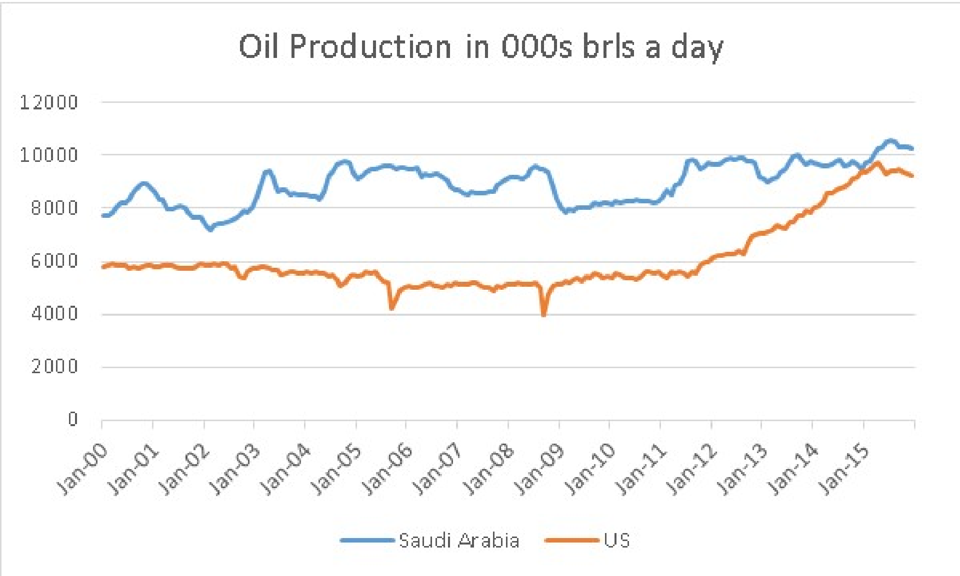
IS SAUDI ARABIA STILL THE SWING PRODUCER?

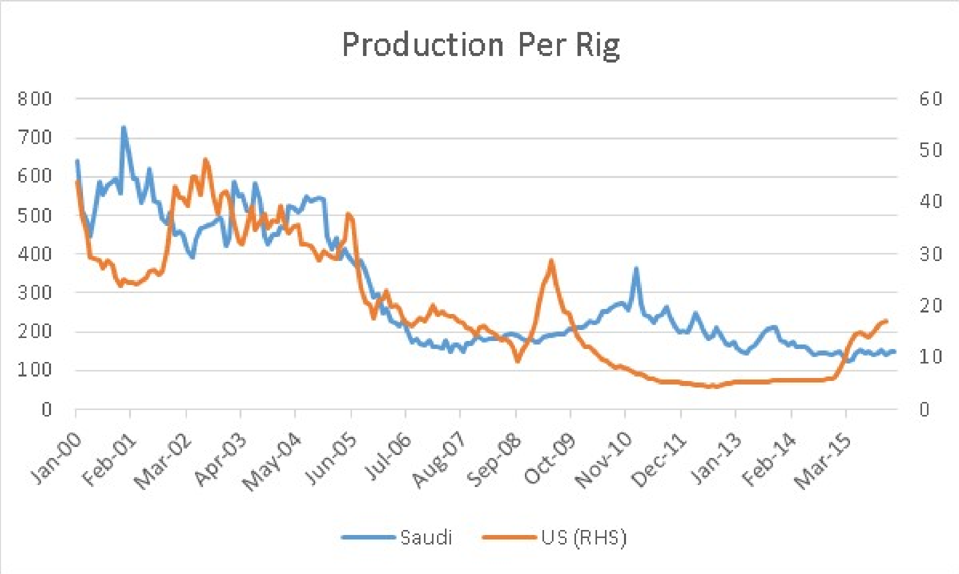
Saudi Arabia is the world's largest exporter of oil, and since 1970 has been the linchpin within OPEC, increasing and decreasing supply to support oil prices. Since late 2014, Saudi Arabia has committed to increasing production to force lower oil prices and reclaim market share.

Looking at production levels from the US and Saudi, we can see how the US oil producers have increased production dramatically since 2011, but production growth in the US has now slowed, as Saudi production has increased over the last year or so.



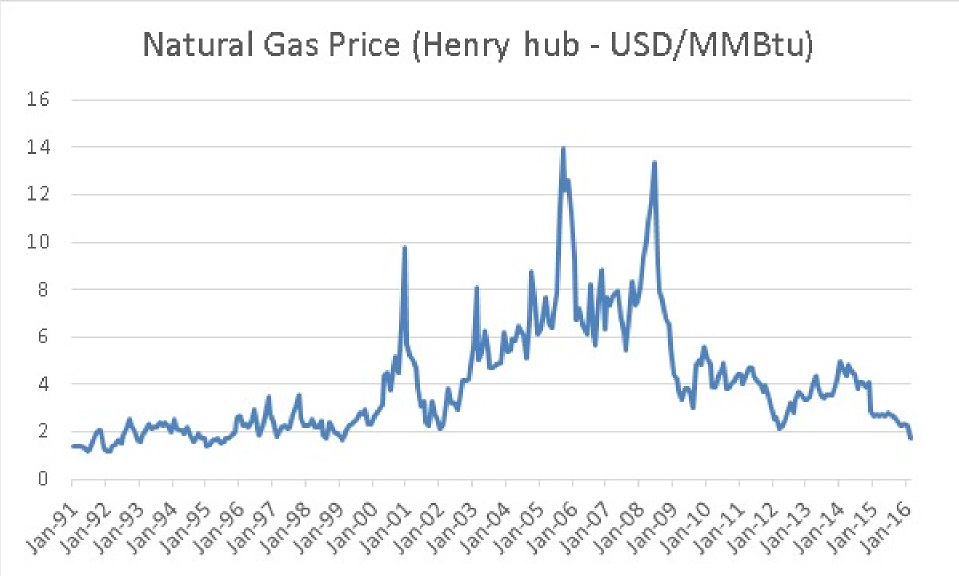
The slight fall in US production is leading many to believe that the market is back in balance, and oil prices can begin to rise again. The problem I have with this view is that it ignores two big changes. Firstly, improvements in drilling techniques and processes in the US have made US oil production more like a manufacturing or technology industry. This implies that the cost of production is constantly falling. Secondly, huge increases in social and military spending in Saudi Arabia have left Saudi with little option than to keep up production as it needs the money. The IMF believes that Saudi needs USD100 oil to balance the budget. As long as the Saudi Riyal is pegged to the dollar I see little scope for social costs to fall.

Why do I believe US oil production has become more like manufacturing industry? There are signs of this improvement in oil production per rig. The problem with this approach is that there is a natural spike in productivity whenever the oil price falls as the least efficient rigs are taken off line first.

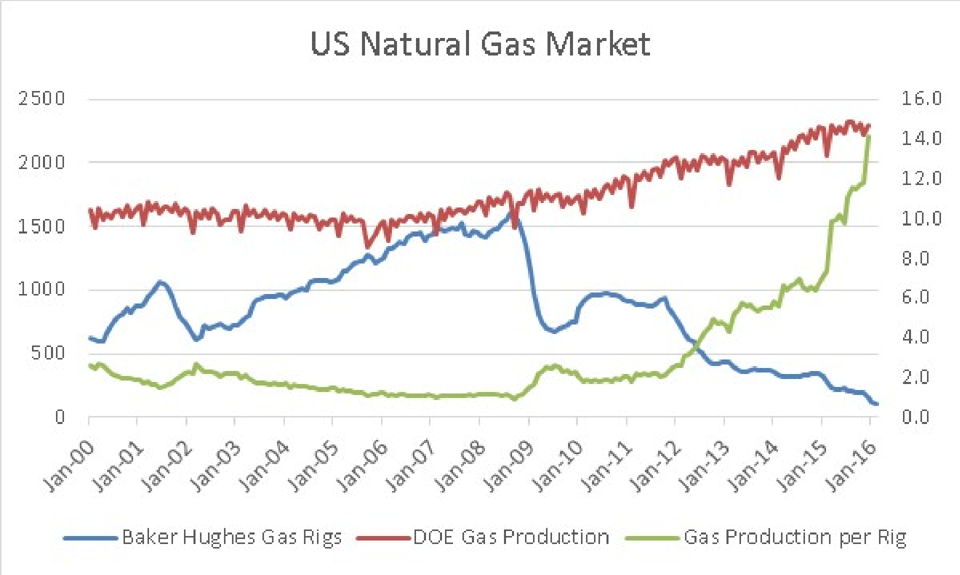


How can we separate technical improvements in drilling from cyclical improvements that naturally occur in lower oil price environments?

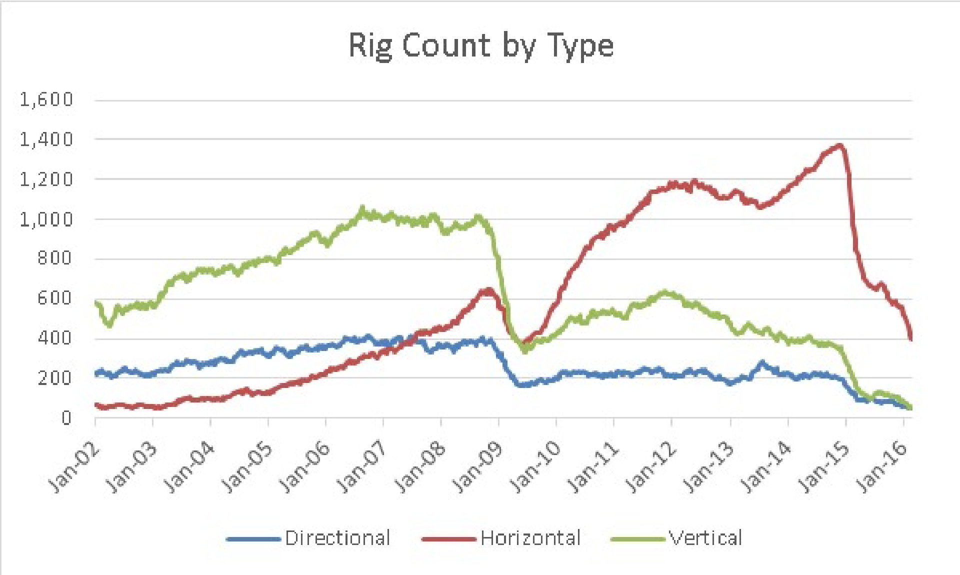
Many of the technical improvements that have revolutionised US oil production came from shale gas producers' original innovations. Shale gas producers have been so successful that the US market has had a severe glut of natural gas, and unlike the oil market, prices have returned to levels last seen in the 1990s.



The intriguing thing about the US natural gas market is that despite gas prices being much weaker since the financial crisis, US gas production has continued to increase. The increase in gas production has occurred despite the fall in the number of gas rigs in the US. If we compare US gas production per rig now, to the levels achieved in 2002, the last time we saw natural gas prices this low, we can see production per rig has increased from 3 to 15, or by a factor of 5.

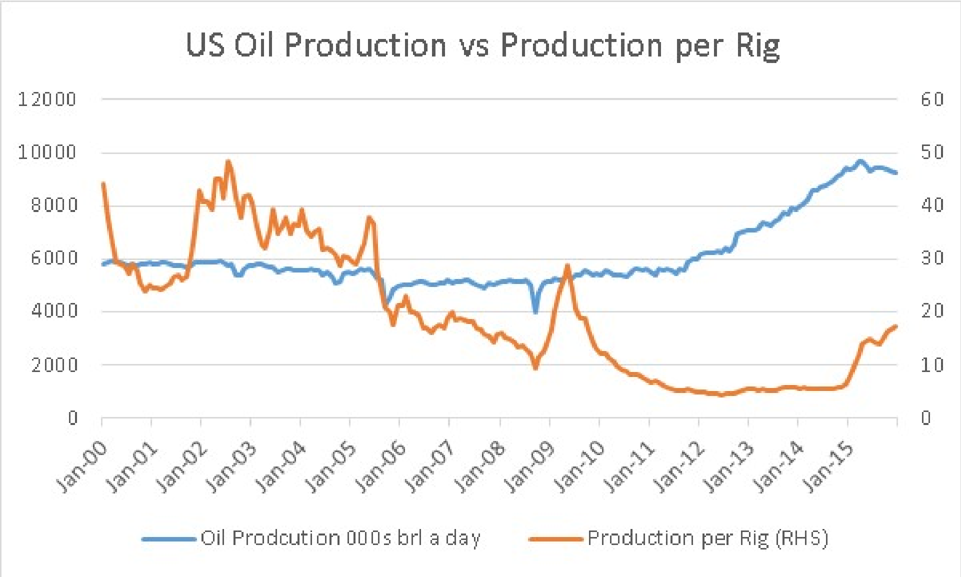


We can also see the driver for this improvement in productivity for oil and gas markets directly. As can be seen below, horizontal style rigs, which are rigs used in fracking for shale gas and oil have become the dominant rig used.

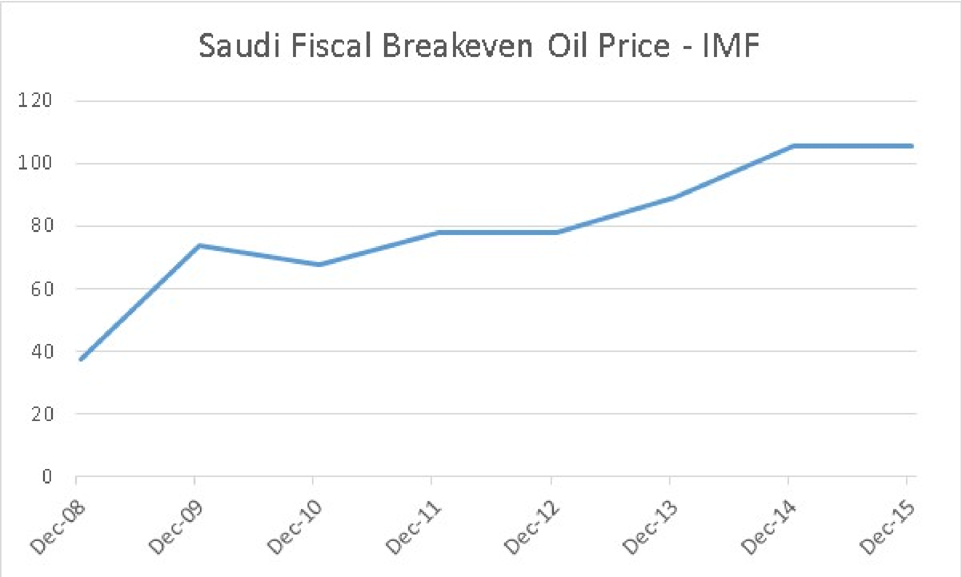


Another factor driving improvement in the US energy market has been vast improvement in many of the drilling techniques used by US oil and gas companies. A 2010 paper from the US Energy Information Administration (http://www.eia.gov/workingpapers/drilling_efficiency.pdf), is a treasure trove of details on drilling improvements. US drillers were seeking to increase production through better processes, and not just technology. This in my mind moves the oil industry close to technology/manufacturing industry, rather than a standard natural resource industry. It would also suggest cost deflation in US production will likely continue.

Comparing the efficiency of production for gas with oil is difficult, but natural gas markets suggests that market would be wise to expect further efficiency gains, and perhaps rather large ones. At current levels, US oil producers are not even back to 2009, levels, let alone the efficiency levels seen in 2002. This also suggests to me that US producers are far more capable of adding than reducing oil supply.

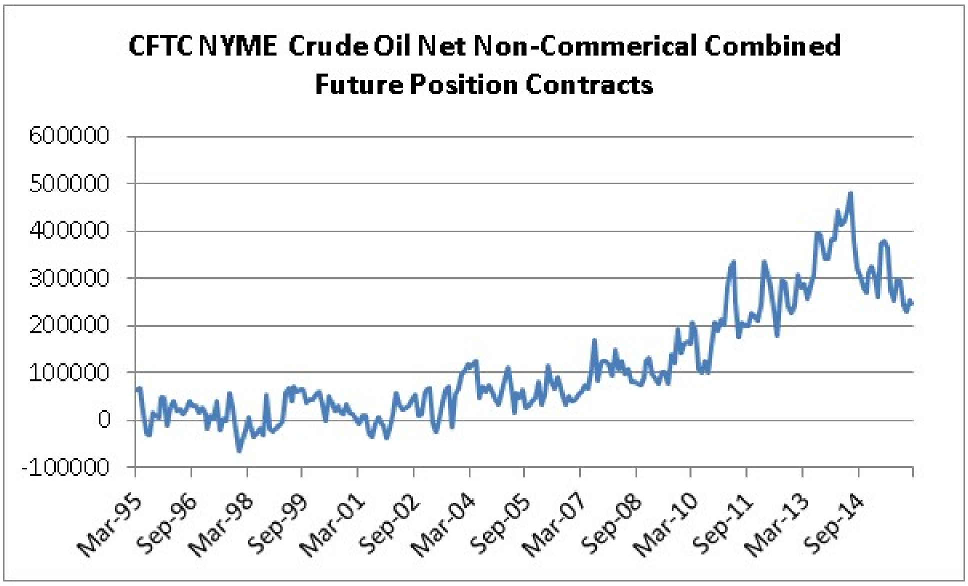


Saudi oil is very cheap to extract, but oil revenue makes up close to 80% of government revenue. With increasing population growth and military spending, Saudi Arabia has seen the government's fiscal breakeven price of oil rise dramatically, from USD 40 in 2008 to over USD100 now.



While US producers have been developing techniques to improve efficiencies, Saudi Arabia has seemingly added numerous social costs to its oil revenues. In my mind, the US is much more likely to be the swing producer from now on. However, if the US is the swing producer and achieving efficiency gains, the oil price that incentivises increasing US production is likely to fall.

While many people believe the market is bearish on oil, CFTC data still shows the market is net long.



In my view the price action seen in the natural gas market offers a good proxy for the eventual low oil price. The ratio of oil price to natural gas price in the 90s and early 2000s was 10 to 1. That would suggest an oil price closer to USD 20.

INFORMATION

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