

Macro Observations

The most significant recent event in the oil market was the decision by OPEC+ to roll over their production cuts for an additional nine months, until the end of March. ***The roll over is effectively an incremental cut as the Iranian barrels, which have been sanctioned by the US, have not been offset.*** According to Bloomberg, Iranian exports of crude and condensate were 1.9mmb/d in March and have fallen to 0.3mmb/d in June. The impact of the lower exports has begun to show up in the data but will become more evident over the course of the next six weeks. Saudi also advocated to change OPEC's inventory target to the 2010-2014 average inventory level (thereby avoiding the later surge of inventories in the calculation.) This inventory target corresponds to a level when oil averaged \$102 although on a days of sale basis it would create a tighter market as demand has grown since that earlier period. Russia did not fully endorse the new measure for fear of over-tightening the market; nevertheless, it is clear that OPEC+ is serious about achieving higher prices or as they put it: "achieving market balance." Finally, the Saudi Oil Minister endorsed a position of accommodating the growth of US tight oil. He sees the rapid growth from tight oil as temporary and the prudent course of action to potentially create spare capacity for the period once tight oil growth slows and then plateaus.

US oil production growth has already slowed considerably despite the market's complaisance. According to the EIA's weekly numbers, US black oil has only grown 100,000 b/d sequentially or at an annual rate of 400,000 b/d, in the last three months. The market expects this growth rate to increase substantially in 2H because of a debottlenecking of Permian pipelines, but the market is likely to be disappointed given that Permian frack spreads are 20% off peak levels and there is little price incentive for companies to produce faster. More important, the period of rapid productivity gains for US tight oil has ended. The lateral lengths of wells and the level of sand per well has now been optimized (with some operators even lowering sand per well.) For example, Pioneer Natural Resources, the bellwether Permian producer, no longer focuses on the next generation of wells in their company presentation but instead highlights lowering corporate G&A. Much of the rapid production growth of tight oil over the last few years has been driven by productivity gains, with oil produced per rig growing at 35+% y/y according to the EIA's Drilling Productivity Report. This number even reached 60+% in 2016 as rigs were dropped and companies high graded drilling into core acreage. Currently, y/y productivity improvement is running at 3% and could go negative as companies experience more 'parent / child' issues or leave the core of their plays. ***Without the rapid productivity growth, the US will need to substantially increase the rig count to maintain the previous pace of rapid production growth.*** The tailwind of significant productivity gains has now ended.

The oil inventory situation has begun to improve. In April and May, the US saw large and unexpected inventory growth, which was the main driver of the recent pullback along with the US / China trade war. The inventory growth was driven by higher imports ultimately caused by the Iranian waiver surge. Another issue was that very large refinery maintenance led to fewer exports of products as the refiners prepared for IMO 2020. Both of these issues have now been resolved with Iranian sanctions fully in place and US refinery utilization recovered. ***In June, US inventories drained slightly more than seasonal averages.*** Looking forward, inventory drainage should increase more as imports continue to drop. The

Saudi Oil Minister expressed a high degree of conviction that global inventories will drop substantially over the coming months, and the supply demand dynamics suggest that he is correct.

The impact of IMO 2020 is nearly upon us. Soon, we will discover whether this event is similar to Y2K or a material disruption of the oil market. The most likely outcome is that refinery runs need to increase to some degree, causing a surge in crude demand. One potential impact that has not been widely discussed is IMO 2020's influence on ship speed. As the price of ship fuel increases, ships are incited to slow down, as a lower speed substantially improves fuel economy. With over 1 billion barrels of oil on the water in tankers globally, a 10% slowdown in speed will add 100mm barrels to industry working capital. This potential increase in working capital will show up as a decrease to land inventory, which is what the market focuses on. With the OECD inventories now 220mm barrels away from Saudi's new target of the 2010-2014 inventory level, slower ship speeds could have a material impact in helping Saudi reach the new inventory goal.

Tension between Iran and the US escalated substantially in June. A few tankers were attacked near the Straits of Hormuz and a US drone was shot down. Less widely reported, but potentially more meaningful, were attacks on oil fields in Basra, Iraq and an attack on the Northern Iraqi export pipeline. The main result of all this tension is the unlikelihood of Iranian exports returning to the market anytime soon. It is, nevertheless, doubtful that the Iranian tensions have a material impact on the oil price unless barrels are permanently removed from the market. Looking back on the history of oil suggests that only a material supply loss with no spare capacity has a dramatic impact on price. The Arab countries embargoed the West in 1967 during the Six Day War and in 1973 during the Yom Kippur war. In the case of the former, the oil price did not move, but in the case of the latter, it went up 4x. The difference between the two embargoes was that there was no spare capacity left in 1973. If Iran decides to attack export facilities in Saudi or Iraq, this could have a significant impact on the oil price; however, this scenario is unlikely.

Electric vehicles sales growth has started to slow materially. In China, which accounts for over 50% of EV sales globally, EV sales grew by 1.8% in the month of May y/y. This is a stark contrast to a year earlier in May when EV sales were growing at a torrid 126%. Furthermore, China just cut its subsidies on EV sales by 50% in June. It is highly likely that Chinese EV sales growth turns negative in 2H, putting a large dent in global EV sales growth. Tesla dominates the US market and reported strong sales in Q4 and Q2 (but not Q1.) With incentives dropping for Tesla buyers, the Company could struggle to show y/y growth later this year. There are quite a few new EV model introductions coming in 2020, but it appears that much of the growth so far has been driven by incentives. If global EV growth slows dramatically, this could change market sentiment with regard to oil companies.