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What Caused the Recent Market Correction?

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In early February, the market sold off hard after the Department of Labor (DOL) reported a 2.9% increase in the average hourly wages for January 2018, the largest annual increase in years. This triggered widespread concern of higher inflation and more aggressive hikes in interest rates that had already been rising during the weeks leading up to the DOL release.

As the market began dropping, volatility spiked. This followed a lengthy period of unusual lack of volatility. The average daily change in the S&P 500 Index (up or down) for 2017 was only 0.3%. According to the New York Times, this was the lowest since 1964 and much lower than the average going back to 1928 of 0.75%.[1] The CBOE Volatility Index (VIX), a popular measure of expected market volatility whose reading spikes when stock markets fall rapidly, dropped to an all-time low of 9.14 in November 2017. During 2017, the VIX closed under 10 many times more than it did since inception in early 1990 through the end of 2016. Based on these metrics, 2017 was the most stable year in recent times.

Amidst the market's calmness in 2017, investors were drawn to investment vehicles that profit from low volatility. VIX-related exchange-traded products that profit from low volatility via shorting VIX futures received billions of dollars in inflows over the past year, with their net short exposure hitting a record high just days before the market sell-off in early February, according to Reuters.[2]

When fear replaced complacency after DOL's January 2018 wage report was published, the S&P 500 suffered its biggest one-day drop since 2011 and the VIX posted its biggest ever one-day surge on February 5, 2018. The sharp rise in volatility led to massive unwinding of short positions in VIX-related products (i.e. investors buying VIX futures), which further exacerbated the spike in VIX. Forced-selling of other securities that occurred to meet margin calls (triggered by losses in the short volatility positions) further fueled the market sell-off.

The dominance of computer-driven trading in today's market also played a central role in the sell-off. Automated sell programs triggered by the initial market decline likely set off other automated sell programs, creating a snowball effect. Funds employing algorithm-based trading strategies were reportedly big sellers when the VIX surged in early February.[3]

However, the concern with inflation and rate hikes might have been overblown. The DOL recently reported that the average hourly wage growth slowed to 2.6% in February 2018, with the January figure revised down to 2.8%. And Fed officials have reportedly reiterated their plan for gradual increases in rates. Furthermore, rates at the current levels are still historically low. With

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synchronized global economic growth, the market should be able to absorb gradual rate hikes over time without sustained dislocation.

The VIX has also reverted closer to the long-term average of around 20. Still, the muted market volatility over the past year should not be viewed as the norm. Large swings in the market can happen within a short period of time, especially now that computer-driven trading (which tends to be pro-momentum) has such a large influence on the market. You will be well served to expect more volatility going forward.

Update on Oil Prices

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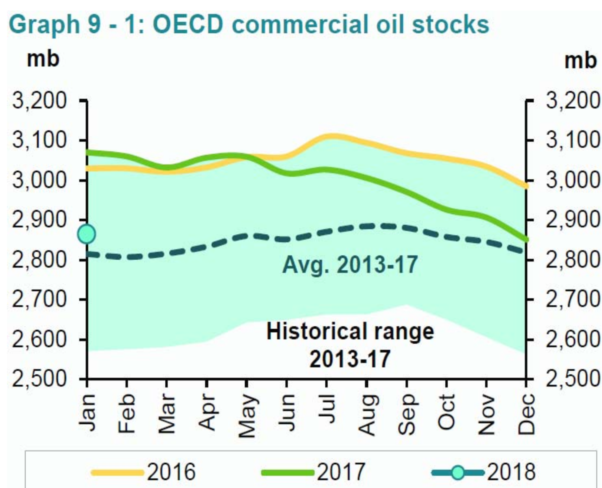
In the Fall 2017 issue of *Observations*, we opined that the oil sector downtrend reflected transitory negative investor sentiment more than deteriorating business fundamentals, and that oil prices would be considerably higher by the end 2017. At the time, the overwhelming consensus expected oil prices to remain "lower for longer." While energy securities have yet to break out of their funk, oil prices have indeed gone up since then. According to data from the U.S. Energy Information Administration (EIA), prices for the West Texas Intermediate (WTI) as well as the Brent went up by about 17% during the last 3 months of 2017.[4]

In this article, we discuss the reasons oil prices should continue to rise. Once the market is convinced that the move is sustainable, energy securities should begin moving up to converge with the higher commodity price.

<u>*Declining Oil Inventories*</u>

As we predicted in Fall 2017, oil inventories of countries belonging to The Organization for Economic Co-operation and Development (OECD) have continued converging towards the 5-year average throughout the last quarter of 2017, as shown in the graph to the right from the March 2018 OPEC Monthly Oil Market Report.[5] Although OECD oil inventories went up in January 2018, it was consistent with the seasonal build normally seen in the first few months of the year.



The International Energy Agency (IEA)'s data also reflected an increase in the OECD oil inventories in January 2018, according to its March 2018 Oil Market Report. However, IEA pointed out that the increase was ***only half*** the usual level and the surplus to the 5-year average fell for the ninth

consecutive month to 50 mb, with products showing a very small deficit and Cushing crude stocks reaching their lowest level in 3 years.[6]

Robust Oil Demand Growth

Synchronized global growth has been driving oil demand and this is expected to continue this year. OPEC forecasts total world oil demand for 2018 to rise by 1.60 mb/d to average 98.63 mb/d, according to the March 2018 OPEC Monthly Oil Market Report.[7] In fact, OPEC has already raised the 2018 world oil demand several times over the past 6 months, because of healthy economic outlook in major global oil demand centers.

Per its March 2018 Oil Market Report, the IEA has similarly revised up its forecast of global oil demand for 2018 to 99.3 mb/day, which is 1.50 mb/d higher than 2017.[8]

Oil Supply Outlook

For 2018, non-OPEC production is forecasted to grow by 1.66 mb/d according to OPEC and 1.78 mb/d according to IEA, led mainly by growth in US shale production.[9,10] Many view the expected growth in non-OPEC production to be more than enough to meet projected demand growth this year, leading to widespread concern that U.S. shale production will once again result in global oversupply.

However, it remains to be seen whether the robust growth in U.S. shale production is sustainable. Earlier in March 2018, shale oil pioneer Mark Papa pointed out that most of the best locations in Eagle Ford and the Bakken have already been drilled, and that producers may soon have to start drilling the lower-quality areas there (i.e. lower output and higher cost).[11] This leaves the Permian Basin, currently the hottest U.S. drilling region, to shoulder most of the burden of meeting growing demand. Yet, there have been reports of shortages of oilfield services, frac sand, labor, as well as equipment, in the Permian Basin. Moreover, according to an Oilprice article dated March 6, 2018, the IEA's Oil 2018 Report indicated that improvements in drilling efficiency and well productivity appear to have stalled or even decreased in some areas in the U.S.[12] On top of these geological and operational challenges, there is also increasing demand from investors for higher returns, which means U.S. oil producers will be under pressure to keep costs under control and reduce production that does not earn adequate returns.

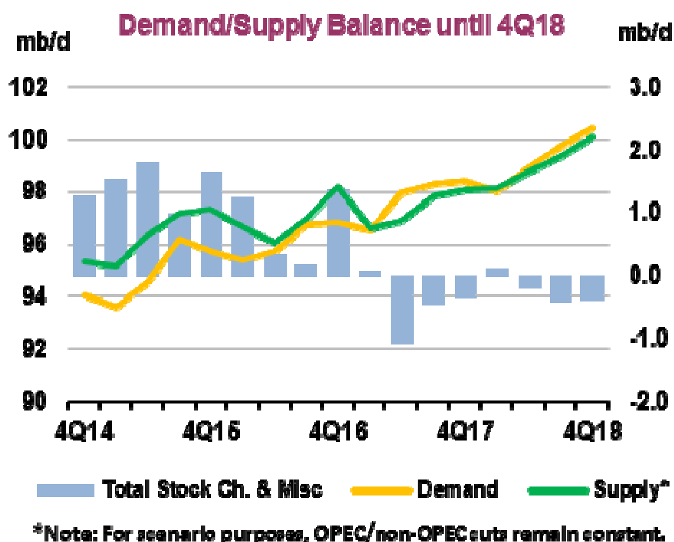
Just as significantly, IEA estimated that global output from aging oil fields is losing more than 3 mb/d each year due to natural decline rates.[13] Coupled this with the massive underinvestment in the industry since the downturn started in 2014, it seems likely that U.S. shale production growth alone would fall far short of meeting projected growing demand for oil.

As for OPEC production, OPEC, Russia, and their allies agreed in November 2017 to extend their oil supply cuts through the end of 2018. It is possible that, when the group meets in June this year, Russia and other participating producers might argue for an earlier termination of the agreement given improving market conditions. However, Saudi Arabia's energy minister said in February this year that the group would rather "err on the side of overbalancing" than exit the deal before the market was ready.[14] This is unsurprising, as keeping oil prices higher for longer is in Saudi Arabia's interest now that the initial public offering of Saudi Aramco may be delayed to 2019.

In addition, Venezuela's oil production continues to plummet amid the country's economic and political crisis, which further keeps OPEC production in check. A recent survey by S&P Global Platts showed that Venezuela production dropped for the seventh successive month in February this year to

1.57 mb/d, the lowest level in many years.[15]

According to IEA, assuming OPEC production remains flat for the rest of 2018, there will be a very small oil inventory build in the first three months of 2018 and deficits for the rest of the year, as illustrated in the graph to the right.



Source: IEA March 2018 Oil Market Report

Despite ongoing concern over robust U.S. shale production growth, the rebalancing of the oil market continues moving in the right direction. Oil inventories over the last year have fallen close to the 5-year average (below which the market will begin worrying about ***undersupply***) and are expected to continue drawing down for the rest of this year. We expect the oil market rebalancing to remain on track in the coming months and eventually bolster investor sentiment in the oil sector and energy securities.

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