

**September 7, 2018**

**The Market**

Since mid-Q1, oil prices have ranged from a low of around \$64 to a high of \$71 per barrel.

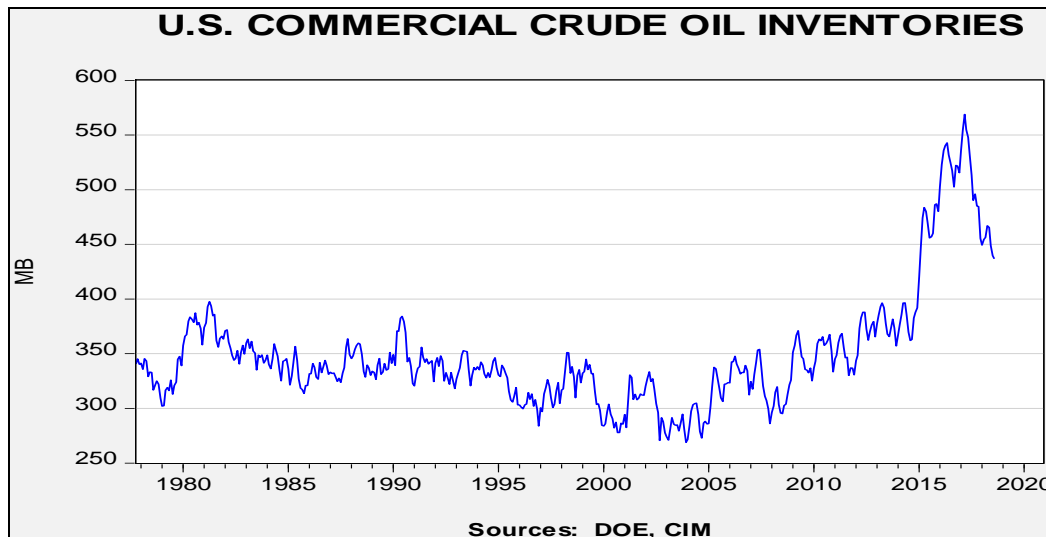


(Source: Barchart.com)

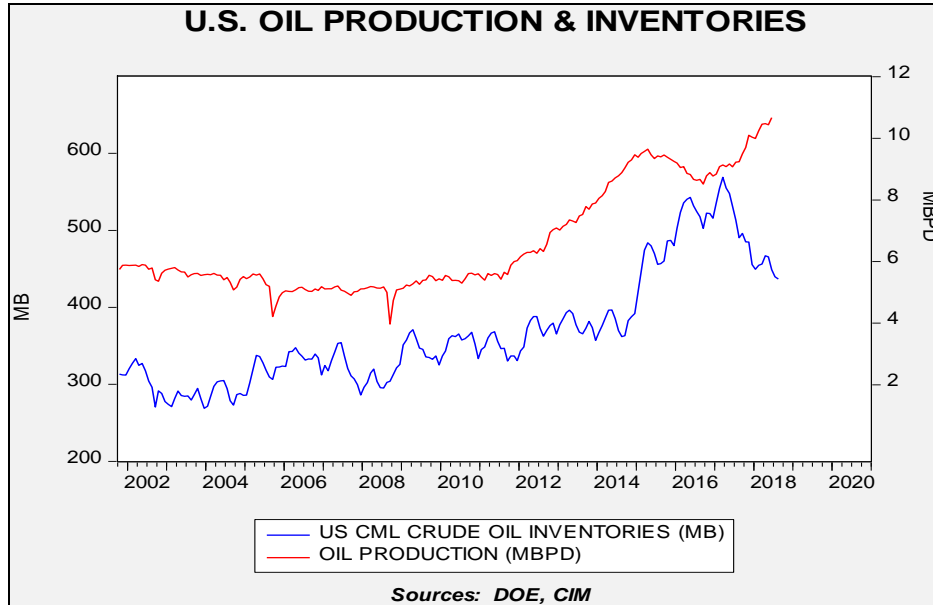
Prices remain elevated, supported by OPEC production discipline, production problems in several OPEC nations, fears of new Iran sanctions and stable global oil demand.

**Prices and Inventories**

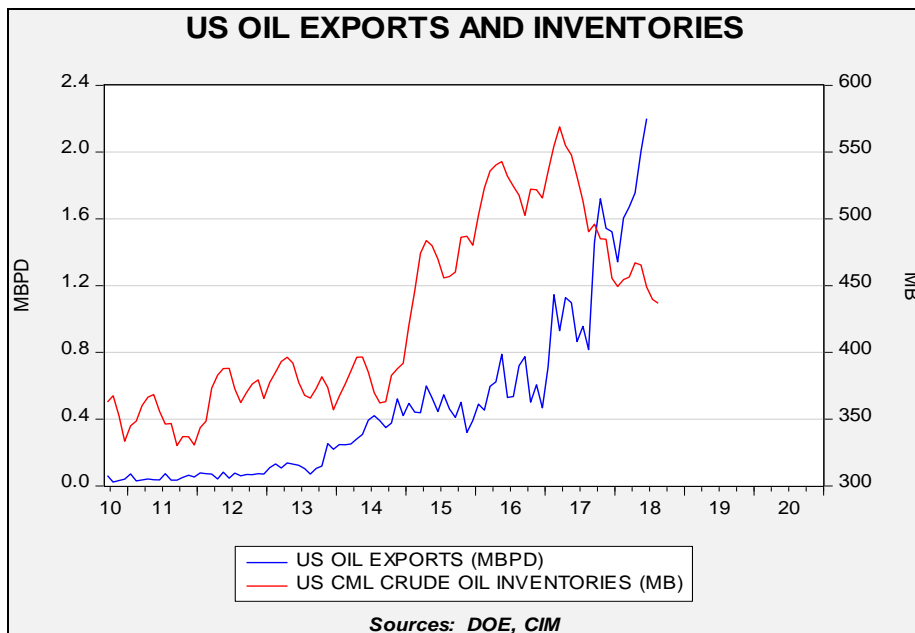
Inventory levels remain elevated but have clearly declined from last year's peak.



From the late 1970s into mid-2014, U.S. commercial crude oil inventories ranged between 275 mb and 400 mb. However, from mid-2014 into 2017, rising U.S. production led to a major increase in stockpiles.

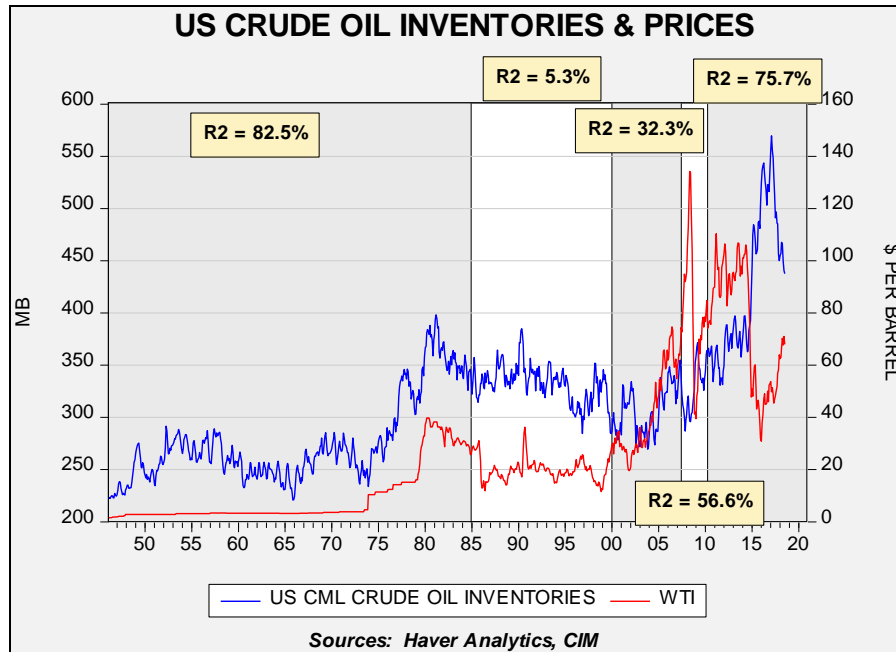


Once production reached 9.0 mbpd, inventories rose sharply. However, stockpiles have steadily declined even with continued production increases. What changed was exports. The U.S. had a crude oil export ban in place from the early 1970s into late 2015. Only limited amounts of crude oil could be exported to Mexico and Canada. However, oil exports began to rise after President Obama lifted the restrictions.



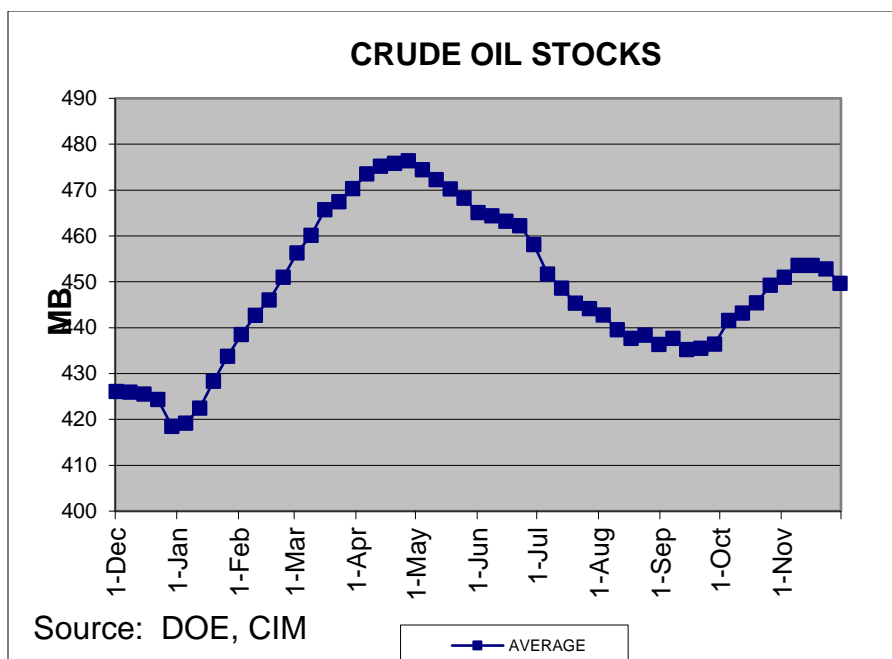
U.S. oil exports now exceed 2.0 mbpd. As exports have increased, inventories have steadily declined.

Oil exports raise two issues. First, it is unclear if the current relationship between prices and inventories will remain consistent.



This chart looks at the regression results of a simple oil price model that uses U.S. commercial crude oil stocks as the independent variable. Note that the behavior changes over time as does the explanatory power of stockpiles. These changes in explanatory power are usually due to fundamental regimes that are in place. Thus, if OPEC (or, prior to 1970, the Texas Railroad Commission) changes production quotas, the relationship between inventories and prices can change as well. After 2000, the impact of Chinese demand changed the oil market. The return of U.S. production is perhaps the most important factor currently. The current explanatory power is high; using the current relationship, 400 mb of inventory would be consistent with \$81.50 crude oil price (WTI).

The second issue is the seasonal pattern for U.S. crude oil stocks. The chart below shows the five-year average of U.S. crude oil inventories on a weekly basis. From early January into late April, the U.S. refining industry engages in maintenance. This reduces domestic crude oil consumption and leads to a seasonal build in crude stockpiles. As the summer driving seasons ramps up, refineries increase production and stockpiles fall. After Labor Day, driving declines and refineries conduct more maintenance into early October. Refineries increase output again for holiday driving and distillate (heating oil) production for winter.



U.S. oil exporting may change this seasonal pattern. Although we still expect refineries to follow the usual maintenance schedule, the seasonal build-up in crude oil may not occur as the excess production is exported instead of stored. If this is the case, it could be bullish for oil prices as the market will tend to expect the seasonal pattern to continue. If inventories fail to build in the coming weeks, there is the potential for much higher prices in Q4 as demand rises for the holiday season.

**Oil Summary**

We view the current market as a bit overvalued. Although inventory levels are generally supportive of the current price, a stronger dollar is usually bearish for oil prices. The most likely outcome, for the next few weeks, is probably that prices will remain in the aforementioned range.

The longer term outlook is more supportive. It appears the Trump administration will apply sanctions on Iran that will almost certainly reduce production. Venezuela’s economic turmoil will likely keep the downtrend in production in place. Tensions in Libya are also depressing output. Some of this lost output will be offset by rising U.S. exports; America’s oil infrastructure is still evolving to move from importing to exporting but it is reasonable to assume that progress on this front will continue. But, those increased exports will not fully offset the loss of production in other parts of the world. Thus, we remain supportive of crude oil prices going forward.

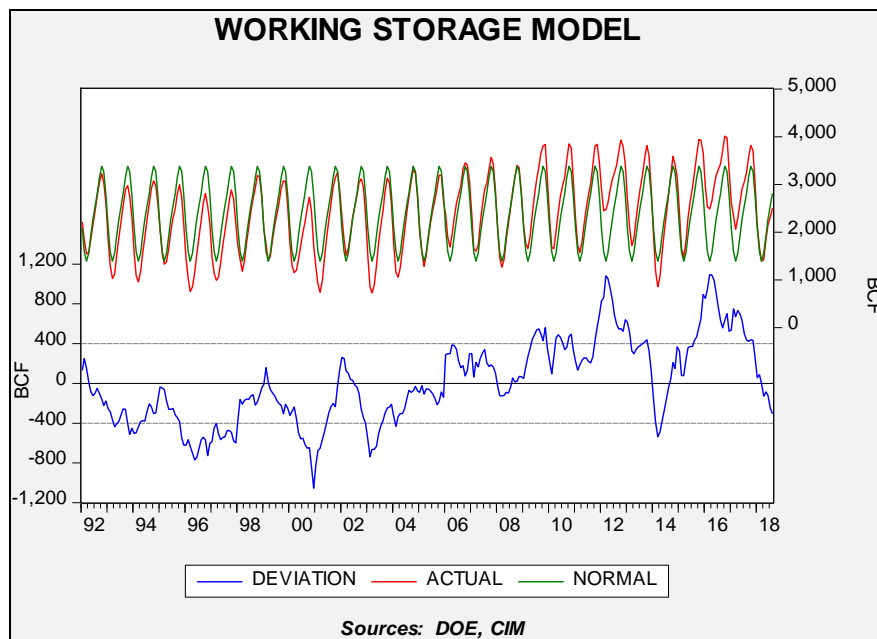
**Natural Gas**

Natural gas prices remain range-bound.



(Source: Barchart.com)

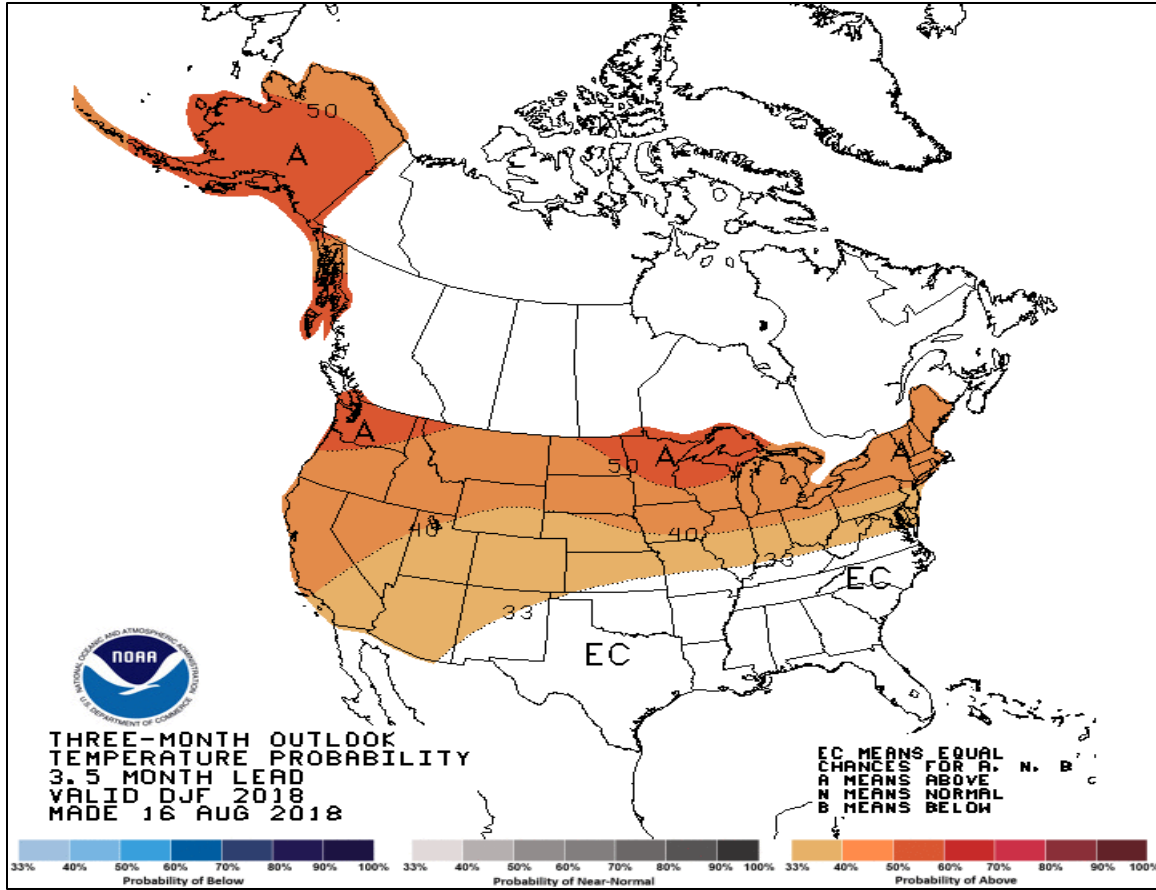
A hot summer led to a slower than average build in natural gas stockpiles.



Sources: DOE, CIM

It appears there is a good chance we will go into winter with lower than normal inventories. Although this factor is usually bullish, fears that high production levels of “associated gas” that come as a byproduct of crude oil output are dampening the usual price reaction. Adding to concerns is the potential for an “el Niño” winter, which tends to be warmer than normal.

In fact, that is the official NOAA forecast for the winter. If this forecast is accurate, natural gas prices will be vulnerable to declines. Therefore, for now, we remain neutral to bearish on natural gas prices, even with favorable inventory patterns.



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