Emerald Advisers, Inc.
Emerald Insights

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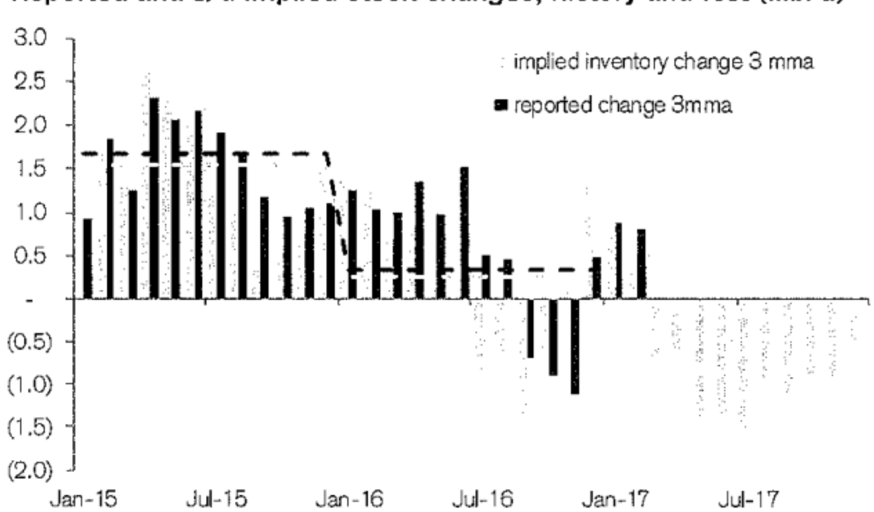
Emerald Energy Outlook

We spoke recently with a sell-side energy analyst who noted he is as bullish now on crude pricing as he has been since January of 2016. He sees many reasons to support higher crude pricing and only sees technical issues driving crude to the $45 level reached in early May. Given OPEC's recent cut extension, Emerald's Energy team is also becoming increasingly bullish about energy stocks, as we believe the carnage has been overdone versus the fundamentals, especially for selected DJ Basin Colorado and oil-weighted names – our team does recognize concerns about US Shale output growing faster than most forecasts and recent demand for Gasoline being weaker than the past few years.

Some of the potential positives we see supporting crude pricing:

- Contrary to popular belief, US crude inventory draws have been very good for the last 7 weeks averaging 2.7 million BOE/d per week in inventory reductions (source –US DOE inventory statistics week ended 5/19/17), with significant draws in distillates and more modest declines in gasoline inventories; Global stocks likewise have been dropping an average of 1 MMBOE/d since February (IEA data). As the following chart shows, Credit Suisse projects large crude stock draws this summer even without an OPEC extension. With the 9 month OPEC extension these draws should be even greater;

Reported and s/d implied stock changes, history and fcst (Mb/d)



Source: Credit Suisse Research, IEA, EIA, JODI, Country Data, the BLOOMBERG PROFESSIONAL™ service

Highlights:

- **We and others see net speculator length resetting in the next few weeks to a lower crude contract level which should be seen as a floor.**
- **Refinery demand for all products has been very strong with Gasoline demand lagging (US DOE data).**
- **Net, net, we at Emerald believe that it is likely that oil prices will recover and when coupled with the Russell Reconstitution possibly adding 2-3% of Energy sector names to growth indices at the annual rebalancing in June, we are looking at adding to our energy positions.**

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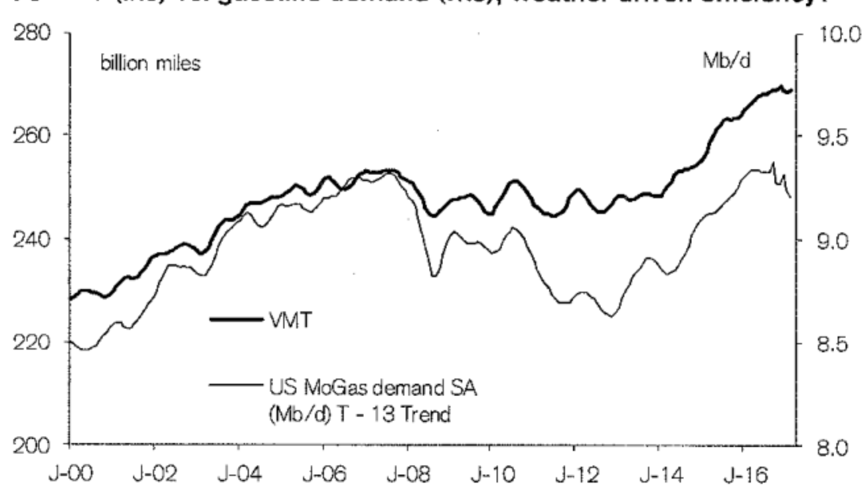
- This has happened even with Saudi, Iran and commercial floating storage (which had built on flush contango driven activity mainly in the North Sea) declining by up to 100m BOE or 1 MMBOE/d since the beginning of the year. We think much of this floating storage came to US refineries, thus offsetting more aggressive inventory declines. We think this floating inventory is no longer a headwind to inventories, thus we believe the next six months should show greater inventory reductions;
- Raymond James sees an undersupplied crude situation in 2017 and going into 2018 even with US crude production in 2017 increasing 300,000 BOE/d followed by 1.3 MBOE/d supply growth in 2018 (source Raymond James May 2017 Energy Outlook). The firm projects global inventory reductions of 1 MMBOE/d worldwide in 2017;
- On May 25 OPEC and selected non OPEC oil producers agreed to continue their output cuts totaling 1.8 MMBOE/d through Spring 2018;
- We and others see net speculator length resetting in the next few weeks to a lower crude contract level which should be seen as a floor;
- Refinery demand for all products has been very strong with Gasoline demand lagging (US DOE data). According to this same Department of Energy data, Diesel demand in particular this year has been very strong thus contributing to aggregate product draws over the past seven weeks. Raymond James analysts, however, see annual US Gasoline demand turning positive and are expecting a 1% increase in annual demand (source Raymond James May 2017 Energy Outlook). The key we believe to continued Gasoline demand improvement is Vehicle Miles Travelled (VMT). As the following Credit Suisse chart shows, while the top line VMT has been rising and is close to its peak, US Gasoline demand has dropped this spring. We think this is seasonal and associated with the recent US GDP slowdown and should rebound with VMT.

US VMT (lhs) vs. gasoline demand (rhs); weather driven efficiency?



Source: Credit Suisse Research, EIA, US Dept of Transportation, NBS, OGP, the BLOOMBERG PROFESSIONAL™ service

- According to DOE and IEA data, inventory storage shows up as the highest it's ever been now because there is a direct correlation between storage and crude production and with US production expected to be at a record later this year, it is no surprise that inventories are high, but they are not as high as many think as a percentage of production;

- Note also there has been extreme under investment in offshore and conventional projects with a 25% decline in global upstream spending in 2015 and an additional 26% retrenchment in 2016 to $433 Bn (IEA data). We believe that $50 oil will have a negative impact on future capex spending and this negatively impact growth in supply in 2018 and after. The question is if the Permian Basin can make up all of this under investment?

Potential negatives:

- We agree with Raymond James analysts who have been perplexed by low gasoline demand. Raymond James posits that even with a ½% demand reduction due to improved fuel economies, we have seen a 2% increase in miles driven and forecasts net gasoline demand up 1.0% (source Raymond James May 2017 Energy Outlook);
- Vitol Group, the world's biggest independent oil trader, said demand isn't expanding as much as expected, and US shale output is growing faster than forecast. While consumption was forecast to grow this year by ~1.3M bpd (IEA data), growth has been limited to about 800K bpd so far. These developments are increasing the burden on OPEC and its allies as they attempt to balance the market;
- US Dollar appreciation, which we think is doubtful at this time;
- Lack of production caps on Libya and Nigeria;
- Significant demand contraction driven by lower global growth.

Net, net, we at Emerald believe that it is likely that oil prices will recover and when coupled with the Russell Reconstitution possibly adding 2-3% of Energy sector names to growth indices at the annual rebalancing in June, we are looking at adding to our energy positions. We are considering DJ Basin Colorado names, which have been oversold recently, high growth oil and natural gas companies that can grow production substantially over the next two years and that have various catalysts, and companies that are experiencing continued demand for sand and pressure pumping services.

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