Weekly Fundamental Market Report January 8-12, 2018

Market Update

PRODUCTS	1/8/18	1/9/18	1/10/18	1/11/18	1/12/18
WTI Crude Oil	61.73	62.96	63.57	63.80	64.30
Brent Crude Oil	67.78	68.82	69.20	69.26	69.87
Natural Gas	2.84	2.92	2.91	3.08	3.20

- **CME Group**

Headlines

Local North Dakota

- **900-mile natural gas liquids pipeline proposed for Bakken.** **Bismarck Tribune**
    - Oneok recently announced plans for a 900-mile natural gas liquids pipeline that will accommodate increasing North Dakota production and play a role in reducing natural gas flaring. The proposed Elk Creek Pipeline will have the capacity to transport up to 240,000 barrels per day of natural gas liquids from a terminal near Sidney, Mont., to Bushton, Kan. The pipeline will run adjacent to Oneok's existing Bakken NGL and Overland Pass pipelines, which are operating at full capacity. Terry Spencer, Oneok president and CEO, said in a statement that a new pipeline is "critical to meeting the needs of producers who are increasing production and are required to meet natural gas capture targets in the Williston Basin." The $1.2 billion Elk Creek Pipeline will not cross North Dakota but will connect to existing pipelines in northwest North Dakota. It's expected to be complete by the end of 2019, but still needs regulatory approvals from federal, state and local agencies. Justin Kringstad, director of the North Dakota Pipeline Authority, said additional pipelines are needed to transport growing volumes of natural gas liquids, such as ethane, propane and butane. Kringstad estimates that North Dakota produces more than 400,000 barrels of natural gas liquids per day. But due to insufficient pipeline capacity, about 40,000 to 60,000 barrels a day are transported by rail, he estimates. Under Kringstad's forecast, North Dakota natural gas liquids production is projected to more than double by the 2030s to between 800,000 and 1 million barrels per day. "As we look to the future at the growth opportunities for natural gas liquids, there's going to need to be additional transportation solutions put in place," Kringstad said. Oneok said the Elk Creek Pipeline could be expanded to transport 400,000 barrels per day with additional pump facilities. The pipeline, which will cross Montana, Wyoming, Colorado and Kansas, also will transport natural gas liquids from the Rocky Mountain region. The Elk Creek Pipeline would transport Y-grade natural gas liquids to existing Oneok facilities in Kansas. That means the natural gas liquids are mixed together for transportation and later separated into products, such as ethane and propane. North Dakota oil industry leaders are working to attract additional investments in natural gas infrastructure to reduce flaring. The industry flared more than 320 million cubic feet per day of natural gas in October, the most recent data available from the Department of Mineral Resources. Overall, the industry met its target of capturing 85 percent of Bakken gas produced in October, but 11 companies fell short. The gas capture targets set by the North Dakota Industrial Commission become more aggressive later this year at the same time that natural gas production is projected to continue increasing. Additional pipeline capacity for natural gas liquids plays a role in reducing flaring by providing a cost-effective, efficient transportation option, Kringstad said. But other infrastructure also is needed to reduce flaring, such as additional gathering pipelines and natural gas processing plants. "This is just one piece of that larger flaring puzzle," Kringstad said. Meanwhile, Oneok has applied to the North Dakota Public Service Commission to convert about 45 miles of natural gas gathering pipelines into a natural gas liquids transmission pipeline. The project is located between Oneok natural gas processing plants in Williams and McKenzie counties. The conversion would transport up to 50,000 barrels per day of natural gas liquids from Dunn and McKenzie counties to Oneok's existing pipeline system. Construction is proposed to begin in February.

Domestic U.S.

- **Oil adds to rally, heads for fourth week of gains. Reuters**
  - Oil prices rose for a sixth day on Friday after Russia's oil minister said that global crude supplies were "not balanced yet," alleviating market concerns about a wind-down of the OPEC-led deal to reduce production. Russian Energy Minister Alexander Novak said ministers from leading OPEC and non-OPEC producers will discuss the possibility of exiting the deal at a coming committee meeting, but said that "we see that the market surplus is decreasing, but the market is not completely balanced yet." His comments boosted prices, which rebounded from earlier decline, though the market has not hit the heights it touched on Thursday, when Brent crude topped $70 a barrel for the first time since December 2014. Markets remained buoyed by the comments throughout the session, shrugging off data that suggested the U.S. production may continue to surge. Brent crude futures LCOc1 rose 61 cents to settle at $69.87 a barrel. U.S. West Texas Intermediate (WTI) crude futures CLc1 rose 50 cents to $64.30. WTI hit its strongest since late 2014 at $64.77 on Thursday. For the week, Brent rose 3.3 percent while WTI jumped 4.7 percent. The agreement between the Organization of the Petroleum Exporting Countries and Russia reached in late 2016 to cut 1.8 million barrels of crude daily is due to last until the end of 2018. Novak said the current oil price was short-term, and he would discuss the situation at a ministerial monitoring committee meeting in Oman, scheduled for Jan. 21ussia's Lukoil Chief Executive Vagit Alekperov said Russia - part of the global agreement with the Organization of the Petroleum Exporting Countries to reduce supply - should start to exit the pact if crude prices remain at $70 a barrel for more than six months. Major oil producing-countries have grown concerned that as prices remain near these levels, it will spur additional production from U.S. shale patches in Texas and North Dakota, risking overwhelming the market with additional supply, and hurting OPEC's market share. U.S. energy companies added 10 oil rigs this week, the biggest increase since June, bringing the total rig count to 752, the most since September, General Electric Co's (GE. N) Baker Hughes energy services firm said. Faith Birol, head of the Paris-based International Energy Agency, said oil prices at $65 to $70 risked encouraging more oversupply from U.S. shale drillers.
    "If you look at any kind of momentum indicator this is telling you this is way overbought," said Robert Yawger, director of energy futures at Mizuho in New York. "However, there are definitely issues supporting the market." U.S. crude production fell in the most recent week by nearly 300,000 barrels per day to about 9.5 million bpd, which analysts attributed to the deep freeze across most of the country. The U.S. Energy Department expects production will blow through 10 million bpd in the next few months, en route to 11 million bpd by next year, rivaling Russia and Saudi Arabia. Futures contracts show an expectation for prices to pull back by year end, with the December U.S. crude futures contract CLZ8 currently trading just above $60 a barrel. Later-dated futures trading lower than the spot price is known as backwardation, and is expected to inhibit production because it implies a lower price for future barrels sold.

- **U.S. crude hits three-year high as prices climb in tight market. Reuters**
  - Oil prices edged higher on Tuesday, with U.S. crude touching its highest since December 2014, supported by OPEC-led production cuts and expectations that U.S. crude inventories have dropped for an eighth week in a row. The Organization of the Petroleum Exporting Countries and allies including Russia are keeping supply limits in place in 2018, a second year of restraint, to reduce a price-denting glut of oil held in inventories. U.S. West Texas Intermediate (WTI) crude rose $1.23, or 2 percent, to settle at $62.96 a barrel after touching its highest since December 2014 at $63.24. Brent crude ended the session up $1.04, or 1.5 percent, at $68.82 per barrel after hitting a session high of $69.08, its highest since May 2015. Both contracts had their strongest close since December 2014. Prices extended gains in post-settlement trade after industry group the American Petroleum Institute said crude inventories fell by 11.2 million barrels in the week to Jan. 5 to 416.6 million, compared with analysts' expectations for a decrease of 3.9 million barrels. If confirmed by U.S. government data at 10:30 a.m. EST (1530 GMT) on Wednesday, the draw will be the largest since Sept. 2, 2016. U.S. stockpiles fell by 14.5 million barrels during that week. "You're so long this market at this point, you could certainly get more interest at these levels," said Rob Haworth, senior investment strategist at U.S. Bank Wealth Management. "This is a little more confirmation of what speculators have been looking for and after tomorrow's (U.S. government inventory) report, we'll see if they look to do some profit-taking." OPEC is cutting output by even more than it promised, and the restraint is reducing oil stocks globally, a trend most visible in the United States, the world's largest and most transparent oil market "We expect oil demand growth to outpace non-OPEC supply growth in both 2018 and 2019," Standard Chartered analysts said in a note. "In our view, the back of the Brent and WTI curves are both still underpriced. We do not think that prices below $65 per barrel are sustainable into the medium term." Many producers, still suffering from a 2014 price collapse, are enjoying the rally, although they are wary it will spur rival supply sources. Iran said OPEC members were not keen on increased prices. The rise in prices is expected to drive gains in U.S. production during 2018, offsetting curbs by others. U.S. crude oil production is expected to surpass 10 million barrels per day (bpd) next month, en route to an all-time record month ahead of previous forecasts, the U.S. Energy Information Administration said Tuesday. Production was expected to rise to an average 10.04 million bpd during the first quarter of this year. Some analysts have said the rise in U.S. shale oil production could

discourage OPEC and Russia to maintain their deal to curb supply until the end of the year for fears of losing market share. “I am now on the lookout for bearish technical patterns to emerge on oil prices as I believe they will struggle to go north of $65-$75 per barrel given the above fundamental consideration,” said Fawad Razaqzada, technical analyst for Forex.com. “If WTI were to go back below the 2017 high of $60.48, which was hit late in the year, and the 2018’s opening price of $60.09, then the technical outlook would turn bearish on oil. But for now, the bullish trend remains intact as prices remain above key supports.”

Oil and Gas Analysis

o Rotary Rig Count Summary

Location	Date	Week	+/-	Week Ago	+/-	Year Ago
United States	5-Jan-18	924	-5	929	259	665
	12-Jan-18	939	15	924	280	659
North Dakota	5-Jan-18	45	-1	46	12	33
	12-Jan-18	45	0	45	13	32
Canada	5-Jan-18	174	38	136	-31	205
	12-Jan-18	276	102	174	-39	315
International	Dec-17	954	12	942	25	929

- **Baker Hughes**

o WTI & Bakken Spot Price

January 2018 Daily Spot Prices					
	Mon	**Tue**	**Wed**	**Thu**	**Fri**
Bakken (FH)					
2018 January-1 to January-5	-	53.07	53.07	56.63	56.63
2018 January-8 to January-12	56.19	56.19	57.67	57.67	58.16
WTI					
2018 January-1 to January-5	-	60.37	61.61	61.98	61.49
2018 January-8 to January-12	61.73				
Differentials					
2018 January-1 to January-5	-	7.3	8.54	5.35	4.86
2018 January-8 to January-12	5.54				

- **Flint Hills Resource**
- **EIA**

o Weekly Petroleum Status Report

Stocks (Million Barrels)			
	Four Weeks Ending		
	1/5/2018	12/29/2017	1/6/2017
Crude Oil (Excluding SPR)	4,193.5	424.5	483.1
Motor Gasoline	237.3	233.2	240.5
Distillate Fuel Oil	143.1	138.8	170.0
All Other Oils	419.8	428.8	441.7
Crude Oil in SPR	663.7	663.7	695.1
Total	1,883.5	1,889.0	2,030.4

Products Supplied (Thousand Barrels per Day)			
	Four Weeks Ending		
	1/5/2018	12/29/2017	1/6/2017
Motor Gasoline	9,094	9,163	8,871
Distillate Fuel Oil	3,874	4,055	3,627
All Other Products	7,650	7,358	7,028
Total	20,618	20,576	19,525

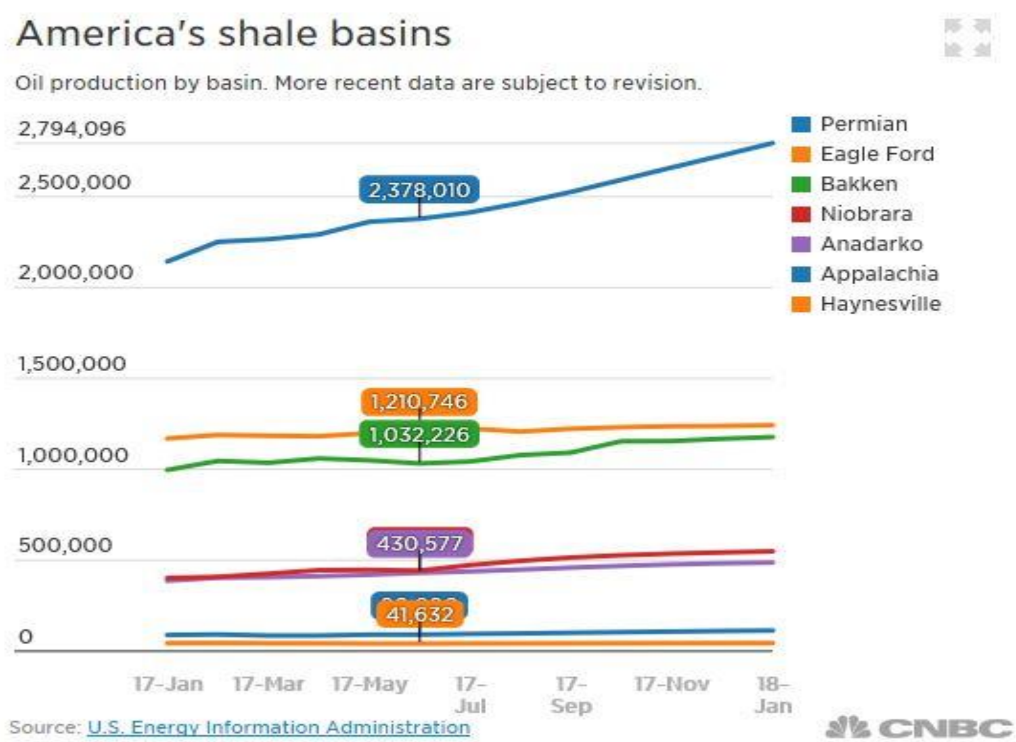
Refinery Activity (Thousand Barrels per Day)			
	Four Weeks Ending		
	1/5/2018	12/29/2017	1/6/2017
Crude Oil Input to Refineries	17,348	17,255	16,753
Refinery Capacity Utilization	95.4	95	92.0
Motor Gasoline Production	9,880	10,031	9,955
Distillate Fuel Oil Production	5,391	5,380	5,183

Net Imports (Thousand Barrels per Day)			
	Four Weeks Ending		
	1/5/2018	12/29/2017	1/6/2017
Crude Oil	6,473	6,382	7,569
Petroleum Products	-3,107	-2,879	-3,292
Total	3,367	3,503	4,277

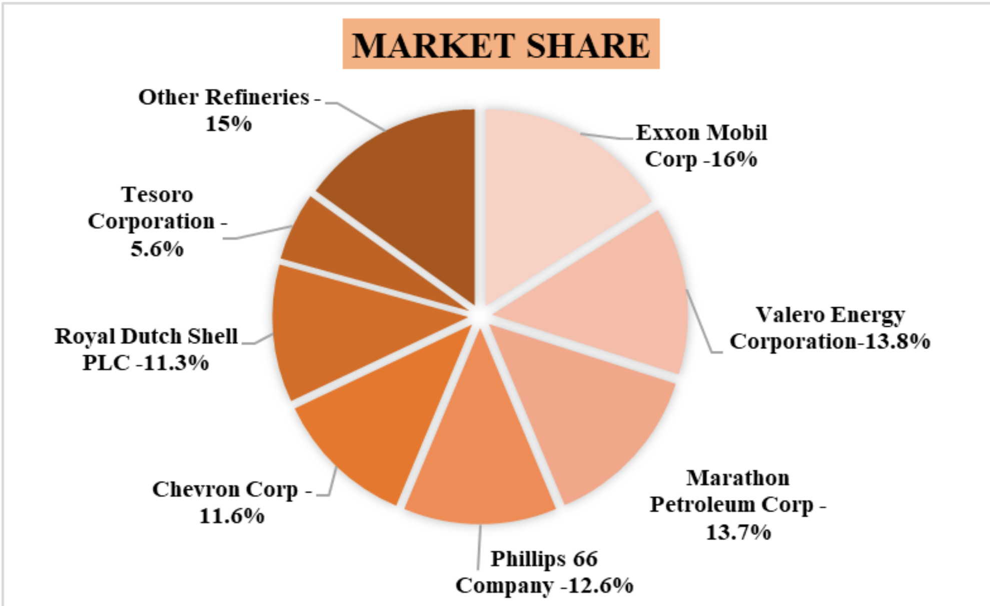
- **EIA**

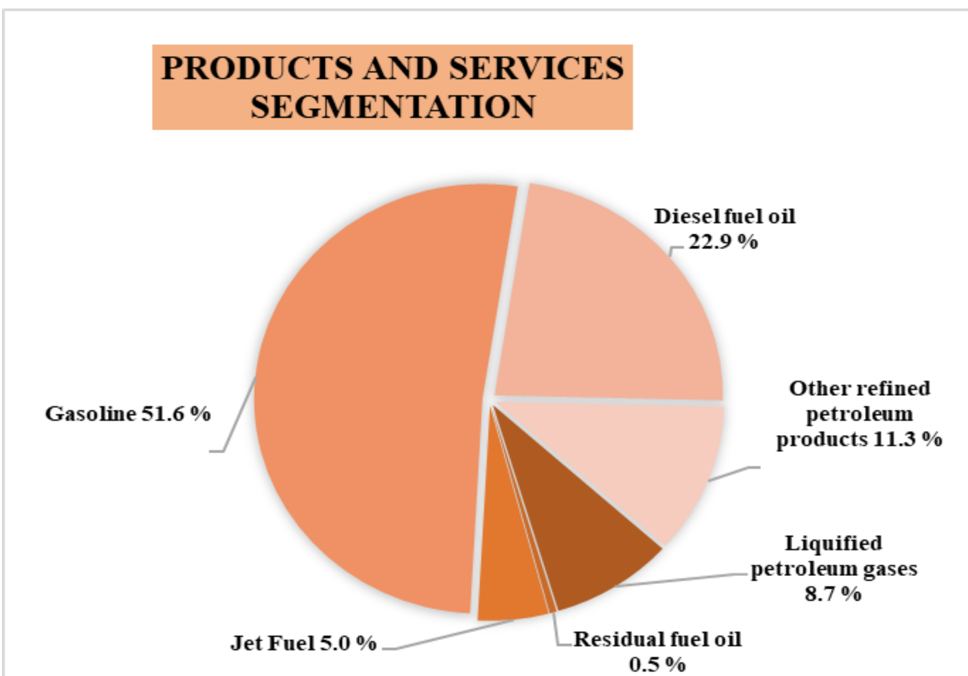
- **US Oil Production**

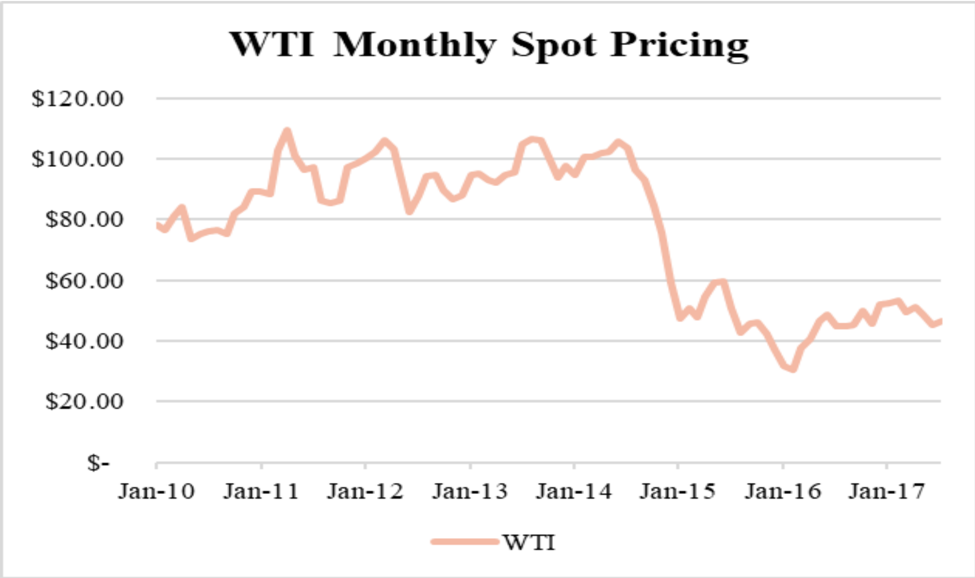
- **Americas Shale Basins**



- US Petroleum Refining at a Glance







- **EIA**

o Key External Drivers

- **World price of crude oil**
  - http://markets.businessinsider.com/commodities/oil-price?type=wti
- **Demand from gasoline and petroleum bulk stations**
  - https://www.reuters.com/article/us-usa-natgas-kemp/u-s-natural-gas-prices-rise-as-winter-stocks-look-tight-kemp-idUSKCN1BU1RK
- **GDP of mainland China**
  - https://tradingeconomics.com/china/gdp
- **Trade-weighted index**
  - https://www.investing.com/news/economy-news/top-5-things-to-know-in-the-market-on-friday-541066
- **Total vehicle miles**
  - https://www.advisorperspectives.com/dshort/updates/2017/08/31/vehicle-miles-traveled-another-look-at-our-evolving-behavior