STRUCTURED INVESTMENTS & ADVISORY

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OIL MARKETS IN 2019:

A CHALLENGING BALANCING ACT

HIGHLIGHTS

- The brutal drop in global financial markets spread into the oil markets and triggered fears of a scenario similar to that of 2014-2015. **Brent declined from a high of USD 86.29/bbl on October 3 to USD 58.80/bbl on November 23, that is around 32% in less than two months.**

- The slide in the oil markets was triggered by **fears of a supply shock caused by an ever-increasing US supply** at a time when **OPEC producers were ramping up production** before the sanctions on Iran took effect, when, at the last minute, President **Trump issued oil import waivers for 8 countries some of which are the largest importers of Iran oil.**

- The **US shale industry has significantly recovered from the 2014-2015 setback** and has been increasing production at unprecedented levels while the US rig count is still at around half of the 2014 high.

- Other factors adding pressure on the markets are concerns on the demand side as the **IMF lowered its estimate for global growth** for 2019 underlining the fragile position of **emerging markets, which are key drivers on increases in oil demand.**

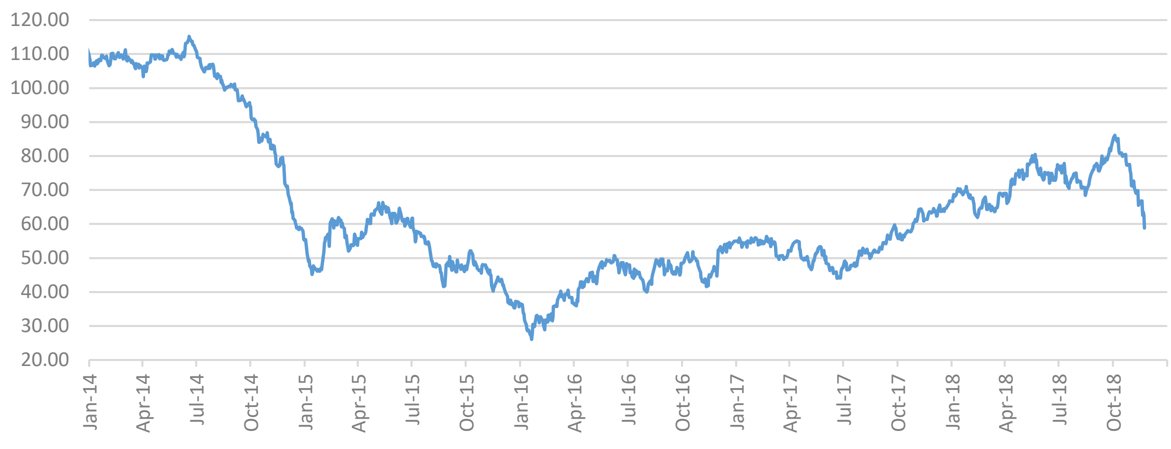
- The outcome of the OPEC meeting in Vienna next month and the position of the Russians will be key in determining the direction of the oil markets, but overall **the risk in the next few months seems to be strongly skewed to the downside**.

MARKET LANDSCAPE

The past two months have been brutal for financial markets and the oil market was no exception. Brent fell from a high of USD 86.29/bbl on October 3 to USD 58.80/bbl on November 23. That is around 32%, or the equivalent of USD 27.49, in less than two months. The intensity and the speed of the decline raised concerns of a scenario similar to that of the second half of 2014 where the price of Brent declined continuously for 6 months between June 2014 and January 2015 to lose 60% of its value. Prices did not find a bottom until a year later when Brent reached USD 26/bbl in January 2016, down 77% from the peak.

The trigger back then was on the supply side when OPEC pursued a pump-at-will strategy in an effort to drive out the shale producers and gain market share. Oil prices collapsed, and inventories started to build up quickly, which subsequently proved to be too painful for oil producers. This ultimately resulted in an unprecedented deal among the member countries of OPEC and 11 non-OPEC oil producing countries, including Russia, to cut production by as much as 1.8mb/day. This deal successfully managed to reduce excess stockpiles and provide support for a rally that has been running for almost two years.

Chart 1. Recent Price History – BRENT



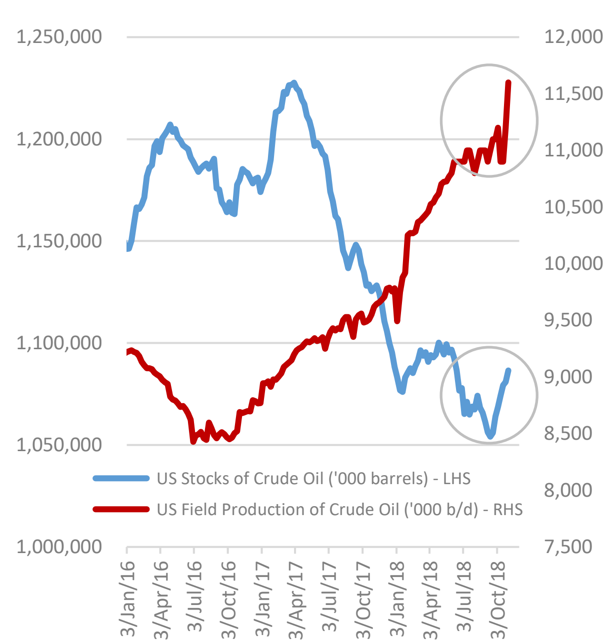
Source: Bloomberg, NBKC

The recent price volatility, however, was driven by a combination of uncertainties on both the supply and the demand side.

On the supply side, the main concerns revolved initially around the effects of the US sanctions on Iran and the resulting potential shortfall of supplies, in addition to the effect of the volatile supply coming from less stable countries such as Venezuela, Nigeria and Libya.

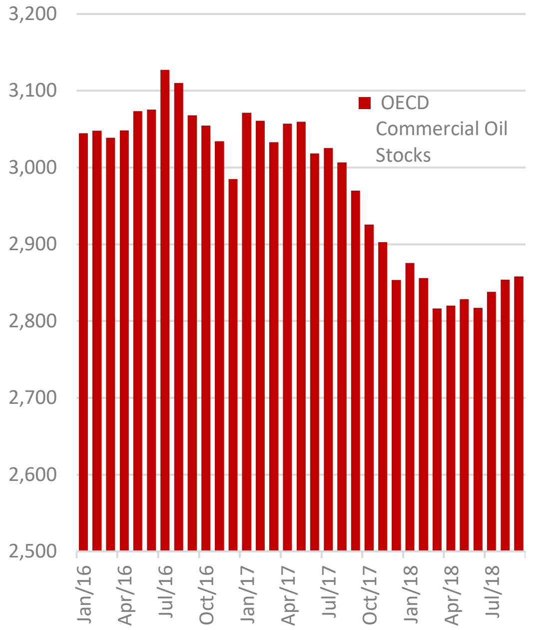
Suddenly, concerns of shortfall turned into fears of oversupply. In an unexpected move, the US president issued 180-day waivers from the sanctions for 8 countries including China, India, Japan, and South Korea, which together buy more than 75% of Iranian oil exports while earlier expectations were for Iranian oil exports to drop to zero. This coincided with a report released by the EIA showing an 8-million-barrel build in US oil inventories for the week ending September 28, at a time where US production was at its peak (see chart 2). Globally, OECD commercial oil stocks started to rise again after a relatively long period of decline caused by the OPEC coordinated crude production cut, which drove down global inventories significantly since the beginning of 2017.

Chart 2. US Production and Stocks of Crude Oil



Source: Energy Information Administration (EIA), NBKC

Chart 3. OECD Commercial Oil Stocks



Source: International Energy Agency (IEA), NBKC

On the demand side, a slowing world economy, especially from outside the OECD countries, the main driver for increases in global oil demand, was threatening demand levels during 2019. This prompted a second OPEC policy U-turn in a very short period of time from increasing supplies to compensate for a shortfall from Iran to curbing supplies again to avoid flooding the market after signs of softening demand during 2019 started to emerge.

IRAN SANCTIONS

After the US withdrew from the nuclear deal with Iran, it re-imposed much stricter and far-reaching sanctions targeted at the Iranian economy. The first set of sanctions came into effect on August 7 and included restrictions on Iran's purchase of US currency, trading in gold and precious metals, purchase of auto parts, commercial passenger aircrafts and related parts and services. The second set of sanctions, however, is what concerned oil markets. It restricts sales of oil and petrochemical products from Iran and it came into effect on November 4. Ahead of that deadline, oil markets became increasingly nervous until prices peaked at the beginning of October.

In anticipation of the second phase of sanction implementation, Saudi Arabia and other major oil producers expressed their willingness and ability to increase production to replace any sanction-related shortfalls from Iran. On October 23, the Saudi oil minister said that the Kingdom was prepared "to meet any demand that materializes". In fact, Saudi has been increasing production gradually during 2018. It started the year at 9.95mb/d and by the end of October production stood at 10.63mb/d, recording an increase of 676,000 b/d over the previous 10 months. Iran was more than 500,000 b/d below its production level over the same period.

Table 1. OPEC Production based on secondary sources ('000 b/d)

	2016	2017	YTD18	*1Q18*	*2Q18*	*3Q18*	Jul-18	Aug18	Sep18	Oct18
Algeria	1,090	1,043	1,035	1,014	1,024	1,056	1,061	1,057	1,057	1,054
Angola	1,718	1,634	1,511	1,562	1,490	1,474	1,443	1,462	1,512	1,533
Congo	216	252	317	306	324	314	316	317	318	324
Ecuador	545	530	521	515	519	529	525	530	528	525
Eq. Guinea	160	133	129	134	127	124	124	124	123	131
Gabon	221	200	187	195	187	187	187	186	184	186
Iran	3,515	3,813	3,701	3,817	3,818	3,599	3,747	3,609	3,452	3,296
Iraq	4,392	4,446	4,530	4,441	4,480	4,618	4,563	4,642	4,654	4,653
Kuwait	2,853	2,708	2,739	2,704	2,708	2,804	2,793	2,803	2,797	2,764
Libya	390	817	943	991	889	890	673	955	1,054	1,114
Nigeria	1,556	1,658	1,718	1,780	1,653	1,704	1,643	1,723	1,768	1,751
Qatar	656	607	602	593	602	617	616	616	595	609
Saudi A.	10,406	9,954	10,209	9,949	10,114	10,425	10,363	10,404	10,502	10,630
UAE	2,979	2,915	2,928	2,850	2,873	2,979	2,960	2,969	3,018	3,160
Venezuela	2,154	1,911	1,368	1,545	1,382	1,236	1,273	1,240	1,211	1,171
Total OPEC	**32,851**	**32,621**	**32,438**	**32,396**	**32,190**	**32,556**	**32,287**	**32,637**	**32,773**	**32,900**

Source: OPEC Secretariat - MOMR November 2018

The increase in Saudi production along with that of Libya of 297,000 b/d and the UAE of 245,000 b/d have more than offset the declines in both Iranian and Venezuelan production. OPEC is now producing a total of 32.9 million b/d compared to 32.62 million b/d at the end of 2017, an increase of 279,000 during 2018.

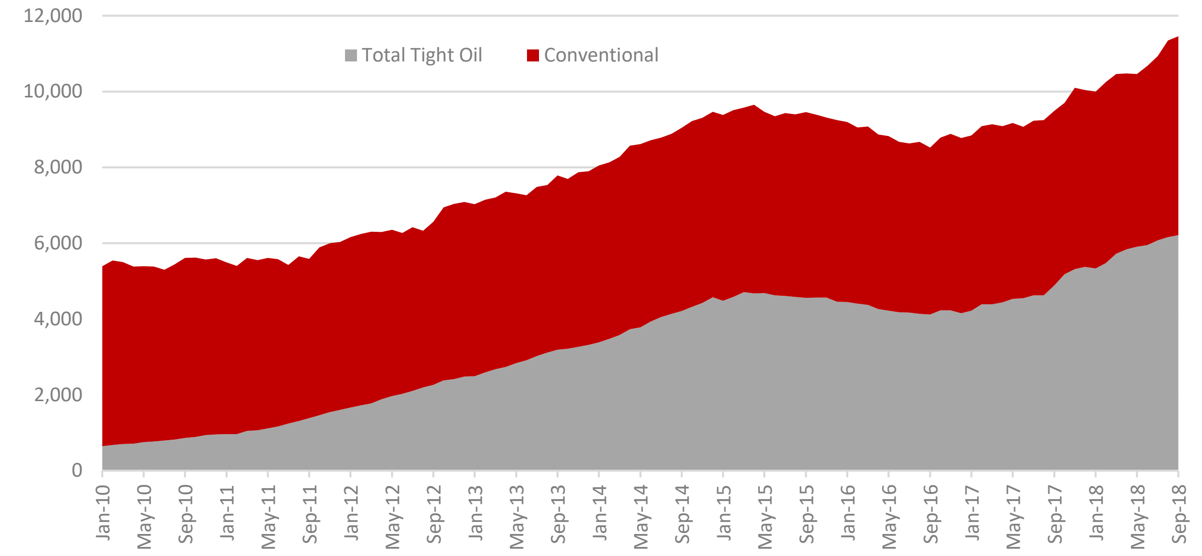
While the oil market braced for the effect of the sanctions on market prices, President Trump issued a temporary waiver for 8 countries including China, India, and Japan, which happen to be some of Iran's largest clients. This took the markets by surprise and suddenly concerns about starving the market because of a decline in Iranian exports turned into fears of oversupply, which accelerated the decline in oil prices.

OPEC, which was just unwinding the Declaration of Cooperation (DoC) that removed over 1.8 million b/d from the market and helped drain excess inventories, was again looking to cut production by as much as 1.4 million b/d to avert a slide in oil price amid a slowing global economy and an increasing US production.

US PRODUCTION

The precipitous drop in oil prices during 2014 was the beginning of a fundamental change in the dynamics of the oil markets. A change that would be marked by the rise of the shale oil industry and the US becoming the largest global producer of crude.

Chart 4. US Oil Production Conventional and Tight Oil (mb/d)



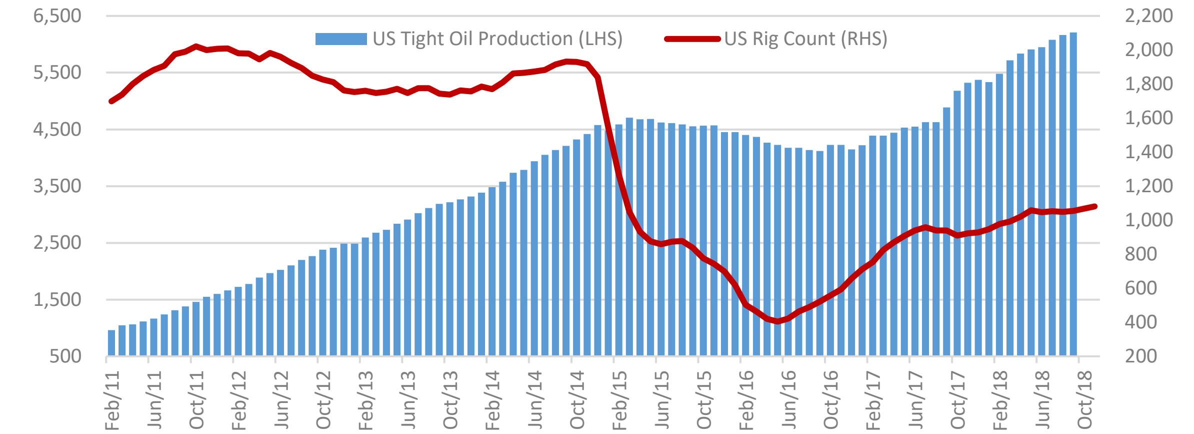
Source: EIA, NBKC

US production of crude oil reached 11.6mb/d at the beginning of November. The production of conventional oil has been relatively stable and fluctuated around 4.4-4.8mb/d over the past 10 years. The tight oil segment, on the other hand, was the real game changer.

After a brief dip in production following the slide in oil prices at the beginning of 2015, the level of US tight oil production stabilized and then started to build momentum again around the start of 2017. The change in rig count was much more pronounced, however. The US rig count dropped from a high of 1,931 in September 2014 to a low of 404 in May 2016. It has recovered somewhat since, but it is still around half of its 2014 high and stands today at a little over 1,000. Over the same period, shale output increased from a low of 4,121mb/d recorded in May 2016 to around 6,209mb/d as of September 2018.

This is very telling of the dynamics of the shale industry. Since the collapse of the oil price back in 2015 more than 71 companies in the exploration and production industry went bankrupt in Texas alone. The shale industry is highly fragmented and formed of many smaller and highly leveraged players who are naturally vulnerable to prolonged declines in oil prices and rising interest rates. To many, the collapse of the shale industry was inevitable in the wake of the price crash of 2014-2015. What happened next, however, is that survivors became more cost conscious, more efficient and started to find new methods of drilling and are now able to extract much more oil from each well. According to Timothy Dove, the chief executive of Pioneer Natural Resources, “typically fracking recovers 8-10% of the oil in the shale. Being able to go from 10% to 12% would actually increase output by 20%.”

Chart 5. US Tight Oil Production and Rig Count



Source: EIA, NBKC

Another factor that is shaping the industry is consolidation and acquisitions. Around 80% of a shale well's production happens in the first two years of operations. Despite the fact that giant oil company have cut their capital expenditures, many of them are redirecting some of their capital spending to the shale industry, especially in the Permian Basin. The relatively short production timetables compared to the multi-decade and multi-billion dollars offshore projects have lured big oil into investing in shale. In July 2018, BP bought the US shale oil and gas assets of global miner BHP Billiton for $10.5 billion. ExxonMobil said it would increase its daily shale production fivefold to 500 thousand barrels per day by 2025. Exxon has been building its presence in the Permian with acquisitions; it spent $6.6 billion on buying drilling rights on 250,000 acres last year. Large companies have more room to exploit their expertise and supply chains and have deeper pockets to invest in analytics and infrastructure to optimize production and transport.

OTHER FACTORS

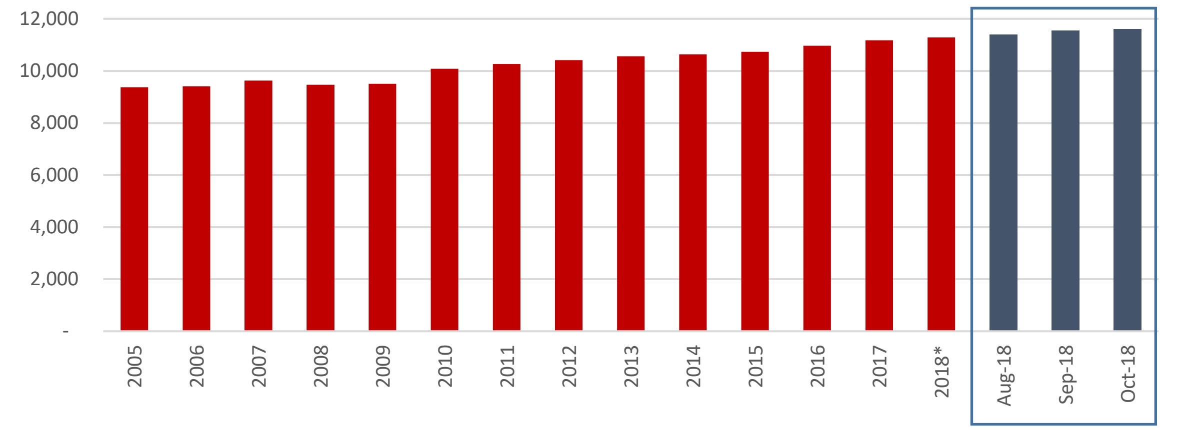
Other factors adding uncertainty to the oil markets include the smaller and less stable oil producers such as Nigeria and Libya and production increases from large non-OPEC members such as the Russian Federation, which is contributing significantly to the global supply.

Nigeria produced between 1.9 and 2.0 million b/d from 1990 to early 2016 when its production plunged by more than 400K b/d to around 1.5mb/d due to political instability. It successfully managed to ramp up its production to a little over 1.7mb/d over the past two years and averaged around 1.75mb/d as of October 2018. The planned elections, however, in February 2019 will be a significant risk to the oil markets early next year.

The same applies for Libya whose political climate is very unstable and increasingly unpredictable. The elections that were originally planned on December 10 this year have now been rescheduled to early 2019. The increase in Libyan oil production helped in offsetting some of the recent declines in Iranian exports. According to secondary sources as reported by OPEC's Monthly Oil Markets Report, Libya produced 1.114mb/d in October compared to an average of 390K b/d during 2016 and 817K b/d in 2017. The average increase between October and June this year of around 225K b/d was almost half the decline in production from

Iran. Any setback in production due to political or security issues would easily deprive the market of several hundred thousand barrels of oil per day.

Chart 6. Russia's Oil Production (mb/d)



*Note: * 2018 shows average production Jan-Oct.*
Source: Bloomberg, NBKC

Another major factor to watch on the supply side is Russian production levels. Russia has been increasing production for the past decade. It produced an average of 11.29mb/d during the first 10 month of 2018 compared to 11.17mb/d in 2017. Russian companies have ramped up production during the later months of 2018 as production reached 11.60mb/d in October, almost at the same level of the US. Russian cooperation with OPEC on the Declaration of Cooperation was key to its success and will be a prerequisite for the success of any future deal to curb production.

DEMAND - SUPPLY BALANCE

The IMF cut its expectation for global growth for this year and next year by 0.2 percentage points and is now expecting global GDP to grow at 3.7% down from a previous estimate of 3.9%, citing trade tensions between the US and its trade partners that are starting to hurt economic activity worldwide. In particular, the IMF forecast for the US and China remain stable for 2018 at 2.9% and 6.6% respectively but have been revised down to 2.6% and 6.2% in 2019.

Moreover, it underlined its forecast for Emerging Markets as their downward revisions were "more severe" due to trade wars, weaker local currencies against the US Dollar, and a rising interest rate environment in the US, in addition to political instability in many Developing nations. The IMF downgrades acted as the trigger for the start of the selloff in the oil markets given that Emerging Markets are the drivers of increases in global demand for crude.

Table 2. World Oil Demand Projections

	2017	2018	2019	*1Q19*	*2Q19*	*3Q19*	*4Q19*
OECD	47.42	47.86	48.12	*47.98*	*47.44*	*48.41*	*48.62*
Developing Countries	32.13	32.65	33.24	*33.01*	*33.19*	*33.46*	*33.30*
China	12.32	12.71	13.05	*12.61*	*13.18*	*12.99*	*13.42*
Other Regions	5.42	5.57	5.67	*5.50*	*5.45*	*5.78*	*5.95*
Total World	**97.29**	**98.79**	**100.08**	**99.10**	**99.26**	**100.64**	**101.29**

Source: OPEC Secretariat - MOMR November 2018

Table 3. Non-OPEC Supply Forecast

	2017	2018	2019	*1Q19*	*2Q19*	*3Q19*	*4Q19*
OECD	25.71	27.92	29.77	29.22	29.04	30.08	30.70
of which US	*14.40*	*16.46*	*18.15*	*17.43*	*17.93*	*18.47*	*18.76*
Developing Countries	11.48	11.44	11.79	11.65	11.70	11.78	12.05
Other Regions	18.15	18.26	18.26	18.30	18.21	18.21	18.30
of which Russia	11.17	11.24	11.24	11.24	11.24	11.24	11.24
Total non-OPEC	**55.34**	**57.61**	**59.82**	**59.17**	**58.95**	**60.07**	**61.04**
Processing Gains	2.21	2.25	2.28	2.28	2.28	2.28	2.28
Total World	**57.55**	**59.86**	**62.09**	**61.45**	**61.23**	**62.35**	**63.32**

Source: OPEC Secretariat - MOMR November 2018

OPEC, in turn, revised down demand for its products in 2019 by around 510K b/d to around 31.54mb/d as of November 2018. It had previously estimated demand for its oil would be around 32.05mb/d back in September. The revision was driven by a combination of a projected 150Kb/d decline in global demand and an increase of 360Kb/d in non-OPEC supply, which is mainly coming from the United States.

OPEC production is estimated to average around 32.57mb/d for the current year and then to drop to 31.54mb/d to match estimated demand for 2019. It stood at 32.9mb/d in October, meaning that OPEC would have to cut somewhere around 1.4mb/d from current levels to reach a demand supply balance in 2019, everything else constant.

Table 4. Supply/ Demand Balance

	2017	2018	2019	*1Q19*	*2Q19*	*3Q19*	*4Q19*
World Oil Demand	**97.29**	**98.79**	**100.08**	**99.1**	**99.26**	**100.64**	**101.29**
Non-OPEC supply	57.55	59.86	62.09	61.45	61.23	62.35	63.32
OPEC NGLs and non-conv	6.24	6.36	6.45	6.42	6.43	6.46	6.49
Total Non-OPEC Supply	**63.79**	**66.22**	**68.54**	**67.87**	**67.66**	**68.81**	**69.81**
Difference*	***33.50***	***32.57***	***31.54***	***31.23***	***31.59***	***31.83***	***31.49***
October	33.45	32.66	31.79	31.53	31.74	32.21	31.67
September	33.42	32.91	32.05	31.81	31.99	32.43	31.98

** Implied OPEC Demand*

Source: OPEC Secretariat - MOMR November 2018

FINAL THOUGHTS

The overall crude market landscape is changing, and it is changing fast. Today, the three top oil producers, Saudi Arabia, the United States and Russia jointly produce an average of around 33.8mb/d. This compares to a total OPEC production of around 32.9mb/d currently. It follows that much of the dynamics in the oil markets, on the supply side at least, will be determined by the degree of agreement, or the lack thereof, among the top three producers.

OPEC and its allies will be meeting in Vienna in early December to try to formulate a policy response to the risk of supply running ahead of demand in 2019 and prices collapsing. Saudi Arabia is now pushing for a cut in output by as much as 1-1.4 million barrels per day while the Russians, so far, are favoring a wait-and-see position in the short term to get more clarity from market data in the coming few months, as per the Russian oil minister.

Russian output has been increasing steadily and Russia does not seem to be very keen on curbing output again after they pushed for a relaxation of the DoC earlier in the summer. President Putin said oil prices of around USD 70/bbl “suits us perfectly”, but he also said that Russia would continue to cooperate with Saudi Arabia in the oil market adding that he cannot say if production should be limited. Russia’s budget and economic forecasts are based on an average oil price of USD 40/bbl for 2018. Its economy is much less dependent on oil revenues than pure-play producers and could withstand somewhat lower levels of oil prices, which would actually benefit its non-oil economy in many ways. For the Russians, however, participating in a production control deal need not be purely for economic reasons, geopolitics is as important.

In the US, the situation is very different. President Trump is pushing for lower oil prices while the US is pumping crude at record levels. He recently referred to the drop in prices as tax cut to America and the World and wanted prices to go even lower. Meanwhile, the shale industry is actually growing so fast that the current EIA projections are calling for US production to reach 12mb/d in April. That is six months sooner than the EIA’s own expectations just a month ago and 1.2 million barrels higher than its expectations at the beginning of the year.

For now, it seems that the direction of the oil markets will be greatly dependent on the direction that OPEC decides to take on December 6 and most importantly whether or not the Russians will be part of that agreement. The greatest risk in the short term is a non-decision in Vienna next month but overall the risk in the next few months seems to be strongly skewed to the downside.

Contacts:

Structured Investments and Advisory
Asset Management

Arraya Tower II, Floor 35
P.O. Box 4950, Safat 13050, Kuwait

T. (965) 2224 5111
F. (965) 2224 6904
E. NBKC.SIA@nbkcapital.com

NBK·CAPITAL

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