THE OXFORD INSTITUTE FOR ENERGY STUDIES

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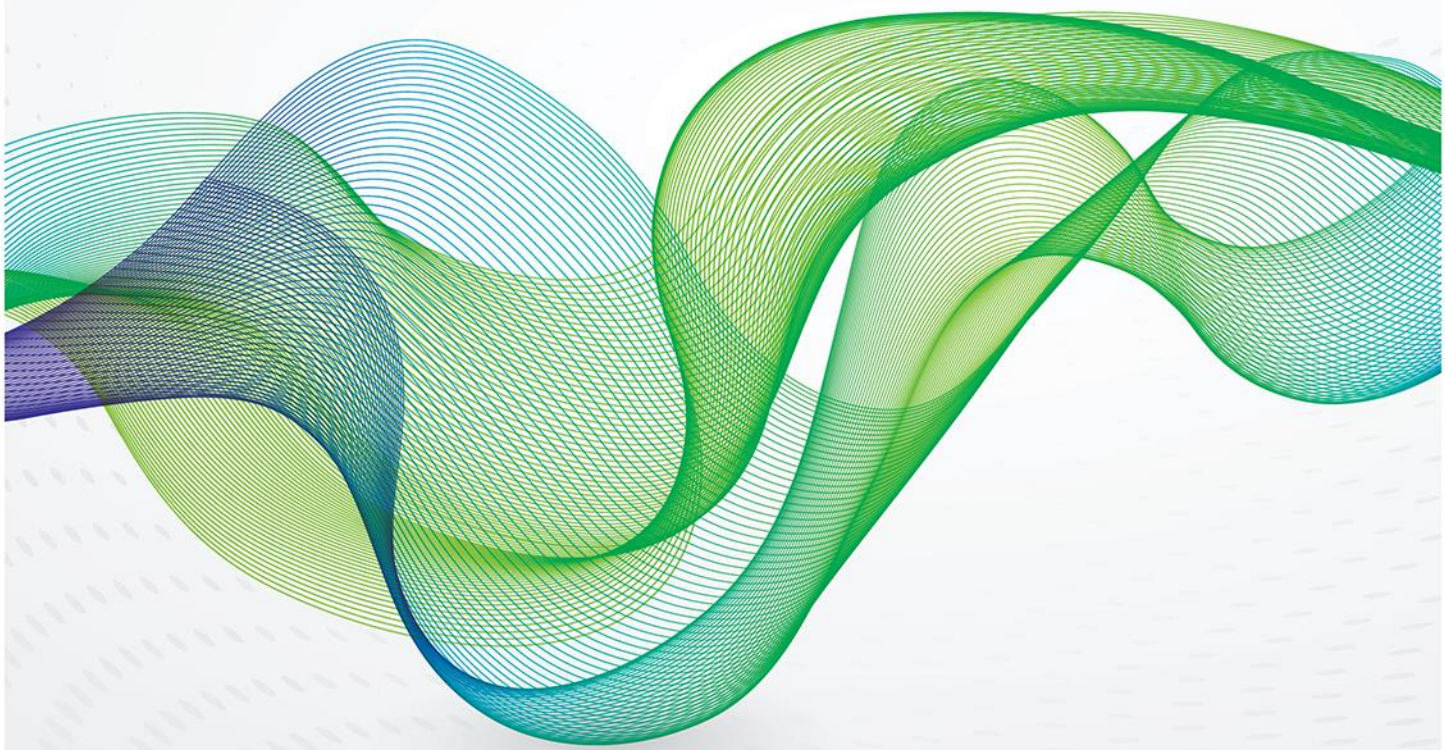
Iranian Sanctions 2.0: Oil Market Risks and Price Stakes



OXFORD ENERGY COMMENT

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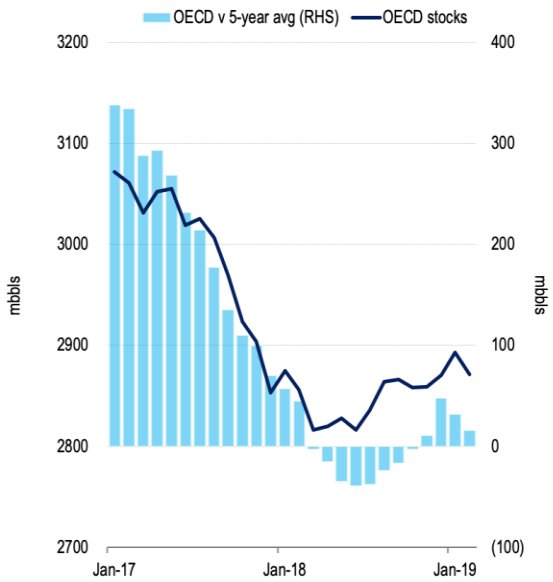
1. Introduction

Before the recent announcement on Iran sanction waivers, the base case for most analysts was that the US would renew the waivers allowing few buyers to continue importing limited quantities of Iranian oil.[1] The logic behind this thinking was very simple: the Trump administration would not risk an oil price spike that could endanger US growth prospects and hurt motorists by tightening sanctions on Iran and disrupting oil exports further. Thus, President Trump's latest decision not to reissue waivers caught the market off guard and caused a mini rally in the oil price with Brent prices reaching a six month high of near $75/b.[2] Trump has been keen to emphasize that the US secured offset commitments from Saudi Arabia and the UAE, and that these countries '*along with other friends and allies, have committed to ensure that global oil markets remain adequately supplied ... and that global demand is met as all Iranian oil is removed from the market*'.[3]

This latest decision comes on the back of a quarter which saw market fundamentals tighten due to deep output cuts from Saudi Arabia, which exceeded the pledged target, the sharp deterioration of Venezuelan output, and demand remaining relatively healthy despite widespread pessimism about global growth prospects. Brent prices recovered by $20/b from their lowest point of $50/b on December 28, 2019, and are so far trading above $70/b, on average, during April 2019 (see Figure 1). OECD commercial stocks have also declined, standing 16 mbbls above their 5-year average as of February 2019 (see Figure 2).

Figure 1: Daily Brent price, Jan 18 – Apr 19

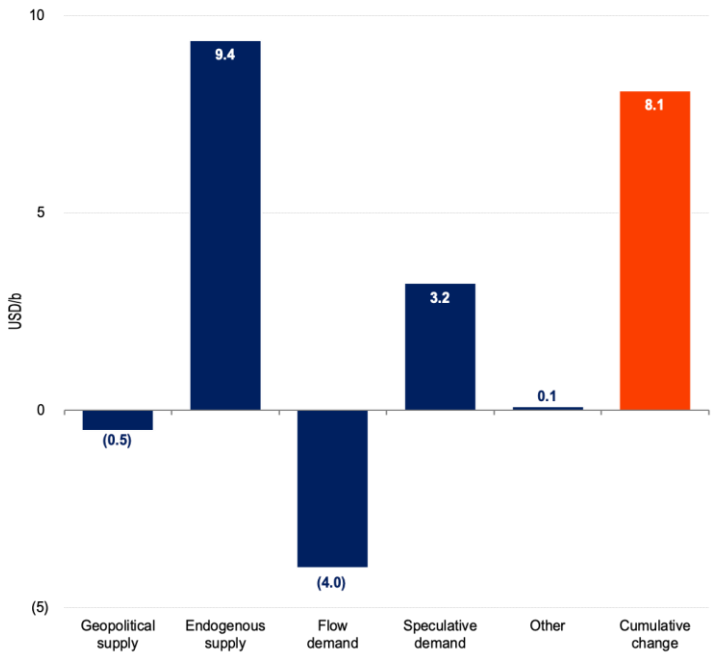
Figure 2: OECD stocks, Jan 17 – Feb 19



Source: EIA, IEA, OIES.

[1] See, for example, Bloomberg, 'U.S. Oil Waivers that Rocked Market in 2018 Back to Focus', 15 March 2019.
[2] U.S. Department of State, 'Advancing the US Maximum Pressure Campaign on Iran', 22 April 2019.
[3] The White House, 'Statement from the Press Secretary on Cooperation between the United States, Saudi Arabia and the United Arab Emirates on Energy and Iran Policies, 22 April 2019.

Figure 3: Brent price drivers in 1Q 2019



Source: OIES.

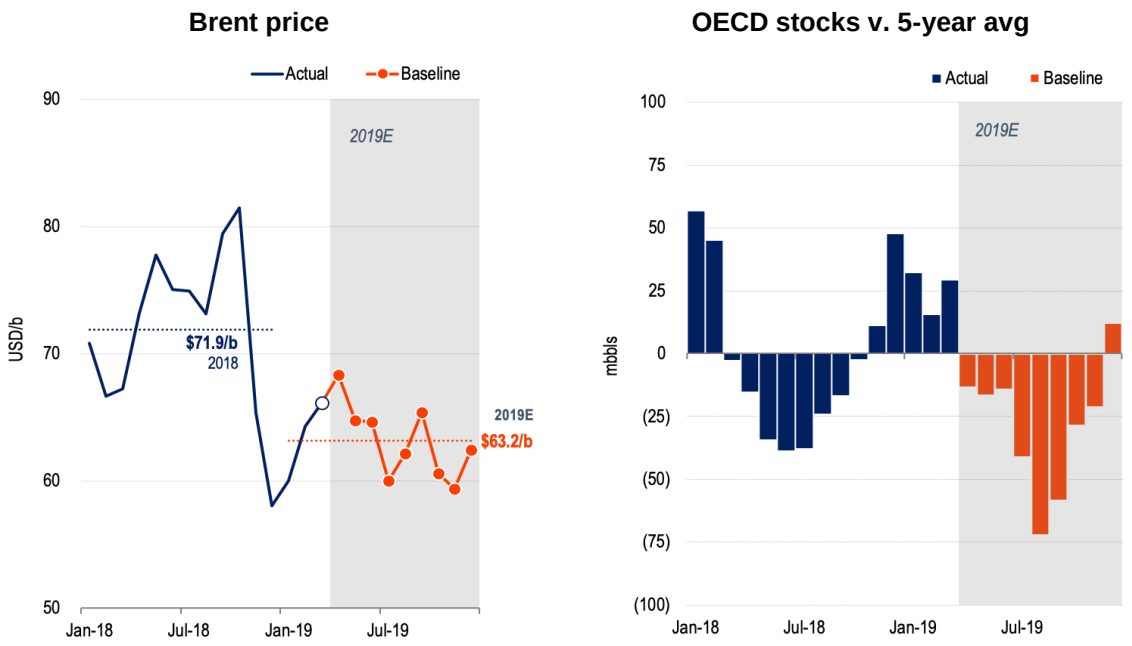
Indeed, as can be seen in Figure 3, the OPEC+ output cuts, in particular from Saudi Arabia, which has curbed its production and exports by about 1.3 mb/d since November 2018, added $9/b to the average monthly Brent price in the first quarter of 2019.[4] At the same time, positive speculative demand pressures in anticipation of the expiration of the Iranian oil waivers, the volatile situation in Venezuela, and renewed unrest in North Africa added another $3/b to the price. These positive contributions to the oil price however were offset by slightly weaker demand conditions that kept prices lower by $4/b. Geopolitical supply shocks were largely neutral as the nearly 0.4 mb/d losses from Venezuela since December 2018, were counter-balanced by gains in Libyan output of 0.2 mb/d and moderate increases in Iranian crude exports of 0.2 mb/d under the exemption waivers. Taken together, the monthly Brent price in the first quarter of 2019 recovered by $8/b to $66/b, from $58/b in December last year when prices had plunged.

As the Brent price consolidated at above $70/b in early-April, market focus quickly shifted to whether OPEC+ will relax its output cuts or even exit the deal altogether in June. Warnings that demand is already being affected by oil prices of above $70/b[5] have begun to surface and within OPEC+, key producers such as Russia are starting to show a lack of enthusiasm for maintaining the current cuts.[6] In fact, as Figure 4 shows, the baseline (*no-change*) forecast projects that even in the absence of further geopolitical outages from Iran and Venezuela and with global growth revised downwards to 3.3% for 2019 (from 3.5% previously), the Brent price is still expected to average at $63/b in 2019 and

[4] Analysis in this paper is based on the 5-variable structural VAR oil market model due to Economou et al. (2017, 'A Structural Model of the World Oil Market: The Role of investment Dynamics and Capacity Constraints in Explaining the Evolution of the Real Price of Oil', OIES Energy Insight 23, December).
[5] S&P Global Platts, 'Interview: Oil prices above $70/b already hurting demand growth – IEA's Birol', 15 April 2019.
[6] Reuters, 'Russia, OPEC may ditch oil deal to fight for market share: Russian minister', 13 April 2019.

OECD stocks to return to below their 5-year average for most of the year. This is an upward revision of $4/b on annual terms from the baseline forecast of $59/b in January 2019.[7]

Figure 4: Baseline forecasts as of April 2019, Jan 18 – Dec 19E



Source: OIES.

While none of the aforementioned market risks on the supply and demand side have been resolved, the US campaign of 'maximum pressure' on Iran has added another layer of uncertainty to an already complex web of events; Saudi Arabia's response, the future of the OPEC+ agreement, the success of the US in driving Iran exports to 'zero', as well as demand prospects on both the upside and the downside. The remainder of this comment assesses these risks and discusses the market outcomes under the different choices facing OPEC and Saudi Arabia.

2. OPEC choices

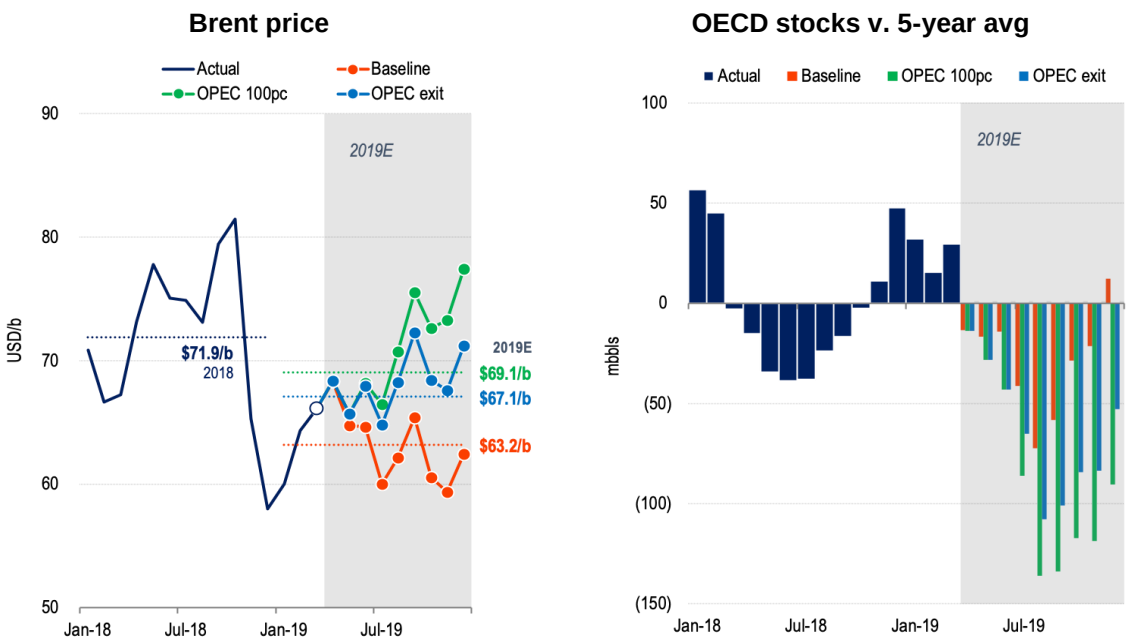
There are good reasons to think that the events that unfolded in the second half of 2018 will not be repeated this year:

- Unlike 2018 when Saudi Arabia acted pre-emptively and increased production before Iranian losses actually materialised, all the signs so far are that the Kingdom will most likely adopt a more measured approach increasing output when physical shortages arise and not responding to hypothetical losses from Iran. The Saudi signals have so far been cautious as the events in the second half of 2018 are still fresh. The hike in Saudi output in November 2018 and the US granting of Iran waivers contributed to stock build in the final quarter of 2018 and shifted market expectations resulting in a sharp drop in the oil price in December. The Saudi Energy Minister announced that the Kingdom '*will coordinate with other oil producers to ensure adequate supplies are available to consumers while ensuring the global oil market does not go out of balance*'[8] and that it does not see the need to do anything immediately.

[7] Fattouh, B. and Economou, A. (2019), 'Oil Price Paths in 2019: Navigating Volatile Markets, OIES Energy Insight 27, February.
[8] Reuters, 'Saudi Arabia says to coordinate with other producers to ensure adequate oil supply', 22 April 2019.

- In 2018, there were doubts about the ability of Saudi Arabia to ramp up production to above 11 mb/d and put a ceiling on the oil price. This is no longer the case as Saudi Arabia demonstrated in November 2018 that it could reach these levels; although the question of Saudi Arabia's spare capacity will come into focus again if its production approaches 11 mb/d.
- Saudi Arabia's production and exports are currently at relatively low levels and it is therefore in a much better position to replace the potential loss in Iranian barrels. By producing at its agreed OPEC quota of 10.3 mb/d in December 2018, this would constitute an increase of 0.5 mb/d from current levels (9.8 mb/d in March 2019). If Saudi Arabia hikes production to its November 2018 level of 11.1 mb/d, this would be an increase of 1.3 mb/d from April 2019 onwards.
- Should the US be successful in driving Iran exports to low levels, the oil price will most likely continue to be supported in the range of $70-80/b. We consider two scenarios:
  1. Saudi Arabia ramps up production to achieve 100% compliance (referred to as *OPEC 100pc* scenario). The advantage of this option being that Saudi Arabia does not need to exit the deal, while returning over 0.5 mb/d of Saudi oil back into the market.[9]
  2. Saudi Arabia ramps up production to November 2018 levels signalling the end of the OPEC+ Agreement (referred to as *OPEC exit* scenario). This option, being the most aggressive, could see a total of 1.8 mb/d of withheld OPEC+ production returning to the market, of which 1.3 mb/d will be from Saudi Arabia.

Figure 5: OPEC choices forecast scenarios as of April 2019, Jan 18 – Dec 19E



Source: OIES.

Figure 5 assesses the evolution of the Brent price and OECD stocks against their 5-year average in 2019 under these two scenarios. Both scenarios assume that Iranian output from May-onwards declines to 2.0 mb/d at year-end.[10] Both scenarios also incorporate a gradual decline in Venezuelan production towards 0.6 mb/d at year-end and assume that the global economy in 2019 grows by 3.3%

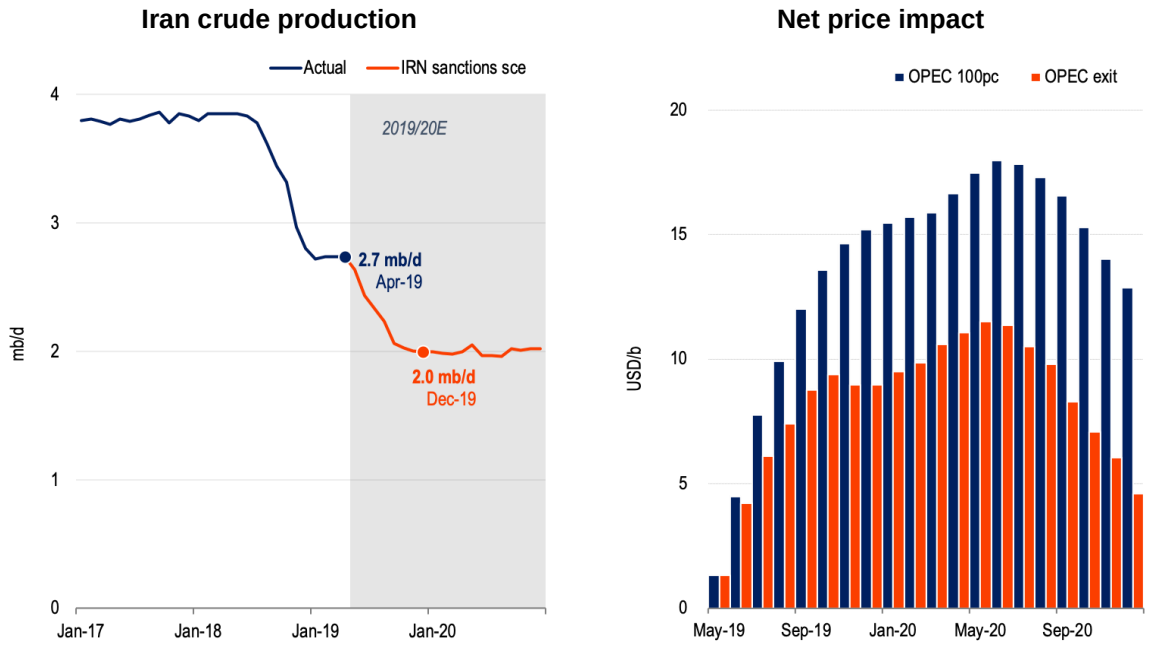
[9] The *OPEC 100pc* scenario maintains that the OPEC output cuts continue for the remainder of the year and compliance is held at 100% throughout.

[10] Assumptions for the Iranian production outlook in the post-sanction period are calculated based on Iran's domestic demand and crude intake which are estimated at 1.5 mb/d in addition to 0.5 mb/d of assumed storage and limited exports.

with US shale production growing by 1.1 mb/d. If Saudi Arabia returns to 100% compliance in May and maintains that level throughout the year (see *OPEC 100pc*), complying with its pledge to the US albeit maintaining the OPEC agreement, the Brent price is expected to be sustained in the $70-80/b range in the second-half of the year, averaging at $72/b. On annual terms, the Brent price is expected to average at $69/b. If the OPEC+ Agreement is dissolved and production is maximised similar to last year (see *OPEC exit*), the Brent price is expected to average at $68/b in the second half of the year. In both cases, OECD stocks are expected to fall below the five-year average, ranging between 50-100 mbbls below the average at year-end.

It is important to state the obvious: none of these options offsets the impact of the Iranian output losses on the Brent price. As can be seen in Figure 6, conditional to our assumptions about the post-sanctions outlook for Iranian production, the re-imposition of US sanctions and resulting losses of Iranian barrels could push prices higher by as much as $10/b by year-end regardless of OPEC and Saudi responses. Moreover, unless the US policy is reversed, the price shock is expected to persist well into next year, surpassing $10/b, before it gradually starts to die out in the second half. These results should not come as a surprise. With OPEC and Saudi Arabia maximizing their production, spare capacity diminishes limiting the ability to offset any other unexpected supply or demand shocks, adding a premium to the price. Further, the increased pressure from the US in both Iran and Venezuela leaves the market all the more vulnerable.

Figure 6: Net price impact of Iranian sanctions, May 19 – Dec 20E



Source: OIES.

Although Saudi Arabia is in a better position to manage the market compared to 2018, this does not mean that there are no risks of under-supply (for instance, if Saudi Arabia adopts the wait and see approach until Iran losses are realized) or over-supply (if prices run ahead of fundamentals and under US pressure, Saudi Arabia increases output sharply to try to control the oil price). There could also be additional shocks hitting the market both on the supply and demand side; on the supply side, the fragile situation in Libya could result in outages;[11] on the demand side, market and price risks are mounting in both directions. Thus, for Saudi Arabia to keep prices within a narrow range is not an

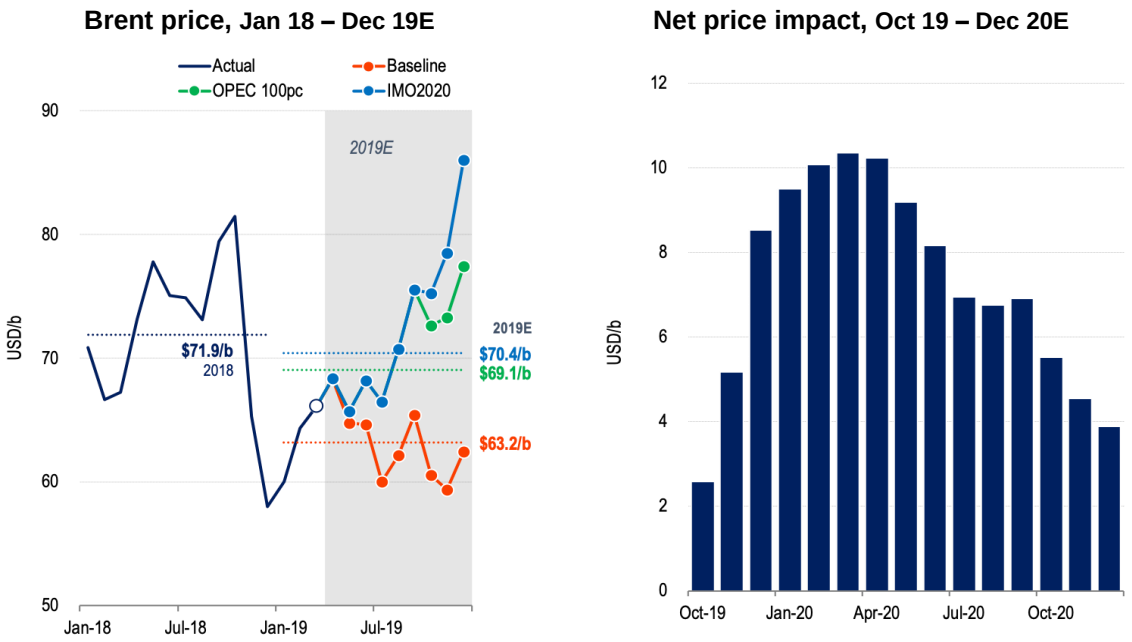
[11] See, for example, Bloomberg, 'Trump Spoke to Libyan Strongman Threatening Tripoli', 19 April 2019.

easy task and second guessing the Kingdom's next move could induce price volatility, as the second half of 2018 clearly illustrated. There might be also divergent views about price expectations: There is no indication which oil price level Trump 'desires' other than 'the lower the price, the better' and Saudi Arabia will be very wary of another downturn in the oil price.

3. Managing Risks

One obvious upside demand risk relates to the impact of the IMO 2020 ruling towards the end of the year. The regulation is intended to put a cap on sulphur emissions from the shipping industry by reducing demand for high-sulphur fuel oil (HSFO), which will boost demand for Marine Gasoil (MGO), which many expect will lead to higher refinery crude runs.[12] Although there are divergent views about the expected boost to global demand growth, many analysts project that crude demand gains will range between 0.5 to 1.0 mb/d. The forecast scenario shown in Figure 7 anticipates that incremental demand due to the IMO 2020 ruling will rise to 0.6 mb/d (which is omitted from the previous forecasts), beginning to gain gradually in the final quarter of 2019. For this scenario, OPEC production is assumed to return to 100% compliance and remain at that level throughout the year (i.e. *OPEC 100pc* scenario). Results show that a boost in global demand towards the end of the year due to IMO 2020 could push prices well into the $80/b territory at year-end, adding up to about $2/b on annual terms in 2019 relative to the *OPEC 100pc* scenario. The price shock however is expected to be short-lived and gradually faze out from the second half of 2020.

Figure 7: IMO 2020 forecast scenario as of April 2019



Source: OIES.

A price hike north of $80/b would exert downward pressure on global oil demand, weakening growth prospects in 2019. Figure 8 shows the cumulative contribution of the supply channel to global demand growth (via its impact on price). Clearly, the OPEC+ output cuts had already started to put some downward pressure on demand growth from December 2018 as prices are currently sustained above $70/b. But the most important observation lies in 2018, which shows that even after June 2018 when Saudi Arabia and the rest of the OPEC+ producers ramped up their production, demand was not

[12] Bloomberg, 'Oil Refiners to OPEC+: We're Going to Need More of Your Crude', 8 April 2019.

boosted, as any gains were short-lived and immediately wiped out by prices reaching $80/b in the third quarter of 2018. It is not inconceivable that such a situation could arise again during the year ahead and OPEC would do well to be very wary of the impact on global demand.

The prospects for global demand in 2019 is captured in Figure 9 that charts the risks inherent in the projected growth of global demand under the OPEC choices scenarios considered above. Evidently, the US decision to pursue the full extent of the Iranian sanctions is expected to push demand growth lower this year to 1.1%, relative to the baseline 1.2%, regardless of Saudi Arabia's response and as higher oil prices begin to impact oil-consuming economies. Moreover, the likelihood of the annual Brent price rising towards, and, or, going above, the $70/b mark in 2019, is expected to slow demand growth further. For example, under the assumption that Saudi Arabia maintains its output cuts at 100% compliance throughout, demand is expected to ease further to 1%. Although a 1% growth in global demand is still healthy by historical standards, the outlook for the global economy remains very challenging with considerable uncertainties. At the same time, as recent experience has shown, the demand side of the oil market is of paramount importance for the market balancing efforts.

Figure 8: Cumulative contribution of supply channel to demand growth, Jan 13 – Mar 19

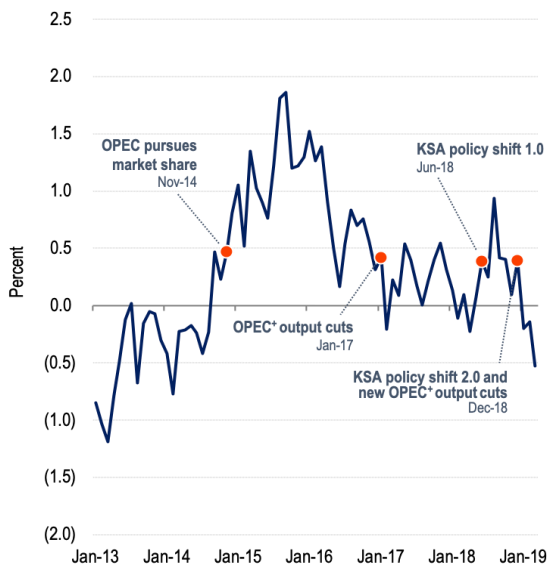


Figure 9: Projected demand growth in 2019