



Organization of the Petroleum Exporting Countries



OPEC Monthly Oil Market Report

13 May 2020

Feature article: *Non-OPEC oil supply development*

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Oil Market Highlights

Crude Oil Price Movements

Crude oil prices recorded a second sharp monthly drop in April, amid an increasing oil surplus in the spot market. The OPEC Reference Basket (ORB) value plummeted by \$16.26, or 48.0%, m-o-m, to \$17.66/b, the lowest monthly level since December 2001. With regard to crude futures, ICE Brent declined by \$7.10, or 21%, to average \$26.63/b, while NYMEX WTI fell by \$13.75, or 45.2%, to average \$16.70/b. The contango structure of the forward curves of all crude futures benchmarks steepened further, on further worsening of global oil market fundamentals and a rapid increase in global oil inventories. Money managers firmly raised their combined futures and options net long positions in April in both ICE Brent and NYMEX WTI contracts.

World Economy

The world economy is forecast to face a recession in 2020, declining by 3.4%, following global economic growth of 2.9% in the previous year. Within the OECD, the US is forecast to contract by 5.2% in 2020, following growth of 2.3% in 2019. An even larger decline is expected in the Euro-zone, where economic activity is forecast to fall by 8.0% in 2020, compared to growth of 1.2% in 2019. Japan is forecast to contract by 5.1% in 2020, comparing to growth of 0.7% in 2019. China's 2020 GDP is forecast to grow by 1.3%, recovering from a sharp contraction in 1Q20, and following growth of 6.1% in 2019. India is forecast to decline by 0.2%, a sharp slowdown from already weakening growth of 5.3% in 2019. Brazil's economy is forecast to contract by 6.0% in 2020, following growth of 1.1% in 2019. Russia's economy is forecast to contract by 4.5% in 2020, after growth of 1.3% in 2019, not only due to COVID-19, but also because of the considerable decline in oil prices.

World Oil Demand

For 2019, world oil demand growth is kept broadly unchanged compared to last month's assessment, estimated to have grown by 0.83 mb/d, y-o-y, to average 98.72 mb/d. In 2020, world oil demand growth is adjusted lower by 2.23 mb/d and is now forecast to drop by 9.07 mb/d. However, the worst contraction in major oil demand centers around the world is expected to take place in the 2Q20, mostly in OECD Americas and Europe, with transportation and industrial fuels affected the most. As such, OECD oil demand is now revised lower by 1.20 mb/d while non-OECD oil demand growth was adjusted down by 1.03 mb/d, for total oil demand to reach 90.59 mb/d. Indeed, demand contraction in 2020 can be mitigated with sooner than expected easing of government COVID-19 related measures, and faster response of economic growth to the implemented extraordinary stimulus packages.

World Oil Supply

The non-OPEC oil supply growth estimate in 2019 is now revised up slightly by 0.04 mb/d from the previous month's assessment, due to an upward revision in Australia's production data, and is estimated to have grown by 2.02 mb/d. For 2020, non-OPEC oil supply is revised down further by almost 2.0 mb/d from the previous projection, and is now forecast to decline by 3.5 mb/d. The main revisions of the month are based on production shut-ins or curtailment plans announced by oil companies – including the majors – particularly in North America. Globally, not including the countries participating in the Declaration of Cooperation (DoC) and as of 6 May 2020, around 3.6 mb/d of production cuts have been announced, so far, in response to the lack of demand, low oil prices, excess supply and limited storage capacity. The 2020 oil supply growth forecast for the US is revised down by 1.3 mb/d to now show a decline of 1.4 mb/d y-o-y. Other large downward revisions are undertaken for Canada and Brazil by 0.3 mb/d and 0.1 mb/d, respectively. Oil supply in 2020 is forecast to show growth only in Norway, Brazil, Guyana and Australia. OPEC NGLs production in 2019 is estimated to have grown by 0.04 mb/d to average 4.79 mb/d and for 2020 is forecast to grow by 0.04 mb/d to average 4.83 mb/d. In April, OPEC crude oil production increased by 1.80 mb/d m-o-m to average 30.41 mb/d, according to secondary sources

Product Markets and Refining Operations

Refinery margins in the Atlantic Basin rebounded in April. Deeper refinery intake cuts as well as low feedstock prices helped offset weak demand. In addition, the relaxation of confinement measures in the US and Europe amid the onset of the driving season, provided much-needed stimulus to the top of the barrel. In Asia, however, stronger product availability, as refineries increased processing rates, outpaced product inventory drawdowns amid a lack of demand from overseas, weighed on the regional product market.

Tanker Market

April was a stellar month for the tanker market with both dirty and clean rates seeing spikes during the month. Dirty freight rates peaked early in April and then trended lower, although remaining at relatively high levels. Rates were supported by a surge in tanker demand, driven by low crude prices and a need to push out excess supplies amid concerns about the availability of onshore storage capacity. Meanwhile, clean tanker rates jumped to historic highs in the middle of April, as refiners and traders looked to boosting product exports and turned to floating storage. However, rates returned to more typical levels by the end of the month. The expected voluntary and involuntary production reductions are expected to weigh on tanker demand in the coming months, although increased floating storage will provide offsetting support.

Crude and Refined Products Trade

According to preliminary data, US crude imports in April fell to 5.4 mb/d – the lowest since 1992 – while the country's crude exports averaged 3.2 mb/d, down from a peak of 3.7 mb/d in February 2020. In March, China's crude imports averaged 9.7 mb/d, falling below 10 mb/d for the first time in eight months. Product exports from China surged to 1.85 mb/d, the second highest level on record, led by a jump in diesel exports. India's crude imports dipped in March to average 4.6 mb/d, impacted by the government-ordered lockdown which began toward the end of the month. India's product exports rose 10% m-o-m, supported by an increase in diesel exports. Crude imports into Japan increased for the first time in two months, averaging 3.1 mb/d in March, while product imports and exports were slightly lower. The latest official data for OECD Europe shows crude exports continuing to fall in January, reaching 2.2 mb/d.

Commercial Stock Movements

OECD commercial oil stocks rose by 57.7 mb m-o-m in March to stand at 3,002 mb. This was 125.8 mb higher than the same time one year ago and 88.6 mb above the latest five-year average. Within components, crude stocks surged by 49.1 mb, while product stocks rose by 8.6 mb, m-o-m. In terms of days of forward cover, OECD commercial stocks surged by 8.9 days m-o-m in March to stand at 86.1 days. This was 25.1 days above March 2019, and 23.8 days above the latest five-year average. Preliminary data for April showed that US total commercial oil stocks surged by 81.1 mb m-o-m to stand at 1,395 mb. This was 136.1 mb, or 10.8%, above the same period a year ago, and 123.7 mb, or 9.7%, higher than the latest five-year average. Within components, crude stocks climbed by 47.9 mb, and product stocks rose by 33.2 mb m-o-m in April.

Balance of Supply and Demand

Demand for OPEC crude in 2019 stood at 29.8 mb/d, 1.2 mb/d lower than the 2018 level. For 2020, and following the recent agreement reached at the extraordinary OPEC and non-OPEC Ministerial Meetings in April, demand for OPEC crude is expected at 24.3 mb/d, which is 5.6 mb/d lower than the 2019 level. It is worth noting that demand for OPEC crude in 2020 remained almost the same as last month's assessment, both considering the voluntary adjustment volumes under the Declaration of Cooperation (DoC) framework. However, additional reductions recently announced by several OPEC member countries, above and beyond their voluntary commitments under DoC, are expected to expedite market re-balancing, and improve the demand for OPEC crude in 2020.

Feature Article

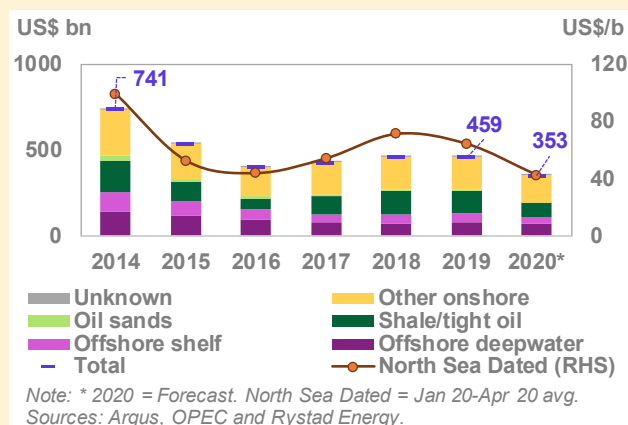
Non-OPEC oil supply development

Non-OPEC oil supply continued to increase by 2.0 mb/d in 2019, driven by US shale production, which rose by 1.7 mb/d, amounting to 84% of total non-OPEC supply growth. This growth came despite pipeline constraints in the Permian basin in 1H19, and as independent oil companies began to reduce spending in response to investor demands to raise free cash flow. With regard to infrastructure, Canada also suffered from limited pipeline and storage capacity, which led to a mandate to curtail oil sands production by the Alberta provincial government. Liquids production in Brazil, Australia, Russia and China also contributed to the gains, while part of this growth was offset by heavy declines in Mexico and Norway.

Capital expenditure, including exploration capex in non-OPEC countries, reached a record high of US\$741 bn in 2014 when oil price levels were also high. However, in the years that followed and with lower average oil prices, investment dropped to considerably lower levels in 2016. Moreover, since the beginning of the renewed decline in oil prices in 4Q18, the amount of capex has also decreased to US\$459 bn in 2019.

Capex in 2020 is forecast to show a y-o-y decline of 23%, according to preliminary estimations, which is only approximately half of level of capex in 2014. The COVID-19 pandemic, which began in 1Q20 has spread globally in a matter of a couple of months, has caused a recession in the global economy as well as an unprecedented oil demand shock, leading to large oversupply in the oil market.

Graph 1: Non-OPEC's investment development, 2014-2020



In response to this sudden and huge market imbalance, OPEC and the 10 non-OPEC participants in the Declaration of Cooperation (DoC), decided to adjust down their combined current production by 9.7 mb/d in May and June 2020, to be followed by a combined reduction of 7.7 mb/d in 2H20 and by 5.8 mb/d for a period of 16 months, from 1 January 2021 to 30 April 2022. Furthermore, on 12 May 2020, Saudi Arabia, the UAE and Kuwait announced that they would voluntarily deepen oil output adjustments from June, by 1 mb/d, 100 tb/d and 80 tb/d, respectively, in an effort to expedite draining a global supply glut and rebalancing the oil market.

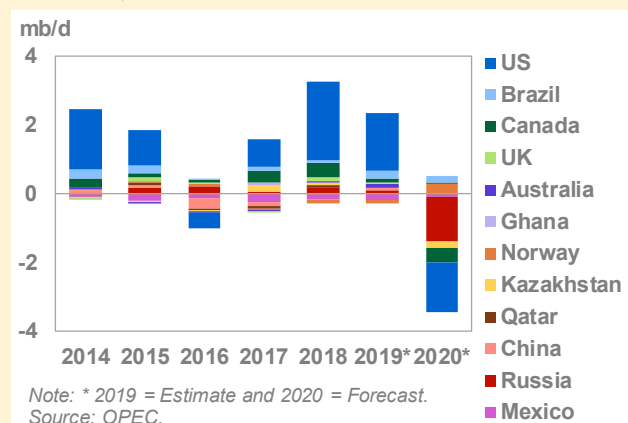
Outside of the DoC, other non-OPEC producers, particularly US producers, reduced their production by shutting-in producing wells or adjusting down the rate of production. According to different sources and company announcements, US producers – including oil majors – have so far cut production by at least 1.5 mb/d in 2Q20, which is likely to be achieved by shut-ins of higher-cost wells, partial reductions in output of selected wells and the deferral of “putting on production” wells.

Additionally, 2020 oil production in Canada, particularly Alberta's bitumen and synthetic crude, is forecast to decline by 0.4 mb/d on an annual basis, on reduced upstream capex of the main operators and shut-ins/curtailment announcements of around 1.0 mb/d.

Globally, outside of the DoC, as of 6 May 2020, around 3.6 mb/d of production cuts have so far been announced in response to the lack of demand, low oil prices, excess supply and limited storage capacity.

With this, non-OPEC supply in 2020 is expected to see a deep contraction of 3.5 mb/d mainly in the US, Russia and Canada, as only few countries will to show some supply growth in 2020 such as Norway, Brazil, Guyana and Australia.

Graph 2: Non-OPEC supply changes in selected countries, 2014-2020



The speedy supply adjustments in addressing the current acute imbalance in the global oil market has already started showing positive response, with rebalancing expected to pick up faster in the coming quarters.

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Crude Oil Price Movements

The OPEC Reference Basket (ORB) dropped by \$16.26, or 48.0%, m-o-m, to stand at \$17.66/b, the lowest monthly point since December 2001. Crude oil spot prices recorded a second sharp monthly drop in April amid an ongoing rise in the oil surplus in the spot market and accumulating unsold cargoes, as refiners heavily cut runs due to plunging oil demand and rising global oil stocks, both onshore and offshore.

Crude oil futures prices extended sharp declines in April amid a strong contraction in both the global economy and oil demand due to the impact of the COVID-19 pandemic. ICE Brent declined by \$7.10, or 21.0%, to average \$26.63/b, and NYMEX WTI fell by \$13.75, or 45.2%, to average \$16.70/b. Y-t-d, ICE Brent was \$20.94 lower, or 31.8%, to average \$44.84/b, while NYMEX WTI was lower by \$18.78, or 32.8%, to average \$38.42/b, compared to the same period a year earlier. DME Oman crude oil futures prices fell m-o-m in April by \$10.30/b, or 30.1%, to settle at \$23.93/b. Y-t-d, DME Oman was lower by \$21.78, or 33.2%, at \$43.85/b.

Despite a significant decline in oil prices, hedge funds and other money managers firmly raised their combined futures and options net long positions in April in both ICE Brent and NYMEX WTI contracts after they reached low levels the previous month. Speculators were betting on a recovery in prices after Brent hit 18-year lows, while NYMEX WTI even settled in negative territory for a trading session.

The contango structure of the forward curves of all crude futures benchmarks steepened further in April on further worsening of global oil market fundamentals and a rapid rise in global oil stocks. The collapse of oil demand, refinery run cuts and rising global oil supply resulted in a large surplus in the oil market along with massive oil stock builds, both onshore and offshore. However, the contango structure flattened in late April and early May on signs of a tender recovery in market fundamentals.

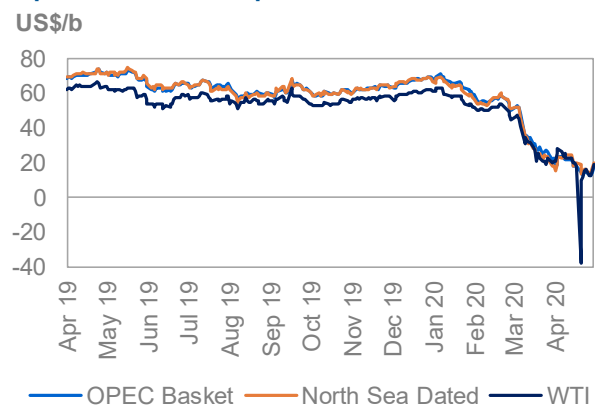
Sweet/sour crude differentials were little changed in April in Europe and on the US Gulf Coast (USGC), while they narrowed significantly in Asia, with sour crude Dubai values moving to a premium against light sweet crudes in Asia, such as Tapis. Medium sour Dubai was supported by expectations of less sour crude supply in the coming months, due to heavy production adjustments from the Middle East, Russia and Canada.

Crude spot prices

Crude oil spot prices recorded a second sharp monthly drop in April on a continuing growing oil surplus in the spot market and accumulating unsold cargoes, as refiners heavily cut runs due to plunging oil demand and global oil stocks rose both onshore and offshore. Crude oil sellers continued to heavily discount their unsold crude oil cargoes for April and May delivery to find buyers, which resulted in swift declines in crude differentials in all regions. North Sea Dated settled at \$13.34/b on 21 April, hitting its lowest point since March 1999. Key crude oil physical benchmarks dropped m-o-m in April, with North Sea Dated and Dubai first-month falling by \$12.88 and \$12.45/b, respectively, or 40.6% and 36.9%, to settle at \$18.83/b and \$21.33/b, while WTI first month fell by \$13.37, or 44.7%, to settle at \$16.52/b.

Crude spot prices in the Atlantic Basin were under heavy pressure due to a sharp decline in crude demand for May loadings, while crude availability continued to increase, resulting in a significant rise in floating oil storage. Growing demand for floating storage pushed freight rates firmly higher, which added downward pressure to spot prices and crude oil differentials and limited arbitrage to Asian markets. Some North Sea crude differentials hit their lowest level on record on a free-on-board (FOB) basis, due to the absence of demand from refiners in Northwest Europe and in the Mediterranean, along with difficult arbitrage to Asia. Forties and Ekofisk crude differentials traded at discounts of \$3.45/b and \$3.24/b, respectively, against North Sea Dated. Light sour crude CPC Blend also witnessed a sharp decline in April, trading at a discount of \$9.55/b against North Sea Dated.

Graph 1 - 1: Crude oil price movement



Sources: Argus, OPEC and Platts.

Crude Oil Price Movements

Crude differentials of West African grades also dropped to record low levels and traded at deep discounts to Dated, with Forcados and Que Iboe differentials hit by discounts in late April of \$7.75/b and \$8.00/b, respectively, to North Sea Dated, mirroring the distress in the physical market.

US crude values dropped sharply in April amid a massive demand decline and deep refinery crude runs, as well as a decline in US crude oil exports, which resulted in a rapid increase in US crude oil stocks, which jumped 63 mb in five weeks, to the week ending 1 May, to reach 532 mb. US refinery utilization rates fell below 70% for most of April, as refiners reduced runs to manage rising oil stocks amid the low demand environment.

Spot crude prices continued to decline more than futures, with the spread between North Sea Dated and ICE Brent reaching \$7.80/b on average in April, compared with \$2.02/b in March and only 3¢/b in February. The spread widened because spot prices were fixed on the prevailing large surplus in the market and accumulating unsold cargoes, while futures prices were affected by sentiment and fundamental expectations for June loading conditions. Furthermore, deep discounts for crude differentials in the Atlantic Basin, such as for North Sea crude, weighed heavily on spot benchmarks like Brent.

Table 1 - 1: Crude spot prices, US\$/b

	Mar 20	Apr 20	Change Apr/Mar	%	Year-to-date 2019	2020
Spot crudes						
North Sea Dated	31.71	18.83	-12.88	-40.6%	65.10	42.31
Dubai	33.78	21.33	-12.45	-36.9%	65.27	43.37
LLS	29.13	19.76	-9.37	-32.2%	64.44	41.02
Mars	27.98	18.65	-9.33	-33.3%	63.13	38.84
Tapis	35.98	17.81	-18.17	-50.5%	69.01	46.98
Urals	29.51	16.61	-12.90	-43.7%	65.57	40.98
WTI	29.89	16.52	-13.37	-44.7%	57.12	38.62
OPEC Reference Basket						
Basket	33.92	17.66	-16.26	-47.9%	64.87	43.06
Differentials						
North Sea Dated/WTI	1.82	2.31	0.49		7.98	3.69
North Sea Dated/LLS	2.58	-0.93	-3.51		0.65	1.29
North Sea Dated/Dubai	-2.07	-2.50	-0.43		-0.17	-1.06

Sources: Argus, Direct Communication, OPEC and Platts.

OPEC Reference Basket (ORB)

The ORB value fell by 48% in April, continuing its decline for the fourth month in a row – the longest period of monthly deterioration in almost five years. It was down by \$16.26, or 48.0%, m-o-m, to stand at \$17.66/b, the lowest monthly point since December 2001. All ORB component values continued to decline sharply in April due to the large surplus in the market, the increasing availability of unsold cargoes, cuts in official selling prices (OSPs), and deep discounts in Basket component crude differentials. The ORB year-to-date value stood at \$43.06/b compared with \$64.87/b a year earlier, down by \$21.81, or 33.6%.

The oil futures market

Crude oil futures prices extended sharp declines in April amid a strong contraction in the global economy and oil demand due to the impact of the COVID-19 pandemic. In April, the ICE Brent contract plunged by 21.0% m-o-m, while the NYMEX WTI contract lost 45.2% of its value amid bearish market sentiment – particularly from the demand side – that weighed on the oil market for a second consecutive month. Furthermore, the latest official data on China, the world's second-biggest oil consumer, showed that the country's GDP dropped by 6.8% in 1Q20 and oil demand declined by 12% y-o-y. With global oil supply continuing to grow in March and April, global crude oil stocks built rapidly and considerably, raising concerns that global storage capacity could reach its maximum limit within weeks in 2Q20, which pushed crude oil futures to 18-year lows in April trading. In addition, concerns for larger-than-expected oil demand losses in 2Q20 were exacerbated by uncertainty of a potential demand recovery in 2H20.

The historic decisions at the 9th and 10th (Extraordinary) OPEC and non-OPEC Ministerial Meetings called for the largest production adjustments by 9.7 mb/d to cope with the huge market imbalance. It should be noted that the OPEC+ production adjustments are in place for a total period of two years, emphasizing a focus on recovery and growth well into 2021 and 2022.

In an unprecedented event, the NYMEX WTI prompt contract for May plunged to a historic low on 20 April and traded at a negative price for the first time ever, settling at minus \$37.63/b. This highlighted how investors and traders can react when logistical oil limits are severely tested. It is important to highlight, however, that it is still unclear whether that historic drop was only due to fundamentals at the landlocked Cushing delivery hub. According to Bloomberg, the chairman of the Commodity Futures Trading Commission (CFTC) said: “CFTC is conducting a deep dive to understand why the WTI price moved with the velocity and magnitude observed, and we will continue to oversee our markets’ role in facilitating the convergence between spot and futures prices at expiration.” The price decline came one day before the expiry of the front-month May NYMEX WTI contract on 21 April, amid low liquidity and a delivery problem for physical May crude at the landlocked Cushing trading hub, which is the delivery point for US crude contracts.

It was reported that speculators that were still holding open contracts were scrambling to exit long positions that would require them to take physical delivery. The considerable build-up of US crude oil stocks for several weeks due to the collapse in domestic oil demand amid large refinery run cuts in the USGC and the Midwest had led to market participants booking all available storage capacity in Cushing. In turn, this created a squeeze in the market when demand for crude delivery at the hub rose. Traders rushed to reserve storage capacity at Cushing amid expectations that tanks would reach maximum capacity in the coming weeks.

On 21 April, the expiry date of the contract, the NYMEX WTI May contract recovered to positive territory and settled at \$10.01/b. Oil prices remained under pressure, particularly NYMEX WTI, undermined on concerns that the oil surplus in the market could lead to maximum storage capacity being reached. The prompt month NYMEX WTI June contract, which is due to expire on 19 May, plunged by about 25% on 27 April after a major oil exchange-traded fund (ETF), the US Oil Fund, announced it would exit from its NYMEX WTI June contract during the week and invest in contracts extending into 2021, exacerbating a selloff in the market.

Other benchmarks, including ICE Brent and DME Oman, as well as those for US physical crudes such as Light Louisiana Sweet (LLS), fell much less during the same period than the front-month NYMEX WTI and remained in positive territory. However, the term structure of all benchmarks moved to an unprecedented super-contango that mirrored the massive physical supply surplus and supported oil storage economics.

The oil price remained volatile in April amid high uncertainty related to global oil demand and swelling global crude oil stocks, as well as global oil supply developments. Extreme volatility was exhibited in the CBOE Crude Oil Volatility Index, which hit a new record high of 325 on 21 April.

Nonetheless, in late April, oil futures prices recovered from low levels, buoyed by optimism about the start of production adjustments on 1 May and expectations that major oil producers would accelerate efforts, in addition to signs that lower production in several countries, such as the US and Canada, could slow a growing global supply overhang. Furthermore, US oil producers announced further output adjustments in early May, while the US rig count continued to decline sharply for the seventh week in a row, to the week of 1 May. At the same time, signs of a recovery in activity in some countries like China, and the announcement of plans to start lifting COVID-19 restrictions on some businesses in several countries and in some US states added support.

Table 1 - 2: Crude oil futures, US\$/b

	Mar 20	Apr 20	Change Apr/Mar	%	Year-to-date 2019	2020
Future crude						
NYMEX WTI	30.45	16.70	-13.75	-45.2	57.20	38.42
ICE Brent	33.73	26.63	-7.10	-21.0	65.78	44.84
DME Oman	34.22	23.93	-10.30	-30.1	65.63	43.85
Spread						
ICE Brent-NYMEX WTI	3.28	9.93	6.65	202.9	8.59	6.42

Note: Totals may not add up due to independent rounding.

Sources: CME, DME, ICE and OPEC.

In April, **ICE Brent** declined by \$7.10, or 21.0%, to average \$26.63/b, and **NYMEX WTI** fell by \$13.75, or 45.2%, to average \$16.70/b. Y-t-d, ICE Brent was \$20.94 lower, or 31.8%, to average \$44.84/b, while NYMEX WTI was lower by \$18.78, or 32.8%, compared with the same period a year earlier, to average \$38.42/b. **DME Oman**

Crude Oil Price Movements

crude oil futures prices fell m-o-m in April by \$10.30, or 30.1%, to settle at \$23.93/b. Y-t-d, DME Oman was lower by \$21.78, or 33.2%, at \$43.85/b.

On 12 May, ICE Brent stood at \$29.98/b and NYMEX WTI at \$25.78/b.

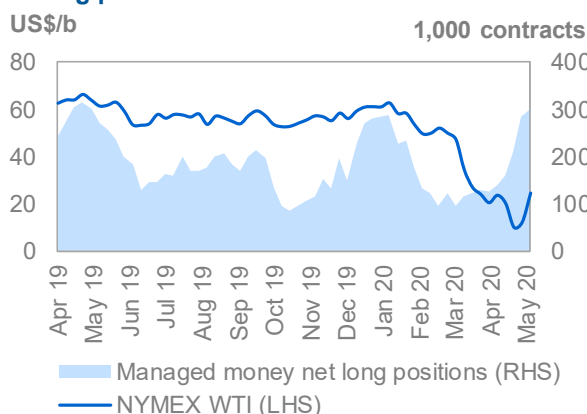
After narrowing for three consecutive months, the **ICE Brent/NYMEX WTI spread** widened significantly in April by \$6.65/b, to average \$9.93/b, after NYMEX WTI fell sharply and even hit an unprecedented negative level on 20 April. The WTI price remained under pressure amid an acute oil surplus in US PADD2 and PADD3, exacerbated by a sharp decline in oil demand and heavy refinery run cuts, as well as high US oil supply, which resulted in a rapid increase in US crude oil stocks, particularly in landlocked Cushing. Crude oil stocks at Cushing, Oklahoma, jumped by about 21 mb between late March and late April, according to US Energy Information Administration (EIA) data, and analysts expected that maximum capacity could be reached in the coming weeks. Lower US crude oil exports in April also weighed on US crude values. However, the value of WTI in the USGC, or WTI Houston, increased in April against North Sea Dated Brent and WTI at Cushing.

Despite a significant decline in oil prices, **hedge funds and other money managers** firmly raised their combined futures and options net long positions in April in both ICE Brent and NYMEX WTI contracts, after they reached low levels the previous month. Speculators were betting on a recovery in prices after Brent hit 18-year lows, while NYMEX WTI had traded negatively.

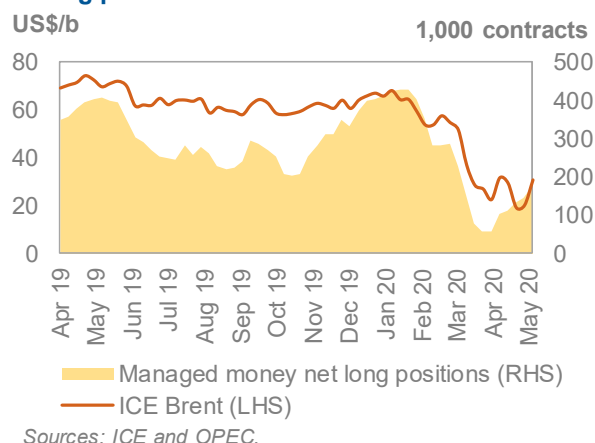
Net long positions in ICE Brent rose for four consecutive weeks in April, due to sharp declines in short positions on expectations that oil prices could rebound amid signs of a gradual recovery in economic activity in some countries, like China, and the announcement of plans to start lifting COVID-19 restrictions in several countries. In addition, the global oil surplus is expected to ease as the new agreement on production adjustments from OPEC and non-OPEC participating countries in the DoC took effect on 1 May, as well as signs of lower oil production in several non-OPEC countries. Net long positions in ICE Brent futures and options rose by 154%, or 86,757 contracts, over April to 143,126 lots in the week of 28 April, ICE data showed. Short bets fell by 44% to 90,840 contracts, while long bets rose 6% to 233,966 lots.

Similarly, speculators increased their **net long positions in WTI** to reach their highest level since early January this year. Speculators were betting on a price recovery, as several US states announced the lifting of COVID-19 restrictions, and more US oil producers announced further production adjustments, while the active rig count had dropped rapidly and considerably for seven consecutive weeks. Money managers increased their net long positions in NYMEX WTI by 124%, or 156,848 contracts, to stand at 283,298 lots in the week of 28 April. This is due to a rise of 111,848 lots in long positions and a decrease of 45,000 contracts in short positions, according to the CFTC.

Graph 1 - 2: NYMEX WTI vs. Managed Money net long positions



Graph 1 - 3: ICE Brent vs. Managed Money net long positions

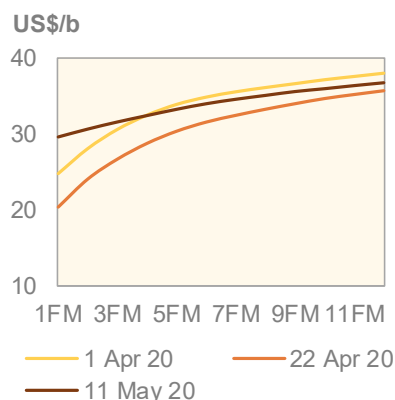


Consequently, the long-to-short ratio of speculative positions in the ICE Brent contract rose in late April to 3:1, compared with 1:1 in late March, and the NYMEX WTI long-to-short ratio rose to about 5:1 contracts in late April, compared with 2:1 in late March. Total futures and options open interest volume on the two exchanges fell slightly by 2%, or 117,272, contracts in April to stand at 6.9 million contracts in the week ending 28 April.

The futures market structure

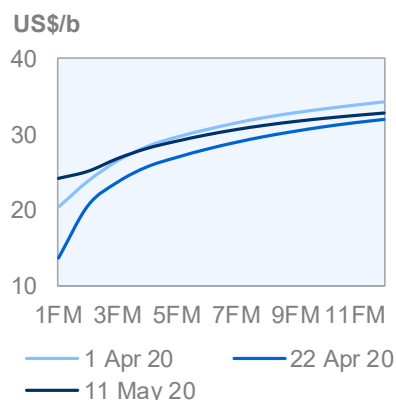
The contango structure of the forward curve of **all crude futures benchmarks steepened** further in April on further worsening global oil market fundamentals and a rapid increase in global oil stocks. The collapse of oil demand, refinery run cuts and rising global oil supply resulted in a large surplus in the oil market and massive oil stock builds, both onshore and offshore. However, the contango structure flattened in late April and early May on signs of a beginning recovery in market fundamentals.

Graph 1 - 4: ICE Brent forward curves



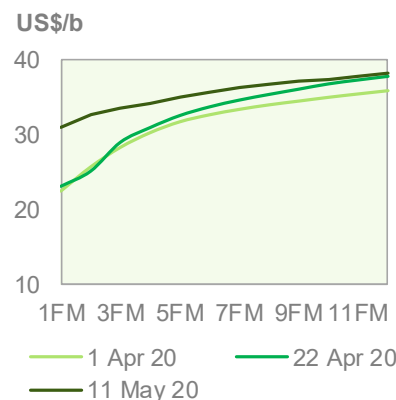
Sources: ICE and OPEC.

Graph 1 - 5: NYMEX WTI forward curves



Sources: CME and OPEC.

Graph 1 - 6: DME Oman forward curves



Sources: DME and OPEC.

The **ICE Brent** term structure moved deeper into contango in April, with prompt prices settling much lower compared with forward values, as rising oil availability, unsold volumes and shrinking oil demand, particularly in the Atlantic Basin, pushed prompt prices sharply lower. The rapid increase in global oil stocks and concerns that storage could reach its maximum capacity, in addition to a substantial increase in demand for floating storage and soaring freight rates, exacerbated the decline in prompt oil prices. Brent's value was under pressure from accumulating unsold cargoes in the Atlantic, while sellers heavily reduced their prices to find a home for their crude. The ICE Brent M1/M3 inter-month spread widened to a contango of \$4.86/b in April, on a monthly average, up from a contango of \$3.10/b in March, while the ICE Brent M1/M6 spread widened to a super-contango of \$8.30/b, in April, on a monthly average.

The **NYMEX WTI** contango curve's shape also steepened significantly in April, signaling a more bearish market direction amid a historical contraction in US oil demand due to COVID-19 restrictions, low refinery utilization, and swelling US crude oil stocks, particularly in Cushing, which were expected to reach maximum capacity within weeks. However, the NYMEX WTI term structure flattened late in the month and in early May, as several US states announced the lifting of COVID-19 restrictions and more US oil producers announced production adjustments, while the US rig count declined sharply in March and April. The NYMEX WTI M1/M3 inter-month spread widened to a contango of \$10.78/b in April, on a monthly average, while the NYMEX WTI M1/M6 spread widened to a contango of \$14.19/b, in April, on a monthly average.

The contango structure of **DME Oman** also steepened significantly in April, particularly at the front of the curve, as prompt prices in the Middle East remained depressed amid high volume availability for exports, while demand remained weak from Asian refiners, such as India. Furthermore, the ongoing low OSPs of Middle East crudes for May loading weighed prompt prices lower. The DME Oman M1/M3 intermonth spread widened to a contango of \$9.24/b in mid-April.

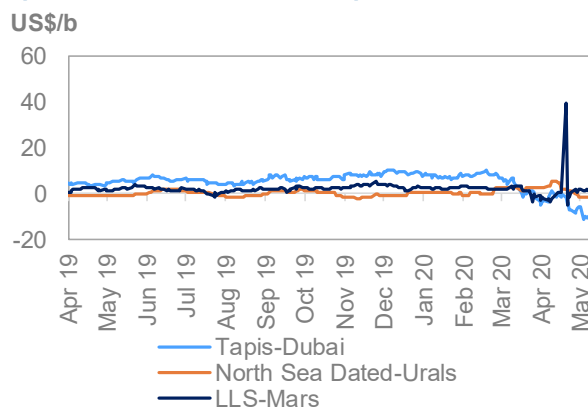
The contango in forward prices for spot benchmarks deepened in April. Regarding the **M1/M3 structure**, the North Sea M1/M3 contango widened in April on a monthly average by \$3.27 to \$6.42/b. In the US, the WTI M1/M3 contango also widened in April, the most among other benchmarks, increasing by \$7.87 to \$10.56/b. The Dubai M1/M3 contango widened as well, increasing by \$5.20 to \$8.21/b on a monthly average.

Crude spreads

Compared with March, **sweet/sour crude differentials** were little changed in April in Europe and in the USGC, though they narrowed significantly in Asia, with the sour crude Dubai value moving to a premium against light sweet crudes in Asia, like Tapis. Medium sour Dubai was supported by expectations of less sour crude supply in the coming months due to heavy production adjustments from the Middle East, Russia and Canada.

In **Europe**, the Brent-Urals spread remained steady but large in April, as the Urals value remained weak in the first part of the month. Lower demand from European refiners for the grade and unsold cargoes for April loading continued to weigh on the grade value, while arbitrage for Urals supplies to Asia was difficult due to a sharp increase in freight rates. However, the value of Urals strengthened in late April, even turning into a premium against North Sea Dated after loading programmes for May showed a significant reduction compared with April, as the global agreement for production adjustments started on 1 May. In April, the premium of North Sea Dated to Urals was almost unchanged m-o-m by, widening only 2¢ to \$2.22/b.

Graph 1 - 7: Differential in Europe, Asia and USGC



Sources: Argus, OPEC and Platts.

However, in **Asia**, the premium of light sweet Tapis over sour Dubai turned to a discount, as the Tapis value fell more than that of Dubai amid weak refining margins for light distillate products and the expectation of a tightening crude sour market in the coming months due to production adjustments from the Middle East, Russia and Canada. Furthermore, the sharp decline in light, sweet crude values amid high availability in the Atlantic Basin weighed on Tapis's value. The Tapis-Dubai spread fell from a premium of \$2.20/b in March to a discount of \$3.52/b in April, a decline of \$5.72 m-o-m. Nonetheless, the Brent-Dubai exchange of futures for swaps (EFS) recovered in late April and early May to around minus \$1/b.

In the **USGC**, sweet/sour differentials were little changed, with the premium of LLS over medium sour Mars narrowing by only 4¢/b in April, averaging \$1.11/b. The Mars value was partly supported by supportive diesel margins, compared with light distillates like gasoline and naphtha.

Commodity Markets

Energy commodity prices dropped sharply for the second consecutive month in April led by crude oil, with prices falling due to the oversupply resulting from the global COVID-19 containment measures. Natural gas hub-based prices, retreated in the US, and the drop was even larger in Europe and Asia, due to limited industrial demand as a result of the lockdowns. In addition, there is an expectation of lower prices ahead for LNG-term contracts as a result of the crude oil price drop. Coal prices also fell as Chinese coal production recovered.

Base metals declined by around 5%, the third consecutive monthly drop, due to the continuing contraction in industrial activities across the world. In the group of precious metals, gold prices rose on average during the month on the back of lower real interest rates.

Trends in selected commodity markets

The **energy price index** fell by around 30.2% m-o-m in April. It was down by 33.1% in the January-April period, compared to the same months in 2019. As in March, oil, natural gas and coal prices declined.

The **non-energy index** fell m-o-m by 2.8%, with both metals and agricultural commodities retreating. Compared to the January-April 2019 period, the non-energy index was down by 2.6% over the first four months of 2020.

Table 2 - 1: Commodity prices

Commodity	Unit	Monthly averages			% Change Apr 20/Mar 20	Year-to-date	
		Feb 20	Mar 20	Apr 20		2019	2020
Energy*	Index	65.0	42.1	29.4	-30.2	78.8	52.7
Coal, Australia	US\$/mt	67.6	66.7	58.6	-12.3	93.5	65.6
Crude oil, average	US\$/b	53.3	32.2	21.0	-34.7	62.5	42.1
Natural gas, US	US\$/mbtu	1.9	1.8	1.7	-3.0	2.8	1.9
Natural gas, Europe	US\$/mbtu	2.9	2.7	2.1	-22.0	5.8	2.8
Non-energy*	Index	81.4	78.4	76.2	-2.8	82.2	80.1
Base metal*	Index	76.0	70.5	67.3	-4.6	84.4	73.6
Precious metals*	Index	120.2	116.6	122.6	5.1	98.8	119.4

Note: * World Bank commodity price indices (2010 = 100).

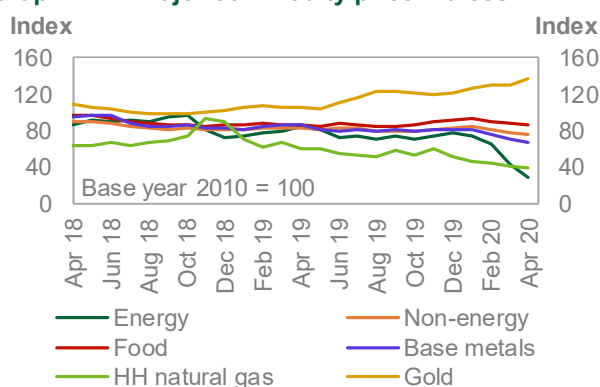
Sources: World Bank and OPEC.

In April, the **Henry Hub natural gas index** dropped on average by 3.0% to \$1.74/mmbtu. Prices traded sideways weakened again by lower demand as a result of the economic slowdown due to the COVID-19 containment measures. It should be noted, however, that some episodes of below average temperatures and the expectation of lower associated gas production provided support. According to the US Energy Information Administration's (EIA) storage report, utilities added 109 bcf to working gas underground storage during the week ending 1 May. This injection left total working gas in underground storage at 2,319 bcf, which was 20.5% above the five year average. As mentioned in the two previous MOMRs, plummeting LNG prices in Europe and Asia (below \$2/mmbtu) complicate the economics of US LNG exports for the rest of 2020.

Natural gas prices in Europe plunged in April with the average **Title Transfer Facility price** down by 22% to \$2.1/mmbtu. As mentioned in the previous MOMR, lower demand from industrial activities as a result of Europe's lockdown measures to contain COVID-19, added to the already bloated inventory levels in the EU after a warm winter. Furthermore, with LNG prices plummeting in Asia, below \$2/mmbtu, the attractiveness of shipping LNG cargoes to Europe over Asia increases. Inventories for EU member states were at 62% at the end of April, according to Gas Infrastructure Europe, compared to around 48% at the end of March 2019.

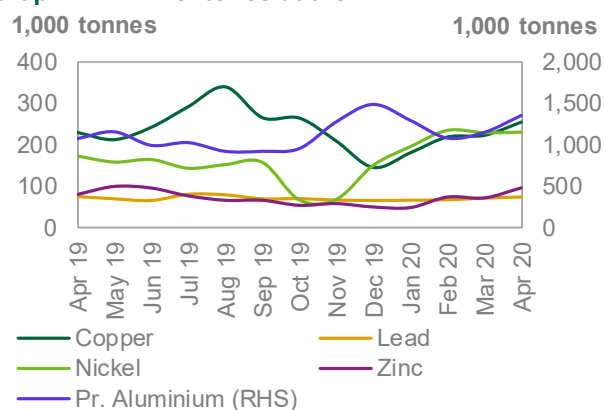
Australian thermal coal prices declined m-o-m in April by 12.3% to average \$58.6/mt. The drop mainly reflected the fast recovery in raw coal output in China, which was up by 9.6% y-o-y, after being down by 6.3% in the January-February window, according to the China National Bureau of Statistics. Additionally, thermal power output was still down, by 7.5% in March, albeit better than the 8.9% y-o-y drop in the January-February period. These developments could weaken imports going forward, although the most recent customs data for April showed that Chinese imports remained strong in spite of the rising output, up by 11% y-o-y. Y-t-d, imports are up by 26.9%.

Graph 2 - 1: Major commodity price indices



Sources: World Bank; S&P Goldman Sachs; Haver Analytics and OPEC.

Graph 2 - 2: Inventories at the LME



Sources: LME, Thomson Reuters and OPEC.

The **base metal price index** fell on average m-o-m by 4.6% in April, however, prices strengthened towards the end of the month as financial markets recovered amid improving investor risk appetite. Moreover, manufacturing activity has started to recover in the main consumer China, despite generally falling elsewhere.

Average monthly copper prices declined by 2.4% to 5057.97/mt in April. The end of month inventories at London Metal Exchange (LME)-designated warehouses rose over the month to 253,700 tonnes from 222,225 tonnes at the end of March, signalling some additional physical market weakening. According to International Copper Study Group estimates, the refined copper balance (adjusted for unreported Chinese inventories) in January 2020 showed a surplus of around 65,000 tonnes, after showing a deficit of around 520,000 tonnes in 2019. As already mentioned, prices saw some recovery in the second half of the month also supported by improving investor sentiment.

Iron ore prices fell on average by 4.8% in April to around \$89.0/mt. Prices weakened at the beginning of the month on the extension of lockdown measures across the world, however, falling stockpiles in China as a result of an increase in steel making activity, helped support prices. Indeed, Chinese imports rose by 11% y-o-y in April, and are up 5.4% in the January-April period compared to the same four months in 2019.

In the group of **precious metals**, gold was up by 5.4%, as the US Federal Reserve managed to keep treasury yields lower through asset purchases, as well as support to other central banks, after a brief spike in March.

Investment flows into commodities

Open interest (OI) increased on average in April for selected US commodity futures, such as crude oil, but declined for natural gas, copper and precious metals, following the trend from the previous month. On average, speculative net long positions decreased for gold, but increased for natural gas, copper and precious metals, which also mirrored the previous month's trend.

Table 2 - 2: CFTC data on non-commercial positions, 1,000 contracts

Selected commodity	Open interest		Net length			
	Mar 20	Apr 20	Mar 20	% OI	Apr 20	% OI
Crude oil	2,211	2,309	149	7	235	10
Natural gas	1,329	1,219	-163	-12	-15	-1
Precious metals	757	631	200	26	165	26
Copper	210	182	-37	-17	-22	-12
Total	4,507	4,341	162	6	208	22

Note: Data on this table is based on monthly average.

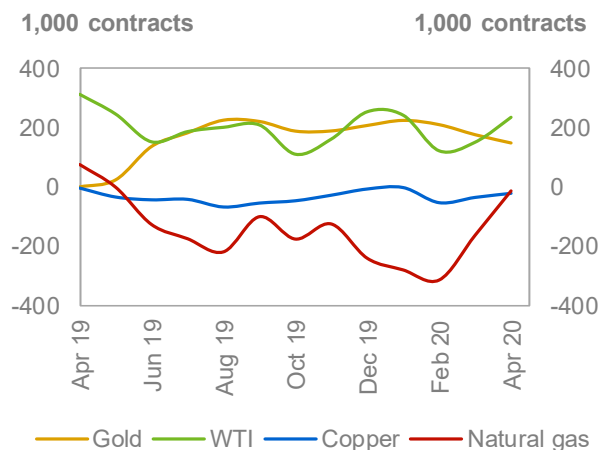
Sources: CFTC and OPEC.

Henry Hub's natural gas OI declined by 8.3% m-o-m in April as money managers decreased most of their net short positions, falling to 15,019 contracts from 163,392 contracts in March. This development was supported by the expectation of a reduction in natural gas production – due to low oil and natural gas prices – and some localized colder than average weather in the US.

Copper's OI decreased by 13.4% in April. Money managers decreased their net short positions by 38.6% to 22,479 contracts from 36,588 contracts in March, mainly on the expectation of a restart of industrial activities around the world.

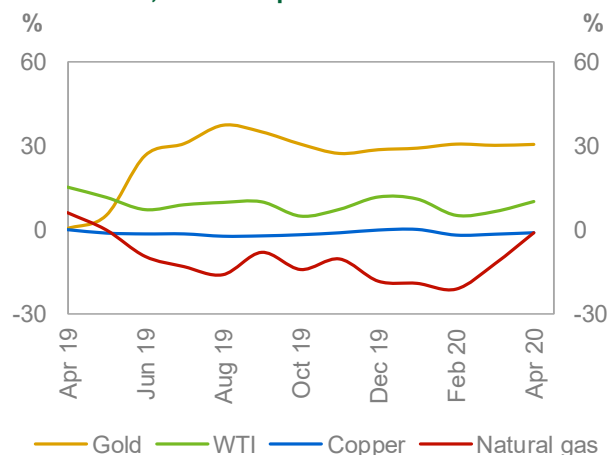
Precious metals' OI fell by 16.6% in April. Money managers' net long positions decreased by 17% to 165,188 contracts from 199,854 contracts the previous month. Money managers remain bullish for gold, as mentioned in the previous MOMR, given interest rates are expected to remain close to zero in the US for an extended period of time.

Graph 2 - 3: Money managers' activity in key commodities, net length



Note: Data on this graph is based on monthly average.
Sources: CFTC and OPEC.

Graph 2 - 4: Money managers' activity in key commodities, as % of open interest



Note: Data on this graph is based on monthly average.
Sources: CFTC and OPEC.

World Economy

Examining the most recently published economic data, including the severe effects of lockdown measures, and taking into account the latest 1Q20 growth numbers from various major economies, available sentiment and output numbers, the 2020 global economic growth forecast was revised down to -3.4%, compared with -1.5% in April. Analysis shows that the major decline in output is being very much impacted by severe lockdown measures. A recovery is forecast as soon as these measures are lifted, which is already happening in some economies. This, in turn, is anticipated to have a considerable positive impact on 2H20 growth. The rebound will be accompanied and further supported by unprecedented fiscal and monetary stimulus. However, the hospitality and leisure sectors, including travel, will remain significantly impacted. Default rates are expected to rise in 2H20 and unemployment is forecast to remain high. Hence, while a recovery is expected to provide some relief to the ongoing downturn, it will not be able to compensate for the significant decline seen in 1H20. The anticipated recovery of the oil sector, supported by the efforts of OPEC and non-OPEC oil-producing nations to rebalance the market, may provide further support to global economic developments.

OECD growth for 2020 has been revised down sharply by 2.0 percentage points to stand at -6.1%, the largest decline these economies have seen on average by far since WWII. The 2020 GDP growth rates within the various economies vary and it is forecast that – after already very weak 1Q20 growth – especially the Euro-zone economies will be hard hit, with a decline in GDP of 8.0%, while the US is forecast to decline by 5.2% and Japan by 5.1%. The UK is forecast to be particularly hard hit, facing a decline of 8.5% in 2020.

Within the major emerging economies, China experienced a significant decline in 1Q20, given that the economy experienced peak infections earlier than other countries. It had already started to recover in 2Q20. Positive growth will first return in 2H20, when the global economy will be able to absorb Chinese exports. This will lead to economic growth for 2020 in China of 1.3%. In light of the continuation of some lockdown restrictions in India until mid-May, the economy will face more significant repercussions and is now forecast to decline by 0.2% in 2020. With the severe impact of COVID-19 and ongoing challenges in commodity markets, both Brazil and Russia are now forecast to decline considerably in 2020, by 6.0% and 4.5%, respectively.

Table 3 - 1: Economic growth rate and revision, 2019-2020*, %

	World	OECD	US	Euro-zone	UK	Japan	China	India	Brazil	Russia
2019	2.9	1.7	2.3	1.2	1.4	0.7	6.1	5.3	1.0	1.4
Change from previous month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2020	-3.4	-6.1	-5.2	-8.0	-8.5	-5.1	1.3	-0.2	-6.0	-4.5
Change from previous month	-1.9	-1.9	-1.1	-2.0	-3.5	-1.2	-0.2	-2.2	-3.6	-4.0

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

Global

Update on latest developments

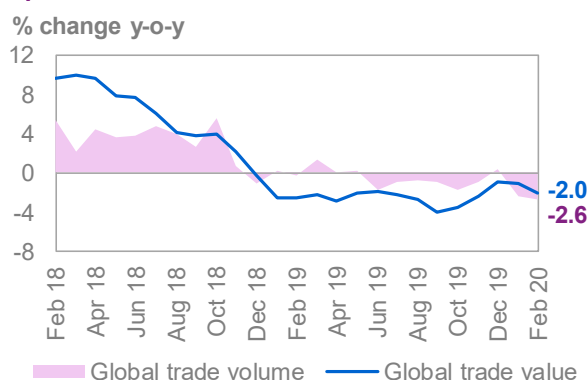
The latest release of 1Q20 GDP growth, in combination with the latest monthly output numbers, provide a good overview into the depth of the ongoing economic decline and how the global economy might develop over the course of 2020. Among the key takeaways is that the more severe the lockdowns in the various economies, the higher the likelihood of a corresponding negative impact on the respective economy. Correspondingly, the timeline of lockdown measures defined the impact. Nonetheless, some economies have fared better than others. Declines were already materialising in 1Q20 when COVID-19 was only an issue in China and to some extent Asia; the US was declining by 1.2% q-o-q on a seasonally adjusted base (SA), compared with the Euro-zone, which was set to decline by 3.8% q-o-q SA. At a later stage, the spread accelerated in countries outside of China, particularly in the advanced economies of the northern hemisphere. This led to the implementation of lockdown measures in those economies towards the end of 1Q20. Hence, although the impact of lockdown measures should have been relatively benign in 1Q20, some

select economies were already showing considerable strain and quarterly declines. China, which experienced its COVID-19 peak in 1Q20, faced a decline of 6.8% y-o-y. This has certainly had a significant impact on trading partners around the world and was an important element that, together with sharply declining business and consumer sentiment in 1Q20, exacerbated the already strong decline in the first three months of the year, including in economies that were less affected by the pandemic.

Positively, global asset markets have seen a significant recovery and were already compensating for a majority of the losses that occurred since the outbreak of COVID-19. Not only did global stock markets recover, but fixed income markets also saw a normalisation of spreads, signalling that a liquidity crisis in financial market weak spots has thus far been avoided. Commodities also recovered somewhat from low levels prices reached back in March and April, though there is still some gap to close. The broad recovery in asset markets is certainly due to unprecedented monetary easing and fiscal stimulus measures that currently account for almost \$20 trillion globally, or more than 20% of global GDP, including guarantees. Moreover, some governments have already started to loosen lockdown measures. This implies that economic activity will recover in major economies, which also considerably lifted investor sentiment.

Trade was a major support factor in past years, lifting global economic growth. Hence, the carryover of last year's US-centred trade disputes, now in combination with COVID-19 and an increasing tendency toward local sourcing, was certainly not helpful to this important element of the global economy. Global trade volumes declined by 2.6% y-o-y in February. Trade in value terms was negative as well, falling by 2.0% y-o-y in February.

Graph 3 - 1: Global trade



Sources: Netherlands Bureau for Economic Policy Analysis, Haver Analytics and OPEC.

Near-term expectations

Taking the 1Q20 experience as a guideline for 2Q20 global GDP growth, GDP is forecast to decline more severely in most major economies, with the exception of China, which faced peak lockdown in 1Q20. Most major economies struggled with severe lockdown measures during April, which are in place to a varying degree up to mid-May. This implies that 2Q20 decline rates will be significantly larger than in 1Q20. While on a yearly base 1Q20 global growth is forecast to decline by almost -3% y-o-y, the 2Q20 decline is estimated at -10% y-o-y, before seeing a recovery in 2H20, leading to almost normal GDP growth levels in 4Q20. Hence, the underlying key assumption has not changed that the impact of COVID-19-related developments outside of China will continue well into 2Q20, with most regions forecast to see a slowdown through 2Q20, recovering only towards the second half of 3Q20. Importantly, this assumes that the pandemic is widely contained by 3Q20 and that lockdown measures will be reduced to a large extent on a global basis, especially in the major economies. China's trajectory is forecast to see a sharp deceleration in 1Q20, and to a lesser extent in 2Q20, before recovering in 2H20. By 4Q20, global activity is assumed to have almost normalized.

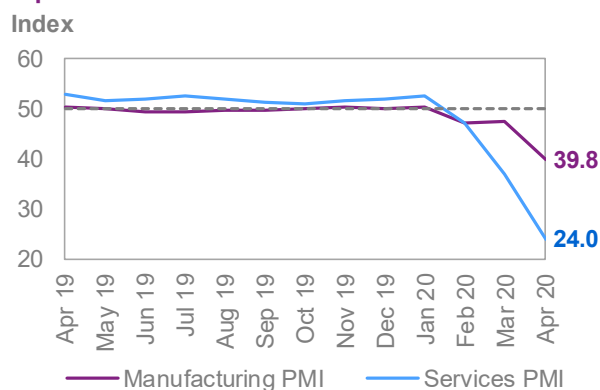
Some uncertainties will remain, as unemployment levels in the US reach their peak in 2Q20 and it is not entirely clear if and how quickly the labour market will recover. Given the fact that US private household consumption accounts for around 10% of global GDP, this is certainly an important element that needs to be monitored. Furthermore, unemployment rates across the world have started to rise. If they do not recover quickly, it will impact spending ability in 2H20. It should also be expected that following extensive support measures in advanced economies, default rates will rise in 2H20, potentially leading to some sectorial dislocations and potentially also impacting financial markets. Even without these effects, the uncertainty of near-term developments regarding COVID-19 remain and, as in past pandemics, a second or third wave may hit even those economies that have so far managed to contain the virus well.

Global trade is forecast to remain impacted by an ongoing trend in domestic sourcing and the replacement of international supply chains by domestic business partners. Given that travel will also remain very much curtailed, goods and services trading will decline sharply in 2020 by more than 10%. US-China trade tensions are still high and it remains to be seen to which extent China will honour its obligations regarding US imports under Phase 1 of the trade deal.

Finally, in value terms, a sharp decline is forecast to materialise in global trade as well in 2020 and particularly in 1H20, given the severe decline in commodity prices, especially oil. Due to ongoing OPEC+ actions, a recovery in 2H20 is anticipated in the forecast

Global purchasing managers' indices (PMIs) in April already considerably reflect the impact of the crisis. The global manufacturing PMI continued its decline to stand at 39.8, compared with 47.3 in March. The services sector PMI retracted very significantly to a level of 24, after showing an already low level of 36.8 in March.

Graph 3 - 2: Global PMI



Sources: JP Morgan, IHS Markit, Haver Analytics and OPEC.

As can be seen in GDP growth data released by various economies for 1Q20, the impact of lockdown measures has been severe, with a larger effect forecast to take hold in 2Q20, while a recovery in 2H20 will be less accentuated and starting from a lower base. This leads to a global GDP growth revision for 2020 to -3.4%, compared with -1.5% the previous month. Uncertainties are high, and while downside risks remain, upside potential may come from quicker-than-expected positive developments regarding the COVID-19 situation, either in the form of a treatment, a vaccine, or more-effective-than-expected containment measures, particularly in the major economies.

Table 3 - 2: World economic growth rate and revision, 2019-2020*, %

	World
2019	2.9
Change from previous month	0.0
2020	-3.4
Change from previous month	-1.9

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

OECD

OECD Americas

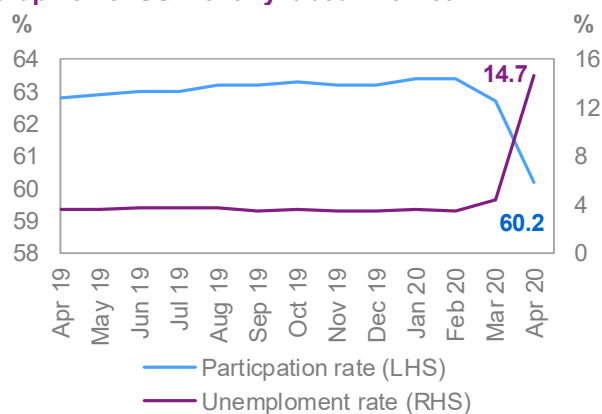
US

Update on the latest developments

While lockdown measures in the US only started in March and most of 1Q20 saw little domestic impact from COVID-19, GDP growth was still reported at -4.8% q-o-q seasonally adjusted annualised rate (SAAR). In addition to the start of lockdown measures in March, declining business and consumer sentiment may have also lent negativity, adding pressure to declining investments. This trend was accentuated by the sharp decline in oil prices, significantly impacting the US energy sector. While private household consumption declined by -7.6% q-o-q SAAR, investments declined by -5.6% q-o-q SAAR. This especially affected investment into structures and equipment, which are both very much driven by the energy sector, and which declined by -9.7% and -15.2% q-o-q SAAR, respectively. Negative developments in 1Q20 were accompanied by a strongly weakening labour market, with around 33 million accumulated jobless claims since the onset of the COVID-19 crisis. Consequently, consumer confidence, as measured by the Conference Board, retracted to 86.9 in April, compared with a March level of 118.8. In the meantime, unprecedented monetary and fiscal stimulus has been enacted to counterbalance the negative effects of the current crisis. The fiscal stimulus enacted so far includes the \$2.4 trillion CARES package, in addition to other smaller relief measures that in total amount to around \$2.6 trillion, or almost 13% of the US GDP. In addition to this, the Federal Reserve (Fed) has also supplied markets with ongoing monetary support, announced to be theoretically unlimited when it comes to its quantitative easing measures. This has lifted stock markets, which have recovered a large part of the COVID-19-related decline, and eased liquidity constraints in fixed-income markets.

The very important US labour market was massively negatively impacted in recent weeks. In April, the unemployment rate stood at 14.7%. This compares with 3.6% at the beginning of the year and reflects the dramatic and extremely quick deterioration of the US economy. Non-farm payrolls declined by 20,357 million. The participation rate also fell considerably, declining to 60.2% in April, compared with 63.4% at the beginning of the year.

Graph 3 - 3: US monthly labour market



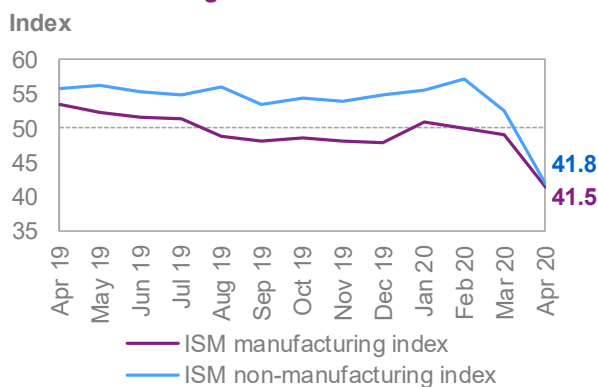
Sources: Bureau of Labor Statistics and Haver Analytics.

Near-term expectations

After already facing a severe contraction in 1Q20, the 2Q20 decline in the US economy is forecast to be even more severe. The 1Q20 GDP decline stood at -4.8% q-o-q SAAR, and 2Q20 GDP growth is forecast to contract by -35% q-o-q SAAR. As in other major economies, the easing of lockdown measures by around mid-May is anticipated to slowly lead into a recovery that will materialise in 2H20. These economic improvements are also forecast to slow the projected peak unemployment rate of 18% in 2Q20. However, the full-year unemployment rate is still forecast to reach 11.2%. These improvements will feed into rising consumption and investment. OPEC+ efforts to rebalance the oil market are forecast to benefit the US economy through less volatile and more normalised oil prices, which may not only lift output values and support job creation in the ailing energy sector, but should also lead to at least some rebound in energy sector-related investments. Inflation levels, due in no small part to the sharp decline in energy prices, will be well below the Fed's envisaged target level of around 2% in the coming months, and are forecast to recover in 2H20. Hence, monetary stimulus is forecast to be largely maintained and further fiscal stimulus of around \$500 billion, around 2.5% of the GDP, is expected to be added in the coming months, with a relatively quick positive effect expected on spending and growth.

The country's economic slowdown is already largely reflected in April PMI levels, as provided by the Institute for Supply Management (ISM). The manufacturing PMI fell to 41.5 in April, compared with 49.1 in March. The services sector index retracted to 41.8, compared with 52.5 in March. Given the ongoing slowdown, the PMIs are forecast to fall further in May before rebounding amid the easing of ongoing lockdown measures.

Graph 3 - 4: US-ISM manufacturing and non-manufacturing indices



Sources: Institute for Supply Management and Haver Analytics.

After an already significant slowdown in 1Q20, it is forecast that the COVID-19 impact will peak in 2Q20, causing a decline of 5.2% in 2020. This compares with the previous month's estimated decline of 4.1%. While downside risk prevails, much will depend on how the COVID-19 situation develops. Hence, a potential upside may also materialise if the virus's impact lessens, especially in 3Q20, if the current stimulus measures provide a sound basis, and if liquidity injections push growth up more considerably than is currently accounted for in the forecast.

Table 3 - 3: US economic growth rate and revision, 2019-2020*, %

	US
2019	2.3
Change from previous month	0.0
2020	-5.2
Change from previous month	-1.2

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

OECD Europe

Euro-zone

Update on the latest developments

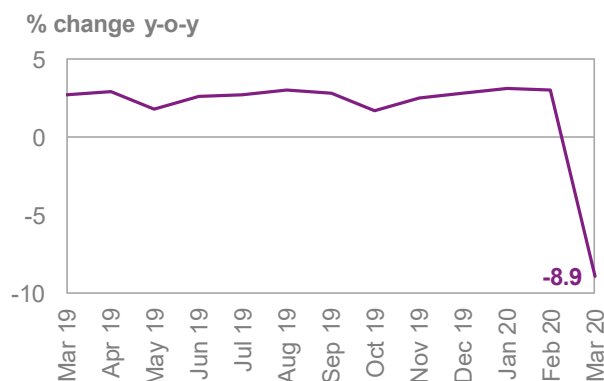
Italy, France and Spain were the countries most severely hit in OECD Europe by the COVID-19 pandemic, though the situation seems to have improved. Not only are infection rates falling, in line with global developments, but the countries are also envisaging an easing of lockdown measures to normalise life as much as possible. Euro-zone GDP growth for 1Q20 was reported at -3.8% q-o-q seasonally adjusted (SA), with varying GDP declines across the Member Countries. Countries which faced more severe lockdown measures were generally more negatively affected. France's economy declined by -5.8% q-o-q SA, Italy's economy fell by 4.8% q-o-q SA and Spain's economy fell by 5.2% q-o-q SA. With many support measures in place for the labour market, the unemployment rate in the Euro-zone could be kept at a relatively modest level until March, the latest available month, when it reached 7.4%, only a notch worse than the 7.3% seen in February.

However, similar to other advanced economic regions, the Euro-zone experienced a strong decline in most economic indicators recently, including industrial production and retail sales. Industrial production fell by 1.6% y-o-y, while retail sales declined significantly, falling by 8.9% y-o-y in value terms. Consequently, the European Commission's overall business sentiment index fell by 27.2 points to stand at 67.0, reaching almost the same low recorded during the great financial crisis in 2009. Positively, major stimulus measures were announced in the Euro-zone, including fiscal measures in member economies and monetary stimulus measures by the European Central Bank (ECB). Including guarantees, these support measures account for more than 3 trillion euros, or around 25% of the Euro-zone's annual GDP. This is forecast to build a good basis for a recovery in 2H20. The positive impact of monetary stimulus measures could already be seen in Euro-zone lending activity, a motor for investment and a signal for the health of the ECB's transmission channel. Lending to the private sector increased by 4.3% y-o-y in March, the highest level since 2009. This compares with 3.1% y-o-y in both February and January.

Near-term expectations

While data from 1Q20 indicates that 2Q20 growth will be even more severely negative, ongoing stimulus efforts, especially monetary easing measures by the ECB, in combination with the easing of lockdown measures, are forecast to lift growth in 2H20. However, this recovery will not in any respect be able to recover the massive losses of 1H20. After a decline of -3.8% q-o-q SA in 1Q20, the 2Q20 slowdown is forecast at -11.4% q-o-q SA. This is forecast to be followed by a 2H20 recovery of 5.4% on average. The recovery will be mainly lifted by a comeback in consumption, investment and exports. However, some uncertainties remain. The degree of recovery reached in the labour market remains to be seen. While the Euro-zone's unemployment rate of only 7.4% in March is very moderate, it is forecast to significantly rise in the coming months. This may lead to less buoyant consumption in 2H20 than previously anticipated. An upside may come from further fiscal stimulus measures and a more coherent strategy by the EU on the further handling of the crisis. Taking insights from 1Q20 GDP developments, the ongoing challenging COVID-19 situation in France will probably cause a sharper-than-expected impact on domestic developments and may continue to negatively impact domestic consumption well into 3Q20. An obvious drag will also come from the leisure and hospitality sector, with the tourism sector — a very important economic sector for most Euro-zone economies and particularly the large economies of France, Italy and Spain — heavily impacted. And while Germany may be less dependent on tourism, it is forecast that the automobile sector, which is among the most important sectors in Germany, will continue to be negatively impacted by the ongoing crisis as big-ticket item spending will very likely be on hold for some time. Moreover, Germany is also a major exporting economy, and while trade is forecast to recover in 2H20, it will remain subdued.

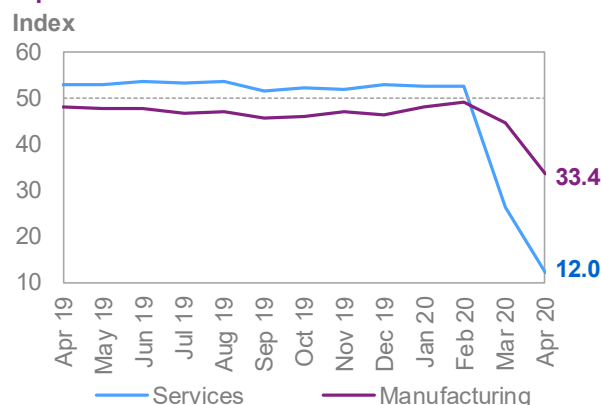
Graph 3 - 5: Euro-zone retail sales



Sources: Statistical Office of the European Communities and Haver Analytics.

The severe contraction is also reflected in the latest April PMI figures. The manufacturing PMI stood at 33.4 for the month, compared with 44.5 in March. The important PMI for services, the largest sector in the Euro-zone, declined sharply to stand at 12.0, compared with 26.4 in March. These important indicators point to a continuation of the ongoing slowdown well into 2Q20, especially in the services sector.

Graph 3 - 6: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

While the GDP contraction in 1Q20 was considerable, the Euro-zone's economic recession is forecast to peak in 2Q20, assuming a strong decline of almost 40% q-o-q SAAR, before recovering in 3Q20 and further accelerating in 4Q20. With these assumptions, the 2020 GDP growth forecast was revised down further to -8.0%, compared with -6.0% the previous month. While downside risk should be limited from this considerably contracted level, further uncertainties remain.

Table 3 - 4: Euro-zone economic growth rate and revision, 2019-2020*, %

	Euro-zone
2019	1.2
Change from previous month	0.0
2020	-8.0
Change from previous month	-2.1

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

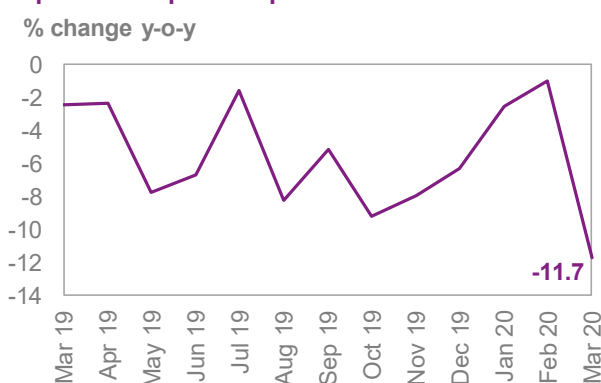
OECD Asia Pacific

Japan

Update on latest developments

The latest available indicators for Japan show that the economy was facing a significant contraction in 1Q20, with industrial production turning largely negative, retail sales falling, and exports declining. Japan already started the year in a weakened situation following a sales tax increase in 4Q19. 4Q19 GDP growth declined by -7.1% q-o-q SAAR, according to the Cabinet Office. The current COVID-19 situation is a further burden to an already relatively fragile economy. Exports declined by -11.7% y-o-y in March on a non-seasonally adjusted base, continuing a slump in external trade that began in December 2018.

Graph 3 - 7: Japan's exports



Sources: Ministry of Finance, Japan Tariff Association and Haver Analytics.

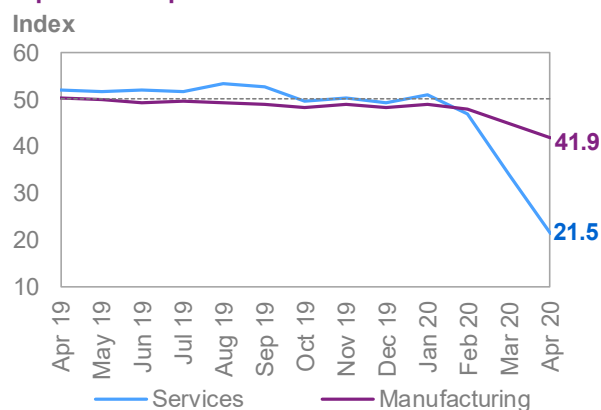
The government announced a multi-trillion yen fiscal stimulus that now accounts to more than 20% of GDP. The Bank of Japan (BoJ) accompanied these fiscal stimulus measures by announcing further quantitative easing through the unlimited buying of government bonds and by lifting its purchases of corporate debt substantially. The effectiveness of these measures will be limited, given that the BoJ already had no need to fully utilize its previous annual ¥80 billion buying pledge in Japanese government bonds to keep interest rates around zero. Meanwhile, industrial production declined by -6.8% y-o-y in March, compared to a major contraction of -3.7% y-o-y in February and continuing a decline in industrial output that started at the beginning of 2019. While retail sales were already severely impacted by the sales tax-increase in 4Q19, the downward slope continues after a quick recovery at the beginning of the year. Retail sales declined by -4.6% y-o-y, compared to a rise of 1.8% y-o-y in February. Consumer sentiment, as reported by the Cabinet Office, declined sharply, falling to 22.2 from 38.7 in January, marking the largest drop of the index on record.

Near-term expectations

Japan is forecast to be severely impacted by COVID-19-related developments in 1Q20 though it has so far avoided a larger public health crisis. The government extended the state of emergency until 31 May. Along with domestic challenges, the economy faces a decline in exports of goods and services, including an expected squeeze on travel and tourism. After an expected 1Q20 fall of -5% q-o-q SAAR, the decline is estimated to hit -25% q-o-q SAAR in 2Q20. While this is serious, it is less than the currently anticipated declines of around -35% q-o-q SAAR in the US and the almost -40% decline that is forecast for the Eurozone. The recovery in 2H20 is anticipated to be strong, but less than in the major OECD peer economies. While the stimulus measures will support the domestic recovery in 2H20, the recovery will also depend very much on the magnitude of the rebound in global trade, which is forecast to recover but will remain affected by the ongoing COVID-19 situation.

The country's low unemployment rate and the limited upside from the labour market in combination with historically high utilisation rates in Japan's industry will limit the upside from the stimulus measures as well. While they are certainly expected to be a major support factor in 2H20, GDP growth will not be able to move beyond the general capacity constraints. PMIs in April suggest the ongoing downturn in 1Q20 will continue into 2Q20. The manufacturing PMI stood at 41.9 in April, compared with 44.8 in March. The PMI for the services sector – which constitutes around two-thirds of the Japanese economy – fell sharply again, standing at 21.5, compared with 33.8 in March.

Graph 3 - 8: Japan's PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

While Japan's economy will be well supported by fiscal and monetary easing, these support measures may turn out to become less effective, given the capacity constraints and hence the limited upside. Exports and domestic consumption are both forecast to slow significantly in 2Q20, albeit at a lower level than in other major OECD economies.

Table 3 - 5: Japan's economic growth rate and revision, 2019-2020*, %

	Japan
2019	0.7
Change from previous month	0.0
2020	-5.1
Change from previous month	-1.2

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

Moreover, given that lockdown measures have been extended, and drawing on available output and sentiment indicators since the beginning of the year, Japan's GDP growth forecast was revised down to -5.1% for 2020. This compares to a forecast of -3.9% in the previous month.

Non-OECD

China

Update on the latest developments

China's GDP contracted by 6.8% y-o-y in 1Q20 for the first time since 1992, following 6% growth in 4Q19. This reflects the inalterable economic costs of two months of lockdown to contain the COVID-19 outbreak. However, recently released economic indicators suggest that the country's economic recovery started in mid-March, as economic activity saw less decline than in the previous month. In the context of China's GDP contribution in relation to various economic activities, when comparing 1Q20 versus 4Q19, final consumption expenditure contracted sharply to 4.4% compared with 3.5% growth the previous quarter, while gross capital formation dropped to -1.5% following growth of 1.9% in 4Q19. Meanwhile, total domestic demand sharply declined by -5.8% compared with 5.4% growth in the previous quarter, and net exports contracted by 1% compared with 0.7% growth in 4Q19.

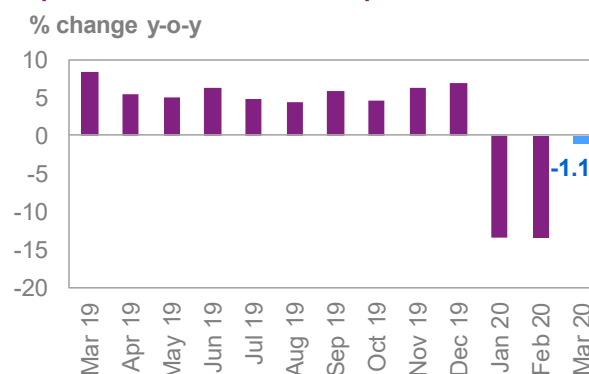
On the supply side, construction activities declined the most, contracting by -17.5% compared with growth of 5.3% in 4Q19, followed by manufacturing, which decreased sharply to -10.2% following 5.9% growth in 4Q19. Services fell steeply to -5.2% compared with 6.9% the previous quarter, while agriculture fell into negative territory to -2.8% compared with an expansion of 3.5% in 4Q19. Only financial services kept positive growth of 6.0%, though reflecting a decline of 1 percentage point (pp) compared with the previous quarter.

China's trade surplus widened to \$45.34 billion in April 2020 from \$13.02 billion in April 2019. Exports rose by 3.5% y-o-y in April, mainly due to an increase in medical goods sales. This was the first improvement in exports since December 2019. In contrast, imports dropped by 14.2% y-o-y in April to \$154.9 billion, the steepest decline since January 2016. China's trade surplus with the US in April was \$22.9 billion compared with \$15.3 billion in March. In 1Q20, China's trade surplus totalled \$12.8 billion.

The country's inflation slowed amid a relaxation of COVID-19 outbreak restrictions. China's **CPI inflation** declined by 4.4% y-o-y in March compared with 5.2% in February. The **producer price index (PPI)** dropped by 1.5% y-o-y in March, following a drop of 0.4% in February. The country's inflation target for 2020 is 3%.

China's industrial production witnessed a smaller decline by 1.1% y-o-y in March, compared with a 13.5% contraction in the January-February period. The recovery resulted from a partial comeback in major industrial activity as COVID-19 outbreak restrictions have been gradually lifted since mid-March.

Graph 3 - 9: China's industrial production



Sources: China National Bureau of Statistics and Haver Analytics.

Near-term expectations

Looking forward, with China's economy returning to normal, the pace of recovery will highly depend on both domestic growth and external demand. The fear of a second COVID-19 wave, as well as dubious labour market conditions may weaken domestic demand. In the meantime, external demand may stay weak, as the economies of key trading partners fall into contraction.

On the bright side, despite uncertainties regarding China's implementations of the Phase 1 trade deal with the US, recent official statements have provided assurance that both countries will work "to create favourable conditions" in implementing the bilateral trade deal in spite of COVID-19 constraints.

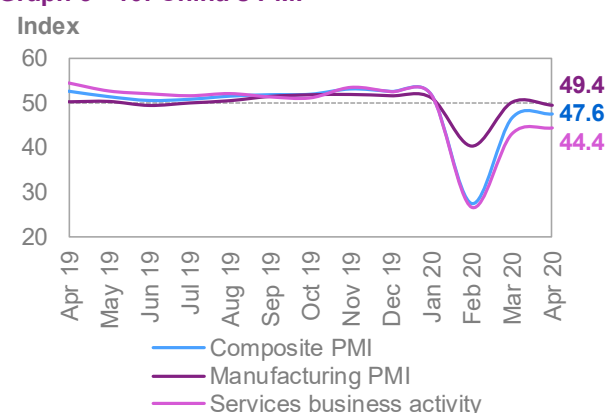
Regarding industrial sector outlooks, manufacturing activities may continue to pick-up, despite the slight weakness in the manufacturing sector seen in the Caixin China General Manufacturing PMI, which dropped to 49.4 in April from 50.1 in March. The drop was mainly due to a fall in new export orders, which have been declining since December 2008. Moreover, the labour market seems to be under less stress, with the unemployment rate declining to 5.9% in March from 6.2% the previous month.

The Caixin China Services PMI climbed to 44.4 in April from 43.0 in March, mirroring a slow recovery in the services sector in 2Q20.

Overall, current figures imply that the demand recovery will be slower than the production recovery.

Yet, the gradual opening of countries around the world may push demand growth up.

Graph 3 - 10: China's PMI



Sources: Caixin, IHS Markit and Haver Analytics.

China's 2020 GDP growth forecast has been downgraded to 1.3% from 1.5% the previous month. The country's GDP is expected to rebound in 2H20, yet the rebound is highly dependent on improvements in domestic and external demand.

Table 3 - 6: China's economic growth rate and revision, 2019-2020*, %

	China
2019	6.1
Change from previous month	0.0
2020	1.3
Change from previous month	-0.2

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

Other Asia

India

Update on latest developments

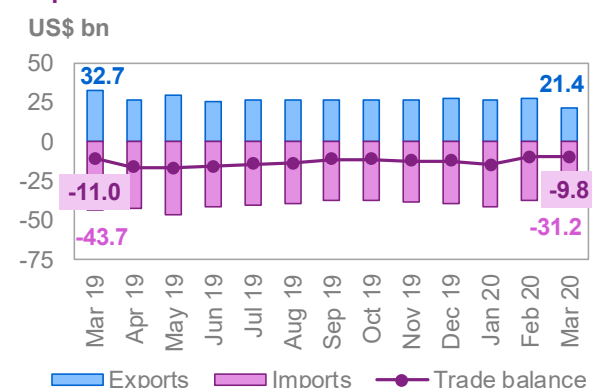
Despite India's gradual easing of COVID-19 restrictions across the country, the reopening of the economy is difficult due to labour shortage challenges and weak demand, which may force most firms to shut down. Restrictions have been extended until May 17, with easing taking place in the production, sale and transport of goods in areas with few cases. However, most of the major industrial cities which provide jobs and drive the economy are under strict lockdown, as they have been identified as red zones according to the district classification plan in accordance with the severity of the virus. The devastating economic effects of the pandemic are starting to become clear, considering the spike in the unemployment rate, which increased to 23.5% in April from 8.7% in March. Additionally, the country's credit markets were disturbed by major money manager announcements of the biggest-ever forced closure of Indian funds, which wound up \$4.1 billion of Indian debt funds on account of the COVID-19 crisis. The Indian government has announced several fiscal and monetary measures to reduce the economic cost of the pandemic, including a fiscal stimulus equating about 1% of the GDP to support the labour market and the most exposed communities. The Reserve Bank of India lowered the repo rate to 4.4% and the reverse repo rate by 90 basis points (bp) to 4%, as well as cutting the cash reserve. Most recently, India's government is determined to increase its borrowing programme to help contain economic costs of the COVID-19 outbreak, though this may lead to an increase in the debt-to-GDP level.

Prior to the virus outbreak, India's economy was signalling considerable expansion, as **industrial production** increased to its highest level since July 2019, rising by 4.5% y-o-y in February from 2.1% in January. Notwithstanding, industrial activity, as well as most other economic activities, slowed considerably due to the 21-day nationwide lockdown.

Regarding the external demand outlook, India's **trade deficit** narrowed to \$9.76 billion in March 2020 from \$11.00 billion in March 2019, due to a slump in both exports and imports. **Exports** declined by 34.57% y-o-y to their lowest level since November 2016. **Imports** also dropped by 28.72% y-o-y to their lowest point since August 2016.

India's **CPI inflation** decreased to 5.9% y-o-y in March compared with 6.6% in February, which meets the RBI's upper target of 6%. Meanwhile, India's wholesale price index (WPI) declined 1.0% y-o-y in March, following 2.3% in February.

Graph 3 - 11: India's trade balance



Sources: Ministry of Commerce and Industry and Haver Analytics.

Near-term expectations

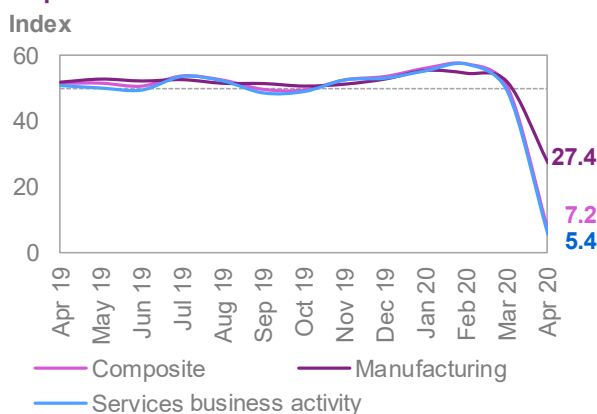
The April to June economic outlook is expected to worsen, considering the catastrophic economic conditions resulting from the nationwide lockdown.

India's **Manufacturing PMI** plunged to 27.4 in April from 51.8 in March. This illustrates the downfall in manufacturing activities due to lower labour force use as people could not work due to lockdown measures and plant closures, as well as a sharp decline in new orders.

The restrictive measures implemented to slow the spread of COVID-19 disturbed service activities on a larger scale as well; India's **services PMI** declined by 5.4 in April from 49.3 the previous month — the steepest contraction level ever registered since IHS Markit started its survey. Overall, the protracted decline in major economic activities has reduced business and economic conditions in India to a very fragile level, considering the overwhelming current economic environment.

Due to the country's recent economic disintegration, India's GDP is destined to drift into negative territory. In accordance, the country's **GDP growth** was revised to a contraction of 0.2% compared with growth of 2.0% the previous month.

Graph 3 - 12: India's PMIs



Sources: Nikkei, IHS Markit and Haver Analytics.

Table 3 - 7: India's economic growth rate and revision, 2019-2020*, %

	India
2019	5.3
Change from previous month	0.0
2020	-0.2
Change from previous month	-2.2

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

Latin America

Brazil

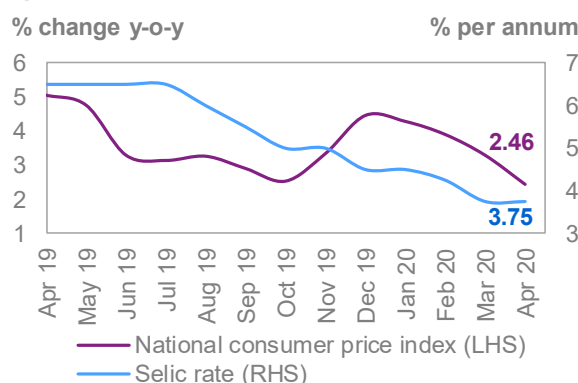
Update on latest developments

Brazils' economy has come out of an already fragile recovery at the beginning of the year. With quarterly growth rates of around 1% over the past three years, the 1.7% y-o-y growth rate in 4Q19 was a welcome sign of recovery. However, the COVID-19 pandemic has spread fast and political strains over the government's response to the crisis seem to put a further drag on the economy. After the pick-up at the turn of the year, large parts of the economy were in decline in the previous months as COVID-19 continued to spread. Industrial production declined by -3.7% in March, weakening further since the beginning of the year, even before COVID-19 impacted the economy, falling by -0.5% y-o-y in February and -0.9% y-o-y in January.

In the meantime the government has announced stimulus measures to counterbalance the downturn and the central bank expanded its monetary easing efforts. Congress also allowed the central bank to engage in quantitative easing measures, a policy tool that was not available to the central bank before the current crisis. In addition, the Senate approved additional stimulus amounting to 125 billion Brazilian real.

Further to the fiscal stimulus, the central bank has lowered the key interest rate, the Selic rate, by 75 basis points recently, providing some support to the economy. This comes only shortly after it had already lowered the key interest rate by 50 basis points in March.

Graph 3 - 13: Brazil's inflation vs. interest rate



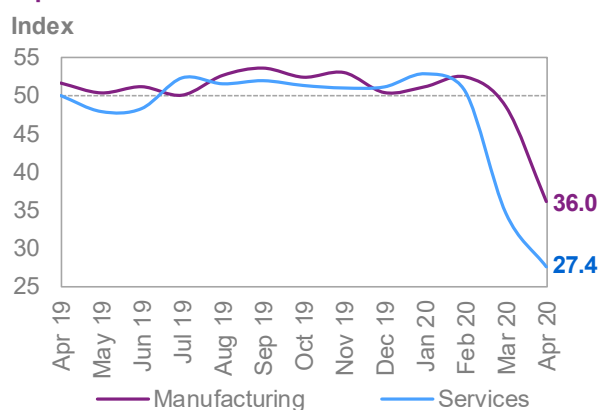
Sources: Banco Central do Brasil, Instituto Brasileiro de Geografia e Estatística and Haver Analytics.

Near-term expectations

The ongoing public health crisis and corresponding lockdown measures will certainly have a deeper impact on the Brazilian economy than previously anticipated. After an expected decline in 1Q20, the negative impact on 2Q20 will rise as the extension of the lockdown measures and anticipated rise of COVID-19 infections are expected to have a rising negative impact on business and consumer sentiment. COVID-19 is now likely to keep economic activity subdued for a longer period of time, possibly well into 3Q20. Moreover, given the frictions within the political system, the political uncertainty may be long-lasting. The high indebtedness of the public sector, corporations and households will further weigh on the economic recovery. While it is currently assumed that the pandemic will be overcome by 2Q20 and that a recovery will take hold in 2H20, major challenges remain and further downside risks prevail.

Furthermore, the economic reforms that were meant to be implemented this year are stalling. While the fiscal support in total stands now at around 250 billion Brazilian real, more than 3% of GDP, the impact will only have a counterbalancing nature given the grave downturn the economy is facing. The fiscal deficit already stands at almost 6% of GDP and given that central government debt has reached a level of around 75% of GDP, further stimulus efforts must be well planned and targeted. The slowing momentum was also reflected in the latest release of the April PMIs. The manufacturing PMI fell to 36.0, compared to 48.5 in March. The services PMI fell to 27.5, down from 34.5 in March.

Graph 3 - 14: Brazil's PMIs



Sources: IHS Markit and Haver Analytics.

Taking into account the impact of COVID-19 and lockdown measures, the GDP growth forecast for 2020 was revised down. While of lesser importance but nonetheless with negative consequences for the economy, the sharp drop in commodity prices, particularly for oil, is forecast to further dampen economic growth in 1H20. GDP growth is forecast to decline by -6.0%, a sharp drop from the -2.4% contraction in the previous month.

Table 3 - 8: Brazil's economic growth rate and revision, 2019-2020*, %

	Brazil
2019	1.0
Change from previous month	0.0
2020	-6.0
Change from previous month	-3.6

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

While a recovery is forecast to materialise in 2H20, the economy will not be able to compensate for the major decline in 1H20. Furthermore there is the risk that the political tensions will continue and that COVID-19 infections will not peak until the very end of 2Q20, making a recovery in 2H20 less likely.

Africa

South Africa

Update on latest developments

South Africa's GDP is expected to contract sharply this year, mainly due to the economic downturn driven by the country's COVID-19 lockdown. The government started to implement a lockdown exit strategy based on a five-level system, with borders kept closed except for limited shipments. Despite the gradual re-opening of the economy, domestic demand and investment is anticipated to sharply decline, particularly in the services sector, due to a fall in the hospitality and tourism sectors. Business confidence dropped sharply in 1Q20, according to the South African RMB/BER business confidence index, declining to 20 compared with 26 in 4Q19. This was its lowest reading in the past 20 years. South Africa's Absa Manufacturing PMI fell to 46.1 in April from 48.1 in March, reflecting an ongoing contraction in the sector that started prior to COVID-19. This was exacerbated by the effect of the 21-day lockdown, which hit the sector even harder, as it suspended most production activities.

The government has announced aggressive monetary easing and a fiscal stimulus package accounting for around 10% of the GDP. Furthermore, the government is planning structural economic reforms in an attempt to halt Moody's consideration to downgrade South Africa's sovereign's credit rating to 'junk'. However, the country faces a severe lack of financial resources to manage COVID-19 containment measures.

Near-term expectations

South Africa's manufacturing sector is anticipated to sustain further damage despite relaxation of restrictive COVID-19 policies. Government efforts to contain the economic fallout from the pandemic are likely to grow more in order to increase business confidence and prevent a further spike in the unemployment rate. Nevertheless, the government's ability to stimulate the economy is constrained due to a huge decline in government revenue, resulting from the deterioration of economic activities, as well as increasing external debt.

In this regard, a further downgrade of the country sovereign's credit is highly likely, as uncertainty still surrounds the economic impact of COVID-19. There is also a lot of suspicion regarding the sufficiency of domestic policy in mitigating the virus's impact and strengthening sovereign credit.

Incorporating these factors into recent developments, South Africa's 2020 GDP is expected to contract by 7.0%.

Table 3 - 9: South Africa's economic growth rate and revision, 2019-2020*, %

	South Africa
2019	0.2
Change from previous month	0.0
2020	-7.0
Change from previous month	-1.5

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

FSU

Russia

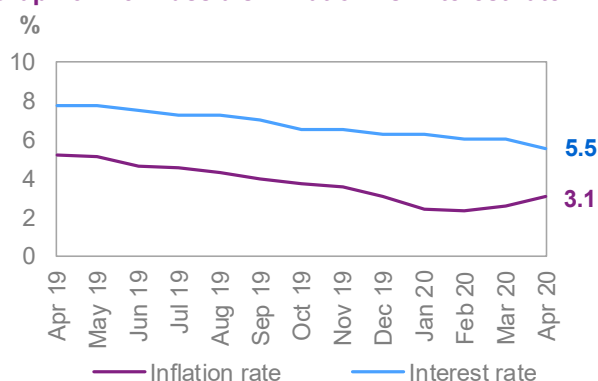
Update on the latest developments

The Russian economy faces a very challenging situation. The combination of the COVID-19 pandemic and oil market volatility dented hopes for improved economic growth this year. Industrial production retracted sharply in March, falling by -1.5% y-o-y. While some of the economic indicators imply only a benign impact from the energy market challenges and COVID-19, it is estimated that growth in 1Q20 was already largely negative.

Moreover, infections in Russia have risen steadily, pointing to an extended period of challenges in 2Q20 that is now expected to push the COVID-19 peak to the end of May, compared to the previous estimates that infections could peak by the end of April or beginning of May.

While the Russian rouble regained some ground in April, it has lost around 20% since the beginning of the year compared to the US dollar. The build-up in foreign reserves has provided a cushion that could be used now, but foreign reserves of more than \$500 billion may fall quickly if depletion continues at the monthly rate of March, when reserves were declining by \$7 billion.

Graph 3 - 15: Russia's inflation vs. interest rate



Sources: Federal State Statistics Service, Central Bank of Russia and Haver Analytics.

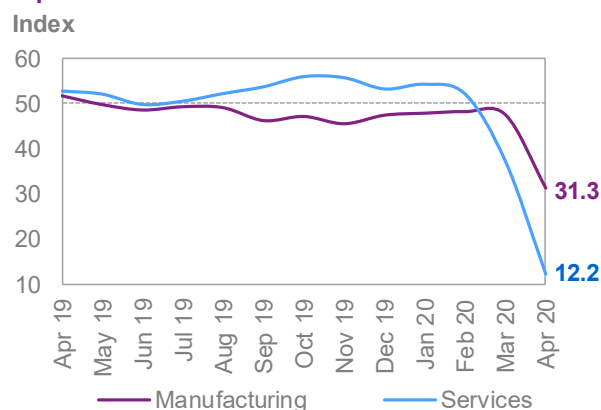
Near-term expectations

The Russian economy is estimated to have declined already in 1Q20, given the major impact of the decline in oil prices and the impact of COVID-19 on the economy. The impact of the slow oil-market rebalancing and the rise in COVID-19 infection rates, in combination with the lockdown measures, will very likely cause a severe downturn of the economy in 2Q20 of up to around 40% q-o-q SAAR. The forecast assumes that the pandemic will peak by the end of May and that a recovery will take place in 2H20. With regard to the oil market, the impact on the Russian economy will be twofold, i.e. by the current low oil price environment and by lower output levels based on the OPEC+ agreement.

With improving balance in the oil market going forward, the economy is forecast to regain strength towards 2H20. This also corresponds to the period when the COVID-19 pandemic should be widely contained in major economies, and a global recovery is forecast to kick in.

The April PMIs have also reflected the economic slowdown in Russia. The PMI for the manufacturing sector fell to 31.3 from 47.5 in March, while the services sector PMI was much more affected, declining to 12.2 from 37.1 in March. Both indicators are forecast to potentially decline further in May given that the situation has worsened further.

Graph 3 - 16: Russia's PMIs



Sources: IHS Markit and Haver Analytics.

Considering the severe challenges, Russia is forecast to experience a declining economy in 1H20, with a recovering dynamic in 2H20 as the COVID-19 pandemic is forecast to taper off and the oil market will become more balanced.

With these underlying assumptions, the Russian economy is forecast to contract by 4.5% in 2020, compared to a forecast of a mild recession of 0.5% in the previous month. However, significant uncertainties remain, not only due to the COVID-19 situation, but also due to the near-term developments in the oil market and further domestic and external political challenges.

Table 3 - 10: Russia's economic growth rate and revision, 2019-2020*, %

	Russia
2019	1.4
Change from previous month	0.0
2020	-4.5
Change from previous month	-4.0

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

OPEC Member Countries

Saudi Arabia

Saudi Arabia's non-oil sector distinctly deteriorated in April as a result of a domestic lockdown due to the COVID-19 pandemic outbreak. The government started gradually relaxing restrictive measures during the holy month of Ramadan, including easing domestic travel restrictions and shortening the curfew in most cities to between 5 pm to 9 am. The government has announced large-scale measures to secure lending to the private sector through 2020 and affirmed its assurance it will support the economy through pro-growth policies, including private sector stimulus (from 2017-2021). However, the dramatic fall in oil prices and oil production adjustments under the Declaration of Cooperation may deepen the economic cost of the lockdown and increase fiscal pressure. Meantime, the manufacturing PMI index rose slightly in April to 44.4 following 42.4 in March, though the PMI level is still below the index threshold of 50.0 due to major uncertainties regarding worldwide lockdowns and economic recovery.

Nigeria

Nigeria's economic activities have sharply declined over the last month, mainly due to the COVID-19 lockdown, as well as lockdowns imposed by other countries. The services sector received the biggest hit due to limited demand and falling consumption. The Central Bank of Nigeria composite PMI for the non-manufacturing sector dropped to 49.2 in March from 58.6 in February, indicating the first contraction in the services sector since April 2017. Meanwhile the manufacturing PMI expanded at its weakest level since April 2017 in March at 51.1 following 58.3 in February. Corresponding to the economic fallout, the sovereign credit rating has been downgraded by several rating agencies. Furthermore, the low oil price caused authorities to devalue the naira in March, and further adjustments are expected. Recently, the government gradually eased the country's lockdown, but the rate of new infections remains high, which may impact both consumer and investor confidence and increase uncertainties in the short-term economic outlook.

The United Arab Emirates (UAE)

The UAE's GDP is expected to contract in 2020 in spite of considerable fiscal stimulus, due to crashing oil prices and oil output adjustments, along with the economic cost of COVID-19. The IHS Markit United Arab Emirates PMI contracted to 44.1 in April from 45.2 in March, mirroring the steepest contraction in the non-oil private sector. Likewise, the delay of Expo 2020 will cause a further decline in the services sector, particularly for travel and tourism activities, which account for around 10% of the GDP. Yet non-oil economic activity is expected to rebound when travel restrictions are eased, while a recovery in oil-related economic activities relies highly on a rebound in oil prices.

The impact of the US dollar (USD) and inflation on oil prices

The **USD** generally advanced against both major and emerging counterparts during the month. The dollar increased by 1.8% against the euro on average m-o-m, supported by the expected relative outperformance of the US economy over the EU economy. The dollar increased against the Japanese yen and the Swiss franc by 0.6% and 1.1%, respectively, amid improving risk sentiment. At the same time, it rose against the Canadian dollar by 0.6%. However, it dropped against the pound sterling by 0.4%.

Meanwhile, US dollar gains were generally stronger against emerging market currencies. It rose against the yuan by 0.8%, and against the Indian rupee on average by 2.5%. As happened the previous month, the dollar increased strongly against the currencies

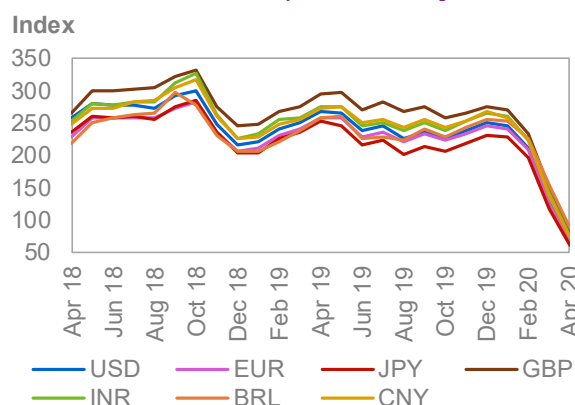
of large commodity exporters. It rose against the Russian ruble by 2.4%, though the ruble strengthened towards the end of the month as oil prices recovered. The dollar rose by 9.0% against the Brazilian real, supported by internal political developments in Brazil and the anticipation of additional rate cuts by the central bank which materialized in May. The dollar rose against the Mexican peso by 8.0%, which was weakened by an unexpected cut in interest rates by the Central Bank of Mexico and uncertainties regarding the government's response to the COVID-19 pandemic.

In **nominal terms**, the price of the OPEC Reference Basket (ORB) decreased by \$16.26, or 47.9%, from \$33.92/b in March to reach \$17.66/b in April.

In **real terms**, after accounting for inflation and currency fluctuations, the ORB decreased to \$11.65/b in April from a revised \$22.19/b (base June 2001=100) the previous month.

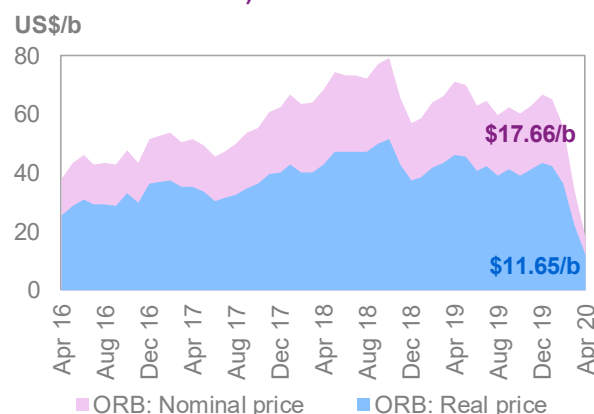
Over the same period, the **US dollar** increased by 0.9% against the import-weighted modified Geneva I + USD basket, while inflation increased slightly by 0.1% m-o-m.

Graph 3 - 17: ORB crude oil price index compared with different currencies (base January 2016 = 100)



Sources: IMF and OPEC.

Graph 3 - 18: Impact of inflation and currency fluctuations on the spot ORB price (base June 2001 = 100)



Source: OPEC.

World Oil Demand

World oil demand growth in 2019 is estimated to have remained unchanged at 0.83 mb/d from the previous month's assessment, with total oil demand at 99.67 mb/d for the year. OECD oil demand is estimated to have declined by around 0.10 mb/d due to a large drop in OECD Asia Pacific oil requirements and weaker-than-expected oil demand growth in OECD Americas and Europe. Non-OECD oil demand is estimated to have increased by 0.93 mb/d, led by solid demand for petroleum products in both China and Other Asia.

World oil demand in 2020 is projected to significantly decrease by 9.07 mb/d, 2.23 mb/d below last month's estimate, to average 91.10 mb/d. The COVID-19 pandemic has caused an economic recession and eroded oil demand growth in many countries across the globe, with unforeseen negative impacts on transportation fuel. Announced lockdowns in many countries around the world – particularly in the US, Europe, India and the Middle East – are causing reduced air travel activities, in addition to lower distances travelled, thereby negatively affecting gasoline and jet fuel demand growth in 2Q20 and for 2020 as a whole. Industrial fuels are also forecast to face pressure in response to reduced manufacturing activity compared with last year, negatively affecting diesel and residual fuel demand. Petrochemical feedstock is projected to decline y-o-y, driven by slower end-user requirements for plastics.

In the OECD region, oil demand is anticipated to plunge by 5.19 mb/d y-o-y, a downward revision of 1.20 mb/d from the previous month's assessment, due to further bleak indications for the transportation sector in OECD Americas and Europe at the beginning of 2Q20. The COVID-19 outbreak and its downward impact on transportation and industrial fuels was reassessed and is now assumed to further deepen y-o-y oil demand losses.

In the non-OECD region, oil demand is foreseen to plummet by 3.88 mb/d, 1.03 mb/d lower than last month's projections. Oil requirements for Other Asia, Latin America and the Middle East were revised lower in light of additional strict measures taken by various governments in an effort to contain the spread of COVID-19. Similar to the OECD region, the impact will be felt mainly in transportation and industrial fuels, which are now forecast to decline at an unprecedented rate.

World oil demand in 2019 and 2020

Table 4 - 1: World oil demand in 2019*, mb/d

	2018	1Q19	2Q19	3Q19	4Q19	2019	Change 2019/18	
							Growth	%
World oil demand								
Americas	25.60	25.14	25.29	26.03	25.99	25.62	0.01	0.05
of which US	20.82	20.65	20.66	21.05	21.02	20.85	0.03	0.12
Europe	14.33	14.09	14.25	14.75	14.25	14.34	0.01	0.06
Asia Pacific	8.08	8.50	7.61	7.68	8.05	7.96	-0.12	-1.49
Total OECD	48.01	47.72	47.15	48.46	48.29	47.91	-0.10	-0.21
Other Asia	13.64	13.91	13.96	13.51	14.08	13.86	0.23	1.66
of which India	4.73	5.03	4.75	4.49	5.10	4.84	0.11	2.36
Latin America	6.53	6.35	6.58	6.87	6.53	6.58	0.06	0.87
Middle East	8.12	8.25	7.87	8.67	8.00	8.20	0.08	0.93
Africa	4.33	4.45	4.42	4.36	4.50	4.43	0.10	2.31
Total DCs	32.62	32.96	32.84	33.41	33.10	33.08	0.46	1.41
FSU	4.76	4.70	4.68	4.96	5.04	4.84	0.09	1.84
Other Europe	0.74	0.75	0.71	0.75	0.84	0.76	0.02	2.69
China	12.71	12.63	13.19	12.95	13.52	13.07	0.36	2.85
Total "Other regions"	18.21	18.08	18.58	18.66	19.40	18.68	0.47	2.58
Total world	98.84	98.75	98.56	100.53	100.79	99.67	0.83	0.84
Previous estimate	98.84	98.75	98.56	100.53	100.79	99.67	0.83	0.84
Revision	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: * 2019 = Estimate. Totals may not add up due to independent rounding.

Source: OPEC.

Table 4 - 2: World oil demand in 2020*, mb/d

	2019	1Q20	2Q20	3Q20	4Q20	2020	Change 2020/19	
							Growth	%
World oil demand								
Americas	25.62	24.47	18.95	24.48	25.16	23.28	-2.34	-9.13
of which US	20.85	20.26	15.22	20.04	20.64	19.05	-1.80	-8.63
Europe	14.34	12.95	9.67	13.25	13.68	12.40	-1.94	-13.53
Asia Pacific	7.96	7.88	6.25	6.64	7.40	7.04	-0.92	-11.51
Total OECD	47.91	45.30	34.87	44.37	46.25	42.71	-5.19	-10.84
Other Asia	13.86	13.15	12.20	12.40	13.66	12.85	-1.01	-7.29
of which India	4.84	4.74	3.90	3.94	4.83	4.35	-0.49	-10.07
Latin America	6.58	6.25	6.00	6.24	6.12	6.15	-0.43	-6.54
Middle East	8.20	7.81	7.01	7.94	7.62	7.59	-0.60	-7.36
Africa	4.43	4.41	4.25	4.05	4.20	4.23	-0.21	-4.67
Total DCs	33.08	31.62	29.46	30.62	31.60	30.83	-2.25	-6.81
FSU	4.84	4.50	3.88	4.45	4.61	4.36	-0.48	-9.97
Other Europe	0.76	0.71	0.54	0.47	0.56	0.57	-0.19	-25.22
China	13.07	10.27	12.55	12.37	13.28	12.12	-0.95	-7.29
Total "Other regions"	18.68	15.47	16.97	17.29	18.45	17.05	-1.63	-8.72
Total world	99.67	92.40	81.30	92.28	96.30	90.59	-9.07	-9.10
Previous estimate	99.67	92.92	86.70	94.28	97.30	92.82	-6.85	-6.87
Revision	0.00	-0.53	-5.40	-2.00	-1.00	-2.23	-2.23	-2.24

Note: * 2019 = Estimate and 2020 = Forecast. Totals may not add up due to independent rounding.

Source: OPEC.

OECD

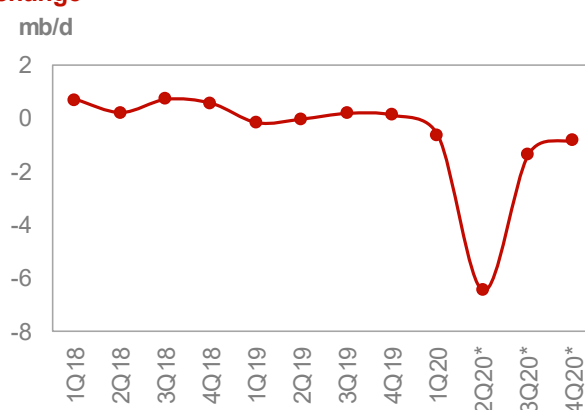
OECD Americas

In February, oil demand fell in **OECD Americas** by close to 0.5 mb/d, with most of the decline seen in the US. Canada was the only country in the region posting positive oil demand growth.

Recently released **US** Energy Information Administration (EIA) monthly oil demand data for **February 2020** shows US oil demand shrinking by approximately 0.4 mb/d y-o-y for the second consecutive month. The decline was partly due to a slowing economy and warm weather conditions during the winter season.

Similar to January, yet unlike previous months, demand for lighter hydrocarbons fell y-o-y, in particular for LPG/NGLs and naphtha, which are the petroleum products normally utilized as feedstock for the petrochemical sector. This could signal the start of a slowdown for plastics and plastic products going forward.

Graph 4 - 1: OECD Americas oil demand, y-o-y change



Note: * 2Q20-4Q20 = Forecast. Source: OPEC.

The continuation of warmer weather in February compared with the historical norm capped heating fuel requirements. Hence the overall diesel pool was negatively impacted, while gasoline and jet kerosene requirements remained in positive territory, y-o-y.

Going forward, the COVID-19 epidemic and its further development will determine the outlook for the US economy in 2020 and consequently for oil demand, most notably in the transportation and industrial sectors. The US has become the global epicentre of the pandemic, showing no signs to date of improvement. The currently imposed full or partial lockdowns create substantial further downside risks for US oil demand growth this year. While measures taken differ between states, the latest main leading indicators foresee sluggish oil demand for at least the first half of the year as an immediate result of these measures. Further developments

World Oil Demand

closely relate to the timing and degree of the pandemic's containment. Consequently, risks to the 2020 US oil demand forecast continue pointing further to the downside, though with the worst expected to have taken place in April. Lockdowns are likely to continue throughout 2Q20, taking into consideration the implied time lag of the COVID-19 spread among states.

Table 4 - 3: US oil demand, tb/d

By product	Feb 20	Feb 19	Change 2020/19	
			tb/d	%
LPG	3,220	3,420	-200	-5.8
Naphtha	172	213	-41	-19.2
Gasoline	8,967	8,963	4	0.0
Jet/kerosene	1,659	1,619	40	2.5
Diesel oil	4,011	4,331	-320	-7.4
Fuel oil	150	301	-151	-50.2
Other products	1,951	1,668	283	17.0
Total	20,130	20,515	-385	-1.9

Sources: EIA and OPEC.

The latest available monthly data shows **Mexican oil demand** sluggish in **March 2020** y-o-y. Demand for all main petroleum categories fell sharply, particularly for jet kerosene, diesel and gasoline, which were only partly offset by slight gains in LPG demand, notably for the residential sector. Overall, March Mexican oil demand fell by approximately 0.2 mb/d, y-o-y. The 2020 forecast for Mexican oil demand has also been lowered from last month's projections and a further decline in 2020 is implied, with risks even more skewed to the downside.

The latest **Canadian data** for February implies slightly increasing oil demand y-o-y, which is mainly attributed to rising gasoline, jet kerosene and diesel requirements. The 2020 Canadian oil demand growth forecast has also been adjusted further to the downside from the previous month's report.

In 2019, **OECD Americas oil demand** grew by 0.01 mb/d compared with 2018, and is projected to decline in 2020 by 2.34 mb/d compared with 2019.

OECD Europe

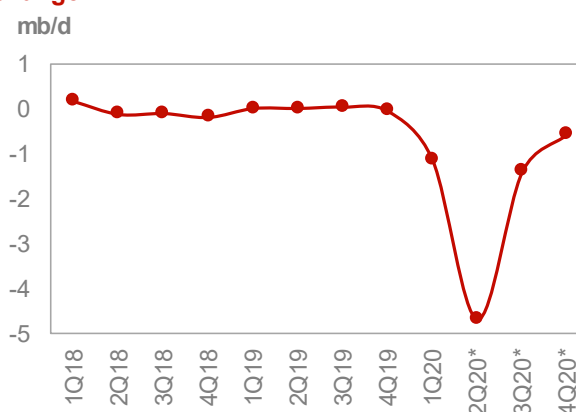
European oil demand fell in **February 2020** by 0.70 mb/d y-o-y for the second consecutive month on the arrival of COVID-19 in the region.

Among the **top four consumers** in the region, oil demand weakened in Germany (-0.37 mb/d y-o-y) and France (-0.13 mb/d y-o-y), and grew slightly in Italy (0.05 mb/d y-o-y) and the UK (0.02 mb/d). The large decline is mainly attributed to weaker diesel, gasoline, naphtha and residual fuel oil demand, in line with continuing warmer weather conditions across the continent and weaker macroeconomic data.

Based on preliminary figures from the European Automobile Manufacturers Association (ACEA), March new vehicle registrations in the EU fell by more than 50% y-o-y following the COVID-19 outbreak. All auto markets dropped substantially, but most notably in Italy, Spain, France and Germany. Industrial production indicators were also lower y-o-y during the month of February in the four major economies, with the largest drop recorded in UK and Italy at around 2-3% y-o-y.

The outlook for the region's oil demand in 2020 has been adjusted to the downside compared with last month's projections, with the bulk of downward revisions originating in 2Q20. In April, the region became the worldwide epicentre of the COVID-19 pandemic. However, so far in May, the spread of the epidemic seems to have been reduced, with the actual impact to be seen in two months' time. Further downside risks remain and relate to the timing of lifting extensive lockdowns, as well as to how specific economic sectors, i.e. aviation and services, will look in the aftermath of the pandemic. Substantial uncertainties remain regarding the success of lockdown

Graph 4 - 2: OECD Europe's oil demand, y-o-y change



Note: * 2Q20-4Q20 = Forecast. Source: OPEC.

removals, as well as an ongoing lack of coordinated action at the regional level. In terms of product performance in 2020, in the road transportation sector, as well as the industrial and residential sectors, diesel is foreseen to be pressured. It is thus anticipated to decline the most in 2020. Other transportation fuels, including gasoline and jet fuel, will drop in 2020, with most of the impact being felt in 2Q20.

Table 4 - 4: Europe's Big 4* oil demand, tb/d

By product			Change 2020/19	
	Feb 20	Feb 19	tb/d	%
LPG	475	548	-73	-13.3
Naphtha	590	683	-93	-13.6
Gasoline	1,063	1,156	-93	-8.0
Jet/kerosene	831	802	29	3.6
Diesel oil	3,186	3,322	-136	-4.1
Fuel oil	140	217	-77	-35.6
Other products	602	601	1	0.2
Total	6,887	7,329	-442	-6.0

Note: * Germany, France, Italy and the UK.

Sources: JODI, UK Department for Business, Energy & Industrial Strategy, Unione Petrolifera and OPEC.

Oil demand for 2019 in **OECD Europe** stands roughly at 2018 levels. In 2020, European oil demand is projected to fall by 1.94 mb/d, y-o-y.

OECD Asia Pacific

Oil demand in **OECD Asia Pacific** is assumed to have declined by 0.83 mb/d in February, a fall largely attributed to steep declines in Japanese oil requirements.

Additionally, the most recent preliminary March data from the Japanese Ministry of Economy Trade, and Industry (METI) shows **Japanese oil demand** falling by 0.44 mb/d, marking the ninth consecutive monthly decline. Bearish March oil demand resulted from shrinking requirements for all main petroleum product categories, particularly jet kerosene, gasoline and diesel, and related to challenges facing the country's economy, along with the COVID-19 pandemic, which influenced transportation and industrial fuels not only in the country but throughout the whole region.

Table 4 - 5: Japan's domestic sales, tb/d

			Change 2020/19	
	Mar 20	Mar 19	tb/d	%
LPG	372	409	-37	-9.1
Naphtha	631	782	-151	-19.3
Gasoline	760	830	-70	-8.4
Jet/kerosene	527	563	-36	-6.4
Diesel oil	784	814	-30	-3.7
Fuel oil	191	228	-37	-16.0
Other products	274	355	-81	-22.9
Total	3,539	3,981	-442	-11.1

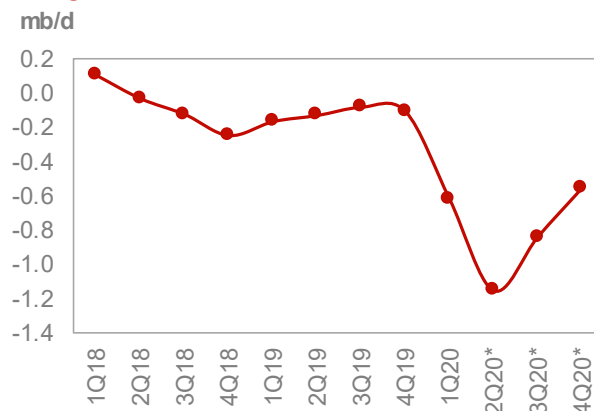
Sources: JODI, METI and OPEC.

In **South Korea**, the latest available February data shows bearish oil demand y-o-y for the second consecutive month. Most petroleum product category requirements fell sharply, notably diesel, jet kerosene, gasoline and naphtha.

In **Australia**, oil demand fell in February y-o-y, with stronger diesel requirements more than offset by lower gasoline and jet kerosene demand.

Additional regional spillover effects from the COVID-19 spread in South Korea and Singapore required a second milder phase of lockdowns during the second half of April and the beginning of May. Nevertheless, the main oil consuming countries in the region seem to be leading in terms of containing its spread. Consequently, reductions in 2020 oil demand in the region have stabilized and remain smaller in magnitude than in other regions. Japanese oil demand is forecast to decline in the current year, with risks slightly skewed to the downside. The outlook for South Korean oil demand in 2020 has been slightly lowered. Some downside risks pertain, though upside risks also exist and relate to the country's fast-growing and flexible economy.

Graph 4 - 3: OECD Asia Pacific oil demand, y-o-y change



Note: * 2Q20-4Q20 = Forecast. Source: OPEC.

In 2019, **OECD Asia Pacific's** oil demand shrank by 0.12 mb/d. In 2020, it will decline by 0.92 mb/d y-o-y.

Non-OECD

China

Oil demand in **China** showed a steep decline in the month of March, contracting by more than 2.0 mb/d y-o-y, on the back of government measures to contain the spread of COVID-19, which emerged earlier in the year. This represents a continuation of sluggish oil demand data for the second consecutive month in 2020. Government contamination and protection measures against the spread of COVID-19, which included a reduction in air travel activity, social distancing measures, and shutting down business and cities on the mainland, led to poor oil demand data in March.

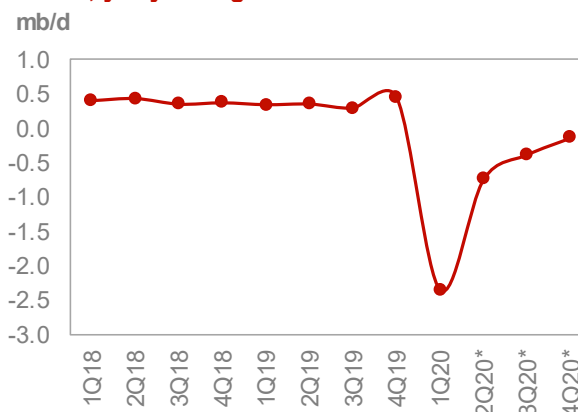
Transportation fuels continued to suffer for the second consecutive month, with gasoline and jet fuel declining sharply y-o-y. Gasoline plummeted by slightly more than 0.80 mb/d y-o-y, while jet/kerosene declined by around 0.30 mb/d y-o-y. Passenger highway traffic was down by a massive 73% y-o-y in March after dropping by 88% y-o-y in February, according to reports from the China National Bureau of Statistics and Haver Analytics. The reports also stated civil aviation activities were down by more than 70% y-o-y in March. Passenger car sales saw large declines in 1Q20, with March data indicating a drop of more than 50% y-o-y, according to the China Passenger Car Association and Haver Analytics.

Diesel sank by around 0.90 mb/d in both the transportation and industrial sectors. The country's composite output PMI was at 46.7 in March, well below contraction territory for the second month running, though significantly better than February levels of 27.5, according to Caixin/IHS Markit and Haver Analytics.

Going forward, oil demand in China is projected to record a steep drop in the current year, with most declines appearing in 1Q20. The remainder of the year is also assumed to see y-o-y declines, though at an improved rate from 1Q20, as recent indicators – particularly for transportation fuels – hint at a gradual recovery in activities. The impact will be driven by a reduction in export, as it is assumed that China's trading partners will continue to battle COVID-19, resulting in dire global economic activity. Oil demand in 2Q20 is projected to drop, with the biggest decline seen in gasoline, stemming from both reduced miles travelled and steep contractions in vehicle sales. Jet fuel is projected to remain sluggish for the remainder of 2020, as inter-continental travel to and from China is anticipated to remain below the levels seen in recent years. Light distillates are projected to suffer the least in 2020, with some positive growth expected in 2H20 due to the return of propane dehydrogenation (PDH) plants to normal levels by the end of the year.

Chinese oil demand grew by 0.47 mb/d in 2019 and is projected to decrease by 0.95 mb/d in 2020.

Graph 4 - 4: Changes in China's apparent oil demand, y-o-y change



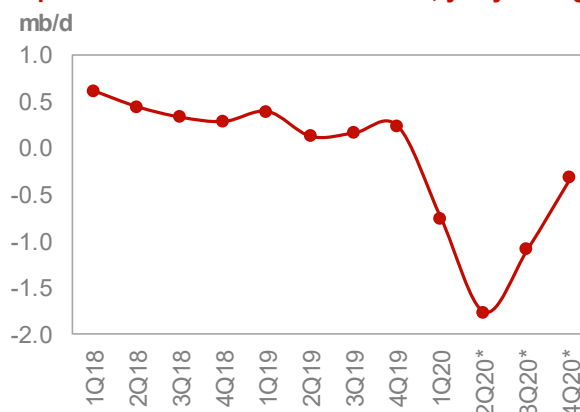
Note: * 2Q20-4Q20 = Forecast. Source: OPEC.

Other Asia

Oil demand showed considerable weakness over February in **Other Asia**, dropping significantly in most countries, apart from India, which saw some increases y-o-y. Oil demand declined in Singapore, Malaysia, Indonesia, Taiwan, the Philippines and Thailand. Jet/kerosene declined the most, followed by residual fuel oil and diesel. Gasoline was the only product in positive territory.

In March, India's oil demand fell by 0.78 mb/d y-o-y, the largest decline ever recorded. Total demand hovered around 4.1 mb/d during the month. Government-imposed measures to control the spread of COVID-19 influenced demand for nearly all petroleum products, except for light distillates. Gasoline demand contracted by 0.12 mb/d compared with the same month in 2019. Miles travelled dropped towards the end of the month, as governments announced strict social distancing procedures. This exacerbated an ongoing decline in passenger vehicle sales, which fell by nearly 51% y-o-y. Diesel consumption dropped the most in March, by a massive 0.42 mb/d y-o-y.

Graph 4 - 5: Other Asia's oil demand, y-o-y change



Note: * 2Q20-4Q20 = Forecast. Source: OPEC.

This decline came on the back of slower construction and agricultural activities in the country, in addition to a significant slowdown in commercial vehicle sales, which plummeted by a huge 88% y-o-y. Residual fuel oil consumption fell by 0.1 mb/d y-o-y in line with reduced power generation and bunker demand.

Looking ahead, oil demand is projected to experience a steep decline in 2Q20. India is projected to account for the bulk of this decline, while other countries in the region, such as Indonesia, Malaysia, Thailand, Singapore and Philippines, are all assumed to experience significant weakness in petroleum product consumption in 2020, particularly 2Q20. Sluggish oil demand performance is expected in 2H20, in line with an expected slowdown in economic activity. In terms of products and sectors, gasoline and jet fuel are anticipated to contract in 2020; with the drop in 2Q20 reaching around 1.0 mb/d compared with the same quarter in 2019.

Table 4 - 6: India's oil demand, tb/d

By product	Mar 20	Mar 19	Change 2020/19	
			tb/d	%
LPG	895	879	17	1.9
Naphtha	411	359	52	14.4
Gasoline	642	757	-116	-15.3
Jet/kerosene	188	275	-87	-31.5
Diesel oil	1,381	1,802	-421	-23.4
Fuel oil	240	252	-12	-4.7
Other products	383	595	-212	-35.7
Total	4,139	4,919	-779	-15.8

Sources: JODI, Petroleum Planning and Analysis Cell of India and OPEC.

Other Asia's oil demand increased by 0.23 mb/d in 2019. Oil demand for 2020 is anticipated to decrease by around 1.01 mb/d.

Latin America

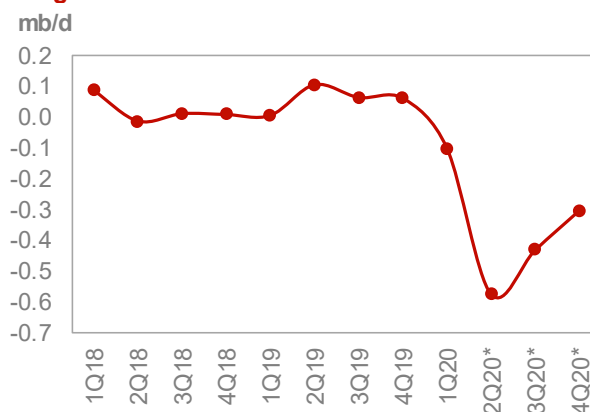
The latest available data for **Latin America** indicates a decline of around 0.05 mb/d y-o-y for the month of February. Oil consumption dropped in all tracked countries in the region, with Brazil and Ecuador showing the most decline at around 0.02 mb/d. Oil demand in Argentina and Venezuela weakened, but at a lower magnitude than in other countries. Looking at the product mix, most petroleum products weakened, led by residual fuel oil and naphtha, while gasoline and LPG showed minor gains.

The latest available data for Brazil indicate declining oil demand in March. This marks the second consecutive month of declines. Petroleum product demand also dropped by 0.12 mb/d y-o-y, with total consumption at 2.5 mb/d. Looking at the product mix, demand for petroleum products generally declined, apart from LPG and diesel, which saw some gains.

Gasoline and ethanol fell due to a light reduction in miles travelled. Light-weight vehicle traffic flow through toll plazas dropped in March to the lowest reading in the past 10 years, according to ABCR Consultorias and Haver Analytics. Additionally, jet/kerosene experienced declines due to reduced air travel activities in the country. Diesel was higher y-o-y, despite sluggish manufacturing PMI data.

Going forward, oil demand in Latin America is anticipated to decline this year, with most of the fall appearing in 2Q20. The negative impact of COVID-19 is projected to take a toll on economic activity in various countries in the region, especially Brazil. The outlook assumes a further reduction in transportation fuels, including both gasoline and jet fuel, with the two products accounting for around 60% of estimated declines in 2020. Diesel consumption in manufacturing and construction is projected to be weak compared with last year in light of the expected economic slowdown. Residual fuel oil is anticipated to follow suit and drop y-o-y in 2020.

Graph 4 - 6: Latin America's oil demand, y-o-y change



Note: * 2Q20-4Q20 = Forecast. Source: OPEC.

Table 4 - 7: Brazil's oil demand*, tb/d

By product	Mar 20	Mar 19	Change 2020/19	
			tb/d	%
LPG	239	213	25	11.9
Naphtha	147	147	0	0.0
Gasoline	548	632	-84	-13.4
Jet/kerosene	87	122	-35	-28.9
Diesel oil	956	924	32	3.4
Fuel oil	87	89	-2	-2.7
Other products	426	483	-56	-11.7
Total	2,489	2,610	-121	-4.6

Note: * = Inland deliveries.

Sources: JODI, Agencia Nacional do Petroleo, Gas Natural e Biocombustiveis and OPEC.

In 2019, **Latin American oil demand** inched higher by around 0.06 mb/d from levels seen a year earlier. For 2020, demand is projected to decrease by around 0.43 mb/d.

Middle East

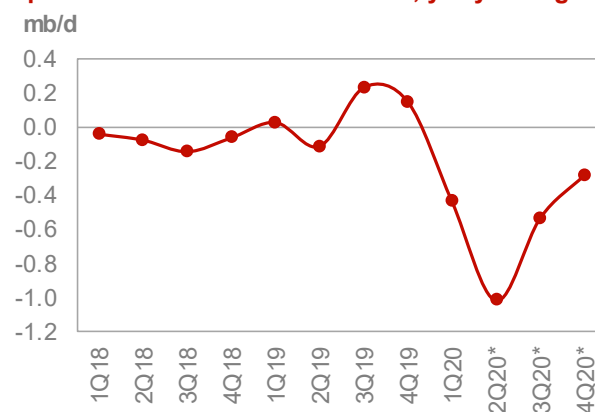
Middle East oil demand in February is estimated to have declined by nearly 0.20 mb/d compared with the same period in 2019. The majority of the decline resulted from a drop in oil requirements in IR Iran (-0.12 mb/d y-o-y), Iraq (-0.04 mb/d y-o-y), the UAE (-0.04 mb/d y-o-y) and Qatar (-0.02 mb/d y-o-y). On the other hand, oil consumption increased in Kuwait (0.01 mb/d y-o-y) and was flat in Saudi Arabia. From a product perspective, jet/kerosene and gasoline weakened the most in February, shedding around 0.12 mb/d y-o-y each, as demand for transportation fuel dropped in IR Iran, the UAE and Qatar. Residual fuel oil demand decreased by 0.13 mb/d y-o-y, mostly in Iraq, with Saudi Arabia following. This is in line with seasonally lower demand for air conditioning in 1Q20 and ongoing substitution programmes in both countries.

The latest monthly data for Saudi Arabia indicates oil demand declined by around 0.14 mb/d y-o-y in March. However, in cumulative terms, oil demand data for 1Q20 remained marginally in positive territory. In March, transportation fuels were the main cause of the total decline, particularly gasoline and jet fuel, which fell by 0.14 mb/d and 0.04 mb/d y-o-y, respectively.

Going forward, transportation fuels are projected to drop steeply y-o-y, in line with last month's projections. However, both gasoline and jet fuel are projected to decline more than in the previous estimation. Oil demand for the Middle East in 2020 will depend on overall economic activity and government spending plans, with risks currently skewed to the downside. The impact of COVID-19 on oil consumption – particularly transportation fuels, in addition to ongoing fuel substitution programmes with natural gas – are accounted for in 2020 assumptions.

Middle East oil demand recorded a 0.08 mb/d y-o-y increase in 2019, while it is projected to decrease by 0.60 mb/d in 2020.

Graph 4 - 7: Middle East oil demand, y-o-y change



Note: * 2Q20-4Q20 = Forecast. Source: OPEC.

World Oil Supply

Non-OPEC liquids production growth in 2019 (including processing gains) has been revised up by 0.04 mb/d from the previous assessment and is now estimated at 2.02 mb/d, mainly based on oil production data from Australia and Africa others. The US, Brazil, Canada, Australia, Russia, China and the UK are estimated to have been the key drivers of growth in 2019, while Mexico and Norway have seen the largest production declines.

Non-OPEC liquids production growth in 2020 (including processing gains) has been revised down by a huge 2.0 mb/d from the previous assessment and is now forecast to decline by 3.5 mb/d to average 61.50 mb/d in 2020. The revision is based on production shut-ins or curtailment plans announced by companies, including the majors, particularly in North America. Globally, not including the production adjustments of the countries participating in the Declaration of Cooperation (DoC), and as of 6 May 2020, around 3.6 mb/d of production adjustments have so far been announced. The 2020 oil supply growth forecast for the US was revised down by 1.3 mb/d to show a decline of 1.4 mb/d y-o-y. Of the total revision, 0.9 mb/d was attributed to production shut-ins for the year. Other large downward revisions were made for Canada and Brazil by 0.3 mb/d and 0.1 mb/d, respectively. Oil supply in 2020 is now forecast to grow only in Norway, Brazil, Guyana and Australia.

May is the starting point for production adjustments agreed in April by the producing countries participating in the DoC, which calls for a total production adjustment of 9.7 mb/d in May and June and an adjustment of 7.7 mb/d from July until the end of the year and 5.8 mb/d for a period of 16 months from 1 January 2021 to 30 April 2022.

On 12 May, Saudi Arabia, the UAE and Kuwait announced that they would voluntarily deepen oil output adjustments from June, by 1 mb/d, 100 tb/d and 80 tb/d, respectively, in an effort to expedite draining a global supply glut and rebalancing the oil market.

OPEC NGLs and non-conventional liquids production in 2019 are estimated to have grown by 0.04 mb/d to average 4.80 mb/d. For 2020, OPEC NGLs have been revised up by 14 tb/d, following higher output in 1Q20, and are now forecast to grow by 0.04 mb/d y-o-y to average 4.83 mb/d.

In April, OPEC-13 crude oil production rose by 1.80 mb/d m-o-m to average 30.41 mb/d, according to secondary sources. Ten OPEC MCs have agreed to adjust down their production from May 2020.

Non-OPEC liquids production in April, including OPEC NGLs and non-conventional liquids, is estimated to have fallen by 1.98 mb/d m-o-m to average 69.05 mb/d, lower by 0.29 mb/d y-o-y. As a result, preliminary data indicates that global oil supply in April decreased by 0.18 mb/d m-o-m to average 99.46 mb/d, up by 0.52 mb/d y-o-y.

Table 5 - 1: Non-OPEC liquids production forecast comparison in 2019–2020*, mb/d

	2019	Change 2019/18	2020	Change 2020/19
Non-OPEC liquids production				
OECD Americas	25.74	1.67	23.81	-1.94
OECD Europe	3.71	-0.13	3.98	0.27
OECD Asia Pacific	0.53	0.11	0.56	0.04
Total OECD	29.98	1.65	28.35	-1.62
Other Asia	3.48	-0.08	3.35	-0.13
Latin America	6.01	0.27	6.20	0.19
Middle East	3.21	0.00	3.08	-0.13
Africa	1.53	0.01	1.46	-0.06
Total DCs	14.23	0.20	14.10	-0.13
FSU	14.37	0.08	12.80	-1.57
Other Europe	0.12	0.00	0.12	-0.01
China	4.05	0.07	4.04	-0.01
Non-OPEC production	62.75	2.00	59.40	-3.35
Processing gains	2.28	0.03	2.10	-0.18
Non-OPEC liquids production	65.03	2.02	61.50	-3.53

Note: Non-OPEC liquids production includes the Republic of Ecuador.

* 2019 = Estimate and 2020 = Forecast.

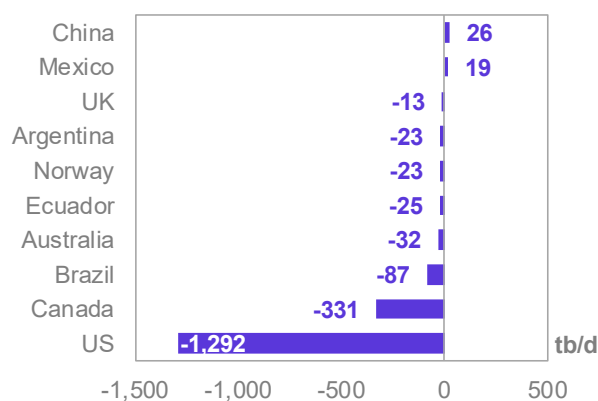
Source: OPEC.

Main monthly revisions

Non-OPEC liquids production growth in **2019** was revised up by 0.04 mb/d owing to an upward revision in Australia's production in all quarters. Non-OPEC liquids production is now estimated to have grown by 2.02 mb/d to average 65.03 mb/d for the year.

Non-OPEC liquids production growth in **2020** was revised lower by 2.03 mb/d m-o-m following the downward revision of 3.26 mb/d in last month's assessment and is now forecast to see a contraction of 3.53 mb/d (including processing gains), to average 61.50 mb/d. This was mainly due to production shut-ins announced by companies in the US and Canada followed by Brazil, Australia, Ecuador, Norway, Argentina and the UK. China and Mexico are seen to have grown in 1Q20, leading to slight upward revisions for these countries. **Graph 5 – 1.**

Graph 5 - 1: Revision of annual liquids production changes in 2020*, May MOMR/April MOMR

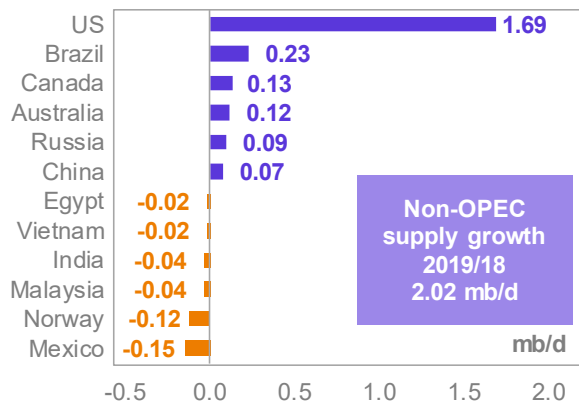


Note: * 2020 = Forecast. Source: OPEC.

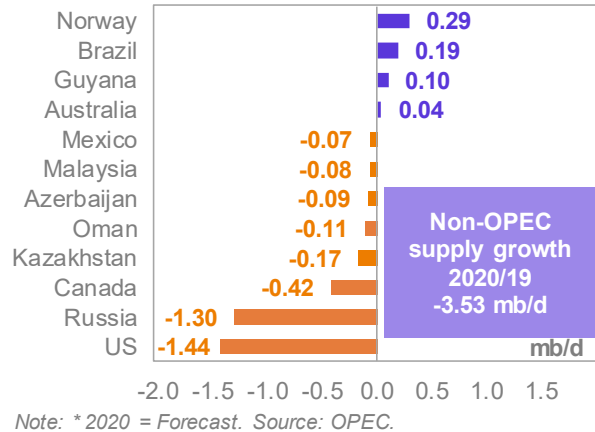
Key drivers of growth and decline

Non-OPEC liquids supply in 2019 is estimated to have grown by 1.98 mb/d with 85% of this growth achieved in the US, followed by Brazil, Canada, Australia, Russia and China. Annual declines were seen mainly in Mexico and Norway. For **2020**, Norway, Brazil, Guyana and Australia are forecast to be the key drivers of growth.

Graph 5 - 2: Annual liquids production changes for selected countries in 2019*



Graph 5 - 3: Annual liquids production changes for selected countries in 2020*



The COVID-19 pandemic has caused a global economic recession as well as an unprecedented oil demand shock. World oil producers began to adjust down their production in response to the large oversupply in the market. Non-OPEC's capex in 2020 is forecast to decline by 23% y-o-y, according to preliminary estimations, which is approximately half of level of capex in 2014.

With a preliminary announcement of production cuts in US liquids production, particularly tight crude, as well as Canadian oil sands production in Alberta, OECD Americas is expected to lead the y-o-y decline in 2020 if oil prices do not recover to meet breakeven costs and service debt loads. The total production of the region is likely to fall by 1.94 mb/d y-o-y, compared to 1.67 mb/d of growth in 2019. In Latin America oil supply is forecast to grow by 0.19 mb/d, revised down by 0.14 mb/d as Brazil's Petrobras decided to push back an extended maintenance programme slated to begin in 2Q20. At the same time production shut-ins were announced at the Loma Campana in Vaca Muerta shale oil project in Argentina and also in Ecuador, while two key pipelines were forced to suspend operations due to a rupture detected in the OCP pipeline. Oil production from the North Sea is expected to grow by 0.28 mb/d, with gains only from Norway. In Australia, a production ramp-up in 2019 brought y-o-y growth of 0.12 mb/d while for this year, it will slow to 0.04 mb/d. Production in developing countries of Asia, the Middle East and Africa – but excluding Latin America – will decline y-o-y in 2020. Oil supply in all FSU countries participating in the DoC will see a total drop of 1.57 mb/d, y-o-y.

Non-OPEC liquids production in 2019 and 2020

Table 5 - 2: Non-OPEC liquids production in 2019*, mb/d

Non-OPEC liquids production	2018	1Q19	2Q19	3Q19	4Q19	2019	Change 2019/18	
							Growth	%
Americas	24.08	25.07	25.59	25.69	26.62	25.74	1.67	6.93
of which US	16.71	17.78	18.29	18.36	19.15	18.40	1.69	10.09
Europe	3.84	3.82	3.57	3.55	3.88	3.71	-0.13	-3.48
Asia Pacific	0.41	0.46	0.51	0.56	0.57	0.53	0.11	27.86
Total OECD	28.33	29.35	29.67	29.79	31.08	29.98	1.65	5.82
Other Asia	3.57	3.52	3.55	3.40	3.47	3.48	-0.08	-2.27
Latin America	5.74	5.77	5.84	6.13	6.29	6.01	0.27	4.70
Middle East	3.21	3.22	3.21	3.21	3.21	3.21	0.00	0.04
Africa	1.52	1.52	1.53	1.53	1.52	1.53	0.01	0.43
Total DCs	14.04	14.03	14.13	14.27	14.49	14.23	0.20	1.40
FSU	14.29	14.55	14.16	14.34	14.42	14.37	0.08	0.55
of which Russia	11.35	11.53	11.36	11.42	11.45	11.44	0.09	0.82
Other Europe	0.12	0.12	0.12	0.12	0.12	0.12	0.00	-2.34
China	3.98	4.05	4.08	4.05	4.03	4.05	0.07	1.87
Total "Other regions"	18.39	18.72	18.36	18.51	18.58	18.54	0.15	0.81
Total non-OPEC production	60.76	62.10	62.16	62.58	64.15	62.75	2.00	3.28
Processing gains	2.25	2.28	2.28	2.28	2.28	2.28	0.03	1.24
Total non-OPEC liquids production	63.01	64.37	64.44	64.85	66.43	65.03	2.02	3.21
Previous estimate	62.99	64.35	64.37	64.78	66.34	64.97	1.98	3.14
Revision	0.02	0.03	0.07	0.07	0.09	0.06	0.04	0.07

Note: Non-OPEC liquids production includes the Republic of Ecuador.

* 2019 = Estimate. Totals may not add up due to independent rounding.

Source: OPEC.

Table 5 - 3: Non-OPEC liquids production in 2020*, mb/d

Non-OPEC liquids production	2019	1Q20	2Q20	3Q20	4Q20	2020	Change 2020/19	
							Growth	%
Americas	25.74	26.59	23.47	22.41	22.79	23.81	-1.94	-7.52
of which US	18.40	19.05	16.81	15.78	16.20	16.96	-1.44	-7.84
Europe	3.71	4.01	3.91	3.94	4.06	3.98	0.27	7.40
Asia Pacific	0.53	0.53	0.55	0.59	0.59	0.56	0.04	7.41
Total OECD	29.98	31.13	27.94	26.93	27.44	28.35	-1.62	-5.41
Other Asia	3.48	3.45	3.30	3.34	3.33	3.35	-0.13	-3.77
Latin America	6.01	6.30	5.97	6.15	6.37	6.20	0.19	3.17
Middle East	3.21	3.19	3.01	3.06	3.07	3.08	-0.13	-4.07
Africa	1.53	1.51	1.45	1.45	1.44	1.46	-0.06	-4.06
Total DCs	14.23	14.44	13.73	14.01	14.21	14.10	-0.13	-0.94
FSU	14.37	14.51	11.82	12.43	12.43	12.80	-1.57	-10.95
of which Russia	11.44	11.50	9.36	9.85	9.85	10.14	-1.30	-11.38
Other Europe	0.12	0.12	0.12	0.12	0.11	0.12	-0.01	-4.32
China	4.05	4.15	4.00	3.99	4.01	4.04	-0.01	-0.35
Total "Other regions"	18.54	18.78	15.94	16.53	16.55	16.95	-1.59	-8.59
Total non-OPEC production	62.75	64.36	57.61	57.47	58.20	59.40	-3.35	-5.34
Processing gains	2.28	2.10	2.10	2.10	2.10	2.10	-0.18	-8.03
Total non-OPEC liquids production	65.03	66.45	59.71	59.57	60.30	61.50	-3.53	-5.43
Previous estimate	64.97	66.60	62.15	62.67	62.47	63.47	-1.50	-2.31
Revision	0.06	-0.15	-2.44	-3.10	-2.17	-1.97	-2.03	-3.12

Note: Non-OPEC liquids production includes the Republic of Ecuador.

* 2019 = Estimate and 2020 = Forecast. Totals may not add up due to independent rounding.

Source: OPEC.

OECD

OECD liquids production in **2019** is estimated to have grown by 1.65 mb/d y-o-y for an average of 29.98 mb/d, revised up by 0.04 mb/d due to an upward revision of 38 tb/d in OECD Asia Pacific. Oil production in OECD Asia Pacific now is estimated to have grown by 0.11 mb/d. Oil production in OECD Americas shows growth of 1.67 mb/d while OECD Europe experienced a decline of 0.13 mb/d.

For **2020**, the OECD oil production was revised down by 1.67 mb/d to an average of 28.35 mb/d, a decline of 1.62 mb/d y-o-y. OECD Americas is projected to decline by 1.94 mb/d to average 23.81 mb/d, a downward revision of 1.61 mb/d. OECD Europe was also revised down by 0.3 mb/d m-o-m and is now forecast to grow by 0.27 mb/d, with average supply of 3.98 mb/d. Oil production in OECD Asia Pacific is forecast to grow by 0.04 mb/d to average 0.56 mb/d, after a downward revision by 0.03 mb/d due to the base change.

OECD Americas

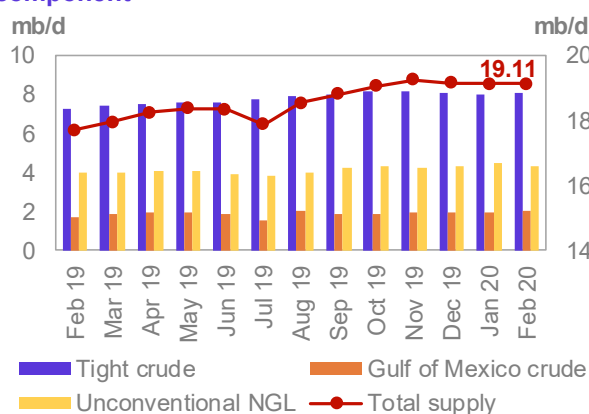
US

US liquids output in February showed a decrease of 9 tb/d to average 19.11 mb/d (excluding processing gains), up by 1.40 mb/d y-o-y.

While **crude oil and condensate output** rose by 87 tb/d m-o-m to average 12.83 mb/d, production of **NGLs** declined by 180 tb/d m-o-m to average 4.97 mb/d.

Preliminary data regarding other non-conventional liquids output, mainly ethanol, shows an increase in February by 84 tb/d m-o-m to average 1.31 mb/d. January's national data shows a decrease of 142 tb/d m-o-m to average 1.23 mb/d (**Graph 5 – 4**).

Graph 5 - 4: US monthly liquids supply by key component



Sources: EIA and OPEC.

While crude oil output in the West Coast, East Coast and Rocky Mountains decreased in February, production in the other two PADDs increased. Production in all of the Rocky Mountain states, including Colorado, which is home to the Niobrara shale, declined in February m-o-m. In the Gulf Coast, crude oil and condensate output fell in Texas by a minor 5 tb/d to average 5,400 tb/d, the first drop since March 2019. Production in GoM recorded more than 2 mb/d for the second time since August 2019 to show 2,023 tb/d, up by 41 tb/d. New Mexico also showed a m-o-m growth of 37 tb/d to average 1,093 tb/d. In the Midwest, production rose by 52 tb/d m-o-m, including in North Dakota and Oklahoma.

Table 5 - 4: US crude oil production by state, tb/d

State	Change		
	Jan 20	Feb 20	Feb 20/Jan 20
Alaska	482	477	-5
Colorado	519	503	-16
Oklahoma	530	557	27
New Mexico	1,056	1,093	37
North Dakota	1,398	1,425	27
Gulf of Mexico (GoM)	1,982	2,023	41
Texas	5,405	5,400	-5
Total	12,746	12,833	87

Sources: EIA and OPEC.

US weekly crude oil production data in February averaged 13.02 mb/d, while actual monthly output data indicates a lower level, by less than 191 tb/d. The average monthly production in February based on US weekly data shows an increase of 56 tb/d compared to January, while it was higher by 31 tb/d based on actual monthly production data at 87 tb/d.

The **US liquids production growth forecast for 2020** was revised down by 1.29 mb/d and is forecast to contract by 1.44 mb/d y-o-y, for an average of 16.96 mb/d. Tight crude and onshore conventional crude production forecasts as well as the non-conventional liquids, mainly ethanol, were all revised down from the previous month's assessment, while the NGL production forecast was revised up by 0.02 mb/d.

US crude oil production in 2020 is now forecast to decline by 1.13 mb/d y-o-y to average 11.10 mb/d.

Production of **NGLs** is likely to rise by minor 0.04 mb/d y-o-y to average 4.85 mb/d. Moreover, according to the EIA weekly report on production of oxygenates

and renewable fuels (mainly ethanol), output started to decline from the week ending 27 March by 165 tb/d to average 0.89 mb/d and then declined to 627 tb/d, a drop of 263 tb/d by 1 May, as several US ethanol producers began to reduce production and deferred projects due to the low oil prices. The US non-conventional liquids production forecast is now expected to decrease by 0.36 mb/d to average 1.00 mb/d for this year.

Three main factors are forecast to affect US crude oil production from April 2020 onward: First, the natural decline, depending on how many new wells come on stream to compensate for the base decline of the older wells. The number of active oil rigs has been declining since 13 March 2020 and has dropped by 354 rigs in seven consecutive weeks up to 1 May. It is estimated that production in April will be affected by around 120 tb/d just because of this decline.

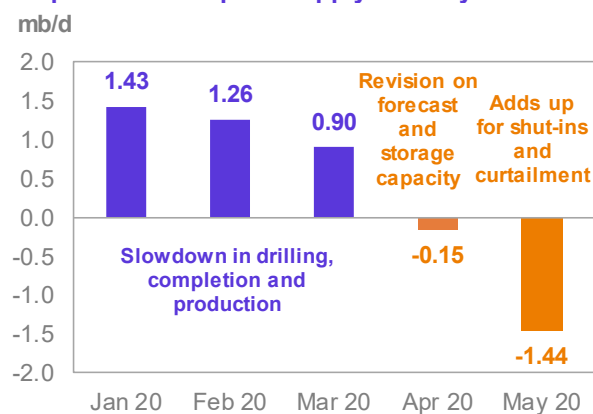
Another factor that could threaten output is the number of completed wells that depend on fracking activity in the shale regions. According to the latest FracFocus data, lower fracking activities in the US in April have caused a remarkable drop in production. Data shows a 50% decline in active frac crews since the beginning of the year. Halliburton is reducing its frac fleet by 75%, while CalFrac has cut its workforce by 70%. While completions and active rig counts are slowing, lower fracking has a different impact depending on well productivity in each region.

The number of shut-in wells is a third factor that could impact production. Many producers announced cuts already in March. Continental, the largest operator in North Dakota which produces 200 tb/d from Bakken shale in Williston Basin, initially planned to cut its production by 30% in April and May, but has now halted production entirely. In North Dakota, 6,000 wells have been idled since February, removing 0.4 mb/d or 30% of the total output in this state. In Texas, while the Texas RRC did not support a suggestion for production curtailment, some producers began to close low-productivity wells in early April. In New Mexico and Oklahoma, wells are being shut-in for a duration of one-to-four months.

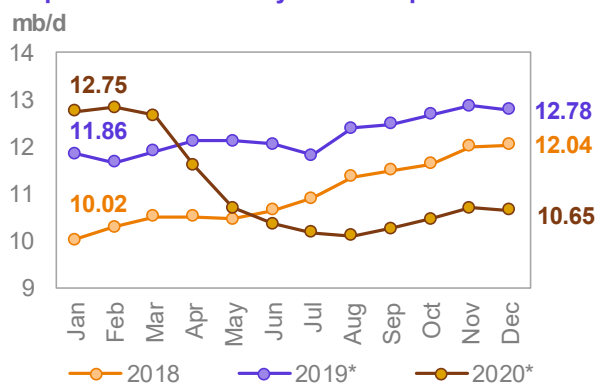
A preliminary estimate based on the factors explained above indicates that crude oil production in 2Q20 is projected to decline by 1.86 mb/d, q-o-q. While output is projected to be actively reduced by around 1.3 mb/d through well shut-ins, the remaining drop is due to natural decline and fewer completed and started wells. Based on the current trend the rig count is anticipated to continue to decline up to the middle of 4Q20. Therefore, while 3Q20 is likely to show a decline of 0.71 mb/d q-o-q, crude oil production in 4Q20 is forecast to grow by 0.43 mb/d to average 10.60 mb/d. Based on this forecast, average crude oil production will decline by 1.13 mb/d y-o-y to average 11.10 mb/d, down by 2.13 mb/d from December 2019 to December 2020.

Production of US NGLs is now expected to see minor y-o-y growth of 0.04 mb/d to average 4.85 mb/d. Indeed, unconventional NGLs coming from shale and tight formations will grow by 0.08 mb/d to an average 4.10 mb/d, which will partially be offset by a decline in conventional NGLs by 0.05 mb/d y-o-y to an average 0.76 mb/d.

Graph 5 - 5: US liquids supply monthly revision

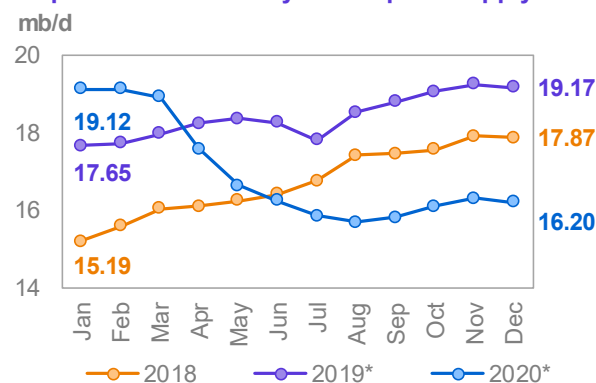


Graph 5 - 6: US monthly crude oil production



Note: * 2019 = Estimate and 2020 = Forecast.
Source: OPEC.

Graph 5 - 7: US monthly total liquids supply



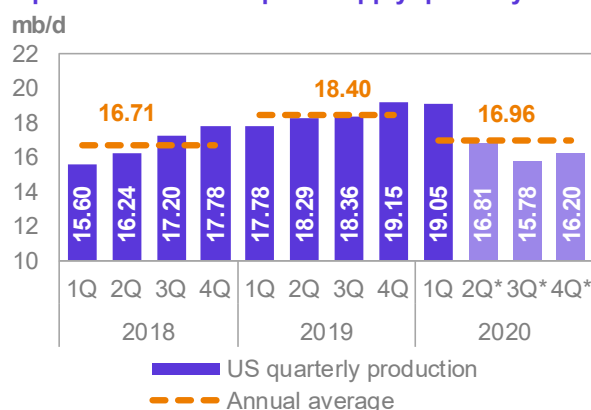
Note: * 2019 = Estimate and 2020 = Forecast.
Source: OPEC.

US crude oil production in 2020 was revised down by 1.13 mb/d and is now forecast to average 11.10 mb/d, representing a y-o-y decline of 1.13 mb/d.

US tight crude oil production is forecast to drop y-o-y by 0.81 mb/d, primarily in the Permian Basin, to average 6.88 mb/d. Oil production from offshore fields in the GoM is expected to grow by 0.04 mb/d to average 1.92 mb/d. Lower 48 onshore non-tight crude oil production, including from Alaska, is forecast to decline by around 0.35 mb/d to average 2.30 mb/d, a downward revision of 0.20 mb/d from the previous assessment.

Regarding tight crude, production in the Permian Basin is expected to continue growing by 0.22 mb/d, while in all other regions, contractions in production are anticipated.

Graph 5 - 8: US total liquids supply quarterly



Note: * 2Q20-4Q20 = Forecast. Sources: EIA and OPEC.

Table 5 - 5: US liquids production breakdown, mb/d

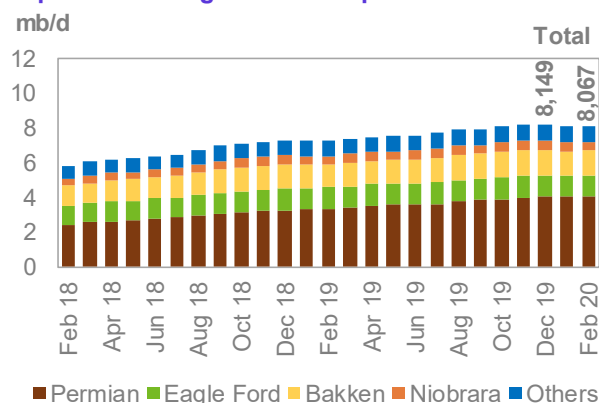
US liquids	2017	2018	Change 2018/17	2019*	Change 2019/18	2020*	Change 2020/19
Tight crude	4.97	6.52	1.55	7.70	1.19	6.88	-0.81
Gulf of Mexico crude	1.68	1.76	0.08	1.88	0.13	1.92	0.04
Conventional crude oil	2.70	2.71	0.01	2.65	-0.07	2.30	-0.35
Unconventional NGLs	2.97	3.58	0.61	4.01	0.43	4.10	0.08
Conventional NGLs	0.81	0.79	-0.02	0.80	0.01	0.76	-0.05
Biofuels + Other liquids	1.27	1.35	0.08	1.36	0.01	1.00	-0.36
US total supply	14.40	16.71	2.31	18.40	1.69	16.96	-1.44

Note: * 2019 = Estimate and 2020 = Forecast.

Sources: EIA, OPEC and Rystad Energy.

US tight crude output in February decreased by an estimated 18 tb/d m-o-m to average 8.07 mb/d, an increase of 834 tb/d y-o-y. The main m-o-m growth in US tight crude output from shale and tight formations through horizontal wells came from the Permian's Delaware Basin, adding a total of 40 tb/d to average 4.10 mb/d, while production in the Permian Midland in Texas declined. Tight crude output in Eagle Ford declined by 27 tb/d to average 1.16 mb/d while output in Williston Basin from the Bakken rose by 27 tb/d to average 1.44 mb/d. In the Niobrara, output declined by 21 tb/d to average 0.52 mb/d; at the same time in other regions, total production fell m-o-m by 37 tb/d to average 0.85mb/d.

Graph 5 - 9: US tight crude output breakdown



Sources: EIA, Rystad Energy and OPEC.

Table 5 - 6: US tight oil production growth, mb/d

US tight oil	2018	Change 2018/17	2019	Change 2019/18	2020*	Change 2020/19
Permian tight	2.84	1.00	3.66	0.85	3.88	0.22
Bakken shale	1.25	0.20	1.41	0.16	1.15	-0.26
Eagle Ford shale	1.19	0.09	1.22	0.04	0.93	-0.29
Niobrara shale	0.45	0.11	0.53	0.06	0.33	-0.20
Other tight plays	0.79	0.15	0.89	0.08	0.59	-0.30
Total	6.52	1.55	7.70	1.19	6.88	-0.81

Note: * 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

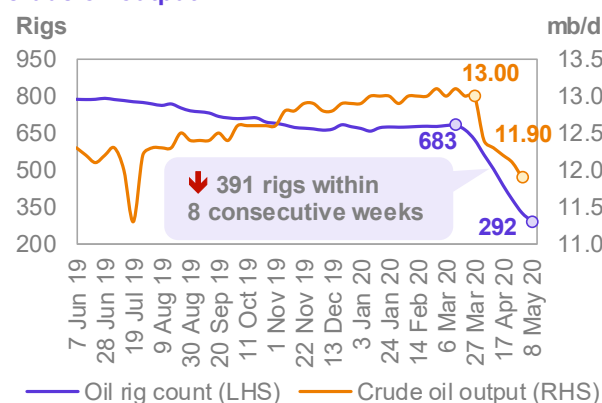
US rig count, spudded, completed, DUC wells and fracking activity

The overall **US rig count** declined by 614 units, or 62%, y-o-y to 374 rigs in the week ending 8 May, the lowest in historical data provided by Baker Hughes, as operators abandoned drilling plans amid the historic plunge in oil prices, demand shock and limited storage capacity. US operators idled 391 oil rigs since crude prices started plummeting from 13 March. Out of 374 active rigs, 359 rigs were onshore and 15 rigs were offshore. US oil rigs dropped by 513 units, or 64%, y-o-y to average 292 rigs (**Graph 5 - 10**).

The **oil rig count** dropped by 33 rigs w-o-w, while gas rigs declined by one. **US gas rigs** dropped by 103 units, or 56%, y-o-y to 80 rigs. Total **horizontal rigs (oil and gas)** decreased by 534 units, or 61%, y-o-y to stand at 338 rigs. The horizontal rig count dropped by 36 rigs w-o-w.

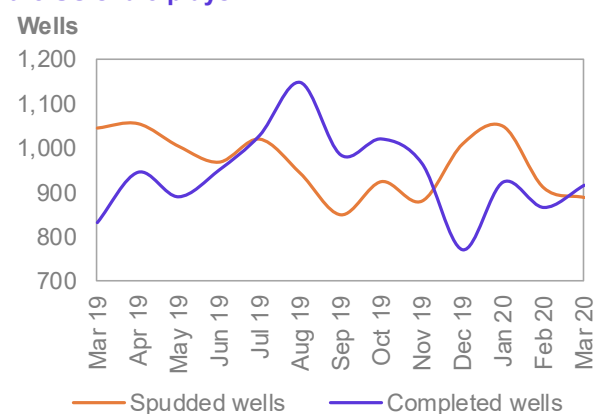
The vast majority of US rigs continue to be in the Permian Basin, at 198 units as of 8 May, lower by 259 rigs (-57%) y-o-y. At the same time, the number of active oil rigs dropped by 47 units to 27 rigs in the Eagle Ford Basin (-64%) y-o-y, by 36 units to 20 rigs (-64%) y-o-y in the Williston Basin and by 22 units to 7 rigs (-76%) y-o-y in the Niobrara Basin.

Graph 5 - 10: US weekly rig count vs. US weekly crude oil output



Sources: Baker Hughes, EIA and OPEC.

Graph 5 - 11: Spudded and completed wells in the US shale plays



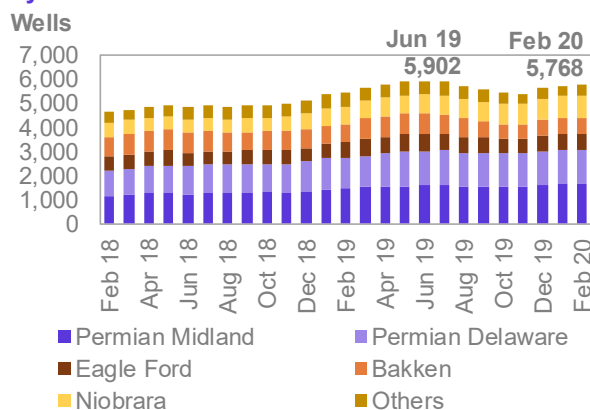
Sources: Rystad Energy and OPEC.

With regard to **spudded and completed wells**, in all US shale plays, 909 horizontal wells were spudded in February, down by 139 wells m-o-m. In the same month, 865 wells were completed, down by 57 wells m-o-m. However, while preliminary spudded and completed horizontal wells in March show a rising trend in completion, but a falling trend in spudded wells according to data by Rystad Energy (**Graph 5 - 11**).

The number of **DUC wells in February** increased by 39 units m-o-m to 5,768 wells. DUCs increased by 30 units in the Permian Midland, declined by 3 units in Delaware and 17 units in the Eagle Ford, and rose by 6 units in the Bakken shale. The DUCs number also increased by 19 units in the Niobrara and was higher by four in other shale regions.

"We expect the oil price outlook to improve as we approach 2021 and that E&Ps will have a large backlog of DUCs at their disposal. We assume they choose to draw down the DUC backlog before investing in new rig contracts. As such, we expect rig recovery to begin in March 2021," according to Wood Mackenzie.

Graph 5 - 12: US horizontal DUC count by shale play



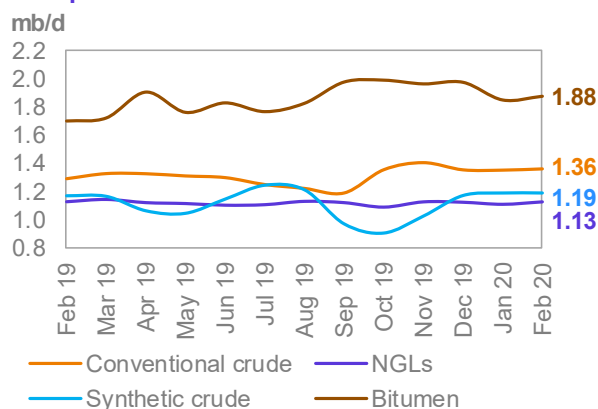
Sources: Rystad Energy and OPEC.

Canada

Canada's preliminary liquids production in 1Q20 rose by 0.02 mb/d q-o-q to average 5.55 mb/d, up by 0.2 mb/d, y-o-y. Total bitumen and synthetic crude output decreased by 0.06 mb/d m-o-m to average 3.01 mb/d in March, according to official data, which was 0.12 mb/d higher y-o-y.

Following the cutting of upstream capex plans in 2020 by about 27% or Cdn\$14.7 billion by five main Canadian oil sands operators in Alberta – CNRL, Husky, Suncor, Cenovus and MEG – due to drastic declines in the crude price in March, 12 workers tested positive for COVID-19 at the 220 tb/d Kearl oil sands mine operated by Exxon's Imperial Oil, posing a potential threat to Canadian crude production.

Graph 5 - 13: Canada's monthly production development



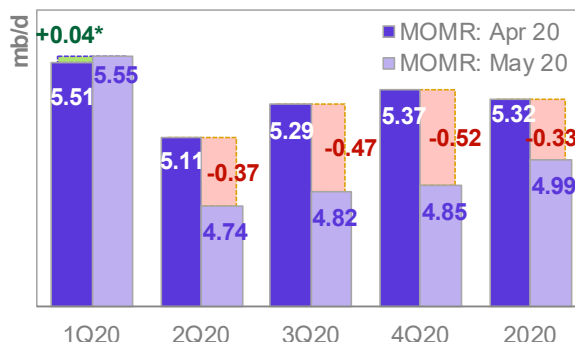
Sources: National Energy Board and OPEC.

Conventional crude oil and NGLs output was almost flat in January, as per official data at 1.35 mb/d and 1.11 mb/d, respectively.

Canadian oil production is likely to drop by 0.42 mb/d y-o-y to average 4.99 mb/d in 2020, particularly Alberta's bitumen and synthetic crude on reduced upstream capex of the main operators and shut-ins and curtailment announcements of around 1.4 mb/d. As seen in the graph for quarterly changes, the cut will continue from 2Q20 to the 4Q20 compared to our forecast in April.

According to the production shut-ins and plans for curtailment, a total of 0.94 mb/d are being cut from April onwards, including 210 tb/d from the Steam Assisted Gravity Drainage (SAGD) projects in Foster Creeks, Christian Lake and Surmont; 130 tb/d of synthetic crude in the Mildred Lake upgrader; 100 tb/d cut due to the shutdown of one of the trains in the Forth Hills mining area; and the production shut-in of

Graph 5 - 14: Canada's production shut-ins/curtailment from 2Q20



Note: 2020 = Forecast.

* Revision due to higher production vs forecast.

Source: OPEC.

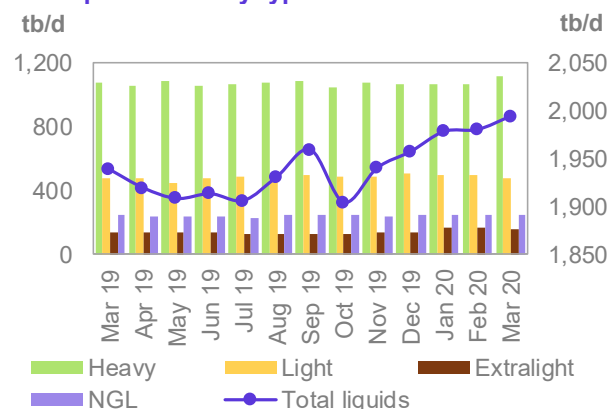
another 100 tb/d due to maintenance in 2Q20 in the Kearn mining area. About 0.4 mb/d of shut-ins were announced in the various conventional and SAGD projects. Oil production in 2Q20, 3Q20 and 4Q20 is expected to be curtailed by 1.36 mb/d compared to the previous assessment.

Mexico

Mexico's liquids output in March was up by 14 tb/d m-o-m to average 1.99 mb/d. This led to an upward revision 19 tb/d for the year to now show a contraction of 0.07 mb/d y-o-y and average production of 1.85 mb/d. Crude oil production in March rose by 16 tb/d m-o-m to average 1.75 mb/d according to Pemex, including 1.11 mb/d of heavy crude and 634 tb/d of light and extra light crude. NGLs output was flat at 0.25 mb/d.

Preliminary expectations for lower crude oil output in **April** could be due to lower price levels, but the average production cost in 2019 was less than \$15/b and both Pemex and the federal government have hedged 55% of total 2020 crude production at \$49/b. Nevertheless, Mexico is faced not only with a high decline rate from mature fields which led to a reduction in production by 0.15 mb/d in 2019 y-o-y, but the country may also be challenged to follow through with planned upstream spending.

Graph 5 - 15: Mexico's monthly liquids and crude production by type



Sources: PEMEX and OPEC.

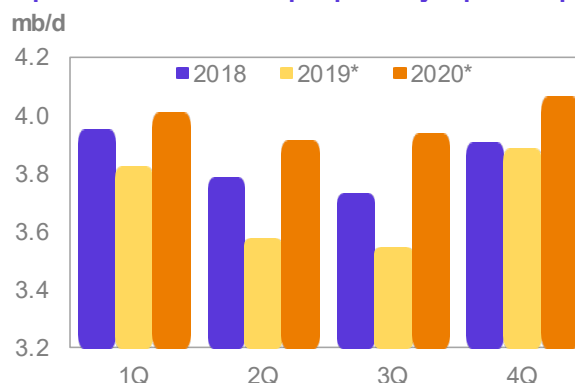
OECD Europe

OECD Europe's liquids production in 2019 declined by 0.13 mb/d to average 3.71 mb/d, primarily due to heavy declines in Norway by 6.2% y-o-y.

For **2020**, production is expected to surge to 3.98 mb/d, representing y-o-y growth of 0.27 mb/d for the region, revised down by 0.03 mb/d.

While oil production in Norway is expected to see growth of 0.29 mb/d in the current year, oil output in other countries of the region will remain unchanged or decline. As mentioned in the April MOMR, around 30 tb/d of the current crude output in the North Sea is not economically viable at below \$30/b.

Graph 5 - 16: OECD Europe quarterly liquids supply



Note: * 2019 = Estimate and 2020 = Forecast.
Source: OPEC.

Norway

Norway's preliminary liquids production in March fell by 0.06 mb/d m-o-m to average 2.04 mb/d, which was 4.4% lower than the Norwegian Petroleum Directorate's (NPD) forecast. Crude oil output in March was down by 79 tb/d m-o-m to average 1.68 mb/d, while NGL and condensate output in March increased by 14 tb/d to average 355 tb/d. Aker BP has started production from the first AERfugl Phase 2 well in the Norwegian Sea, three years ahead of schedule. According to Aker BP, it is one of the most profitable development projects on the Norwegian shelf with a break-even price of about \$15/b.

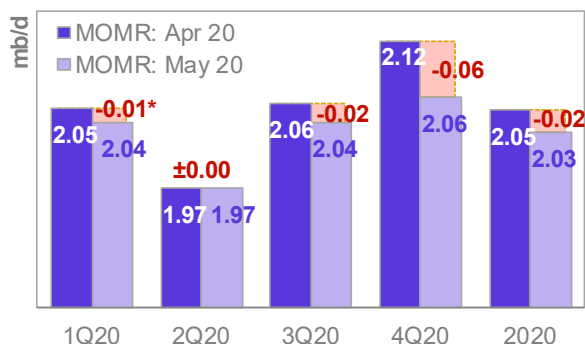
The Norwegian government decided to lend support to the recent production adjustments agreed by the OPEC and non-OPEC countries in the DoC. According to the Norwegian plan, production will come down by 250 tb/d in June to an upper limit of 1.61 mb/d and by 134 tb/d during 2H20, to a limit of no more than 1.725 mb/d. Moreover, new offshore project start-ups were deferred into 2021. Gas and condensate fields were exempt from the measures, as were fields on the median line with other countries and such with problems related to resource management.

Norway's liquids supply in **2020** is now expected to grow by 0.29 mb/d to average 2.03 mb/d, revised down by 0.02 mb/d from the previous month's assessment due to lower-than-expected oil output in 1Q20 and the announced production curtailments.

Compared to April's production forecast, Norway will adjust down crude oil production by 0.02 mb/d followed by 0.06 mb/d in 4Q20. As a result, the total liquids production will be affected by only 0.02 mb/d.

Apart from the incremental production from the Johan Sverdrup field, the start of new projects – such as Snøhvit-Askeladd phase-2 (August), Martin Linge (September), Njord (October), Dvalin (December) and YME-redevelop phase-2 and Tor II oil fields in November and December – will be delayed until 2021 according to an official announcement.

Graph 5 - 17: Norway's quarterly liquids supply forecast based on new production curtailment



Note: 2020 = Forecast.

* Revision due to lower actual output vs forecast.

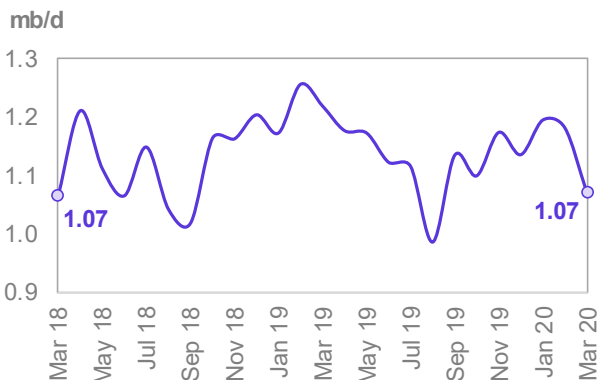
Source: OPEC.

UK

UK liquids production in March was down by 0.01 mb/d m-o-m to average 1.07 mb/d, lower by 0.11 mb/d y-o-y. Crude oil output declined by 103 tb/d to average 935 tb/d in March, while NGL output was down by 7 tb/d to average 90 tb/d. Non-conventional liquids were flat at 47 tb/d. However, preliminary output data in April shows a mild rising trend.

For **2020**, the planned summer shutdown of the forties pipeline has been postponed to spring 2021 in light of the UK government-imposed restrictions concerning the COVID-19 pandemic. UK oil production is forecast to remain unchanged from last year at 1.15 mb/d.

Graph 5 - 18: UK monthly liquids output



Sources: Department of Energy & Climate Change and OPEC.

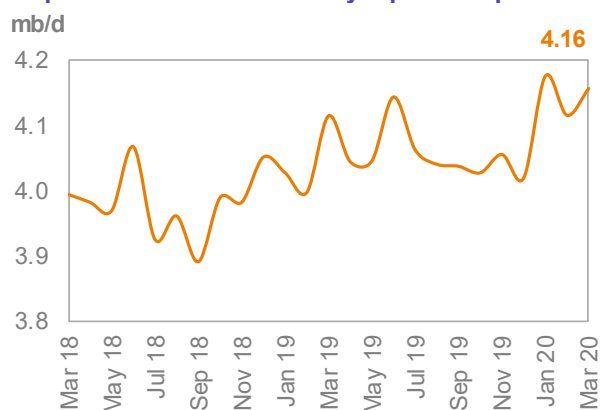
Non-OECD

China

China's liquids production in March was up by 41 tb/d m-o-m to average 4.16 mb/d, and also higher by 42 tb/d y-o-y, according to official data.

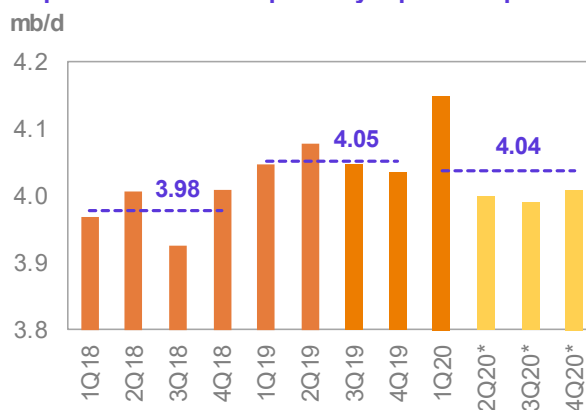
Crude oil output in March increased by 39 tb/d to average 3.90 mb/d, up by only 5 tb/d, y-o-y. Oil output from the CNOOC offshore fields in China was up by 9.7% y-o-y to 87.1 mboe, mainly attributable to the start of new projects. The company's capex reached about \$2.4 billion for 1Q20, up 20.1% y-o-y, as a result of the increased workloads. Under the current low oil price environment, the company has reduced its annual net production target for 2020 from 520-530 mboe to 505-515 mboe and total capex from \$12-13 billion to \$11-12 billion.

Graph 5 - 19: China's monthly liquids output



Sources: CNPC and OPEC.

Graph 5 - 20: China's quarterly liquids output



Note: *2Q20-4Q20 = Forecast. Sources: CNPC and OPEC.

If crude prices remain low for a prolonged period of time, the revenue of the main Chinese E&P companies will suffer, possibly leading to cuts in capex plans for 2020. This would place more downside pressure on domestic output in 2020-2021.

In **2020**, China's liquids supply is forecast to see a contraction of 0.01 mb/d to average 4.04 mb/d, a lower decline y-o-y due to the upward revision by 106 tb/d in 1Q20 on higher-than-expected production compared with the last month's assessment.

Developing Countries (DCs)

Total developing countries' (DCs) liquids production for 2019 was revised up marginally by 5 tb/d and is now estimated to have grown by 0.20 mb/d y-o-y to average 14.23 mb/d. Latin America is estimated to have recorded y-o-y growth of 0.27 mb/d, driven by new production ramp-ups in Brazil. Meanwhile, oil supply is estimated to have remained unchanged y-o-y in the Middle East, and to have declined by 0.08 mb/d y-o-y in Other Asia. Oil production in Africa is estimated to have grown by 0.01 mb/d in 2019.

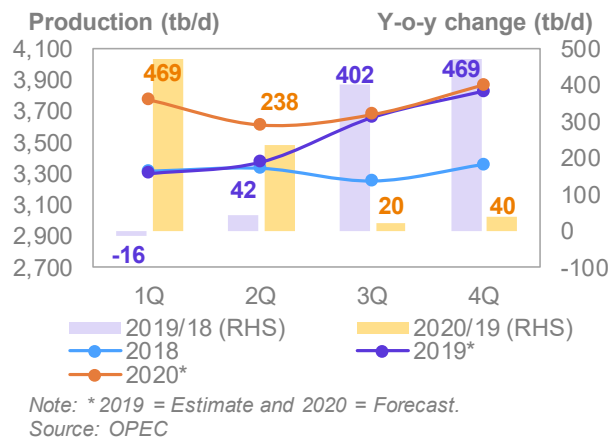
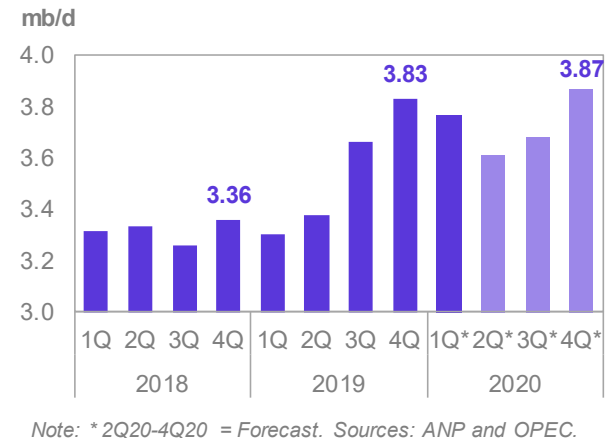
For **2020**, DCs' liquids production is forecast to decline by 0.13 mb/d to average 14.10 mb/d. This represents a downward revision of 0.16 mb/d from the previous assessment, of which the largest revision is attributed to Latin America by 0.14 mb/d. Nevertheless, the key growth driver remains Latin America with a forecast y-o-y increase of 0.19 mb/d to average 6.20 mb/d. Oil production is forecast to decrease in the Middle East, Africa and Other Asia by 0.13 mb/d to average 3.08 mb/d; 0.06 mb/d to average 1.46 mb/d; and 0.13 mb/d to average 3.35 mb/d, respectively.

Latin America

Production in **Brazil** has been revised down by 87 tb/d in 2020, now representing growth of 0.19 mb/d y-o-y due to the decision by Petrobras to delay until 3Q20 an extended programme of maintenance that was slated to begin in 2Q20 at a number of key FPSOs

Brazil's **crude oil output in March** fell by only 4 tb/d and remained almost flat from last month at 2.97 mb/d. Total liquids, including biofuels, remained unchanged at 3.70 mb/d, up by 0.4 mb/d y-o-y, an average of 3.77 mb/d in 1Q20. Oil production from the offshore Buzios field in the pre-salt horizon in Santos Basin reached a record of 0.52 mb/d. Indeed, the y-o-y growth of Brazilian crude oil production at 0.40 mb/d is equal to the yearly growth from Buzios. Petrobras has also issued an update on its current field developments and production measures offshore Brazil. The new facility will produce oil from the Atapu field in the pre-salt Santos Basin: the offshore interconnection programme is now nearing its conclusion and production should start before mid-year. The platform has an oil-processing capacity of 150 tb/d and a gas processing capacity of 6 mcm/d. In contrast, oil production from post-salt fell to an average of 0.89 mb/d in March, representing a decline by 0.04 mb/d, y-o-y. Petrobras has introduced the binding phase for the sale of its full interest in the deepwater Papa-Terra field in the Campos Basin offshore Brazil.

In early April, Petrobras agreed to reduce its oil production by 0.2 mb/d in response to the contraction of demand for oil and oil-related products. Brazil's liquids production in 2020 is forecast to increase by 0.19 mb/d y-o-y to average 3.73 mb/d, revised down by 87 tb/d in the new forecast following their stipulation for a cut.

Graph 5 - 21: Brazil's crude oil and liquids supply**Graph 5 - 22: Brazil's quarterly liquids supply**

In **Argentina**, production shut-ins at the Loma Campana in Vaca Muerta shale oil project are likely to impact the yearly production by 30 tb/d.

In **Ecuador**, the operations of two key pipelines that transport almost 100% of the country's production to the Pacific coast were affected by a rupture detected in the OCP pipeline caused by the Coca River flooding in first week of April. It was reported that production fell by over 300 tb/d compared with March. Therefore, the production forecast for 2Q20 was revised down by 0.7 mb/d, leading to a higher y-o-y decline in Ecuador.

Colombia will see a y-o-y decline by 50 tb/d.

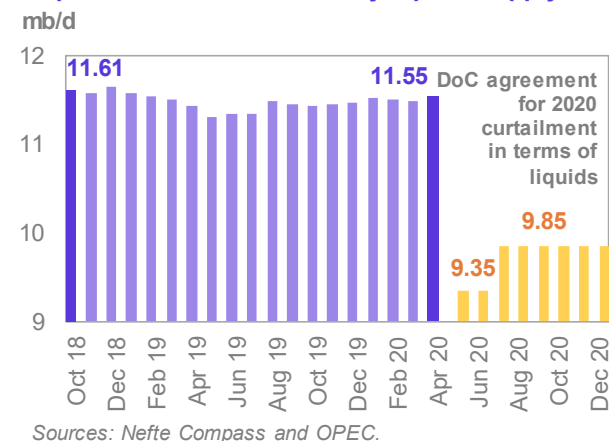
FSU

For **2020**, the FSU oil supply forecast remained unchanged in May, following the significant downward adjustment in production by countries participating in the DoC in the previous month's assessment. Oil production in Russia is forecast to decline by 1.30 mb/d y-o-y to average 10.14 mb/d. Oil supply forecasts for Kazakhstan and Azerbaijan are also projected to decline by 0.17 mb/d and 0.09 mb/d, respectively. Oil production of FSU Others is forecast to decline by a minor 0.01 mb/d to average 0.31 mb/d in 2020.

Russia

Preliminary data for Russia's liquids production in **April** shows an increase by 0.06 mb/d to an average of 11.55 mb/d, ahead of the implementation of the DoC output adjustments at the beginning of May. Crude oil production in April averaged 10.66 mb/d, up by 54 tb/d m-o-m, higher by 53 tb/d y-o-y. In April, total condensate and NGL output from gas condensate fields was estimated at 887 tb/d, similar to February and March.

For **2020**, Russian liquids supply is expected to decline by 1.30 mb/d y-o-y to average 10.14 mb/d.

Graph 5 - 23: Russia's monthly liquids supply

Caspian

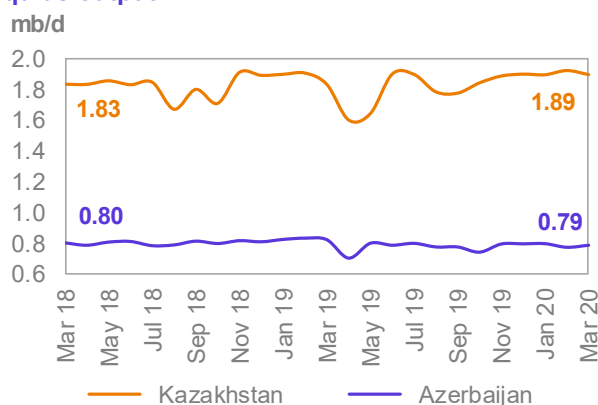
Kazakhstan

Kazakhstan's liquids output in **March** decreased by 0.03 mb/d to average 1.89 mb/d, higher by 0.06 mb/d y-o-y. While crude oil production declined by 30 tb/d to average 1.63mb/d, up by 73 tb/d y-o-y, NGL output remained flat m-o-m at 0.27 mb/d, and flat y-o-y.

Kazakhstan's oil production in **2019** is not estimated to have grown y-o-y due to heavy maintenance.

For **2020**, total liquids production is forecast to decline by 0.17 mb/d to average 1.65 mb/d.

Graph 5 - 24: Kazakhstan and Azerbaijan monthly liquids output



Sources: Nefte Compass and OPEC.

Azerbaijan

Azerbaijan's liquids output in **March** was up by 0.01 mb/d m-o-m to average 0.79 mb/d, lower by 0.03 mb/d y-o-y. While crude oil production grew by 16 tb/d to average 0.67 mb/d, NGLs and condensates dropped by 3 tb/d, to average 114 tb/d.

For **2020**, due to planned maintenance at the Chirag oil field and Shah Deniz gas-condensate field and considering the agreed voluntary adjustment, production is forecast to decline by 0.09 mb/d to average 0.70 mb/d.

OPEC NGL and non-conventional oils

OPEC NGLs and non-conventional liquids are estimated to have grown by 0.04 mb/d in **2019** to average 4.79 mb/d, unchanged from last month's assessment, following growth of 0.12 mb/d in 2018.

OPEC NGL output in **March** declined by 0.03 mb/d to average of 4.87 mb/d. Preliminary production in April also indicates a further decline.

The preliminary **2020** forecast indicates growth of 0.04 mb/d to average 4.83 mb/d, representing an upward revision by 0.01 mb/d, due to higher-than-expected NGL output in 1Q20.

Graph 5 - 25: OPEC NGL and non-conventional liquids output

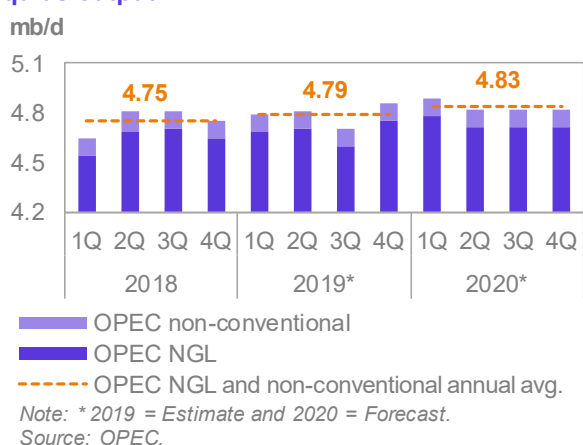


Table 5 - 7: OPEC NGL + non-conventional oils, mb/d

	2018	2019	Change 19/18	1Q20	2Q20	3Q20	4Q20	2020	Change 20/19
Total OPEC	4.75	4.79	0.04	4.88	4.82	4.82	4.82	4.83	0.05

Note: 2019 = Estimate and 2020 = Forecast.

Source: OPEC.

OPEC crude oil production

According to secondary sources, total **OPEC-13 preliminary crude oil production** averaged 30.41 mb/d in April, higher by 1.80 mb/d m-o-m. Crude oil output increased mainly in Saudi Arabia, the UAE and Kuwait, while production decreased primarily in Angola, Nigeria, IR Iran and Iraq.

In addition to the agreed production adjustments that should take effect as of 1 May 2020, on 12 May, Saudi Arabia, the UAE and Kuwait announced that they would voluntarily deepen oil output adjustments from June, by 1 mb/d, 100 tb/d and 80 tb/d, respectively, in an effort to expedite draining a global supply glut and rebalancing the oil market.

Table 5 - 8: OPEC crude oil production based on secondary sources, tb/d

Secondary sources	2018	2019	3Q19	4Q19	1Q20	Feb 20	Mar 20	Apr 20	Change Apr/Mar
Algeria	1,042	1,022	1,021	1,022	1,017	1,009	1,030	1,007	-23
Angola	1,505	1,401	1,390	1,350	1,388	1,387	1,402	1,312	-90
Congo	317	325	325	315	296	302	294	281	-12
Equatorial Guinea	125	117	119	122	122	121	122	127	5
Gabon	187	208	204	209	195	191	202	193	-9
Iran, I.R.	3,553	2,356	2,189	2,113	2,058	2,070	2,022	1,969	-53
Iraq	4,550	4,678	4,752	4,633	4,560	4,604	4,571	4,521	-50
Kuwait	2,745	2,687	2,655	2,688	2,739	2,672	2,873	3,132	259
Libya	951	1,097	1,103	1,163	348	147	91	82	-9
Nigeria	1,718	1,786	1,842	1,777	1,797	1,788	1,844	1,777	-68
Saudi Arabia	10,311	9,771	9,452	9,846	9,814	9,698	9,997	11,550	1,553
UAE	2,986	3,094	3,096	3,135	3,208	3,065	3,507	3,839	332
Venezuela	1,354	796	714	724	730	760	660	622	-38
Total OPEC	31,344	29,337	28,861	29,097	28,272	27,813	28,614	30,412	1,798

Notes: Totals may not add up due to independent rounding.

Source: OPEC.

Table 5 - 9: OPEC crude oil production based on direct communication, tb/d

Direct communication	2018	2019	3Q19	4Q19	1Q20	Feb 20	Mar 20	Apr 20	Change Apr/Mar
Algeria	1,040	1,023	1,025	1,023	1,018	1,009	1,033	1,004	-29
Angola	1,473	1,377	1,318	1,345	1,402	1,387	1,404	1,352	-52
Congo	323	332	333	309	308	293	319	324	5
Equatorial Guinea	120	110	109	110	126	126	123	122	0
Gabon	193	218	220	212	224	216	234	..	..
Iran, I.R.	..	..	..	..	..	..	..	..	..
Iraq	4,410	4,576	4,630	4,568	4,490	4,500	4,500	4,480	-20
Kuwait	2,737	2,678	2,636	2,683	2,744	2,665	2,901	3,151	250
Libya	..	..	..	..	..	..	..	..	..
Nigeria	1,602	1,727	1,794	1,702	1,761	1,742	1,799	1,793	-6
Saudi Arabia	10,317	9,808	9,503	9,929	9,755	9,784	9,733	12,007	2,274
UAE	3,008	3,058	3,068	3,058	3,173	2,990	3,526	4,033	507
Venezuela	1,510	1,013	864	859	821	865	718	737	19
Total OPEC	..	..	..	..	..	..	..	..	..

Notes: .. Not available. Totals may not add up due to independent rounding.

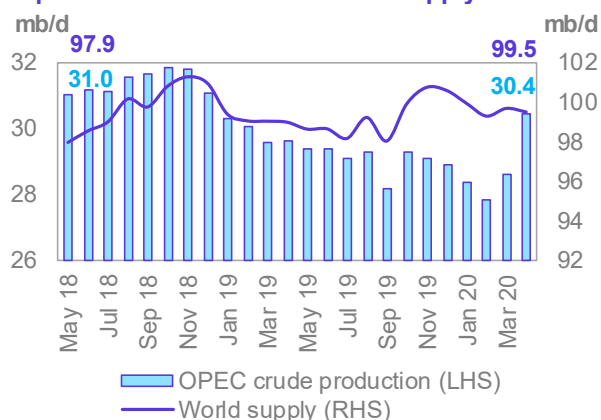
Source: OPEC.

World oil supply

Preliminary data indicates that **global liquids production** in **April** decreased by 0.18 mb/d to average 99.46 mb/d, compared with the previous month. Global crude supply will fall considerably in May under the agreement signed by countries participating in the DoC, as well as the announced shut-ins by other countries, mainly in North America.

Non-OPEC liquids production in April, including OPEC NGLs and non-conventional liquids, is estimated to have fallen by 1.98 mb/d m-o-m to average 69.05 mb/d, lower by 0.29 mb/d y-o-y. Preliminary declines in production during April 2020 were mainly driven by the US, Canada, Ecuador, Brazil and Kazakhstan.

Graph 5 - 26: OPEC and world oil supply



Source: OPEC.

The **share of OPEC crude oil in total global production** increased by 1.9 pp to 30.6% in April compared with the previous month. Estimates are based on preliminary data from direct communication for non-OPEC supply, OPEC NGLs and non-conventional oil, while estimates for OPEC crude production are based on secondary sources.

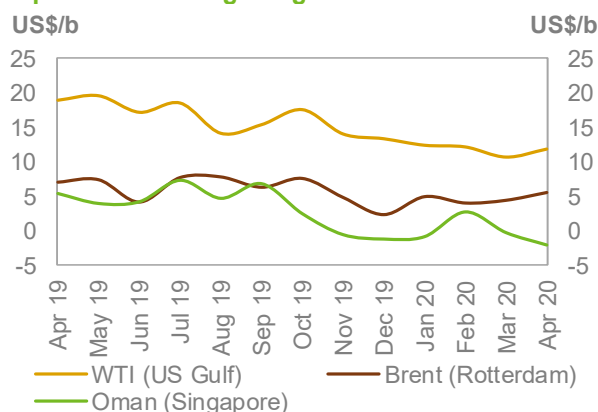
Product Markets and Refinery Operations

Refinery margins in the Atlantic basin rebounded. Deeper refinery intake cuts as well as the low feedstock price environment helped offset the unappealing demand-side signals. In addition, the relaxation of confinement measures in the US and Europe at the onset of the driving season provided some much-needed stimulus at the top of the barrel. In Asia, stronger product availability as refineries increased processing rates, led to stronger stockbuilds amid declining export orders, which consequently weighed on the regional product.

Refinery margins

US refining markets gained some ground in April, as processing rates tumbled by nearly 3 mb/d in April. The massive reductions in crude throughput, countered further acceleration of core product inventories builds, and provided backing to pricing signals. The weak benchmark price environment in the USGC reflected positively in refining margins. Moreover, towards the end of the month US refining margins benefitted from a rally in gasoline cracks, although sliding middle distillate cracks hindered further gains in overall refining economics. The imbalance between rising product availability and declining demand put the US refining system to test, although signs of an implied pick up in domestic demand started to emerge in April as the lockdown measures began to ease, possibly suggesting further marginal uptick in utilisation going forward.

Graph 6 - 1: Refining margins



Sources: Argus and OPEC.

The US refining system is also under pressure from declining demand in other regions despite massive cuts in Latin American refinery run rates. The reduction of US borne product flows to Latin America led to sharp declines in total product exports, which combined with sky-high freight rates, kept gains capped during the month. US refinery margins against WTI averaged \$11.92/b in April, up by \$1.16/b m-o-m but down by \$7.05/b y-o-y.

European margins strengthened with support from the decline in refinery product output which boosted naphtha and fuel oil markets and thus provided a competitive advantage, particularly to simple configurations. The strongest contributor to margins over the month came from the bottom of the barrel. The implementation of deeper intake cuts to mitigate the negative impact caused by plunging demand, along with announcements of reduction of the confinement measures in France and Germany proved to be supportive for product pricing. The resulting reduction in product outputs led to stronger naphtha and gasoline market sentiment as the summer driving season is expected to lift road transportation fuels. However, sturdy declines in total product departures from Europe, coupled with the unusually high freight rates witnessed over the month, amounted to some operational pressure particularly on European refineries that have traditionally targeted international product markets. Russia, one of the largest suppliers of heavy fuel in Europe, in April saw crude intake hold up reasonably well, backed by the implied refining subsidy which kept margins there healthy. However, given the local and regional demand contraction, gasoline yields declined by 3.0 pp m-o-m while that of gasoil increased by 1.0 pp m-o-m. This hints at a relatively stable supply of Russian products into the European markets during the month, possibly placing a lid on further strength in the regional product market. Refinery margins for Brent in Europe averaged \$5.55/b in April, up by \$1.11 compared to a month earlier but down by \$1.46 y-o-y.

In **Asia**, margins plunged deeper into negative territory during the month, pressured by a regional product surplus and lack of outlets overseas to accommodate extra volumes amid record high freight rates. The rise in refinery runs in the region as Chinese independent refiners – which are more focused on the domestic market – ramped up operations. This led to higher product availability and weighed on product markets, resulting in loss all across the barrel with the exception of fuel oil. Independent refineries in eastern Shandong province also lifted average run rates from 59% in March to 70.6% as of 22 April. More refineries in northern China have lifted run rates this month, which may have outpaced the overall recovery in domestic oil product

demand triggered by the relaxation of confinement measures. Refinery margins for Oman lost \$1.80 m-o-m to average minus 2¢/b in April, and were lower by \$7.49 y-o-y.

Refinery operations

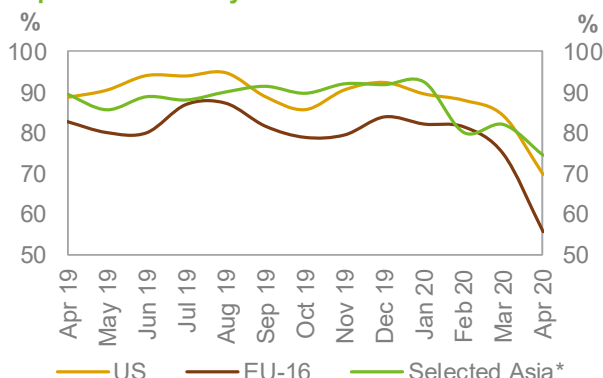
US refinery utilization rates fell, averaging 69.9%, which corresponds to a throughput of 13.24 mb/d. This represented a drop of 14.4 pp and 2.6 mb/d compared to the previous month. Y-o-y, the April refinery utilization rate was down by 18.9 pp, with throughputs down by 3.4 mb/d.

Euro-16 refinery utilization averaged 67.0% in April, corresponding to a throughput of 8.31 mb/d. This is a m-o-m drop of 7.9 pp, or 980 tb/d. Y-o-y, utilization rates decreased by 15.9 pp and throughputs were down by 2.0 mb/d.

In selected **Asia** – comprising Japan, China, India, Singapore and South Korea – refinery utilization rates continued to recover, averaging 85.0% in April, which corresponds to a throughput of 24.13 mb/d.

Compared to the previous month, throughputs were up by 2.4 pp and by 720 tb/d. Meanwhile, y-o-y they were down by 4.5 pp, which corresponded to a decline of 862 tb/d.

Graph 6 - 2: Refinery utilization rates



Note: * Japan, China, India, Singapore and South Korea.
Sources: Argus, EIA, Euroilstock, PAJ and OPEC.

Product markets

US market

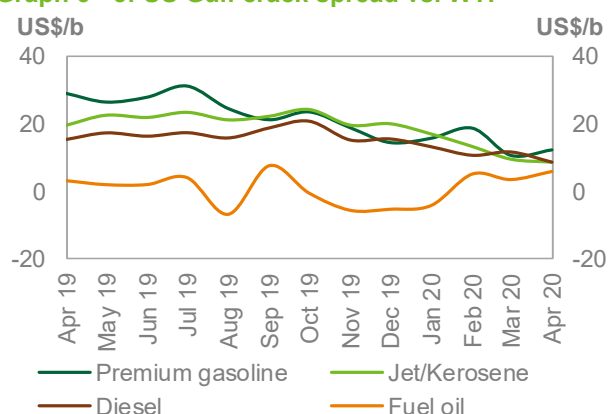
US gasoline cracks reversed course and showed gains backed by prices attributed to the summer grade RVP shift, whilst PADD-5 saw the most pronounced upside trend amid deeper refinery outputs. The lack of storage capacity and contangoed market structure has led to floating storage bookings. Bullish signals as lockdowns started to ease in April implied nationwide demand up by 800 tb/d over the last two weeks of April, and a massive reduction in imports has helped trim US gasoline stocks and support cracks. In April, the gasoline crack spreads gained \$1.60 m-o-m to average \$12.45/b, and were down by \$16.45 y-o-y.

The USGC **jet/kerosene crack spread** continued to decline due to air travel disruptions and jet fuel demand remained largely contracted amid growing product availability. The US jet/kerosene crack spread against WTI averaged \$8.54/b, down by 90¢ m-o-m and by \$11.09 y-o-y.

US gasoil crack spreads lost the gains witnessed in the previous month as diesel stocks rose sharply due to high refinery diesel yields that were around 9.0 pp higher y-o-y. At the same time, diesel inventory builds totalled nearly 30 mb m-o-m and reached an 11-month high, according to the US Energy Information Administration. The rise in diesel inventory levels, coupled with the weakened demand attributed to the coronavirus pandemic, contributed to the poor performance recorded in April. The US gasoil crack spread averaged \$8.52/b, down by \$3.08 m-o-m and by \$6.86 y-o-y.

US fuel oil crack spreads saw solid gains as declining refinery output amid strong shipping activity lent support to US fuel oil markets. In April, the US fuel oil crack spread averaged \$5.88/b, up by \$2.40 m-o-m and by \$2.73 y-o-y.

Graph 6 - 3: US Gulf crack spread vs. WTI



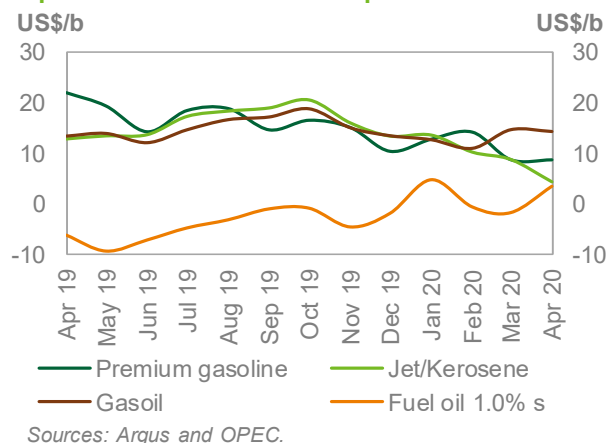
Sources: Argus and OPEC.

European market

Gasoline crack spreads gained traction and saw moderate losses. Fluid Catalytic Cracking margins remained weak because regional gasoline demand has not yet picked up to levels that would require sustained increases in FCC utilisation. The spike in freight rates contributed to the downside by making exports unattractive. The gasoline crack spread averaged \$8.78/b in April, down by 3¢ m-o-m and by \$13.13 y-o-y.

The **jet/kerosene crack spreads** continued to decline and reached a new multiyear low, pressured by strong demand contraction due to the impact of COVID-19 on air travel. The Rotterdam jet/kerosene crack spread averaged \$4.41/b, down \$4.37 m-o-m and by \$8.38 y-o-y.

Graph 6 - 4: Rotterdam crack spreads vs. Brent



European **gasoil crack spreads** edged slightly lower in April, as the paper contango deepened and flat prices came under added pressure. Bullish news in Northwest Europe amid reports of a small uptick in road fuel consumption and ongoing demand for cheap heating oil kept gasoil margins at healthy levels and prevented a steeper downturn. Consumption for domestic heating oil and a small uptick for 50 ppm gasoil demand supported the regional gasoil market. In addition, in April traders were reported to have bought significant volumes of 10 ppm diesel from retail surpluses and downgraded it into the heating fuel pool, diverting the product to tanks for 0.1% Sulphur gasoil and selling it as heating oil. However this supportive factor was offset by stronger supplies as refiners, in light of favourable economics in the previous month, maximized gasoil production to the detriment of gasoline and jet fuel due to their severe market weakness. The gasoil crack spread averaged \$14.29/b, which was lower by 36¢ m-o-m and higher by 90¢ y-o-y.

At the bottom of the barrel, **fuel oil 3.5% crack spreads** in Rotterdam jumped, supported by the hike in requirements for floating storage. Moreover, continued shipping operations have kept fuel oil markets in Europe in healthy shape – albeit at reduced rates, with many shipping companies optimizing onshore storage while keeping a close eye on floating storage economics. At the same time, HSFO prices have also shown more resilience this month, as most of the pricing for the bunker grade is done on contract and its demand is limited to scrubber-fitted vessels. Slowing HSFO demand in Europe most likely pushed refiners to resort to exports amid high storage levels, reflecting the arbitrage opening reported over the month from Europe to the US and Singapore. The fuel oil crack spread against Brent averaged minus \$3.33/b, which was higher by \$7.26 m-o-m and by \$5.76 y-o-y.

Asian market

The **Asian gasoline 92 crack spread** against Dubai continued to fall in April, pressured by expectations of stronger gasoline availability as economic activity and refinery intakes picked up in China. The cancellation of gasoline import orders from outside the region weighed further. The Singapore gasoline crack spread against Oman averaged \$1.91/b in April, down by \$3.21 m-o-m and by \$9.75 y-o-y.

Singapore light distillate **naphtha crack spreads** performed negatively. Low European vs Asian naphtha prices provided an arbitrage of volume flows to the East of Suez, with around 15 mb of naphtha booked for Asia-Pacific in April. However, the positive effect of this spur in the demand was offset by the additional barrels available in the market from refineries. The Singapore naphtha crack spread against Oman averaged minus \$3.47/b, down by 29¢ m-o-m but up by \$3.99 y-o-y.

In the middle of the barrel, the **jet/kerosene crack spreads** in Asia dropped further to near zero against Oman due to massive air travel disruptions.

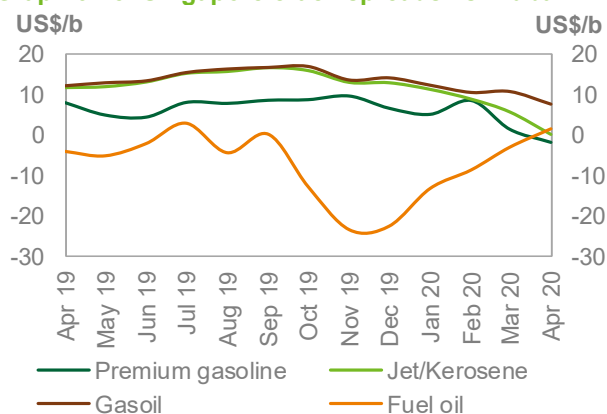
The plunge in global jet demand resulted in stock builds, which were exacerbated by bearish signals triggered by rising refinery intakes in Asia. This led to a jet/kerosene price drop of a hefty \$18/b m-o-m. The Singapore jet/kerosene crack spread against Oman averaged 2¢/b, down by \$5.59 m-o-m and by \$11.66 y-o-y.

The Singapore **gasoil** crack spread reversed course and was slashed by sluggish industrial activity, travel restrictions due to extended lockdowns and disruptions to global supply chains. In addition, the gasoil crack spreads, which until last month showed resilience, suffered from stronger refinery outputs amid declining storage availability, which combined stoked negative market sentiment. The Singapore gasoil crack spread against Oman averaged \$7.52/b, down by \$3.12 m-o-m and also lower by \$4.54 y-o-y.

The Singapore **fuel oil 3.5%** crack spread jumped, supported by robust demand from the bunker sector. The Singapore trading hub hosts a high number of VLCC's, with this vessel type representing the highest share of fleets with scrubbers installed that burn

HSFO. Due to limited outputs, Singapore relies on imports to meet an annual marine fuel demand of up to 45-50 mt. The resulting combination of traditional local shortage and robust demand led to the positive performance and the considerable gains seen in HSFO markets. Singapore fuel oil cracks against Oman averaged \$1.48, up by \$4.55 m-o-m and by \$5.60 y-o-y.

Graph 6 - 5: Singapore crack spreads vs. Dubai



Sources: Argus and OPEC.

Table 6 - 1: Short-term prospects for product markets and refinery operations

Event	Time frame	Asia	Europe	US	Observations
Summer driving season	Jun 20– Aug 20	⬇️ Negative impact on product markets	⬇️ Negative impact on product markets	⬇️ Negative impact on product markets	Further alleviation of lockdowns could incentivize refiners to increase runs, worsening the product supply/demand balance, and fuel consumption is expected to pick up very gradually.
Maintenance Season	2020	⬇️ Negative impact on product markets	⬇️ Negative impact on product markets	⬇️ Negative impact on product markets	The supportive factor from heavy turnarounds is expected to be vastly muted this year due to demand contraction. A large number of refineries have deferred maintenance
High product inventory levels	1Q20	⬇️ Negative impact on product markets	⬇️ Negative impact on product markets	⬇️ Negative impact on product markets	The low crude price environment should drive refiners to process every barrel they can. This will maintain the product oversupply while floating storage will need to be cleared first due to high costs.

Source: OPEC.

Product Markets and Refinery Operations

Table 6 - 2: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				Refinery utilization, %			
	Feb 20	Mar 20	Apr 20	Change Apr/Mar	Feb 20	Mar 20	Apr 20	Change Apr/Mar
US	16.57	15.85	13.24	-2.61	88.11	84.28	69.85	-14.4 pp
Euro-16	10.12	9.29	6.91	-2.38	81.64	74.91	55.75	-19.2 pp
France	0.74	0.47	0.38	-0.10	59.11	37.62	29.98	-7.6 pp
Germany	1.85	1.60	0.83	-0.77	84.60	73.17	38.16	-35.0 pp
Italy	1.24	1.23	0.64	-0.59	60.46	59.87	31.13	-28.7 pp
UK	1.12	1.00	0.60	-0.40	85.07	76.24	45.64	-30.6 pp
Selected Asia*	22.71	23.26	21.19	-2.07	80.18	82.11	74.65	-7.5 pp

Note: * Includes Japan, China, India, Singapore and South Korea.

Sources: EIA, Euroilstock, PAJ, FGE, and OPEC.

Table 6 - 3: Refinery crude throughput, mb/d

	2017	2018	2019	2Q19	3Q19	4Q19	1Q20	2Q20
Total OECD	38.35	38.26	37.65	37.38	38.62	37.29	35.82	25.71
OECD Americas	19.10	19.31	18.96	19.07	19.55	18.87	18.17	13.40
US	16.88	17.32	16.98	17.14	17.43	16.87	16.42	12.48
OECD Europe	12.44	12.21	12.13	11.85	12.54	12.02	11.34	7.12
France	1.17	1.10	1.00	0.98	1.06	0.82	0.65	0.40
Germany	1.91	1.80	1.78	1.70	1.83	1.83	1.77	0.97
Italy	1.40	1.35	1.35	1.33	1.48	1.33	1.26	0.88
UK	1.10	1.06	1.08	1.03	1.07	1.14	1.10	0.63
OECD Asia Pacific	6.82	6.74	6.56	6.45	6.54	6.40	6.32	5.19
Japan	3.22	3.11	3.04	2.94	3.05	3.00	2.96	2.13
Total Non-OECD	42.12	43.41	44.12	43.15	44.35	44.85	41.31	37.13
China	11.35	12.03	12.98	12.66	12.95	13.68	12.04	12.01
Middle East	7.04	7.26	7.09	7.06	7.17	6.82	6.57	6.06
Russia	5.59	5.72	5.70	5.38	5.89	5.83	5.88	4.76
Latin America	4.49	4.22	4.05	3.98	4.12	4.02	3.76	3.25
India	4.79	4.89	5.03	4.97	4.96	5.08	5.09	4.01
Africa	2.24	2.24	2.30	2.22	2.35	2.39	2.09	1.90
Total world	80.48	81.67	81.77	80.54	82.98	82.14	77.13	62.84

Note: Totals may not add up due to independent rounding.

Sources: AFREC, APEC, EIA, IEA, Euroilstock, PAJ, Ministry data, including Ministry of Energy of the Russian Federation, Ministry of Petroleum and Natural Gas of India, OPEC and JODI.

Table 6 - 4: Refined product prices, US\$/b

	Mar 20	Apr 20	Change Apr/Mar	Annual avg. 2019	Year-to-date 2020
US Gulf (Cargoes FOB)					
Naphtha*	22.13	13.98	-8.15	56.86	35.59
Premium gasoline (unleaded 93)	40.74	28.97	-11.77	79.66	53.12
Regular gasoline (unleaded 87)	35.58	23.72	-11.86	72.70	47.70
Jet/Kerosene	39.33	25.06	-14.27	79.32	50.70
Gasoil (0.2% S)	41.49	25.04	-16.45	74.61	49.62
Fuel oil (3.0% S)	23.84	17.02	-6.82	52.55	31.52
Rotterdam (Barges FoB)					
Naphtha	27.08	15.14	-11.94	55.71	37.93
Premium gasoline (unleaded 98)	40.52	27.61	-12.91	79.52	53.49
Jet/Kerosene	40.49	23.24	-17.25	80.22	51.58
Gasoil/Diesel (10 ppm)	46.36	33.12	-13.24	79.50	55.50
Fuel oil (1.0% S)	29.98	22.25	-7.73	60.15	43.78
Fuel oil (3.5% S)	31.50	22.51	-8.99	54.19	36.08
Mediterranean (Cargoes FOB)					
Naphtha	24.88	10.50	-14.38	54.48	35.22
Premium gasoline**	33.29	20.53	-12.76	71.36	46.51
Jet/Kerosene	37.76	17.43	-20.33	77.77	48.04
Diesel	44.99	28.98	-16.01	79.03	53.69
Fuel oil (1.0% S)	33.38	25.41	-7.97	63.42	47.32
Fuel oil (3.5% S)	22.93	15.90	-7.03	50.55	29.85
Singapore (Cargoes FOB)					
Naphtha	30.60	17.86	-12.74	57.10	40.52
Premium gasoline (unleaded 95)	36.42	20.49	-15.93	72.45	48.10
Regular gasoline (unleaded 92)	35.08	19.42	-15.66	69.45	46.55
Jet/Kerosene	39.39	21.35	-18.04	77.26	49.78
Gasoil/Diesel (50 ppm)	45.22	31.16	-14.06	77.78	54.59
Fuel oil (180 cst)	30.71	22.81	-7.90	57.29	37.48
Fuel oil (380 cst 3.5% S)	30.06	22.23	-7.83	56.70	36.51

Note: * Barges. ** Cost, insurance and freight (CIF).

Sources: Argus and OPEC.

Tanker Market

April was a stellar month for the tanker market, with both dirty and clean rates continuing to see spikes during the month.

The volatile trend that began in early March continued into April, with dirty freight rates peaking early in the month and then trending lower, although remaining at relatively high levels. Rates were supported by a surge in tanker demand that continued through April, driven by low crude prices and a need to push out excess supplies amid concerns about the availability of onshore storage capacity.

Meanwhile, clean tanker rates jumped to historic highs in the middle of April, as a collapse in demand due to COVID-19 lockdowns, storage constraints and a strong contango structure for key products gave refiners and traders an incentive to boost product exports and to turn to floating storage. However, these market trends were quickly overwhelmed, sending rates down to more typical levels by the end of the month.

The implementation of the historic OPEC+ decision in May along with sharp reductions in capex and drilling activities in the US are expected to weigh on tanker demand in the coming months, although increased floating storage will provide offsetting support.

Spot fixtures

Global spot fixtures fell m-o-m in April, declining by 0.8 mb/d, or 4%, from the high levels seen in the previous month to average 19.1 mb/d. Spot fixtures were broadly in line with the performance seen in the same month last year. Fixtures remained at high levels supported by crude bookings from major exporters, which picked up from the previous month.

Table 7 - 1: Spot fixtures, mb/d

	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
All areas	18.62	19.93	19.09	-0.84
OPEC	12.54	13.80	13.79	-0.01
Middle East/East	7.40	8.01	7.92	-0.09
Middle East/West	1.20	2.91	2.51	-0.40
Outside Middle East	3.94	2.88	3.36	0.48

Sources: Oil Movements and OPEC.

OPEC spot fixtures averaged 13.79 mb/d in April, broadly in line the previous month, but an increase of 0.6 mb/d or 5% y-o-y.

Fixtures from the **Middle East-to-East** were also stable m-o-m in April at 7.9 mb/d. Y-o-y, fixtures on the route were 1.1 mb/d, or 16%, higher.

Middle East-to-West fixtures declined 14% m-o-m in April coming off the substantial gain seen in the previous month. Fixtures on the route averaged 2.5 mb/d, representing an increase of 0.7 mb/d, or 41%, over the same month last year.

Outside of the Middle East, fixtures recovered from the previous month's decline, rising 0.5 mb/d or 17% m-o-m to average 3.4 mb/d in April. In annual terms, fixtures were sharply lower, registering a decline of 1.2 mb/d or 26%.

Sailings and arrivals

OPEC sailings jumped 1.9 mb/d in April to average 25.74 mb/d and increased 1.1 mb/d, or 5%, compared to April 2019. **Middle East** sailings rose 0.6 mb/d, or 3%, m-o-m to average 17.75 mb/d for a y-o-y gain of 0.6 mb/d or 4%.

Crude arrivals were higher in April on all routes outside the Far East. Arrivals in West Asia saw the highest gains, increasing 6% m-o-m, although remaining broadly at the level seen in April last year. Arrivals in North America rose 1% m-o-m to average 7.9 mb/d. Y-o-y, arrivals were still 26% lower on the route. Arrivals in Europe were broadly consistent m-o-m in April averaging 11.0 mb/d. In contrast, Far East arrivals declined 9% m-o-m to average 8.0 mb/d in April, but were broadly in line with the level achieved in the same month last year.

Table 7 - 2: Tanker sailings and arrivals, mb/d

	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
Sailings				
OPEC	24.12	23.88	25.74	1.86
Middle East	17.33	17.20	17.75	0.55
Arrivals				
North America	8.04	7.79	7.88	0.09
Europe	11.72	11.00	11.01	0.01
Far East	8.47	8.82	8.04	-0.78
West Asia	4.32	4.06	4.32	0.26

Sources: Oil Movements and OPEC.

Dirty tanker freight rates

Very large crude carriers (VLCCs)

The positive momentum that began in March continued on into April with an increase in cargoes and demand for floating storage supporting rates. As a result, **VLCC spot freight rates** saw further gains across the board during the month, with rates rising by 16% on average m-o-m.

Rates on the **Middle East-to-East** route led gains in April, up 23% m-o-m to average WS156 and were up three-fold compared to the same month last year.

Freight rates for tankers operating on the **Middle East-to-West** route rose 2% m-o-m in April, on top of the substantial jump seen the month before, to average WS103. Y-o-y, rates were almost five-times as high.

Increased activity also tightened the **West Africa-to-East** route, where rates rose 20% to WS145, representing a gain of more than 200% compared with April 2019.

Table 7 - 3: Dirty VLCC spot tanker freight rates, Worldscale (WS)

	Size 1,000 DWT	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
VLCC					
Middle East/East	230-280	43	127	156	29
Middle East/West	270-285	30	100	103	3
West Africa/East	260	48	121	145	24

Sources: Argus and OPEC.

Suezmax

Suezmax rates also benefited from the higher activity, with **average spot freight rates** increasing 16% m-o-m on average in April. Y-o-y, rates were up 118%.

Rates for tankers operating on the **West Africa-to-US Gulf Coast** (USGC) route averaged WS140 in April, an increase of 14% over the month before. Y-o-y, rates were 133% higher than in April last year.

The **Northwest Europe (NWE)-to-USGC** route rose 4% m-o-m to average WS102, representing a 100% jump compared to the same month last year.

Table 7 - 4: Dirty Suezmax spot tanker freight rates, WS

	Size 1,000 DWT	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
Suezmax					
West Africa/US Gulf Coast	130-135	77	123	140	17
Northwest Europe/US Gulf Coast	130-135	66	98	102	4

Sources: Argus and OPEC.

Aframax

Aframax rates rose 8% in April, mirroring gains in other classes to a lesser extent. Compared to the same month last year, rates were 85% higher. The **Indonesia-to-East** route led Aframax gains, increasing 28% to average WS154. The **Cross-Med** route rose 10% to average WS149, while the **Mediterranean-to-NWE** route gained 7% to average WS156.

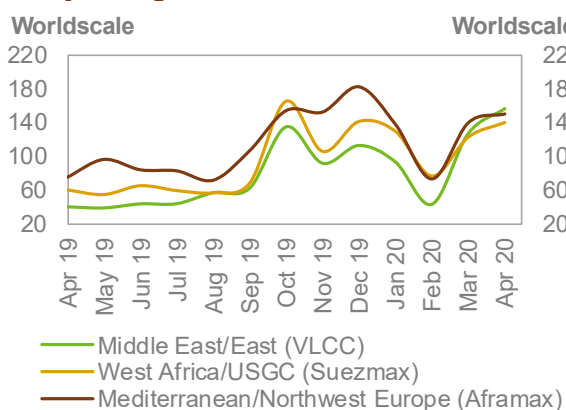
Table 7 - 5: Dirty Aframax spot tanker freight rates, WS

	Size 1,000 DWT	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
Aframax					
Indonesia/East	80-85	100	121	154	34
Caribbean/US East Coast	80-85	170	165	153	-12
Mediterranean/Mediterranean	80-85	80	142	156	14
Mediterranean/Northwest Europe	80-85	73	139	149	10

Sources: Argus and OPEC.

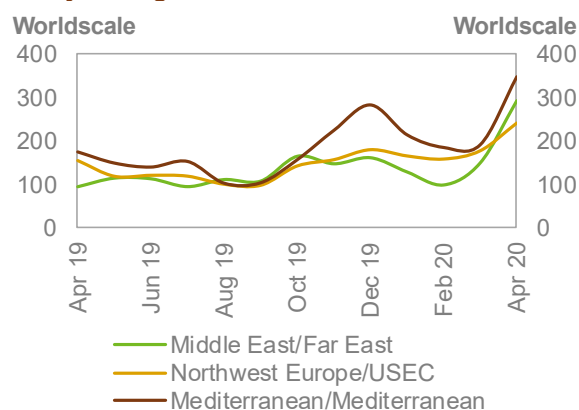
Only the **Caribbean to US East Coast** (USEC) route experienced a decline m-o-m, dropping 7% to average WS153, but still managed a strong y-o-y increase of 95% to average WS153.

Graph 7 - 1: Crude oil spot tanker freight rates, monthly average



Sources: Argus and Platts.

Graph 7 - 2: Products spot tanker freight rates, monthly average



Sources: Argus and OPEC.

Clean tanker freight rates

The **clean spot tanker** market showed a strong performance in April, up 69% m-o-m and 95% y-o-y.

On the **East of Suez** route, clean tanker spot freight rates increased 74% m-o-m in April and were 118% higher than the same month last year. The **Middle East-to-East** route rose by 94% m-o-m to average WS291. Meanwhile, the **Singapore-to-East** route averaged WS237, representing a m-o-m increase of 54% and a y-o-y gain of 63%.

Clean tanker spot freight rates for **West of Suez** were around 66% higher in April compared with the previous month and up some 85% from the same month last year. The **Cross-Med** and **Med-to-NWE** routes jumped 82% and 78%, respectively, to average WS348 and WS358. Meanwhile, rates on the **NWE-to-USEC** route increased 37% to WS241.

Table 7 - 6: Clean spot tanker freight rates, WS

	Size 1,000 DWT	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
East of Suez					
Middle East/East	30-35	100	150	291	141
Singapore/East	30-35	140	154	237	83
West of Suez					
Northwest Europe/US East Coast	33-37	157	177	241	65
Mediterranean/Mediterranean	30-35	185	191	348	157
Mediterranean/Northwest Europe	30-35	195	201	358	157

Sources: Argus and OPEC.

Crude and Refined Products Trade

Global crude and product trade flows continue to be affected by the twin impacts of the collapse in demand due to the COVID-19 pandemic and the resulting overhang of crude and product supplies.

Preliminary data for April shows US crude imports falling to 5.4 mb/d – the lowest level since 1992 – while the country's crude exports averaged 3.2 mb/d, well below the recent peak of 3.7 mb/d in February 2020.

In March, China's crude imports averaged 9.7 mb/d, falling below 10 mb/d for the first time in eight months. Product exports from China surged to 1.85 mb/d, the second highest level on record, led by a jump in diesel exports.

India's crude imports dipped in March to average 4.6 mb/d, impacted by the government-ordered lockdown which began toward the end of the month. India's product exports rose 10% m-o-m, supported by an increase in diesel exports. Crude imports into Japan increased for the first time in two months, averaging 3.1 mb/d in March, while product imports and exports were slightly lower.

The latest official data for OECD Europe shows crude exports continuing to fall in January, reaching 2.2 mb/d, with the UK slightly lower and Norway down by almost 20% from a recent peak of 2.6 mb/d in November.

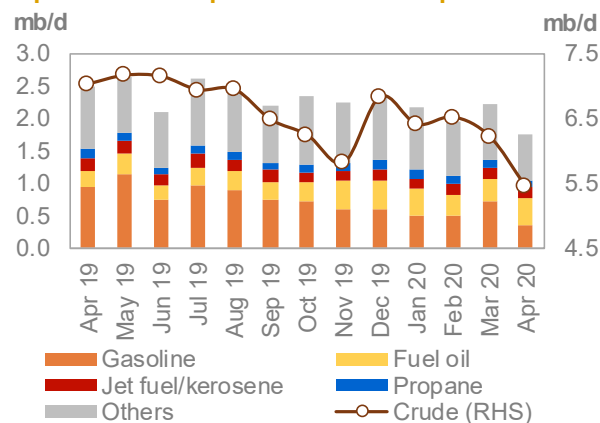
US

Preliminary data for April shows **US crude imports** falling to 5.4 mb/d, the lowest since 1992 in monthly terms. This follows a sharp fall of 0.7 or 12.5% m-o-m and an even steeper decline of 1.6 mb/d or 22.5% from the same period last year. The decline in crude imports came as refineries cut back refinery runs amid a collapse in product demand and concerns about declining availability of commercial storage capacity.

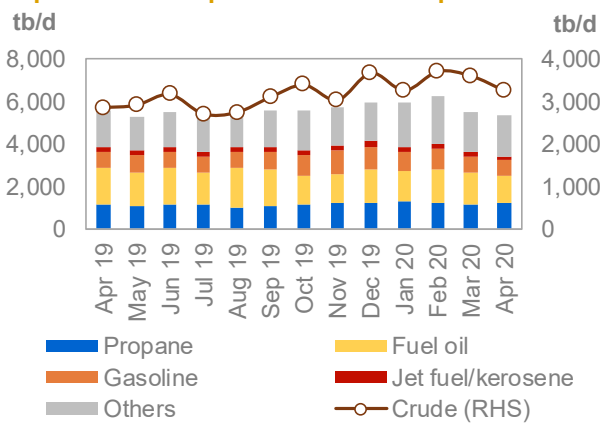
US crude exports averaged 3.2 mb/d in April, well below a peak of 3.7 mb/d in February 2020, with a growing share of US crude exports headed to floating or overseas storage, as domestic commercial storage becomes tight. Exports fell 0.5 mb/d or almost 10% m-o-m; however, crude exports were still 0.4 mb/d or 14% higher than the same month last year.

The latest data by **destinations** shows US exports to South Korea – a key buyer of US crude – fell by about half m-o-m to average 0.3 mb/d in February, amid COVID-19 disruptions, although exports to other Asian countries – notably Singapore, Thailand and Taiwan – took up the slack. Europe countries also brought in more US crude, with the Netherlands being the top destination for US crude in February, with 0.5 mb/d. Canada fell to second place with 0.4 mb/d.

Graph 8 - 1: US imports of crude and products



Graph 8 - 2: US exports of crude and products



As a result, **US net crude imports** averaged 2.2 mb/d in April, representing a decline of almost 0.4 mb/d or 16% compared with the previous month. Y-o-y, US net crude imports were almost 2.0 mb/d or 47% lower than in the same period last year.

On the product side, preliminary data showed **US product exports** averaged 5.3 mb/d in April, representing a decline of around 150 tb/d or 3% compared to the previous month and some 250 tb/d lower than the same month last year. The decline in product exports in April was reportedly due to reduced flows to Mexico on the

Crude and Refined Products Trade

back of low consumption and limited storage capacity, and as high freight rates narrowed arbitrage economics to Brazil.

US product imports dropped 0.5 mb/d, or around 21%, in April to average 1.6 mb/d. Compared to the same month last year, US product imports were 0.7 mb/d or around 29% lower.

As a result, **US net product exports** averaged 3.6 mb/d in April, representing an increase of 0.3 mb/d or 9% compared to the previous month. Y-o-y, net product exports were by around 0.5 mb/d or 15% higher than in April 2019.

Combined, **net crude and product exports** averaged 1.4 mb/d in April, according to preliminary data, double the level seen in the previous month and a notable 2.5 mb/d or 230% increase over the same month last year.

Table 8 - 1: US crude and product net imports, tb/d

US	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
Crude oil	2,811	2,626	2,205	-421
Total products	-4,337	-3,293	-3,594	-301
Total crude and products	-1,526	-667	-1,389	-722

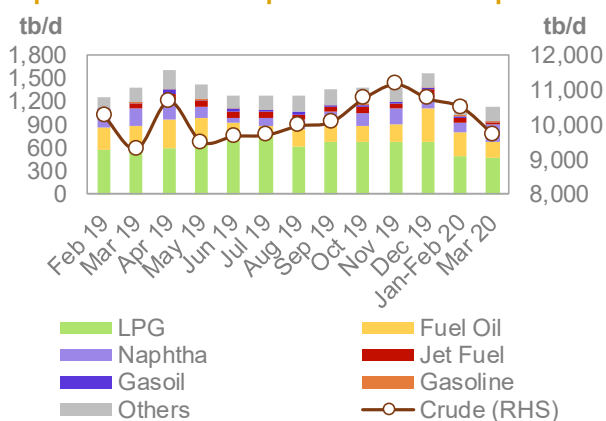
Sources: EIA and OPEC.

China

China's **crude imports** averaged 9.7 mb/d in March, falling below 10 mb/d for the first time since July 2019. Crude imports in March were 0.8 mb/d or almost 8% lower compared to the average seen over the first two months of the year. Preliminary customs data indicates crude imports remained below 10 mb/d in April as well, although edging up slightly.

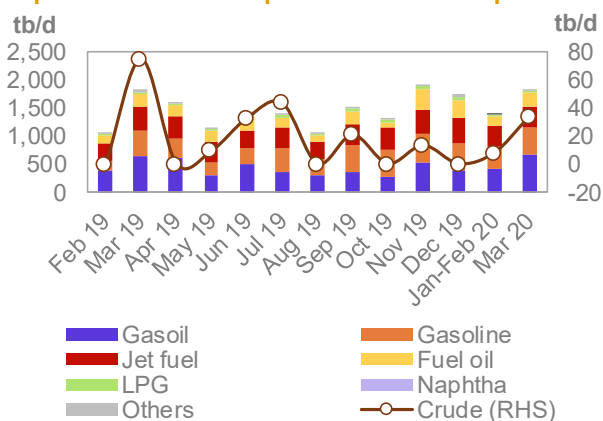
Saudi Arabia remained the title of top **crude supplier** to China in March, with a share of 17.5% representing 1.7 mb/d in imports. Russia was in second place with a 17.1% share, followed by Iraq with 13.6%, Angola with 9.7% and Brazil with 8%. Loading data shows China beginning to import US crude again in April after an absence of US crude imports in 1Q20, with the majority of the crude destined for storage.

Graph 8 - 3: China's imports of crude and products



Sources: Argus and OPEC.

Graph 8 - 4: China's exports of crude and products



Sources: Argus and OPEC.

China's product imports averaged 1.1 mb/d in March, representing a marginal decline of 6% compared to the average seen over the first two months of the year and almost 0.3 mb/d or 18% lower compared to the same period in 2019. Most major product experienced declines, except naphtha, which was 62% higher from the levels seen over the first two months of the year. Gasoil, jet fuel, and gasoline led the declines, down 96%, 36% and 27%, respectively.

Product exports from China rebounded to 1.85 mb/d in March, the second highest level on record. This represented an m-o-m gain of 0.4 mb/d, and was broadly in line with y-o-y levels. M-o-m increases were seen across the board, led by LPG (+67%), gasoil (+58%) and fuel oil (+33%), with only jet fuel experiencing a decline among the major products, down 2% m-o-m.

As a result, China remained a **net product exporter** for the fifth month in a row, with net exports of 711 tb/d in March 2020. China net crude and product imports reached under 9.0 mb/d in March, a level last seen twelve months ago.

Table 8 - 2: China's crude and product net imports, tb/d

China	Dec 19	Jan-Feb 20	Mar 20	Change Mar 20/Jan-Feb 20
Crude oil	10,740	10,495	9,672	-823
Total products	-188	-205	-711	-506
Total crude and products	10,552	10,290	8,961	-1,330

Sources: Argus China Petroleum and China, Oil and Gas Petrochemicals and OPEC.

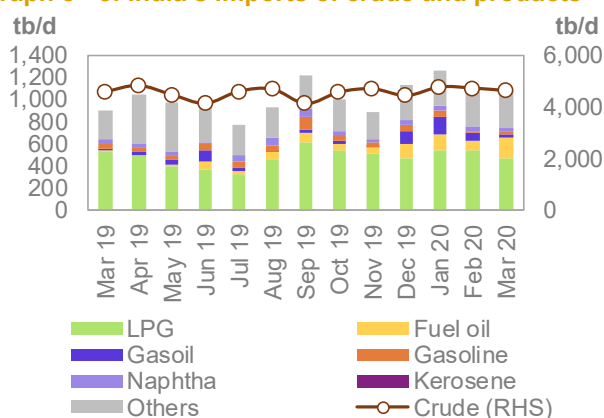
India

India's **crude imports** declined in March to average 4.6 mb/d, impacted by the government-ordered lockdown which began toward the end of that month. Imports were around 0.1 mb/d or 2% lower m-o-m and down 1% y-o-y. India's oil imports are expected to fall in April after refiners lifted lower volumes due to shrinking domestic demand.

India's **product imports** declined 2% in March, averaging 1.1 mb/d for the month. Compared to the same month last year, product imports were 0.2 mb/d or almost 18% higher. Fuel oil imports led gains, almost doubling m-o-m. Product imports are likely fall further in April on reduced consumption of oil products with the country under lockdown for a full month.

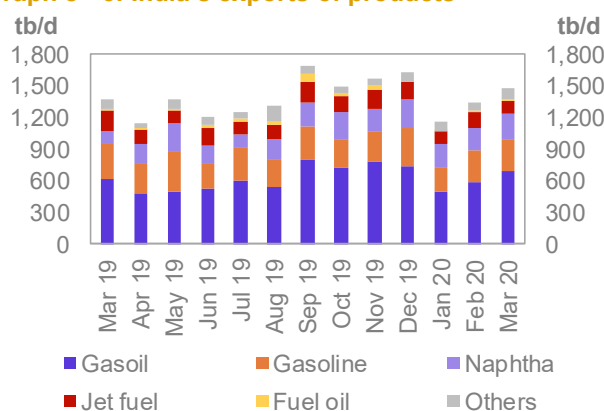
India's **product exports** increased in March, with an m-o-m gain of 0.1 mb/d or 10% to average 1.5 mb/d. Product exports were also some 0.1 mb/d or 8% higher than in the same month last year. Gains were seen across all major products, with the exception of fuel oil. The increase came amid declining domestic product demand and product storage limitations, which encouraged refiners to push out exports.

Graph 8 - 5: India's imports of crude and products



Sources: PPAC and OPEC.

Graph 8 - 6: India's exports of products



Sources: PPAC and OPEC.

As a result, India's **net product exports** increased by 158 tb/d in March to average 0.4 mb/d, compared to 0.5 mb/d in the same month last year.

Table 8 - 3: India's crude and product net imports, tb/d

India	Jan 20	Feb 20	Mar 20	Change Mar 20/Feb 20
Crude oil	4,755	4,707	4,608	-99
Total products	93	-258	-415	-158
Total crude and products	4,848	4,449	4,193	-256

Note: India data table does not include information for crude import and product export by Reliance Industries.

Sources: PPAC and OPEC.

Japan

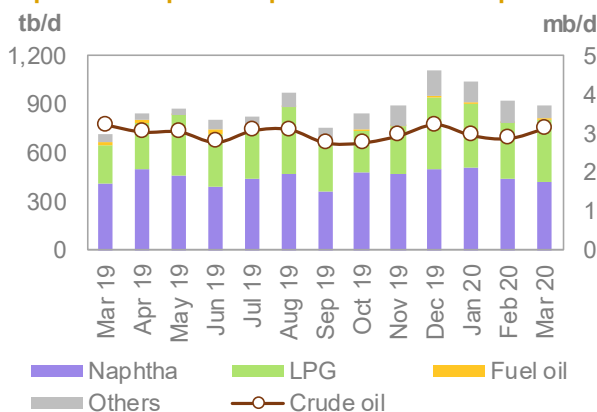
Japan's **crude imports** increased y-o-y in March after falling over the previous two months, as low prices encouraged increased inflows. Crude oil imports averaged 3.1 mb/d in March, representing an m-o-m decline of 0.3 mb/d or 9%. Y-o-y, crude oil imports were some 3% lower.

The United Arab Emirates was the **top supplier of crude** to Japan in March, averaging 1.2 mb/d, representing a share of 38.7%. Saudi Arabia held the second spot with around 34.9% followed by Qatar 9.8%.

Crude and Refined Products Trade

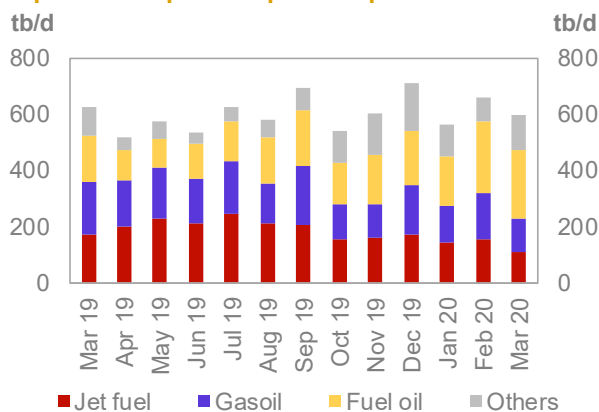
Product imports to Japan, including LPG, averaged 0.9 mb/d in March, some 3% lower from the previous month, due to continued weakness in domestic product sales. Kerosene experienced the biggest decline, while gasoil increased by 4%.

Graph 8 - 7: Japan's imports of crude and products



Sources: METI and OPEC.

Graph 8 - 8: Japan's exports of products



Sources: METI and OPEC.

Meanwhile, **product exports**, including LPG, averaged 596 tb/d in March, representing a 9% decline compared with the previous month.

As a consequence, Japan's **net product imports** averaged 298 tb/d in March, broadly unchanged m-o-m but an increase of 205 tb/d or 219% compared to the same month last year.

Table 8 - 4: Japan's crude and product net imports, tb/d

Japan	Jan 20	Feb 20	Mar 20	Change Mar 20/Feb 20
Crude oil	2,948	2,872	3,124	252
Total products	477	267	298	31
Total crude and products	3,426	3,139	3,422	283

Sources: METI and OPEC.

OECD Europe

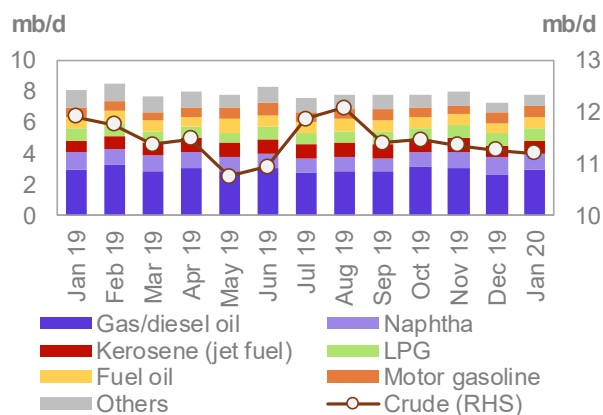
The latest available data shows **OECD Europe crude imports**, including intra-regional trade, averaged 11.2 mb/d in January, broadly in line with the previous month but down 0.7 mb/d y-o-y. The y-o-y decline came as refinery demand remained low amid ongoing refinery disruptions.

OECD crude exports in January declined for the third month in a row, down from a recent peak of 2.6 mb/d in November 2019. The declines were driven primarily by fluctuations in Norway supply following the ramping up of the giant Johan Sverdrup field in the North Sea at the end of October 2019, which led to a surge in exports that subsequently fell back to October 2019 levels. However, Norwegian data shows a return to higher levels in February 2020.

OECD Europe **net crude imports** averaged 8.9 mb/d in March, representing a decline of 0.7 mb/d from the same month last year.

OECD Europe **product imports** averaged 7.8 mb/d in March, representing an increase of 526 tb/d or 7% m-o-m but a drop of 273 tb/d or 3% y-o-y. Among major products, gasoline and diesel led the m-o-m increases, with both up by 12%.

Graph 8 - 9: OECD Europe imports of crude and products



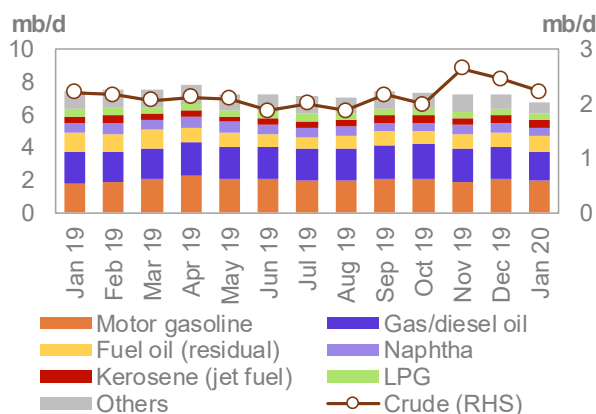
Sources: IEA and OPEC.

Product exports averaged 6.8 mb/d in January, indicating a drop of 0.4 mb/d compared with the previous month and some 0.6 mb/d lower than in January 2019. Exports were supported by increased outflows of motor gasoline and jet kerosene, while fuel oil, diesel oil and kerosene led declines.

As a result, **net product exports** from the OECD were 0.9 mb/d higher m-o-m in January, averaging 1.0 mb/d, representing an increase of 0.4 mb/d compared to the same month last year.

Combined, **net crude and product exports** averaged 9.9 mb/d in January, an increase of 1.1 mb/d from the previous month, but down 0.3 mb/d or 3% lower than in the same month last year.

Graph 8 - 10: OECD Europe exports of crude and products



Sources: IEA and OPEC.

Table 8 - 5: OECD Europe's crude and product net imports, tb/d

OECD Europe	Nov 19	Dec 19	Jan 20	Change Jan 20/Dec 19
Crude oil	8,714	8,814	8,970	156
Total products	784	67	1,008	940
Total crude and products	9,497	8,881	9,978	1,097

Sources: IEA and OPEC.

FSU

Total crude oil exports from the Former Soviet Union (FSU) increased by 3.5% or 251 tb/d m-o-m in March 2020 to average 7.4 mb/d. Compared to the same month last year, FSU crude exports were 188 tb/d or 2.6% higher.

Crude exports through the **Transneft system** also edged higher in March, up 77 tb/d or around 2% m-o-m to average 4.3 mb/d. Compared to the same month last year, exports were up 133 tb/d or 3%.

Total shipments from the Black Sea increased 162 tb/d m-o-m, or around 36%, to average 612 tb/d in March. Total Baltic Sea exports fell 118 mb/d to 1.4 mb/d, with shipments from Ust-Luga declining 7% to 603 tb/d and Primorsk exports down 9% or 77 tb/d. Meanwhile, shipments via the Druzhba pipeline increased 18 tb/d to average 1.0 mb/d. Kozmino shipment rose 13 tb/d m-o-m, or 2%, to average 686 tb/d. Exports to China via the ESPO pipeline averaged 607 tb/d in March, broadly unchanged m-o-m.

In the **Lukoil system**, exports via the Barents Sea edged up 17 tb/d or 12% to 161 tb/d in March, while those from the Baltic Sea edged down 5 tb/d.

On other routes, **Russia's Far East** exports increased to 408 tb/d, some 3% higher m-o-m and an increase of 4% compared to March last year.

Central Asia's total exports averaged 190 tb/d in March, down 6% compared with the previous month and some 17% lower y-o-y.

Black Sea total exports increased 292 tb/d m-o-m to average 1.7 mb/d, with Novorossiysk port terminal (CPC) driving the increase, up 24%, while the Supsa port terminal saw a 30% decline m-o-m.

FSU total product exports declined 150 tb/d or more than 4% m-o-m to average 3.3 mb/d in March. Declines were seen across all major products, except gasoil which edged higher and VGO which jumped 53%. Fuel oil and gasoline led declines. Y-o-y, FSU product exports were 350 tb/d or 12% higher in March.

Commercial Stock Movements

Preliminary March data showed that total OECD commercial oil stocks rose by 57.7 mb m-o-m to stand at 3,002 mb. This was 125.8 mb higher than the same time one year ago and 88.6 mb above the latest five-year average. Within the components m-o-m, crude stocks swelled by 49.1 mb and product stocks rose by 8.6 mb. In terms of days of forward cover, OECD commercial stocks surged by 8.9 days m-o-m in March to stand at 86.1 days. This was 25.1 days above March 2019, and 23.8 days above the latest five-year average. Preliminary data for April showed that US total commercial oil stocks increased by 81.1 mb m-o-m to stand at 1,395 mb. This was 136.1 mb, or 10.8%, above the same period a year ago, and 123.7 mb, or 9.7%, higher than the latest five-year average. Within the components, crude stocks climbed by 47.9 mb and product stocks by 33.2 mb.

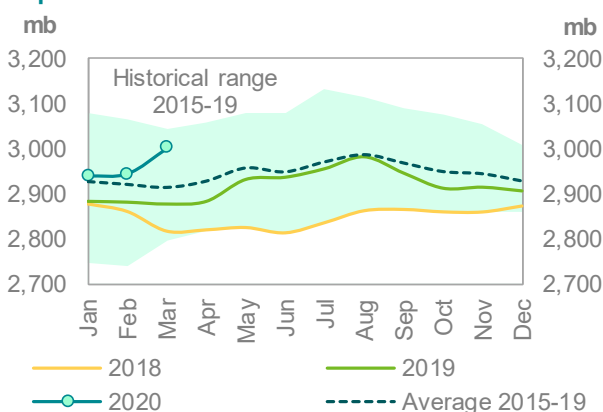
OECD

Preliminary March data showed that total **OECD commercial oil stocks** rose by 57.7 mb m-o-m to stand at 3,002 mb. This was 125.8 mb higher than the same time one year ago and 88.6 mb above the latest five-year average.

Within the components m-o-m, crude stocks swelled by 49.1 mb, while product stocks rose by 8.6 mb. Commercial oil stocks in March rose m-o-m in OECD America, OECD Asia Pacific, and OECD Europe.

OECD **commercial crude stocks** surged by 49.1 mb m-o-m in March, ending the month at 1,485 mb. This was higher by 22.9 mb compared with the same time a year ago and 12.3 mb above the latest five-year average.

Graph 9 - 1: OECD commercial oil stocks



Sources: Argus, EIA, Euroilstock, IEA, METI and OPEC.

Compared with the previous month, OECD America crude stocks in March jumped by 30.1 mb, OECD Asia Pacific increased by 8.4 mb, and OECD Europe rose by 10.6.

OECD **total product inventories** rose by 8.6 mb m-o-m in March to stand at 1,518 mb. This was 102.9 mb above the same time a year ago, and 76.3 mb higher than the latest five-year average. Within the OECD regions, product stocks in OECD America went up by 11.8 mb m-o-m. While product stocks in OECD Asia Pacific and OECD Europe fell in March by 1.0 mb and 2.1 mb m-o-m, respectively.

In terms of **days of forward cover**, OECD commercial stocks surged by 8.9 days m-o-m in March to stand at 86.1 days. This was 25.1 days above March 2019, and 23.8 days above the latest five-year average. Within the regions, OECD Americas was 23.7 days above the latest five-year average at 84.8 days; OECD Europe was 32.4 days higher than the latest five-year average at 102.9 days; and OECD Asia Pacific was 12.7 days above the latest five-year average at 63.9 days.

Table 9 - 1: OECD's commercial stocks, mb

	Mar 19	Jan 20	Feb 20	Mar 20	Change Mar 20/Feb 20
OECD stocks					
Crude oil	1,462	1,432	1,436	1,485	49.1
Products	1,415	1,508	1,509	1,518	8.6
Total	2,877	2,940	2,945	3,002	57.7
Days of forward cover	61.0	69.8	77.2	86.1	8.9

Note: Totals may not add up due to independent rounding.

Sources: Argus, EIA, Euroilstock, IEA, METI and OPEC.

OECD Americas

OECD Americas total commercial stocks sharply increased by 41.9 mb m-o-m in March to settle at 1,608 mb. This was 99.2 mb above the same time last year and 80.5 mb higher than the latest five-year average. Crude and product stocks rose by 30.1 mb and 11.8 mb, respectively.

Commercial crude oil stocks in OECD Americas jumped by 30.1 mb m-o-m in March to stand at 828 mb. This was 29.2 mb higher than March 2019 and 21.5 mb above the latest five-year average. The build was driven by US lower refinery throughput of around 0.7 mb/d m-o-m in March.

Total product stocks in OECD Americas rose by 11.8 mb m-o-m in March to stand at 780 mb. This was 70.0 mb higher than the same time one year ago and 59.1 mb above the latest five-year average. Lower regional consumption and lower refinery utilization was behind the product stock build.

OECD Europe

OECD Europe's total commercial stocks increased by 8.5 mb m-o-m in March to end the month at 995 mb. This was 6.5 mb higher than the same time a year ago and 2.9 mb above the latest five-year average. Crude stocks increased by 10.6 mb, while product stocks fell by 2.1 mb, m-o-m.

OECD Europe's **commercial crude stocks** rose by 10.6 mb m-o-m in March to end the month at 434 mb. This was 13.8 mb below the level one year ago and 2.9 mb higher than the latest five-year average. The rise was due to lower m-o-m refinery throughput in the EU-16 countries of around 0.8 mb/d in March.

In contrast, OECD Europe's **commercial product stocks** dropped by 2.1 mb m-o-m to end March at 561 mb. This was 20.4 mb higher than the same time a year ago, and in line with the latest five-year average. The drop came on the back of a m-o-m decline in refinery utilization of 6.7% in March.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks increased by 7.3 mb m-o-m in March to stand at 400 mb. This was 20.1 mb higher than a year ago and 5.2 mb above the latest five-year average. Crude stocks increased by 8.4 mb, while product stocks fell by 1.0 mb m-o-m in March.

OECD Asia Pacific's **crude inventories** rose by 8.4 mb m-o-m to end March at 223 mb. This was 7.6 mb higher than one year ago and 12.1 mb below the latest five-year average.

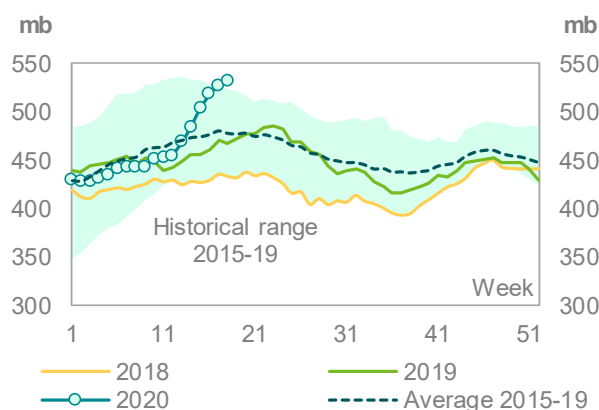
In contrast, OECD Asia Pacific's **total product inventories** fell by 1.0 mb m-o-m to end March at 177 mb. This was 12.5 mb higher than the same time a year ago and 17.3 mb above the latest five-year average.

US

Preliminary data for April showed that **total US commercial oil stocks** surged by 81.1 mb m-o-m to stand at 1,395 mb. This was 136.1 mb, or 10.8%, above the same period a year ago, and 123.7 mb, or 9.7%, higher than the latest five-year average. Crude stocks climbed by 47.9 mb, and product stocks increased by 33.2 mb.

US commercial crude stocks surged in April to stand at 532.2 mb. This was 63.4 mb, or 13.5%, above the same time last year, and 53.9 mb, or 11.3%, above the latest five-year average. The build was driven by lower refinery throughput, which dropped by around 2.6 mb/d m-o-m to average 13.2 mb/d. The surge in crude stocks would have been even higher without the decline in crude imports by 0.8 mb/d to stand at 5.44 mb/d in April.

Graph 9 - 2: US weekly commercial crude oil inventories



Sources: EIA and OPEC.

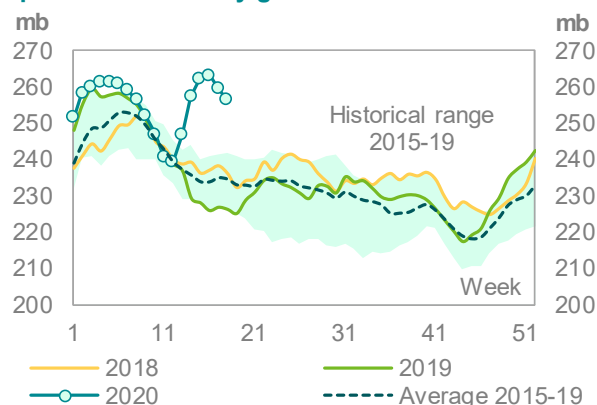
Total product stocks climbed in April by 33.2 mb m-o-m to stand at 863 mb. This was 72.7 mb, or 9.2%, above April 2019 levels, and 69.8 mb, or 8.8%, above the latest five-year average. Within the components, apart from gasoline, all products registered stocks builds in April.

Gasoline stocks fell slightly in April, by 0.9 mb m-o-m, to settle at 256.4 mb. This was 26.2 mb, or 11.4%, higher than levels seen in the same month last year, and 19.2 mb, or 8.1%, higher than the latest five-year average. This monthly decrease came mainly on the back of the sharp 14.4% drop in refinery utilization m-o-m in April. In addition, gasoline imports fell m-o-m during April.

Distillate stocks rose by 28.8 mb m-o-m in April to reach 151.5 mb. This was 23.3 mb, or 18.2%, higher than the same period a year ago, and 13.8 mb, or 10.0%, above the latest five-year average.

Residual fuel oil stocks increased in April by 1.2 mb m-o-m and **jet fuel** stocks by 0.9 mb. At 37.2 mb, residual fuel oil was 9.3 mb, or 33.2%, higher than the same month a year ago, and 1.4 mb, or 3.8%, above the latest five-year average. Jet fuel stocks ended April at 39.7 mb, which is 2.0 mb lower than the latest five-year average.

Graph 9 - 3: US weekly gasoline inventories



Sources: EIA and OPEC.

Table 9 - 2: US commercial petroleum stocks, mb

	Apr 19	Feb 20	Mar 20	Apr 20	Change Apr 20/Mar 20
US stocks					
Crude oil	468.8	454.2	484.4	532.2	47.9
Gasoline	230.2	251.7	257.3	256.4	-0.9
Distillate fuel	128.2	132.7	122.7	151.5	28.8
Residual fuel oil	27.9	31.2	36.0	37.2	1.2
Jet fuel	40.9	42.7	38.9	39.7	0.9
Total products	790.5	825.2	830.0	863.2	33.2
Total	1,259.3	1,279.4	1,314.3	1,395.4	81.1
SPR	648.6	635.0	635.0	637.8	2.9

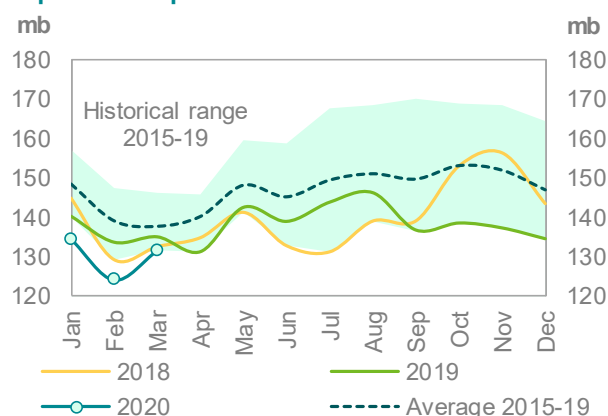
Sources: EIA and OPEC.

Japan

In Japan, **total commercial oil stocks** rose in March by 7.3 mb m-o-m to settle at 131.5 mb. This was 3.5 mb, or 2.6%, lower than one year ago and 6.3 mb, or 4.6%, below the latest five-year average. Crude stocks climbed by 8.4 mb, while product stocks dropped by 1.0 mb.

Japanese **commercial crude oil stocks** climbed in March to stand at 76.5 mb. This was 3.6 mb, or 4.5%, below the same period a year ago, and 5.8 mb, or 7.0%, below the latest five-year average. Higher crude imports, which increased by 0.3 mb/d in March, contributed to the crude stock build.

Graph 9 - 4: Japan's commercial oil stocks



Sources: METI and OPEC.

Japan's **total product inventories** fell by 1.0 mb m-o-m to end March at 55.0 mb. This was 0.1 mb, or 0.3%, higher than the same month last year, and 0.5 mb, or 0.9%, below the latest five-year average. Middle distillates and fuel oil experienced stock decreases, while gasoline and naphtha showed slight stock builds.

Gasoline stocks rose by 0.5 mb m-o-m to stand at 11.8 mb in March. This was 1.4 mb, or 13.2%, higher than a year ago, and 1.2 mb, or 11.1%, above the latest five-year average.

Distillate stocks fell by 0.9 mb m-o-m to end March at 23.1 mb. This was 1.2 mb, or 5.3%, higher than the same time a year ago, and 1.1 mb, or 5.1%, above the latest five-year average. Within distillate components, jet fuel and gasoil increased by 1.7% and 0.5% m-o-m, respectively.

Total residual fuel oil stocks in March fell by 1.1 mb m-o-m to stand at 11.1 mb. This was 2.2 mb, or 16.5%, lower than the same month last year, and 1.8 mb, or 13.8%, below the latest five-year average. Within components, fuel oil A and fuel oil B.C stocks fell m-o-m by 1.3% and 13.3%, respectively.

Table 9 - 3: Japan's commercial oil stocks*, mb

	Mar 19	Jan 20	Feb 20	Mar 20	Change Mar 20/Feb 20
Japan's stocks					
Crude oil	80.1	69.3	68.2	76.5	8.4
Gasoline	10.4	12.0	11.3	11.8	0.5
Naphtha	9.2	10.9	8.5	9.0	0.5
Middle distillates	21.9	29.3	24.0	23.1	-0.9
Residual fuel oil	13.3	12.9	12.2	11.1	-1.1
Total products	54.8	65.1	56.0	55.0	-1.0
Total**	135.0	134.4	124.2	131.5	7.3

Note: * At the end of the month. ** Includes crude oil and main products only.

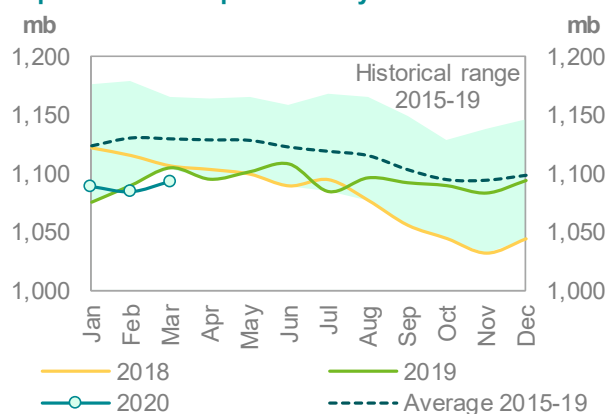
Sources: METI and OPEC.

EU-15 plus Norway

Preliminary data for March showed that **total European commercial oil stocks** climbed by 8.5 mb m-o-m to stand at 1,093 mb. This was 11.6 mb, or 1.1%, below the same time a year ago, and 36.7 mb, or 3.2%, lower than the latest five-year average. Crude stocks surged by 10.6 mb, while product stocks dropped by 2.1 mb.

European **crude inventories** rose in March to stand at 468.7 mb. This was 20.4 mb, or 4.2%, lower than the same period a year ago, and 20.1 mb, or 4.1%, below the latest five-year average. The fall in crude oil inventories in March was mainly the result of lower refinery throughput in the EU-16 of 9.3 mb/d, a drop of around 0.8 mb/d m-o-m.

Graph 9 - 5: EU-15 plus Norway's total oil stocks



Sources: Argus, Euroilstock and OPEC.

In contrast, European **total product stocks** fell by 2.1 mb m-o-m to end March at 624.3 mb. This was 8.7 mb, or 1.4%, higher than the same month a year ago, albeit 16.5 mb, or 2.6%, lower than the latest five-year average. The build in product stocks could be attributed to lower demand in the region together with lower refinery utilization, which dropped by 6.7% m-o-m during March.

Gasoline stocks rose by 0.5 mb m-o-m in March to stand at 114.6 mb. This was 5.6 mb, or 4.6%, lower than the same time a year ago, and 7.7 mb, or 6.3%, below the latest five-year average.

Distillate stocks decreased by 1.7 mb m-o-m in March, to stand at 414.8 mb. This was 10.1 mb, or 2.5%, higher than the same time last year, but 4.7 mb, or 1.1%, below the latest five-year average.

Naphtha stocks were unchanged in March, ending the month at 26.0 mb. This was 3.4 mb, or 11.5%, below the March 2019 level, and 1.5 mb, or 5.4%, lower than the latest five-year average.

Residual fuel stocks increased slightly in March to end the month at 69.03 mb. This was 7.6 mb, or 12.4%, higher than the same time one year ago, but 2.6 mb, or 3.6%, below the latest five-year average.

Table 9 - 4: EU-15 plus Norway's total oil stocks, mb

	Mar 19	Jan 20	Feb 20	Mar 20	Change Mar 20/Feb 20
EU stocks					
Crude oil	489.0	464.4	458.1	468.7	10.6
Gasoline	120.1	114.8	115.1	114.6	-0.5
Naphtha	29.3	26.4	26.0	26.0	0.0
Middle distillates	404.7	417.8	416.5	414.8	-1.7
Fuel oils	61.4	65.3	68.9	69.0	0.1
Total products	615.6	624.4	626.4	624.3	-2.1
Total	1,104.6	1,088.8	1,084.5	1,093.0	8.5

Sources: Argus, Euroilstock and OPEC.

Singapore, Amsterdam-Rotterdam-Antwerp (ARA) and Fujairah

Singapore

At the end of March, **total product stocks in Singapore** had risen by 1.1 mb m-o-m, to stand at 51.6 mb. This was 4.0 mb, or 8.4%, higher than the same period a year ago. Stocks of both light and middle distillates rose, while fuel oil stocks decreased.

Light and middle distillate stocks rose m-o-m in March by 0.9 mb and 1.4 mb, respectively. At 14.3 mb, light distillates stood at 1.5 mb, or 9.5%, lower than the same time one year ago. Middle distillate stocks ended March at 13.0 mb, which was 1.9 mb, or 17.1%, higher than in March 2019.

Fuel oil stocks fell by 1.2 mb m-o-m to end March at 24.3 mb. This was 3.6 mb, or 17.4%, higher than the same period a year ago.

ARA

Total product stocks in ARA rose by 1.5 mb m-o-m in March to a level of 39.8 mb. This was 3.2 mb, or 7.4%, below the same period a year ago. Stocks of all products increased m-o-m in March, except for gasoil which experienced a build.

Gasoil stocks fell by 2.0 mb m-o-m to stand at 13.9 mb at the end of March. This was 6.4 mb, or 31.5%, lower than the same time one year ago.

Gasoline, naphtha, jet oil and residual fuel stocks increased in March by 0.2 mb, 1.4 mb, 0.9 mb, and 1.0 mb, m-o-m, respectively.

Gasoline stocks stood at 10.0 mb in March, which was 1.1 mb or 12.4% higher than a year ago. Naphtha stocks registered 3.5 mb at the end of March. This was 1.1 mb or 45.8% higher than the same period a year ago. The level of jet oil stocks was 4.2 mb in March, which was 1.5 mb, or 26.3%, lower than a year earlier. In March, residual fuel stocks finished the month at 8.2 mb, which is 2.5 mb, or 43.9%, above the level registered one year ago.

Fujairah

During the week ending 4 May 2020, **total oil product stocks in Fujairah** increased by 1.54 mb w-o-w to stand at 26.19 mb, according to data from FEDCom and S&P Global Platts. At this level, total oil stocks were 2.47 mb higher than the same time a year ago. Light distillate stocks saw a w-o-w decrease, while middle and heavy distillates witnessed stock builds.

Light distillate stocks fell by 0.75 mb w-o-w to stand at 6.72 mb, which was 4.06 mb lower than a year ago.

Middle and heavy distillate stocks increased by 0.73 mb and 1.56 mb, respectively. At 4.86 mb, middle distillate stocks were 2.27 mb above the same week in 2019, while heavy distillate stocks stood at 14.62 mb, which is 4.26 mb above the same time last year.

Balance of Supply and Demand

Demand for OPEC crude in 2019 stood at 29.8 mb/d, which is 1.2 mb/d lower than in 2018. According to secondary sources, OPEC crude production averaged 30.0 mb/d in 1Q19, about 0.4 mb/d higher than demand for OPEC crude for the same period, while in 2Q19, OPEC crude production averaged 29.4 mb/d, around 0.1 mb/d higher than demand for OPEC crude. In 3Q19, OPEC crude production averaged 28.9 mb/d, around 2.1 mb/d lower than its demand. In 4Q19, OPEC crude oil production stood at 29.1 mb/d, around 0.4 mb/d below its demand. For 2019 as a whole, OPEC crude oil production averaged 29.3 mb/d, around 0.5 mb/d lower than demand.

Demand for OPEC crude in 2020 is forecast at 24.3mb/d, around 5.6 mb/d lower than for 2019.

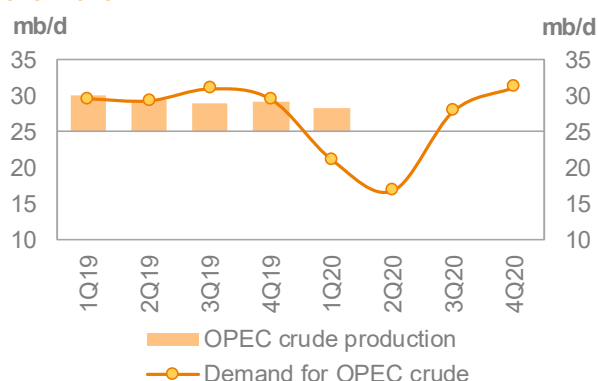
Balance of supply and demand in 2019

Demand for OPEC crude in 2019 stood at 29.8 mb/d, which is 1.2 mb/d lower than in 2018.

When compared with the same quarters in 2018, demand for OPEC crude in 1Q19 and 2Q19 was 2.1 mb/d and 1.7 mb/d lower, respectively. The 3Q19 and 4Q19 showed drops of 0.3 mb/d and 0.8 mb/d, respectively.

According to secondary sources, OPEC crude production averaged 30.0 mb/d in 1Q19, about 0.4 mb/d higher than demand for OPEC crude in the same period, while in 2Q19 OPEC crude production averaged 29.4 mb/d, around 0.1 mb/d higher than demand. In 3Q19, OPEC crude production averaged 28.9 mb/d, around 2.1 mb/d lower than its demand. In 4Q19, OPEC crude oil production stood at 29.1 mb/d, around 0.4 mb/d below its demand. For 2019 as a whole, OPEC crude oil production averaged 29.3 mb/d, around 0.5 mb/d lower than demand.

Graph 10 - 1: Balance of supply and demand, 2019–2020*



Note: * 2019 = Estimate and 2020 = Forecast.
Source: OPEC.

Table 10 - 1: Supply/demand balance for 2019*, mb/d

	2018	1Q19	2Q19	3Q19	4Q19	2019	Change 2019/18
(a) World oil demand	98.84	98.75	98.56	100.53	100.79	99.67	0.83
Non-OPEC liquids production	63.01	64.37	64.44	64.85	66.43	65.03	2.02
OPEC NGL and non-conventionals	4.75	4.79	4.81	4.70	4.85	4.79	0.04
(b) Total non-OPEC liquids production and OPEC NGLs	67.76	69.16	69.25	69.56	71.28	69.82	2.06
Difference (a-b)	31.08	29.59	29.31	30.97	29.51	29.85	-1.23
OPEC crude oil production	31.34	29.96	29.45	28.86	29.10	29.34	-2.01
Balance	0.27	0.37	0.14	-2.11	-0.41	-0.51	-0.78

Note: Non-OPEC liquids production includes the Republic of Ecuador.

* 2019 = Estimate. Totals may not add up due to independent rounding.

Source: OPEC.

Balance of supply and demand in 2020

Demand for OPEC crude in 2020 is forecast at 24.3 mb/d, around 5.6 mb/d lower than in 2019.

When compared with the same quarters in 2019, demand for OPEC crude in 1Q20 and 2Q20 is expected to be 8.5 mb/d and 12.5 mb/d lower, respectively. The 3Q20 shows a decline of 3.1 mb/d, while 4Q20 is expected to see a rise of 1.7 mb/d compared with 4Q19.

Table 10 - 2: Supply/demand balance for 2020*, mb/d

	2019	1Q20	2Q20	3Q20	4Q20	2020	Change 2020/19
(a) World oil demand	99.67	92.40	81.30	92.28	96.30	90.59	-9.07
Non-OPEC liquids production	65.03	66.45	59.71	59.57	60.30	61.50	-3.53
OPEC NGL and non-conventionals	4.79	4.88	4.82	4.82	4.82	4.83	0.05
(b) Total non-OPEC liquids production and OPEC NGLs	69.82	71.34	64.53	64.39	65.12	66.33	-3.49
Difference (a-b)	29.85	21.06	16.77	27.89	31.18	24.26	-5.59
OPEC crude oil production	29.34	28.27					
Balance	-0.51	7.21					

Note: Non-OPEC liquids production includes the Republic of Ecuador.

* 2019 = Estimate and 2020 = Forecast. Totals may not add up due to independent rounding.

Source: OPEC.

Appendix

Table 11 - 1: World oil demand and supply balance, mb/d

	2016	2017	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
World oil demand and supply balance													
World demand													
OECD	47.07	47.61	48.01	47.72	47.15	48.46	48.29	47.91	45.30	34.87	44.37	46.25	42.71
Americas	24.89	25.07	25.60	25.14	25.29	26.03	25.99	25.62	24.47	18.95	24.48	25.16	23.28
Europe	14.04	14.38	14.33	14.09	14.25	14.75	14.25	14.34	12.95	9.67	13.25	13.68	12.40
Asia Pacific	8.14	8.15	8.08	8.50	7.61	7.68	8.05	7.96	7.88	6.25	6.64	7.40	7.04
DCs	31.56	32.13	32.62	32.96	32.84	33.41	33.10	33.08	31.62	29.46	30.62	31.60	30.83
FSU	4.57	4.64	4.76	4.70	4.68	4.96	5.04	4.84	4.50	3.88	4.45	4.61	4.36
Other Europe	0.70	0.72	0.74	0.75	0.71	0.75	0.84	0.76	0.71	0.54	0.47	0.56	0.57
China	11.80	12.32	12.71	12.63	13.19	12.95	13.52	13.07	10.27	12.55	12.37	13.28	12.12
(a) Total world demand	95.70	97.42	98.84	98.75	98.56	100.53	100.79	99.67	92.40	81.30	92.28	96.30	90.59
Non-OPEC liquids production													
OECD	24.86	25.71	28.33	29.35	29.67	29.79	31.08	29.98	31.13	27.94	26.93	27.44	28.35
Americas	20.59	21.49	24.08	25.07	25.59	25.69	26.62	25.74	26.59	23.47	22.41	22.79	23.81
Europe	3.85	3.83	3.84	3.82	3.57	3.55	3.88	3.71	4.01	3.91	3.94	4.06	3.98
Asia Pacific	0.43	0.39	0.41	0.46	0.51	0.56	0.57	0.53	0.53	0.55	0.59	0.59	0.56
DCs	14.11	13.94	14.04	14.03	14.13	14.27	14.49	14.23	14.44	13.73	14.01	14.21	14.10
FSU	13.85	14.05	14.29	14.55	14.16	14.34	14.42	14.37	14.51	11.82	12.43	12.43	12.80
Other Europe	0.13	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.11	0.12
China	4.09	3.97	3.98	4.05	4.08	4.05	4.03	4.05	4.15	4.00	3.99	4.01	4.04
Processing gains	2.19	2.22	2.25	2.28	2.28	2.28	2.28	2.28	2.10	2.10	2.10	2.10	2.10
Total non-OPEC liquids production	59.24	60.02	63.01	64.37	64.44	64.85	66.43	65.03	66.45	59.71	59.57	60.30	61.50
OPEC NGLs + non-conventional oils	4.57	4.63	4.75	4.79	4.81	4.70	4.85	4.79	4.88	4.82	4.82	4.82	4.83
(b) Total non-OPEC liquids production and OPEC NGLs	63.81	64.65	67.76	69.16	69.25	69.56	71.28	69.82	71.34	64.53	64.39	65.12	66.33
OPEC crude oil production (secondary sources)	31.66	31.48	31.34	29.96	29.45	28.86	29.10	29.34	28.27				
Total liquids production	95.47	96.13	99.10	99.12	98.70	98.42	100.38	99.16	99.61				
Balance (stock change and miscellaneous)	-0.22	-1.29	0.27	0.37	0.14	-2.11	-0.41	-0.51	7.21				
OECD closing stock levels, mb													
Commercial	3,007	2,860	2,873	2,877	2,936	2,946	2,906	2,906	3,002				
SPR	1,601	1,569	1,552	1,557	1,549	1,544	1,535	1,535	1,538				
Total	4,608	4,428	4,425	4,434	4,485	4,490	4,441	4,441	4,541				
Oil-on-water	1,102	1,025	1,058	1,013	995	1,012	1,011	1,011	1,179				
Days of forward consumption in OECD, days													
Commercial onland stocks	63	60	60	61	61	61	64	68	86				
SPR	34	33	32	33	32	32	34	36	44				
Total	97	92	92	94	93	93	98	104	130				
Memo items													
(a) - (b)	31.89	32.77	31.08	29.59	29.31	30.97	29.51	29.85	21.06	16.77	27.89	31.18	24.26

Note: Non-OPEC liquids production includes the Republic Ecuador.

Totals may not add up due to independent rounding.

Source: OPEC.

Table 11 - 2: World oil demand and supply balance: changes from last month's table*, mb/d

	2016	2017	2018	1Q19	2Q19	3Q19	4Q19	2019	1Q20	2Q20	3Q20	4Q20	2020
Changes from last month's table													
World demand													
OECD	-	-	-	-	-	-	-	-	-0.23	-3.50	-0.80	-0.30	-1.20
Americas	-	-	-	-	-	-	-	-	-0.08	-1.40	-0.30	-0.10	-0.47
Europe	-	-	-	-	-	-	-	-	-0.15	-1.70	-0.30	-0.10	-0.56
Asia Pacific	-	-	-	-	-	-	-	-	-	-0.40	-0.20	-0.10	-0.17
DCs	-	-	-	-	-	-	-	-	-0.30	-1.10	-0.80	-0.40	-0.65
FSU	-	-	-	-	-	-	-	-	-	-0.50	-0.10	-0.10	-0.17
Other Europe	-	-	-	-	-	-	-	-	-	-0.10	-0.10	-0.10	-0.08
China	-	-	-	-	-	-	-	-	-	-0.20	-0.20	-0.10	-0.13
(a) Total world demand	-	-	-	-	-	-	-	-	-0.53	-5.40	-2.00	-1.00	-2.23
Non-OPEC liquids production													
OECD	-	-	-	0.03	0.03	0.05	0.06	0.04	0.01	-1.88	-2.70	-1.92	-1.62
Americas	-	-	-	-	-	-	-	-	0.05	-1.89	-2.69	-1.87	-1.60
Europe	-	-	-	-	-	-	-	-	-0.05	-	-0.02	-0.06	-0.03
Asia Pacific	-	-	-	0.03	0.03	0.05	0.06	0.04	0.01	0.01	0.01	0.01	0.01
DCs	0.01	-	0.02	-	0.04	0.03	0.03	0.02	-0.04	-0.32	-0.16	-0.02	-0.14
FSU	-	-	-	-	-	-	-	-	0.01	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
China	-	-	-	-	-	-	-	-	0.11	-	-	-	0.03
Processing gains	-	-	-	-	-	-	-	-	-0.24	-0.24	-0.24	-0.24	-0.24
Total non-OPEC liquids production	0.01	-	0.02	0.03	0.07	0.07	0.09	0.06	-0.15	-2.44	-3.10	-2.17	-1.97
OPEC NGLs + non-conventionals	-	-	-	-	-	-	-	-	-	-	-	-	-
(b) Total non-OPEC liquids production and OPEC NGLs	0.01	-	0.02	0.02	0.07	0.07	0.09	0.06	-0.15	-2.44	-3.10	-2.17	-1.97
OPEC crude oil production (secondary sources)	-	-	-	-	-	-	-	-	0.01				
Total supply	0.01	-	0.02	0.02	0.07	0.07	0.09	0.06	-0.14				
Balance (stock change and miscellaneous)	0.01	-	0.02	0.02	0.07	0.07	0.09	0.06	0.39				
OECD closing stock levels, mb													
Commercial	-	-	-	-	0.32	0.92	4.14	4.14					
SPR	-	-	-	-	-	-	-0.01	-0.01					
Total	-	-	-	0.01	0.31	0.93	4.14	4.14					
Oil-on-water	-	-	-	-	-	-	-	-					
Days of forward consumption in OECD, days													
Commercial onland stocks	-	-	-	-	0.01	0.02	0.41	1.96					
SPR	-	-	-	-	-	-	0.17	0.98					
Total	-	-	-	-	0.01	0.02	0.58	2.94					
Memo items													
(a) - (b)	-0.01	-	-0.02	-0.02	-0.07	-0.07	-0.09	-0.06	-0.38	-2.96	1.10	1.17	-0.26

Note: * This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the April 2020 issue.

This table shows only where changes have occurred.

Source: OPEC.

Table 11 - 3: OECD oil stocks and oil on water at the end of period

	2017	2018	2019	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19	1Q20
OECD oil stocks and oil on water												
Closing stock levels, mb												
OECD onland commercial	2,860	2,873	2,906	2,816	2,812	2,865	2,873	2,877	2,936	2,946	2,906	3,002
Americas	1,498	1,544	1,538	1,471	1,473	1,543	1,544	1,508	1,565	1,559	1,538	1,608
Europe	948	930	976	968	952	933	930	989	983	988	976	995
Asia Pacific	413	400	392	378	388	390	400	379	389	399	392	400
OECD SPR	1,569	1,552	1,535	1,577	1,575	1,570	1,552	1,557	1,549	1,544	1,535	1,538
Americas	665	651	637	667	662	662	651	651	647	647	637	637
Europe	481	481	482	487	491	486	481	488	485	482	482	485
Asia Pacific	423	420	416	422	422	422	420	417	417	416	416	416
OECD total	4,428	4,425	4,441	4,393	4,387	4,435	4,425	4,434	4,485	4,490	4,441	4,541
Oil-on-water	1,025	1,058	1,011	1,036	1,014	1,041	1,058	1,013	995	1,012	1,011	1,179
Days of forward consumption in OECD, days												
OECD onland commercial	60	60	68	60	58	59	60	61	61	61	64	86
Americas	59	60	66	58	57	60	61	60	60	60	63	85
Europe	66	65	79	68	65	65	66	69	67	69	75	104
Asia Pacific	51	50	55	49	50	48	47	50	51	49	50	62
OECD SPR	33	33	37	33	33	32	33	33	32	32	34	44
Americas	26	26	29	26	26	26	26	26	25	25	26	34
Europe	34	34	39	34	33	34	34	34	33	34	37	51
Asia Pacific	52	53	59	55	54	52	49	55	54	52	53	64
OECD total	92	93	105	93	91	92	93	94	93	93	98	130

Sources: Argus, EIA, Euroilstock, IEA, JODI, METI and OPEC.

Table 11 - 4: Non-OPEC liquids production and OPEC natural gas liquids, mb/d

	2016	2017	2018	3Q19	4Q19	2019	Change 19/18	1Q20	2Q20	3Q20	4Q20	2020	Change 20/19
Non-OPEC liquids production and OPEC NGLs													
US	13.6	14.4	16.7	18.4	19.1	18.4	1.7	19.0	16.8	15.8	16.2	17.0	-1.4
Canada	4.5	4.9	5.3	5.4	5.5	5.4	0.1	5.6	4.7	4.8	4.9	5.0	-0.4
Mexico	2.5	2.2	2.1	1.9	1.9	1.9	-0.2	2.0	1.9	1.8	1.7	1.9	-0.1
OECD Americas	20.6	21.5	24.1	25.7	26.6	25.7	1.7	26.6	23.5	22.4	22.8	23.8	-1.9
Norway	2.0	2.0	1.9	1.7	1.9	1.7	-0.1	2.0	2.0	2.0	2.1	2.0	0.3
UK	1.0	1.0	1.1	1.1	1.1	1.1	0.0	1.1	1.1	1.1	1.2	1.1	0.0
Denmark	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Other OECD Europe	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.0
OECD Europe	3.9	3.8	3.8	3.5	3.9	3.7	-0.1	4.0	3.9	3.9	4.1	4.0	0.3
Australia	0.3	0.3	0.3	0.5	0.5	0.5	0.1	0.5	0.5	0.5	0.5	0.5	0.0
Other Asia Pacific	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
OECD Asia Pacific	0.4	0.4	0.4	0.6	0.6	0.5	0.1	0.5	0.6	0.6	0.6	0.6	0.0
Total OECD	24.9	25.7	28.3	29.8	31.1	30.0	1.6	31.1	27.9	26.9	27.4	28.4	-1.6
Brunei	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
India	0.9	0.9	0.9	0.8	0.8	0.8	0.0	0.8	0.8	0.9	0.9	0.8	0.0
Indonesia	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.9	0.8	0.8	0.8	0.9	0.0
Malaysia	0.7	0.7	0.7	0.6	0.7	0.7	0.0	0.7	0.6	0.6	0.6	0.6	-0.1
Thailand	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.0
Vietnam	0.3	0.3	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Asia others	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Other Asia	3.7	3.6	3.6	3.4	3.5	3.5	-0.1	3.4	3.3	3.3	3.3	3.4	-0.1
Argentina	0.7	0.6	0.6	0.7	0.7	0.7	0.0	0.7	0.6	0.6	0.7	0.7	0.0
Brazil	3.1	3.3	3.3	3.7	3.8	3.5	0.2	3.8	3.6	3.7	3.9	3.7	0.2
Colombia	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.9	0.9	0.8	0.8	0.9	-0.1
Ecuador	0.6	0.5	0.5	0.6	0.5	0.5	0.0	0.5	0.4	0.5	0.5	0.5	0.0
Latin America others	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.5	0.5	0.5	0.5	0.1
Latin America	5.6	5.7	5.7	6.1	6.3	6.0	0.3	6.3	6.0	6.2	6.4	6.2	0.2
Bahrain	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Oman	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	0.8	0.8	0.8	0.9	-0.1
Qatar	2.0	1.9	2.0	1.9	1.9	2.0	0.0	1.9	2.0	2.0	2.0	2.0	0.0
Syria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yemen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0
Middle East	3.3	3.1	3.2	3.2	3.2	3.2	0.0	3.2	3.0	3.1	3.1	3.1	-0.1
Cameroon	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Chad	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Egypt	0.7	0.7	0.7	0.6	0.6	0.7	0.0	0.6	0.6	0.6	0.6	0.6	0.0
Ghana	0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
South Africa	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Sudans	0.3	0.2	0.2	0.3	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	-0.1
Africa other	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Africa	1.5	1.5	1.5	1.5	1.5	1.5	0.0	1.5	1.5	1.5	1.4	1.5	-0.1
Total DCs	14.1	13.9	14.0	14.3	14.5	14.2	0.2	14.4	13.7	14.0	14.2	14.1	-0.1
FSU	13.9	14.0	14.3	14.3	14.4	14.4	0.1	14.5	11.8	12.4	12.4	12.8	-1.6
Russia	11.1	11.2	11.3	11.4	11.5	11.4	0.1	11.5	9.4	9.8	9.8	10.1	-1.3
Kazakhstan	1.6	1.7	1.8	1.8	1.9	1.8	0.0	1.9	1.5	1.6	1.6	1.6	-0.2
Azerbaijan	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.8	0.6	0.7	0.7	0.7	-0.1
FSU others	0.4	0.3	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.0
Other Europe	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
China	4.1	4.0	4.0	4.0	4.0	4.1	0.1	4.1	4.0	4.0	4.0	4.0	0.0
Non-OPEC production	57.0	57.8	60.8	62.6	64.2	62.8	2.0	64.4	57.6	57.5	58.2	59.4	-3.3
Processing gains	2.2	2.2	2.3	2.3	2.3	2.3	0.0	2.1	2.1	2.1	2.1	2.1	-0.2
Non-OPEC liquids production	59.2	60.0	63.0	64.9	66.4	65.0	2.0	66.5	59.7	59.6	60.3	61.5	-3.5
OPEC NGL	4.5	4.5	4.6	4.6	4.7	4.7	0.0	4.8	4.7	4.7	4.7	4.7	0.0
OPEC Non-	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
OPEC (NGL+NCF)	4.6	4.6	4.8	4.7	4.9	4.8	0.0	4.9	4.8	4.8	4.8	4.8	0.0
Total Non-OPEC production and OPEC NGLs	63.8	64.6	67.8	69.6	71.3	69.8	2.1	71.3	64.5	64.4	65.1	66.3	-3.5

Note: Non-OPEC liquids production includes the Republic of Ecuador and OECD Americas includes Chile.

Totals may not add up due to independent rounding.

Source: OPEC.

Appendix

Table 11 - 5: World rig count, units

	2017	2018	2019	Change 2019/18	2Q19	3Q19	4Q19	1Q20	Mar 20	Apr 20	Change Apr/Mar
World rig count											
US	875	1,031	944	-88	990	920	819	784	771	566	-205
Canada	207	191	134	-57	83	131	138	196	133	34	-99
Mexico	17	27	37	10	34	38	48	46	42	46	4
OECD Americas	1,099	1,249	1,114	-135	1,106	1,089	1,005	1,026	946	646	-300
Norway	15	15	17	2	17	18	18	16	14	14	0
UK	9	7	15	7	16	16	13	8	6	4	-2
OECD Europe	92	85	149	63	159	190	154	129	123	112	-11
OECD Asia Pacific	15	21	29	8	29	31	30	30	32	27	-5
Total OECD	1,206	1,355	1,292	-64	1,295	1,310	1,189	1,184	1,101	785	-316
Other Asia*	208	222	221	-1	225	217	212	214	218	182	-36
Latin America	119	131	129	-2	130	132	119	107	102	29	-73
Middle East	68	65	68	3	69	67	69	69	70	63	-7
Africa	38	45	55	11	53	51	63	61	59	54	-5
Total DCs	432	462	474	12	477	467	463	451	449	328	-121
Non-OPEC rig count	1,638	1,817	1,766	-52	1,771	1,777	1,652	1,635	1,550	1,113	-437
Algeria	54	50	45	-5	49	42	41	38	34	42	8
Angola	3	4	4	1	5	4	3	6	6	7	1
Congo	2	3	3	0	4	3	2	2	2	2	0
Equatorial Guinea**	1	1	2	1	2	2	2	2	2	2	0
Gabon	1	3	7	4	6	7	9	9	8	6	-2
Iran**	156	157	157	0	157	157	157	157	157	157	0
Iraq	49	59	74	14	75	77	77	74	74	70	-4
Kuwait	54	51	46	-5	44	46	48	53	50	54	4
Libya	1	5	14	10	15	16	16	14	11	10	-1
Nigeria	9	13	16	2	14	16	18	19	21	16	-5
Saudi Arabia	118	117	115	-2	115	118	109	113	114	116	2
UAE	52	55	62	7	59	64	67	66	68	65	-3
Venezuela	49	32	25	-8	23	25	25	25	25	14	-11
OPEC rig count	547	550	569	19	569	577	575	578	572	561	-11
World rig count***	2,185	2,368	2,335	-33	2,340	2,354	2,226	2,213	2,122	1,674	-448
of which:											
Oil	1,678	1,886	1,840	-46	1,829	1,835	1,758	1,748	1,677	1,289	-388
Gas	466	448	464	15	482	486	431	411	381	324	-57
Others	42	33	31	-2	29	32	38	54	64	61	-3

Note: * Other Asia includes Indonesia.

** Estimated data when Baker Hughes Incorporated did not report the data.

*** Data excludes China and FSU.

Totals may not add up due to independent rounding.

Sources: Baker Hughes and OPEC.

Glossary of Terms

Abbreviations

b	barrels
b/d	barrels per day
bp	basis points
bb	billion barrels
bcf	billion cubic feet
cu m	cubic metres
mb	million barrels
mb/d	million barrels per day
mmbtu	million British thermal units
mn	million
m-o-m	month-on-month
mt	metric tonnes
q-o-q	quarter-on-quarter
pp	percentage points
tb/d	thousand barrels per day
tcf	trillion cubic feet
y-o-y	year-on-year
y-t-d	year-to-date

Acronyms

ARA	Amsterdam-Rotterdam-Antwerp
BoE	Bank of England
BoJ	Bank of Japan
BOP	Balance of payments
BRIC	Brazil, Russia, India and China
CAPEX	capital expenditures
CCI	Consumer Confidence Index
CFTC	Commodity Futures Trading Commission
CIF	cost, insurance and freight
CPI	consumer price index
DoC	Declaration of Cooperation
DCs	developing countries
DUC	drilled, but uncompleted (oil well)
ECB	European Central Bank
EIA	US Energy Information Administration
Emirates NBD	Emirates National Bank of Dubai
EMs	emerging markets
EV	electric vehicle

Glossary of Terms

FAI	fixed asset investment
FCC	fluid catalytic cracking
FDI	foreign direct investment
Fed	US Federal Reserve
FID	final investment decision
FOB	free on board
FPSO	floating production storage and offloading
FSU	Former Soviet Union
FX	Foreign Exchange
FY	fiscal year
GDP	gross domestic product
GFCF	gross fixed capital formation
GoM	Gulf of Mexico
GTLs	gas-to-liquids
HH	Henry Hub
HSFO	high-sulphur fuel oil
ICE	Intercontinental Exchange
IEA	International Energy Agency
IMF	International Monetary Fund
IOCs	international oil companies
IP	industrial production
ISM	Institute of Supply Management
LIBOR	London inter-bank offered rate
LLS	Light Louisiana Sweet
LNG	liquefied natural gas
LPG	liquefied petroleum gas
LR	long-range (vessel)
LSFO	low-sulphur fuel oil
MCs	(OPEC) Member Countries
MED	Mediterranean
MENA	Middle East/North Africa
MOMR	(OPEC) Monthly Oil Market Report
MPV	multi-purpose vehicle
MR	medium-range or mid-range (vessel)
NBS	National Bureau of Statistics
NGLs	natural gas liquids
NPC	National People's Congress (China)
NWE	Northwest Europe
NYMEX	New York Mercantile Exchange
OECD	Organisation for Economic Co-operation and Development
OPEX	operational expenditures
OIV	total open interest volume
ORB	OPEC Reference Basket
OSP	Official Selling Price
PADD	Petroleum Administration for Defense Districts
PBoC	People's Bank of China
PMI	purchasing managers' index
PPI	producer price index

RBI	Reserve Bank of India
REER	real effective exchange rate
ROI	return on investment
SAAR	seasonally-adjusted annualized rate
SIAM	Society of Indian Automobile Manufacturers
SRFO	straight-run fuel oil
SUV	sports utility vehicle
ULCC	ultra-large crude carrier
ULSD	ultra-low sulphur diesel
USEC	US East Coast
USGC	US Gulf Coast
USWC	US West Coast
VGO	vacuum gasoil
VLCC	very large crude carriers
WPI	wholesale price index
WS	Worldscale
WTI	West Texas Intermediate
WTS	West Texas Sour

OPEC Basket average price

US\$/b



down 16.26 in April

April 2020	17.66
March 2020	33.92
Year-to-date	43.06

April OPEC crude production

mb/d, according to secondary sources



up 1.80 in April

April 2020	30.41
March 2020	28.61

Economic growth rate

per cent

	World	OECD	US	Euro-zone	Japan	China	India
2019	2.9	1.7	2.3	1.2	0.7	6.1	5.3
2020	-3.4	-6.1	-5.2	-8.0	-5.1	1.3	-0.2

Supply and demand

mb/d

2019		19/18	2020		20/19
World demand	99.7	0.8	World demand	90.6	-9.1
Non-OPEC liquids production	65.0	2.0	Non-OPEC liquids production	61.5	-3.5
OPEC NGLs	4.8	0.0	OPEC NGLs	4.8	0.0
Difference	29.8	-1.2	Difference	24.3	-5.6

OECD commercial stocks

mb

	Mar 19	Jan 20	Feb 20	Mar 20	Mar 20/Feb 20
Crude oil	1,462	1,432	1,436	1,485	49
Products	1,415	1,508	1,509	1,518	9
Total	2,877	2,940	2,945	3,002	58
Days of forward cover	61.0	69.8	77.2	86.1	8.9

Next report to be issued on 17 June 2020