Organization of the Petroleum Exporting Countries

OPEC Monthly Oil Market Report

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Feature article:
Winter oil market outlook

Organization of the Petroleum Exporting Countries

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Oil Market Highlights

Crude Oil Price Movements

Crude oil prices rebounded m-o-m in September, gaining about 5%, supported by robust oil market fundamentals amid a slow restart of US oil production, further recovery of oil demand and a drop in inventories, along with easing COVID-19-related mobility restrictions in several Asian countries. Moreover, worries about natural gas and coal shortages in Europe and Asia boosted sentiment for higher oil demand. The OPEC Reference Basket (ORB) value rose by $3.55 or 5.0% m-o-m in September to settle at $73.88/b. Year-to-date (y-t-d), the ORB was up by $26.21, or 64.5%, to average $66.83/b compared with the same period last year. The ICE Brent front-month rose $4.37, or 6.2%, m-o-m in September to average $74.88/b, while NYMEX WTI increased by $3.83, or 5.7%, m-o-m to average $71.54/b. Consequently, the Brent/WTI spread widened further in September to $3.34/b, its highest point since last April. The market structure of all three major oil benchmarks – Brent, WTI and Dubai – remained in backwardation. However, the Brent forward curve strengthened, while WTI and Dubai backwardation flattened slightly. Hedge funds and other money managers boosted bullish wagers in September as oil prices rose to multi-year highs, as the risk of a natural gas and coal shortage urged speculators to bet on higher oil prices.

World Economy

Global economic growth forecasts for both 2021 and 2022 remain unchanged from the last month's assessment at 5.6% and 4.2%, respectively. Given somewhat slowing 3Q21 momentum, the US economy forecast for 2021 is revised down slightly to 5.8% from 6.1%, while the forecast for 2022 remains unchanged at 4.1%. Euro-zone economic growth is revised up to 5% from 4.7% for 2021 and to 3.9% from 3.8% for 2022, after a strong rebound in 2Q21. The forecast for Japan is revised down to 2.6% from 2.8% for 2021, due to ongoing COVID-19-related social-distancing measures in 3Q21, while the forecast for 2022 remains at 2%. After a strong recovery in the first half of the year, China's economy is seen to slow somewhat, leaving the growth forecast at 8.3% in 2021 and 5.8% in 2022, representing a 0.2 percentage point downward revision for both years. Meanwhile, India's 2021 growth forecast is unchanged at 9% for 2021 and 6.8% for 2022, although downside risks prevail. Russia's forecasts are revised up from 3.5% to 4% for 2021 and from 2.5% to 2.7% for 2022, benefitting from the more stable oil market. Brazil's growth forecast remains unchanged for both 2021 and 2022 at 4.7% and 2.5%, respectively. The ongoing robust growth in the world economy continues to be challenged by uncertainties, such as the spread of COVID-19 variants and the pace of vaccine rollouts worldwide, as well as ongoing global supply-chain disruptions. Additionally, sovereign debt levels in many regions, together with rising inflationary pressures and potential central bank responses, remain key factors requiring close monitoring.

World Oil Demand

World oil demand is estimated to increase by 5.8 mb/d in 2021, revised down from 5.96 mb/d in the previous month's assessment. The downward revision is mainly driven by lower-than-expected actual data for the first three quarters of this year, despite healthy oil demand assumptions going into the final quarter of the year, which will be supported by seasonal uptick in petrochemical and heating fuel demand and the potential switch from natural gas to petroleum products due to high gas prices. Both OECD and non-OECD figures are adjusted lower, with the downward revision in OECD regions focused in 1H21, while the non-OECD revision is concentrated in 3Q21.The world is expected to consume 96.6 mb/d of petroleum products this year. For 2022, world oil demand growth is unchanged at 4.2 mb/d. As a result, global demand next year is seen averaging 100.8 mb/d. Demand is anticipated to be supported by healthy economic momentum in the main consuming countries and better management of the COVID-19 pandemic.

World Oil Supply

Non-OPEC liquids supply growth in 2021 is revised down by 0.3 mb/d from the previous month's assessment to now stand at 0.7 mb/d. The revisions were driven mainly by a downward adjustment in 3Q21 due to factors such as production outages in the US Gulf of Mexico caused by Hurricane Ida; maintenance in the Tengiz field in Kazakhstan; and a force majeure in Canada at the Suncor oil sands site. The impact of the Hurricane led to a downward revision in US liquids supply in 2021 from growth of 0.1 mb/d to a contraction of 0.1 mb/d. The main growth drivers for 2021 supply growth continue to be Canada, Russia, China, Norway and Brazil. Similarly, the non-OPEC supply growth forecast for 2022 is revised up by 0.1 mb/d due to the base change to

now stand at 3.0 mb/d. Russia and the US are expected to be the main drivers, followed by Brazil, Norway, Canada, Kazakhstan, Guyana, and other countries in the DoC. OPEC NGLs are forecast to grow by 0.1 mb/d in both 2021 and 2022 to average 5.2 mb/d and 5.3 mb/d, respectively. OPEC crude oil production in September increased by 0.49 mb/d m-o-m, to average 27.33 mb/d, according to available secondary sources.

Product Markets and Refining Operations

Refinery margins further extended their upward trend in September globally, with solid support coming from the middle of the barrel. The tightness in product balance caused by supply side constraints in previous months was exacerbated by the start of peak refinery maintenance season amid lower product exports from China. Middle distillates were the main margin driver in all regions, while in Asia this upside was outpaced by robust fuel oil performance. Meanwhile, gasoline markets weakened as their crack spreads stepped down from post-pandemic highs registered the previous month, due to a less optimistic demand outlook as peak driving season approached its end.

Tanker Market

Dirty tanker rates remained soft in September amid a continued imbalance between tonnage supply and demand, keeping rates at low or even loss-making levels. Meanwhile, some positive signs are emerging for the final quarter of the year, as loading schedules should see a 20% increase in waterborne Russian exports and 10% increase in North Sea flows, amid ongoing planned upward adjustments in OPEC production. However, a sustained recovery in the tanker market could take as long as 12 months to materialize to allow for a return in demand from emerging and developing markets and sufficient scrapping to reduce the overhang in tonnage availability.

Crude and Refined Products Trade

Preliminary data shows US crude imports in September recovering from a slight dip the month before to average a healthy 6.4 mb/d, while US crude exports averaged 2.6 mb/d in September, continuing an alternating pattern of rises and dips, this time on the lower side. After four months of relatively muted levels, China's crude imports jumped to 10.5 mb/d in August, pushed higher by the arrival of storm-delayed cargoes, although policy-led uncertainties continued to impact China's trade flows. India's crude imports finally saw a recovery, after following a general downward trend since December 2020, to average 4.1 mb/d in August. Tanker tracking data show India's crude imports remaining steady in September. Japan's crude imports continued to recover from low levels, reaching their highest point since April 2020 at 2.7 mb/d in August. The country's crude and product imports are expected to see a boost from demand in the power sector for fuel oil as well as crude for direct burning, amid reports of a restart of oil-fired power units.

Commercial Stock Movements

Preliminary August 2021 data showed that total OECD commercial oil stocks fell by 19.5 mb m-o-m to stand at 2,855 mb. This was 363 mb lower than the same time one year ago, 183 less than the latest five-year average and 131 mb below the 2015-2019 average. Within components, OECD commercial crude stocks fell by 23.0 mb m-o-m in August, ending the month at 1,362 mb. This was down by 102 mb compared with the latest five-year average, and 87 mb below the 2015-2019 average. By contrast, OECD total product inventories rose by 3.2 mb m-o-m in August to stand at 1,493 mb. This was 81 mb lower than the latest five-year average and 43 mb below the 2015-2019 average. In terms of days of forward cover, OECD commercial stocks fell by 0.1 days m-o-m in August to stand at 62.5 days. This was 12.3 days lower than the same period in 2020, 2.5 days below the latest five-year average and 0.3 days below the 2015-2019 average.

Balance of Supply and Demand

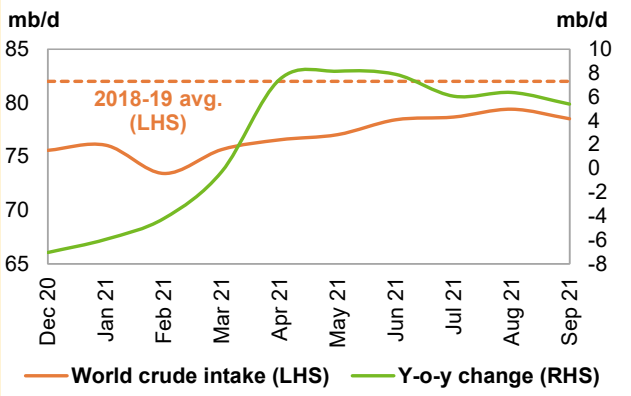
Demand for OPEC crude in 2021 is revised up by 0.1 mb/d from the previous month's assessment to stand at 27.8 mb/d, around 5.0 mb/d higher than in 2020. Demand for OPEC crude in 2022 was also revised up by 0.1 mb/d from the previous month's assessment to stand at 28.8 mb/d, around 1.0 mb/d higher than in 2021.

Feature Article

Winter oil market outlook

Following the outbreak of COVID-19 and resulted lockdown measures in 2020, refined oil product consumption, along with refinery intakes, recovered considerably in 2021. As road transportation fuel demand picked up during the summer season this year, and petrochemical feedstock requirements increased, refinery intakes in August rose by 6.4 mb/d, compared with the same month a year earlier. This marks a significant measure ahead of the usual refinery maintenance season beginning in September, and corresponds to a hefty 10.5 mb/d increase relative to levels seen in May 2020. Despite this considerable recovery, intakes in August still remain nearly 2.5 mb/d below the pre-pandemic 2018-2019 average of 82 mb/d (***Graph 1***).

Graph 1: Refinery intake by region



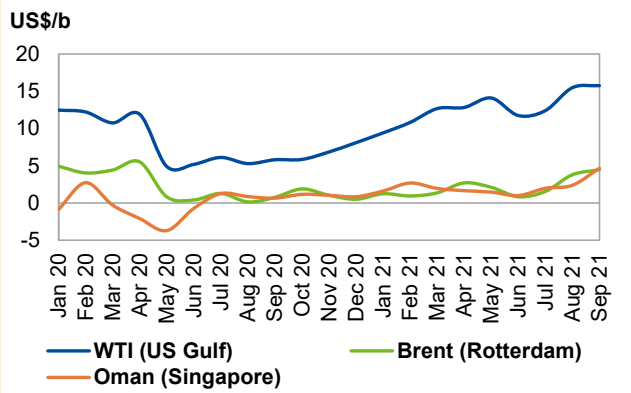
Source: OPEC.

Refinery utilization rates in 2021 have been firmly supported by stronger product fundamentals with robust gasoline performance, mainly in the US and Europe, leading to strong conversion margins in recent months and, ultimately, solid improvement in refining economics (***Graph 2***).

The recovery in transportation fuels, as well as in the naphtha segment, was mostly driven by stronger consumption levels and robust economic activity amid improved mobility indicators. At the same time, cautious management of refinery intakes in an attempt to prevent product oversupply, amid a rise in unplanned outages during the hurricane season in the US, contributed to an increasingly stronger product balance and further supported product markets and refining economics in recent months.

These supply-side constraints ultimately drove product prices to soar to post-pandemic record highs, with gasoline prices in the US in reaching a multi-year record high of $99.50/b in July, compared with $52.51/b a year earlier and $88.55/b in July 2019.

Graph 2: Refinery margins



Sources: Argus and OPEC.

Refinery offline capacity began its seasonal rise in September, up by 891 tb/d m-o-m, according to preliminary estimates. Based on historical data and announced maintenance plans, the rise in offline capacity is projected to peak at around 9.3 mb/d in October, compared with 6.1 mb/d seen in August, before the onset of maintenance.

At the same time, the renewed spread of COVID variants continues to pose a downside risk to product markets, despite the positive vaccination rollout progress, particularly with regard to air travel and jet fuel markets, the hardest pandemic-hit product segment, which has yet to fully recover.

Recently, soaring natural gas prices, which have reached record-high levels, particularly in Europe during September, have triggered a growing interest in switching from natural gas to liquid fuels at the industrial level, as energy companies attempt to drive down cost. Should this trend continue, fuels such as fuel oil, diesel, and naphtha could see support, driven by higher demand from power generation, refining and petrochemical use. On the other hand, record high natural gas prices have pushed electricity costs and, consequently, refining operational costs higher. This could weigh on refinery intakes and industrial production and partially offset the upside potential. Forecasts for a colder-than-average winter in 4Q21 could set the stage for positive support for heating oil markets, particularly in December, but this could be offset by seasonal weakness from other key products across the barrel, particularly gasoline.

Looking ahead, despite expectations of a seasonal pick-up in heating oil demand, as well as a potential switch from natural gas to liquid fuels, product markets are expected to see some weakness during the coming winter due to higher refinery throughput leading to ample supply. Although refineries are expected to increase run rates in line with seasonal trends to replenish stocks, any considerable growth in global intake levels could pose a challenge to product markets. Meanwhile, concerns of potential renewed COVID-19-related mobility restrictions during the winter could weigh on product markets and, consequently, refinery intakes. Thus, as oil markets continue to emerge from the COVID-19 pandemic, countries participating in the Declaration of Cooperation continue to maintain a vigilant watch over market fundamentals in an ongoing effort to support balance in oil market.

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Crude Oil Price Movements

Crude oil spot prices rose firmly in September, rebounding about 5% on a monthly average from August, supported by robust oil market fundamentals and a rally in futures markets. Signs of a recovery in oil demand in Asia due to the improving COVID-19 situation, and supply disruptions in several regions because of planned and unplanned outages, including in the Gulf of Mexico (GoM) after Hurricane Ida, supported higher oil prices.

The ORB value rose firmly in September. It increased by $3.55 m-o-m, or 5.0%, to stand at $73.88/b. This was on the back of higher ORB component-related crude benchmarks, and an increase in official selling prices (OSPs) for grades delivering to Asia and US markets, amid a healthier physical crude market.

Crude oil futures prices bounced back in September ending the month substantially higher compared with August. ICE Brent was up 6.2% m-o-m, mirroring investors' perception of robust global oil market fundamentals this winter. Moreover, worries about the risk of natural gas and coal shortages in Europe and Asia boosted sentiment for an additional increase in oil demand as a substitution fuel.

The ICE Brent front-month rose m-o-m by $4.37, or 6.2%, in September to average $74.88/b, and NYMEX WTI increased m-o-m by $3.83, or 5.7%, to average $71.54/b. ICE Brent was $25.44 higher y-t-d, or 59.8%, at $67.97/b, while NYMEX WTI was $26.83 higher y-t-d, or 70.2%, at $65.04/b. DME Oman crude oil futures rose m-o-m in September by $3.68, or 5.3%, to settle at $72.99/b. Y-t-d, DME Oman was higher by $24.20, or 57.2%, at $66.52/b.

Hedge funds and other money managers raised their futures and options net long positions in September to their highest since last July. This was as oil prices rose to multi-year highs and as soaring energy prices for natural gas, coal and electricity in Europe and Asia, likely urged speculators to bet on higher oil prices. Longer than expected disruptions in US GoM production also prompted speculators to raise their bullish positions.

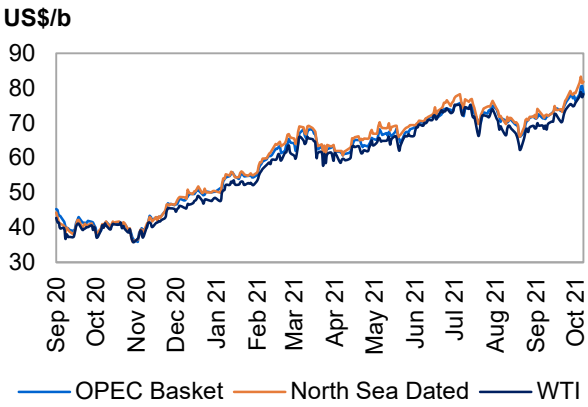
The market structure of all three major oil benchmarks remained in sustained backwardation in September. This was on the back of expected stronger global oil market fundamentals in 4Q21 amid further global oil demand recovery and a continued decline in OECD stocks to below the 2015-2019 average.

The sweet/sour crude differentials narrowed in Europe and the US Gulf Coast (USGC) in September due to the significant oil supply disruptions in the GoM, mainly sour crude, higher margins of heavier products, and the well-supplied light sweet crude market in the Atlantic Basin. However, in Asia, the sweet/sour crude differentials widened on a higher supply of sour crude in the Middle East, soft demand from Asian refiners, and an unfavourable west-to-east arbitrage that supported light sweet crude values in Asia.

Crude spot prices

Robust oil market fundamentals and a rally in futures markets pushed **crude oil spot prices** higher in September, rebounding about 5% on a monthly average from August. Oil prices were supported by a slow recovery from crude supply disruptions in the US GoM as a result of Hurricane Ida. These caused cumulative losses of more than 30 mb, according to the US Bureau of Safety and Environmental Enforcement data. In addition, support came from lower supply in other regions, including the Caspian due to field maintenances, lower loading programs in several West African crudes, and temporary export disruptions in Libya.

Graph 1 - 1: Crude oil price movement



Sources: Argus, OPEC and Platts.

Meanwhile, global oil demand continued to recover on the back of easing COVID-19 related mobility restrictions in several Asian countries, while the risk of a natural gas and coal shortage in Europe and Asia boosted sentiment about higher oil demand.

In September, North Sea Dated increased by $3.60, or 5.1%, to an average of $74.40/b. The WTI and Dubai first month rose by $3.73 and $3.20, respectively, or 5.5% and 4.6%, to settle at $71.46/b and $72.57/b.

The return of buying interest from Asian refiners, including China, rising European refinery crude intakes in August, and the sharp decline in US crude oil stocks in September, contributed to supporting higher spot prices. According to Euroilstock data, the crude intake of the Europe-16 nations rose 2% m-o-m in August, to stand at 9.21 mb/d. Higher refining margins also lent support.

However, the physical crude oil market did not show signs of a supply shortage or any large deficit. Crude oil differentials registered mixed performances in the Atlantic Basin, Asia, and other regions. A softer physical crude market compared to the futures market was also reflected in a rising front-month for Brent-Dubai Exchange of Futures for Swaps (EFS), which increased above $4/b.

Table 1 - 1: OPEC Reference Basket and selected crudes, US$/b

			Change		Year-to-date	
OPEC Reference Basket (ORB)	Aug 21	Sep 21	Sep/Aug	%	2020	2021
ORB	**70.33**	**73.88**	**3.55**	**5.0**	**40.62**	**66.83**
Arab Light	71.36	75.01	3.65	5.1	41.14	67.59
Basrah Light	70.39	73.75	3.36	4.8	40.54	66.97
Bonny Light	71.23	74.09	2.86	4.0	40.79	67.69
Djeno	63.35	66.95	3.60	5.7	35.46	60.37
Es Sider	69.45	72.75	3.30	4.8	39.40	66.03
Girassol	70.93	74.76	3.83	5.4	41.69	68.17
Iran Heavy	70.34	74.08	3.74	5.3	39.64	66.65
Kuwait Export	71.06	74.92	3.86	5.4	40.56	67.37
Merey	51.76	54.96	3.20	6.2	27.93	48.70
Murban	69.89	73.41	3.52	5.0	42.45	66.82
Rabi Light	70.34	73.94	3.60	5.1	39.12	67.36
Sahara Blend	71.05	73.85	2.80	3.9	41.44	67.70
Zafiro	70.41	74.03	3.62	5.1	40.49	68.01
Other Crudes						
North Sea Dated	70.80	74.40	3.60	5.1	40.84	67.82
Dubai	69.37	72.57	3.20	4.6	41.53	66.36
Isthmus	65.25	68.82	3.57	5.5	34.89	63.56
LLS	68.55	72.89	4.34	6.3	40.36	66.68
Mars	65.93	70.83	4.90	7.4	39.10	64.64
Minas	68.45	72.62	4.17	6.1	40.47	65.73
Urals	68.14	72.65	4.51	6.6	40.90	66.43
WTI	67.73	71.46	3.73	5.5	38.32	65.04
Differentials						
North Sea Dated/WTI	3.07	2.94	-0.13	-	2.53	2.78
North Sea Dated/LLS	2.25	1.51	-0.74	-	0.48	1.14
North Sea Dated/Dubai	1.43	1.83	0.40	-	-0.69	1.46

Sources: Argus, Direct Communication, OPEC and Platts.

Crude oil differentials were mixed in September in the Atlantic Basin. Some grade differentials remained weak, mirroring a well-supplied crude market, while the upcoming autumn refinery maintenance season prompted some refiners to reduce purchases. For light sweet crude, a strong North Sea Dated and steep backwardation weighed on crude differentials. A strong Brent value compared with Dubai made Brent-related crudes less attractive for Asian refiners and limited west-to-east arbitrage.

Light sweet crude differentials in Northwest Europe weakened in September, with the Forties and Ekofisk crude differentials falling on a monthly average by 92¢ and 76¢, respectively, to average a discount of 2¢/b and a 34¢/b premium. In the West Africa market, Bonny Light, Forcados and Qua Iboe crude differentials also weakened in September against the Brent benchmark. This was by a monthly average of 10¢, 28¢ and 13¢, respectively, to discounts of 60¢/b, 79¢/b and 70¢/b. However, healthy demand from China supported Cabinda and Dalia values. These rose m-o-m by 29¢ and 93¢ respectively, to stand at a premium of 10¢ and a discount of 90¢.

Saharan Blend crude differentials were on average 32¢ higher m-o-m in September, to an average of 32¢/b discount, although the crude differential remained at a discount to Brent. The Caspian CPC Blend differential fell further in September by 42¢ to a discount of $1.66/b on average, despite the prospects of lower supply from the grade due to field maintenance.

In the US, a large production disruption in the GoM supported the value of crude in the USGC, although a slow recovery of refinery operations in PADD3 and lower crude demand limited gains. Light Louisiana Sweet (LLS) and Mars crude differentials increased in September, rising on a monthly average by 55¢ and $1.13, respectively, to a premium of $1.38/b and a discount of 68¢/b. In the Middle East, however, the value of the Oman crude differential fell m-o-m by 61¢ in September to a premium of $1.59/b.

OPEC Reference Basket (ORB)

The **ORB** value rose firmly in September. It increased m-o-m by $3.55, or 5.0%, to stand at $73.88/b. This was on the back of higher ORB component-related crude benchmarks, and an increase in official selling prices (OSPs) for grades delivering to Asia and US markets, amid a healthier physical crude market. Compared to the previous year, the ORB was up 64.5%, from $40.62/b in 2020 to an average of $66.83/b so far this year.

All ORB component values rose in September, with West and North African Basket components – Bonny Light, Djeno, Es Sider, Girassol, Rabi Light, Sahara Blend and Zafiro – rising $3.37, or 4.9% m-o-m on average, to $72.91/b. The multiple regions' destination grades – Arab Light, Basrah Light, Iran Heavy, and Kuwait Export – increased m-o-m by $3.65, or 5.2% on average, to settle at $74.44/b. Murban crude rose m-o-m by $3.52, or 5.0% on average, to settle at $73.41/b. The Merey component also rose m-o-m by $3.20, or 6.2% on average, to settle at $54.96/b.

The oil futures market

Crude oil futures prices bounced back in September ending the month substantially higher compared with August. ICE Brent was up 6.2% m-o-m, mirroring investors' perception of robust global oil market fundamentals this winter. Worries were fuelled by soaring gas, coal, and electricity prices in several regions and trading hubs, amid a potential risk of gas and coal shortages in the coming months.

Earlier in the month, oil prices were buoyed by worries about tightening global oil supply amid a slow recovery in US GoM production, production maintenance in several regions, and signs of strengthening global demand, which resulted in a further decline in OECD stocks in August. They fell by 19.5 mb compared to July 2021 to stand below the 2015-2019 average. EIA weekly data showing seven weeks of consecutive declines in US crude oil stocks, which are now their lowest since October 2018, also helped push oil prices higher. Easing worries about the oil demand outlook, specifically in Asia, given the improving COVID-19 situation in major Asian countries, additional signs of a demand recovery and the return of crude buying interests in Asia further supported oil prices. Oil prices also found support from data showing China's crude oil imports rose 8% m-o-m in August, to 44.53 MT, according to data from the General Administration of Customs.

Oil futures prices rallied further in the second half of September to their highest level in about three years. Prices were boosted by a bullish futures market, as soaring energy prices, specifically for gas, coal and electricity, amid a potential risk of energy shortages in the winter season, prompted investors to bet on higher demand for oil, which pushed up oil prices.

Meanwhile, oil production from OPEC and non-OPEC participating countries in the Declaration of Cooperation (DoC) continued to rise following the decision to adjust upward their overall production by 0.4 mb/d on a monthly basis starting August 2021. The recent 21st OPEC and non-OPEC Ministerial Meeting reconfirmed this decision for the month of November 2021.

However, the oil price rally was capped by a strong US dollar compared to a basket of other major currencies that rose to its highest in around one year, and as concerns about crude oil supply eased slightly later in the month as oil production in the US GoM continued to restart. According to the Bureau of Safety and Environmental Enforcement (BSEE), 16.2%, or about 294 tb/d of US GoM oil production was still shut-in as of 23 September, compared to 76.5% two weeks earlier. Mixed economic data from China, including lower manufacturing activity in September, worries about the financial troubles of China's Evergrande group, along with a statement from the National Food and Strategic Reserves Administration that it would release oil reserves via public auction to domestic refiners, weighed on oil prices.

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

Crude oil futures	Aug 21	Sep 21	Change Sep/Aug	Change %	Year-to-date 2020	Year-to-date 2021
NYMEX WTI	67.71	71.54	3.83	5.7	38.21	65.04
ICE Brent	70.51	74.88	4.37	6.2	42.53	67.97
DME Oman	69.31	72.99	3.68	5.3	42.32	66.52
Spread						
ICE Brent-NYMEX WTI	2.80	3.34	0.54	19.3	4.32	2.93

Note: Totals may not add up due to independent rounding. Sources: CME, DME, ICE and OPEC.

The **ICE Brent** front-month rose m-o-m by $4.37, or 6.2%, in September to average $74.88/b, and NYMEX WTI increased m-o-m by $3.83, or 5.7%, to average $71.54/b. ICE Brent was $25.44 higher y-t-d, or 59.8%, at $67.97/b, while **NYMEX WTI** was $26.83 higher y-t-d, or 70.2%, at $65.04/b. **DME Oman** crude oil futures prices rose m-o-m in September by $3.68, or 5.3%, to settle at $72.99/b. Y-t-d, DME Oman was higher by $24.20, or 57.2%, at $66.52/b.

On 12 October, ICE Brent stood at $83.42/b and NYMEX WTI at $80.64/b.

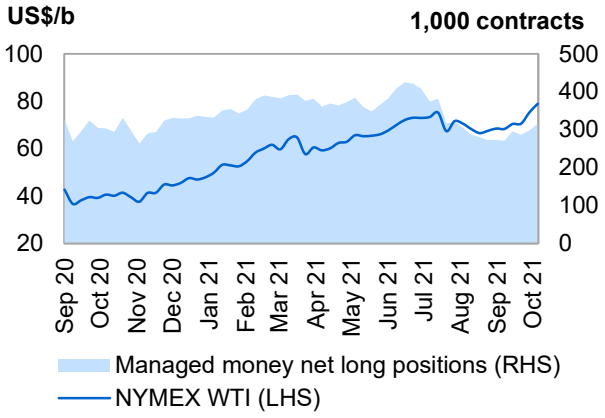
The **ICE Brent/NYMEX WTI spread** increased further in September to $3.34/b. This is 54¢ wider than in August. The spread is now at its highest level since last April, and keeps US crude oil as a more attractive grade for arbitrage into both Europe and Asia. However, US crude exports remained low, particularly in the first decade of September, before recovering to just above 3 mb/d in the week to 24 September, according to EIA weekly data.

The widening spread was the result of a sharp rise in Brent futures prices that was supported by worries about an energy crunch in Europe and parts of Asia. However, the rise of WTI futures at Cushing was probably capped by a slow recovery of US refinery operations in the USGC after Hurricane Ida. The prospects of additional supply from the US Strategic Petroleum Reserve (SPR) in 4Q21 also weighed on the WTI price. However, the spread between North Sea Dated and WTI Houston narrowed in September by 57¢ to an average $1.91/b, on the back of lower supply in the USGC amid a slow recovery in GoM production.

After significantly reducing their net long positions in July and for most of August, **hedge funds and other money managers** recovered parts of their combined futures and options net long positions in September. This was as oil prices rose to multi-year highs, and as soaring energy prices for gas, coal and electricity in Europe and Asia, likely urged speculators to bet on higher oil prices. Longer than expected disruptions in the US GoM also prompted money managers to raise their bullish positions.

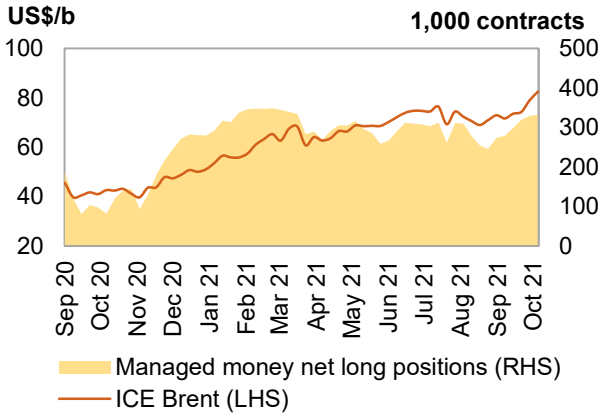
Between the week of 24 August and the week of 28 September, money managers were net buyers of an equivalent of about 108 mb in both Brent and WTI. However, speculators were more bullish about Brent prices as a global crude benchmark, while in the US, the end of the driving season and the disruptions seen in US refinery operations due to Hurricane Ida, probably reduced speculators' risk appetite.

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



Sources: CFTC, CME and OPEC.

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



Sources: ICE and OPEC.

Money managers raised their net long positions in ICE Brent in September to their highest level since last March. Combined futures and options net long positions in ICE Brent rose by 55,060 contracts, or 20.1%, to reach 328,954 lots between the week of 31 August and the week of 28 September, according to the ICE Exchange.

During the same period, gross short positions fell by 4,230 lots, or 6.4%, to 62,141 contracts, while gross long positions rose by 50,830 lots, or 14.9%, to 319,095 contracts during the same period.

Hedge funds and other money managers raised their positive positions related to NYMEX WTI in September, increasing by 25,125 contracts, or 9.2%, to stand at 298,042 lots in the week of 28 September. This is due to a drop in short positions by 94 lots, or 0.2%, to 54,166 contracts, and an increase of 25,031 lots, or 7.7%, in long positions to 352,208 contracts, according to the US Commodity Futures Trading Commission (CFTC).

The **long-to-short ratio** of speculative positions in the ICE Brent contract rose slightly in September, increasing from about 5:1 in August to about 6:1 in the week of 28 September. However, the NYMEX WTI long-to-short ratio remained at about 7:1 in the week to 28 September, the same level as in August. **Total futures and options open interest volumes** on the two exchanges rose over September, increasing by 6.8%, or 381,783 contracts, to stand at 6.0 million contracts in the week ending 28 September.

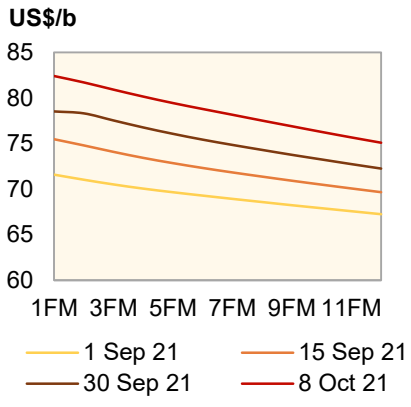
The futures market structure

The **market structure** of all three major oil benchmarks remained in sustained backwardation in September on the back of expected stronger global oil market fundamentals in 4Q21, amid further global oil demand recovery, and a continued decline in OECD stocks to below the 2015-2019 average. Soaring natural gas and coal prices, and worries about an energy shortage in the coming winter season, boosted market sentiment about higher oil demand, particularly in the power sector. This contributed to supporting near-month forward prices and strengthening the backwardation structure, specifically the ICE Brent forward curve.

The forward curve for **Brent futures**, as a global benchmark, steepened in September, compared to the previous month. This was evidence that the tightening of the global market is accelerating and reflected the prospects of strengthening global oil market fundamentals in the coming months. Oil supply disruptions after Hurricane Ida hit the GoM and limited crude availability in the Atlantic Basin contributed to a strengthening of the forward curve. The ICE Brent first-month premium to the third month rose m-o-m by 24¢, to a backwardation of $1.39/b. The ICE Brent's M1-M6 also moved into deeper backwardation last month to settle at $3.10 on average, compared to a backwardation of $2.46/b in August.

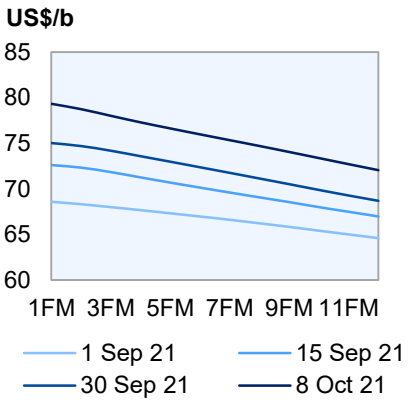
The backwardation structure of **DME Oman** strengthened in September. On a monthly average, the DME Oman M1-M3 spread widened by 50¢ to a backwardation of $1.76/b in September, from a backwardation of $1.26/b in August.

Graph 1 - 4: ICE Brent forward curves



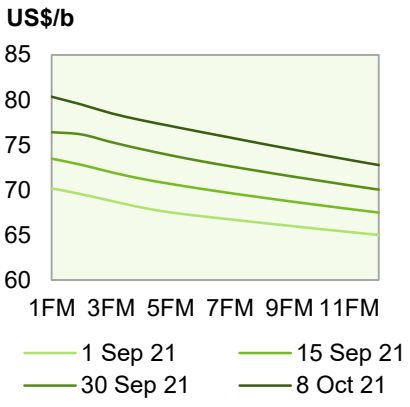
Sources: ICE and OPEC.

Graph 1 - 5: NYMEX WTI forward curves



Sources: CME and OPEC.

Graph 1 - 6: DME Oman forward curves



Sources: DME and OPEC.

In the US, the **NYMEX WTI** forward curve flattened slightly in the front, although the whole futures curve remained in backwardation amid healthy US oil demand, an improving COVID-19 situation in the US, and a sharp decline in US crude oil stocks in September. However, a slow recovery of refinery operations in PADD2 after Hurricane Ida limited the call on US crude, including from PADD3, which played a role in flattening the forward curve in the front. The NYMEX WTI M1-M3 month spread widened slightly by 1¢ to a backwardation of 68¢/b on average in September, compared with a backwardation of 67¢/b in August.

In terms of the **M1-M3 structure**, the North Sea Brent M1/M3 spread widened in September on a monthly average by 51¢ to a backwardation of $1.47/b, compared with 96¢/b in August. In the US, the WTI M1-M3 backwardation was little changed in September narrowing by 2¢ to 62¢/b, compared with a backwardation of

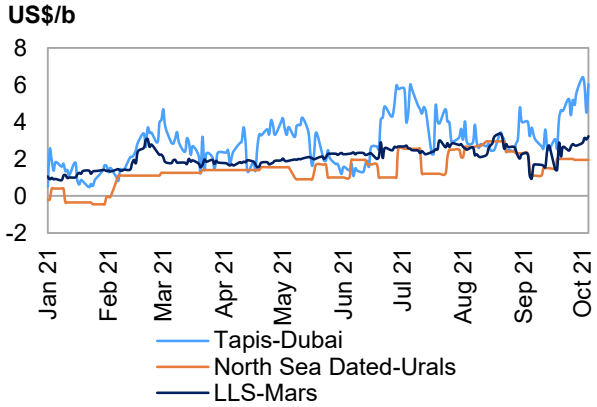
$64¢/b in August. The Dubai M1-M3 backwardation narrowed on average in September by 67¢ to a backwardation of $1.38/b.

Crude spreads

The **sweet/sour crude differentials** narrowed in Europe and the USGC in September due to the significant oil supply disruptions in the GoM, mainly sour crude, the strengthening margins of heavier products, and the well-supplied light sweet crude market in the Atlantic Basin. In Asia, however the sweet/sour crude differentials widened on the higher supply of sour crude in the Middle East, soft demand from Asian refiners, and an unfavourable west-to-east arbitrage that supported light sweet crude values in Asia.

In **Europe**, although the crude differentials of the medium sour crude Urals remained in a deep discount to Brent, on a monthly average in September the value increased, particularly in the Mediterranean. The Urals value strengthened early in September on firm demand, including from European refiners amid higher refining margins for the grade. The value of Urals crude differentials wakened later in the month on softening demand amid an unfavourable arbitrage to the east, and rising supplies of the grade. Meanwhile, the value of light sweet crudes in the North Sea, as well as in the West African and Mediterranean markets, remained under pressure from WTI crude flows to Europe and a wider Brent-Dubai spread that make moving light sweet crude to the east of Suez market less economically attractive for Asian refiners.

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



Sources: Argus, OPEC and Platts.

On a monthly average, the North Sea Dated-Urals spread fell to a premium of $1.75/b in September, narrowing by 91¢, from a premium of $2.66/b in August.

In the **USGC**, the sweet-sour crude differential narrowed in September. This was mainly due to supply disruptions in the GoM after Hurricane Ida that resulted in considerable shut-in offshore productions for several weeks, including Mars sour crude production, hence, limiting the supply of sour crude in the market. The LLS premium over medium sour Mars narrowed m-o-m in September by 56¢/b, to $2.06/b. The value of Mars sour crude witnessed high volatility not only due to production disruptions, but also due to the slow recovery of refinery operations in the USGC that limited demand for crude.

Contrary to other regions, the sweet-sour crude differential widened in **Asia** on the higher value of light sweet crude compared to sour crude, amid a higher Brent-Dubai differential that limited the flow of light sweet crude from the Atlantic Basin to Asia. The Brent-Dubai front-month EFS increased further m-o-m in September, rising by 31¢, to average at $3.64/b. Moreover, the gradual increase of sour crude supply in the Middle East, in line with the DoC decision, and a soft sour spot market amid limited demand from some Asian refiners, specifically Chinese independent refiners, contributed to a widening of sweet-sour crude differentials.

Commodity Markets

Energy commodities experienced a surge across the board, with natural gas and coal prices reaching record highs in Europe and Asia amid lower than average storage levels that fuelled concerns about potential shortages should winter temperatures be colder than usual. Crude oil prices rose on signs of an oil demand recovery in Asia due to the improving COVID-19 situation, as well as supply disruptions in several regions because of planned and unplanned outages, including the Gulf of Mexico (GoM) after Hurricane Ida.

Base metals advanced led by higher aluminium prices due to limited output from China because of the power rationing measures, while declining inventories also contributed to the upside over the month. Gold prices declined following expectations of higher US interest rates.

Trends in selected commodity markets

The **energy price index** rose m-o-m by 10.1% in September, with components rising across all regions. The average index level was up by 73% in the January–September 2021 timeframe, compared with the same period in 2020.

The **non-energy index** declined m-o-m by 1.1%. As witnessed in the previous month there was a decline in agricultural commodity prices, while base metals advanced. The non-energy index was up by 35.1% in the January–September window, compared to the same period of 2020.

Table 2 - 1: Commodity prices

Commodity	Unit	*Monthly averages*			*% Change*	*Year-to-date*	
		Jul 21	Aug 21	Sep 21	Sep 21/Aug 21	2020	2021
Energy*	Index	**97.7**	**95.7**	**106.0**	**10.8**	**50.4**	**87.3**
Coal, Australia	US$/mt	152.0	169.6	185.7	9.5	58.2	122.8
Crude oil, average	US$/b	73.3	68.9	72.8	5.7	40.5	66.0
Natural gas, US	US$/mbtu	3.8	4.1	5.1	26.2	1.9	3.6
Natural gas, Europe	US$/mbtu	12.5	15.4	22.8	48.1	2.6	10.7
Non-energy*	Index	**113.7**	**112.6**	**111.3**	**-1.1**	**81.2**	**109.7**
Base metal*	Index	**119.3**	**120.9**	**124.1**	**2.7**	**76.3**	**114.7**
Precious metals*	Index	**141.2**	**138.0**	**136.5**	**-1.1**	**130.1**	**140.9**

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

In September, the **Henry Hub natural gas price** rose m-o-m by around 26.2% to average $5.1/mmbtu. Prices strengthened on production outages in the GoM due to the impact of Hurricane Ida, some localized warmer than average weather that supported demand mainly in the first half of the month, and the expectation of strong winter LNG exports in view of escalating prices in Europe and Asia. However, towards the end of the month injections to storage amid moderating weather reduced the deficit vs. the five-year average. According to the Energy Information Administration, utilities added 118 bcf to working gas underground storage during the week ending 1 October 2021. This build left total working gas in underground storage at 3,288 bcf, around 5.1% below the latest five-year average. At the end of August, stocks were 7.2% below the five-year average.

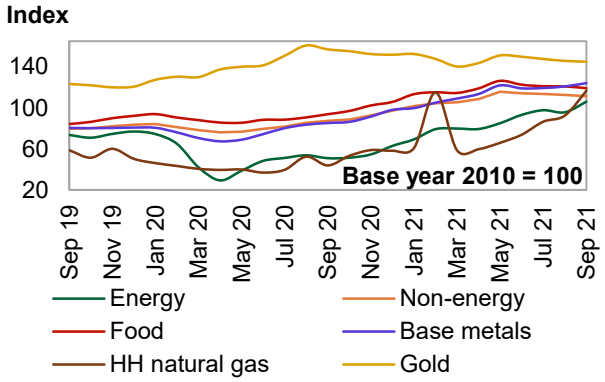
Natural gas prices in Europe rose to a new record in September, with the average **Title Transfer Facility price** up m-o-m by around 48.1% to average $22.8/mmbtu. Average prices in the January–September period are around three times higher than the same period last year. As mentioned in previous MOMRs, inventories remain significantly low ahead of the winter season. EU Inventories ended September around 74.6% full – around 16% below the average of the previous five years – vs. 67% full at the end of August, according to Gas Infrastructure Europe.

The rising price of carbon emission credits continues to support natural gas usage in the power sector vs. coal, which also surged to a record high. At the same time, a directive from the Chinese government to ensure winter supplies has further supported Asia LNG prices vs. Europe, favouring exports to the Asian region. The surge in natural gas prices has resulted in record power prices – more than 300% y-t-d in some countries – and if this persists it would likely see a reduction in industrial demand. Some energy intensive industry representatives have suggested limiting output, or potentially closing some operations/factories for a period of time.

Australian thermal coal prices rose m-o-m by 10.8% in September to a record monthly average of $185.7/mt. In the January–September timeframe, prices more than doubled compared to the same period last year. As mentioned in previous MOMRs, the combination of strong demand for power generation amid warmer than average weather, a recovery in industrial activities, and reduced hydroelectric power due to drought, has led to low stockpiles of coal in main consumer China ahead of the winter season. These factors have led to electricity rationing measures that have affected heavy industries, and more recently to a directive from the National Development and Reform Commission (NDRC) to ensure adequate supplies before winter. Coal output in the country has been restricted due to mine safety directives. At the same time, disruption due to severe weather in major exporters Australia, Indonesia and Colombia have also contributed to the market tightness.

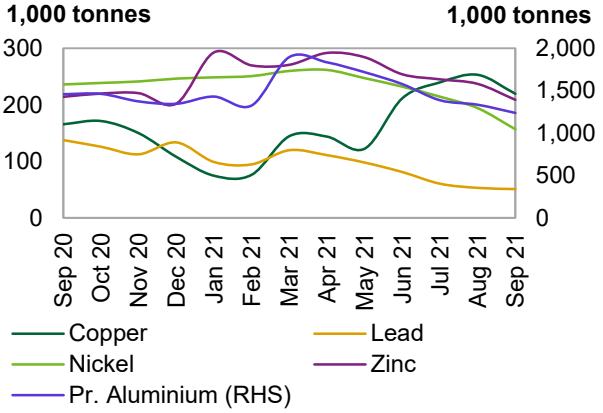
China's thermal power demand rose at a slower rate of 0.3% y-o-y in August, compared to an increase of 12.7% y-o-y in July, as a result of the beginning of the rationing measures. At the same time, coal output increased by 0.8% in August, compared to a decline of 3.3% y-o-y in July. Hydropower fell by 4.7% y-o-y during August. In India, there has also been reports of low coal stockpiles. According to Platts, citing data from the Central Electric Authority, coal stockpiles at power plants were at three-year lows.

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** rose by m-o-m by 2.7% in September, led by a**luminium** that saw average prices increase by a strong 8.9% to 2,834.6/mt. The price rise was supported by reductions in China's output due to power rationing measures.

Average monthly copper prices declined m-o-m in September by 0.8% to average $9,324.7/mt. Average prices in the January–September period were 57.4% higher than for the same months of 2020. Stock levels at the London Metal Exchange (LME) declined by 13.2% to 219,525 tonnes at the end of September, suggesting strong market fundamentals. Estimations from the International Copper Study Group (ICGS) for the refined copper balance (adjusted for unreported Chinese inventories) in 1H21 showed a surplus 58,000 tonnes, vs. a 128,000 tonne surplus in the January–May estimation. This also supported the view of a robust market.

Iron ore prices dropped sharply by 23.2% m-o-m to $124.5/mt. Average prices in the January–September window were 76.8% higher than the average for the same period last year. Prices continued their weakening trend as steel making activity dropped further in China on the back of power rationing. Global steel making activity declined by 1.4% in August 2021 compared to the same month last year, according to World Steel Association. This was mainly due to a drop in Chinese output of 13.2% y-o-y in August – vs. a drop of 8.4% y-o-y in July.

In the group of **precious metals**, gold prices declined on average by 0.6% m-o-m in September, supported by rising real US interest rates and anticipation of some reduction in monetary policy support from the Federal Reserve in the coming months. Silver and platinum prices dropped by 3.3% and 3.5%, respectively.

Investment flows into commodities

Money managers' net length positions increased in crude oil and copper, but declined in natural gas and gold. Despite this, investors continued to hold an average net long position in the selected commodities during the month.

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

Selected commodity	*Open interest*		*Net length*			
	Aug 21	Sep 21	Aug 21	% OI	Sep 21	% OI
Crude oil	2,776	2,785	284	10	288	10
Natural gas	1,443	1,442	63	4	59	4
Gold	639	626	86	13	69	11
Copper	214	201	27	13	30	15

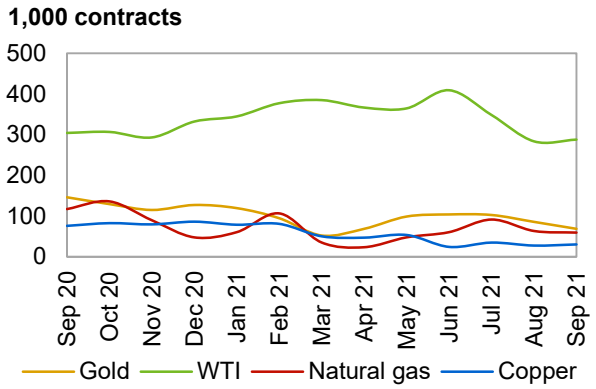
Note: Data on this table is based on monthly average.
Sources: CFTC and OPEC.

Henry Hub's natural gas open interest (OI) was relatively unchanged during the month. Money managers' net long position declined by 6.2% to average 59,197 contracts from 63,124 contracts the previous month, as investors bet on lower prices after the ongoing price surge.

Copper's OI dropped by 6.1% in September. Money managers' increased their net length by 10% m-o-m to 29,990 contracts from 27,193 contracts, following declines in warehouse stocks.

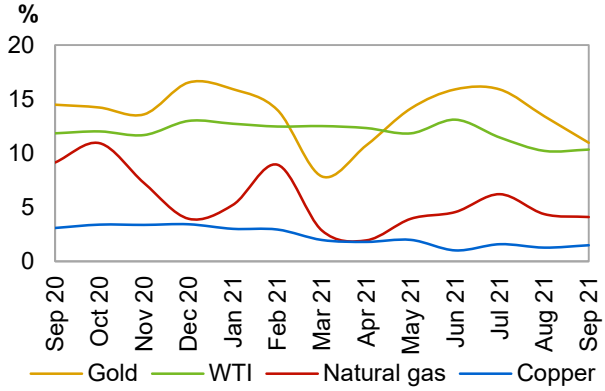
Gold OI decreased by 2.0% in September. Money managers' net length fell by 20% to 68,663 contracts from 85,756 contracts the previous month, as the market priced in a reduction in US monetary policy support.

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

The world economy has continued recovering strongly in the past months, however, at an increasingly diverging pace in the various economies and gradually challenged by rising uncertainties. The underlying assumptions for the GPD growth forecast are that COVID-19 will remain well contained and that it will not dampen the recovery beyond current levels. It is also anticipated that numerous additional challenges will not hurt the current path of the recovery. This applies especially to the ongoing global supply chain issues with potential longer-lasting effects on inflation. In addition, tight labour markets are seen to be temporary, a factor that otherwise may lead to rising inflation at the global level as well. Finally, very high debt levels, in both governments and the private sector, could provide substantial challenges going forward, particularly in light of a possibly longer-dated rise in inflation and a consequent hike in global interest rates. While it currently seems that economic growth risks are tilted towards the downside, upside risks could materialize as well. Further stimulus measures in the US, a continued strong recovery in the Euro-zone and a solid rebound in Japan could lead to stronger-than-expected growth in these OECD economies. Moreover, China may overcome the softening trend in the 2H21 recovery through governmental support and ongoing export-driven momentum. India could also overcome the ongoing challenges through an improvement in domestic demand and a rebound in the export-driven services sector.

With these uncertainties in both directions and numerous counterbalancing revisions among the various economies, the global GDP growth forecast remains unchanged for both 2021 and 2022 at 5.6% and 4.2%, respectively.

The US GDP growth forecast for 2021 was revised down slightly to 5.8% from 6.1%, reflecting somewhat slower 3Q21 momentum, while the 2022 growth forecast remained unchanged at 4.1%. Euro-zone 2021 economic growth was revised up to 5% from 4.7% after stronger-than-expected 2Q21 GDP growth. Benefitting from the ongoing momentum, the 2022 GDP growth forecast was revised up slightly to 3.9% from 3.8%. The forecast for Japan was revised down somewhat to stand at 2.6%, compared with 2.8% in the previous month, given a softening dynamic in 3Q21. The 2022 GDP growth forecast remains unchanged at 2%. China's economy is seen to grow at 8.3% in 2021 and 5.8% in 2022, a 0.2 percentage point downward revision for both years, reflecting the 2H21 slowdown with some expected carry-over into next year. Meanwhile, India's 2021 growth forecast remains at 9% and at 6.8% for 2022. Brazil's growth forecast for this year remains at 4.7%, and the 2022 growth forecast is unchanged as well to stand at 2.5%. Russia's forecast for 2021 has been revised up to 4% from 3.5%, benefitting from OPEC-non-OPEC efforts to stabilize the oil market, while the forecast for 2022 was revised up to 2.7% from 2.5%.

Table 3 - 1: Economic growth rate and revision, 2021–2022*, %

	World	OECD	US	Euro-zone	UK	Japan	China	India	Brazil	Russia
2021	**5.6**	**5.1**	**5.8**	**5.0**	**6.2**	**2.6**	**8.3**	**9.0**	**4.7**	**4.0**
Change from previous month	0.0	0.1	-0.3	0.3	0.0	-0.2	-0.2	0.0	0.0	0.5
2022	**4.2**	**3.6**	**4.1**	**3.9**	**3.9**	**2.0**	**5.8**	**6.8**	**2.5**	**2.7**
Change from previous month	0.0	0.0	0.0	0.1	0.0	0.0	-0.2	0.0	0.0	0.2

*Note: * 2021-2022 = Forecast. The GDP numbers have been adjusted to reflect 2017 ppp.*

Source: OPEC.

Update on latest global developments

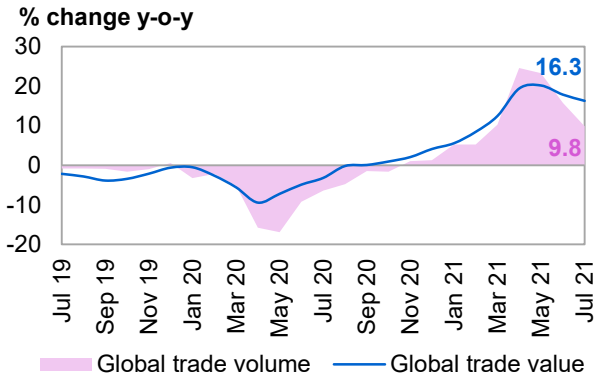
The **global economy has continued recovering in 3Q21,** but at an increasingly diverging pace and faced with rising uncertainties. For various reasons, the first three quarters have shown differing trends in not only the major economies, but across the globe. While, in general, 1H21 showed strong growth at differing levels in most major economies, 3Q21 growth levels are now seen to have softened in the US, China and other key economies. This was caused by ongoing COVID-19-related issues, as well as by supply chain bottlenecks, labour market tightness, rising inflation and the implied risk of rising interest rates. In most major economies, there is an ongoing mismatch between order backlogs and the ability to fulfil the current magnitude of orders due to a lack of input goods and inventories. A shortage of semiconductors, among other input goods, has been ongoing. Bottlenecks in logistical capabilities have accentuated this problem. Selective labour market shortages have added to the challenges, and it remains to be seen if inflation will be a temporary issue as is currently seen by most major central banks. The labour shortage in combination with a resurgence in COVID-

19 infections has also dampened the recovery in the services sector. With rising COVID-19 cases, the sectors of travel and tourism, hospitality and leisure may be particularly exposed. As the services sector is an important driver for a full-fledged economic recovery, it will require close monitoring.

The ongoing budgetary and debt ceiling negotiations in the US Congress, including on additional fiscal stimulus, are an additional area that has turned out to be more challenging than expected. This in combination with a softening US labour market and, to some extent, the ending of COVID-19-related social support systems seems to have impacted negatively recent domestic demand in the US.

A very important factor, **global trade,** continued its rebound, but retraced somewhat, also impacted by the base effect from last year. Moreover, it may have become constrained by supply shortages, a development that could continue. In July, world trade volumes retracted to stand at 9.9% y-o-y growth, after a rise of 15.8% y-o-y was seen in June and 23.3% y-o-y in May, based on the CPB World Trade Index provided by the CPB Netherlands Bureau for Economic Policy Analysis. Trade retracted in value terms as well, albeit less so, rising by 16.3% y-o-y, compared with 17.9% y-o-y in June and 20.2% y-o-y in May.

Graph 3 - 1: Global trade



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

Near-term global expectations

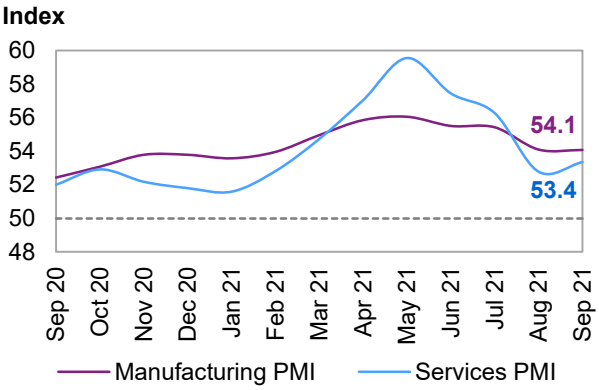
While **COVID-19 is expected to remain a dominating factor** in 4Q21 economic developments, additional challenges have emerged. An important aspect and, to some extent, also a consequence of the pandemic is the issue of supply chain disruptions, which is contributing to rising inflation while, at the same time, global economic growth may be dampened by these effects, also in combination with potential rising interest rates. It remains to be seen whether supply shocks will be quickly overcome and will turn out to be temporary. Supply issues have certainly compounded and, in addition to weather-related events, have been lifting food prices. The latest inflation numbers in the US and the Euro-zone show no imminent easing of the situation. Producer price developments in emerging economies will also need to be closely monitored. Both India and China have experienced soaring producer prices, while consumer inflation has remained well anchored, but higher producer price levels could materialize, only with some delay.

The current forecast assumes that COVID-19 **will remain well contained** and that it will not dampen the recovery beyond current levels. Entering the coming months and hence the winter season in the northern hemisphere, it will be critical that infection levels not rise too rapidly, especially in those economies where vaccine penetration is still low, as this may coincide with the seasonal flu virus and the usual arrival of the common cold. It is also anticipated that numerous additional challenges will not hurt the current path of the recovery. This applies especially to the ongoing global supply chain issues with potentially longer-lasting effects on inflation. In addition, tight labour markets are seen to be temporary, a factor that otherwise may lead to rising inflation at the global level as well. Finally, very high debt levels in both governments and the private sector could provide substantial challenges going forward, particularly in light of a possibly longer-dated rise in inflation and a consequent hike in global interest rates. While it currently seems that economic growth risks are tilted towards the downside, upside risks could materialize as well. Further stimulus measures in the US, a continued strong recovery in the Euro-zone and a solid rebound in Japan could lead to stronger-than-expected growth in these OECD economies. Moreover, China may overcome the soft patch in the 2H21 recovery through governmental support and ongoing export-driven momentum. India may also overcome the ongoing challenges by an improvement in domestic demand and a rebound in the export-driven services sector.

With these base assumptions, 1Q21 **global GDP growth is forecast** to stand at 1.8% q-o-q and decelerate to 0.8% q-o-q in 2Q21. Some acceleration is then forecast to materialize in 2H21, with 3Q21 growth forecast at 1.1% q-o-q and 4Q21 growth at 1.0% q-o-q. The growth pattern in 2022 is forecast to be relatively equally spread and in line with average historical patterns. Inflation is assumed to remain well anchored in the OECD economies in the sense that, in 2021, it will not significantly exceed the 2% OECD average on an annual basis and will stand at around 4% in the US. For 2022, these levels are forecast to stand at slightly below 2% for OECD economies on average and around 2.5% for the US.

Global purchasing managers' indices (PMIs) for both the manufacturing and services sectors retracted slightly in September, reflecting ongoing challenges in supply chains, labour market constraints and rising price levels. The global manufacturing PMI stood at 54.1 in September, unchanged from August, after reaching 55.4 in July and 55.5 in June. The global services sector PMI retracted slightly to stand at 53.4 in September, after reaching 52.8 in August, 56.3 in July and 57.4 in June.

Graph 3 - 2: Global PMI



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

Considering the numerus counterbalancing developments in the global economy that have been taken into consideration, the 2021 **GDP growth** forecast remains unchanged from the previous month at 5.6%. While growth in 2022 is forecast to normalize at lower levels, it is also seen to benefit from a build-up in momentum in 2021. GDP growth in 2022 is forecast at 4.2%, unchanged from the previous month as well. This implies that, among other issues, COVID-19-related challenges will not derail the recovery.

Table 3 - 2: World economic growth rate and revision, 2021–2022*, %

	World
2021	**5.6**
Change from previous month	0.0
2022	**4.2**
Change from previous month	0.0

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

OECD

OECD Americas

US

Update on the latest developments

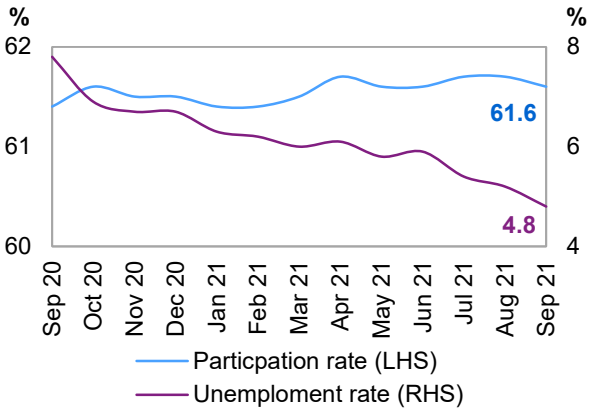
After the strong momentum in 1H21, **GDP growth** seems to have slowed down in 3Q21 in the US. 2Q21 GDP growth was revised up slightly to stand at 6.7% q-o-q seasonally adjusted annualized rate (SAAR), according to the Bureau of Economic Analysis (BEA). This compares with the BEA's initial assessment of 6.5% q-o-q SAAR. The widely watched Atlanta Fed GDP tracker now stands at only 1.3% annualized growth in 3Q21, significantly below the Secretariat's assumption of around 4%. In the meantime, rising COVID-19 cases in 3Q21, declining consumer confidence, a tightening labour market, inflation and reported supply chain bottlenecks are indicators that 2H21 growth will likely be lower than 1H21 growth. The ongoing budget and fiscal stimulus discussions in the US Congress during the coming weeks will remain an important factor. A bill by Congress to approve a temporary lift of the debt ceiling into December has only postponed a further debate on that matter. The fiscal stimulus that was envisaged by the US administration will also need further negotiations.

Consumer confidence retracted substantially to stand at 109.3 in September, compared with 115.2 in August and 125.1 in July based on the index provided by the Conference Board. The Fed continued providing strong support, pointing to a continuation in its accommodative monetary policy, albeit, in the meantime, some officials of the Fed have pointed to a potential tapering, given the strong rise in consumer prices. US inflation remained high at 5.2% y-o-y in August, only slightly below the 5.3% in July. The strongest appreciation came once again from the sub-sector of transportation, pointing to the possibility of a transitory effect after the reopening of the economy. Prices in the transportation sector rose by 17.6% y-o-y in August, compared with 19.1% y-o-y in July. Excluding the volatile components of energy and food, inflation stood at 4% in August, after 4.2% y-o-y in July.

The **unemployment rate** fell considerably to stand at only 4.8% in September, compared with 5.2% in August. However, the participation rate declined as well, standing at 61.6% in September, compared with 61.7% in August, indicating that less people are currently participating in the US labour market. The participation rate before the pandemic stood at almost 63%.

Non-farm payroll additions slowed considerably in September again increasing by 194,000, after reaching an upwardly revised 366,000 in August and 1.091 million in July. Under these circumstances, wage developments will need close monitoring as they could materially lift inflation. Hourly earnings rose by 4.6% y-o-y in September compared with 4% y-o-y in August and July, substantially above pre-COVID-19 yearly growth of between 2% and 3%.

Graph 3 - 3: US monthly labour market



Sources: Bureau of Labor Statistics and Haver Analytics.

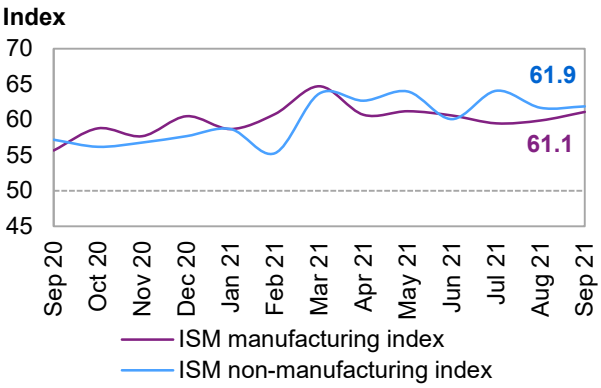
Near-term expectations

Near-term expectations have slowed somewhat as uncertainties have grown as reflected in the latest output indicators. Importantly, the draw-down from inventories was significant in 2Q21 and while inventories will likely be replenished in 2H21, supply chains will need to be monitored as an ongoing shortage of vital input goods like semiconductors could dampen this expectation. Another aspect that will play an important role in the near-term recovery is the labour market trend as it remains to be seen if job-seekers will re-enter the job market. Positively, further fiscal stimulus – still under negotiation – may provide an additional upside to the growth forecast.

In terms of **quarterly growth** developments, 1Q21 GDP growth stood at 6.3% q-o-q SAAR, and 2Q21 growth was reported at 6.7% q-o-q SAAR, based on BEA numbers. With the expectation of inventory restocking in 2H21 and further stimulus measures, growth levels for 2H21 and 2022 are forecast to remain sound. Growth in 3Q21 is forecast to reach 4.2% q-o-q SAAR, however, this is significantly below the previous month's 3Q21 forecast of 8.4% q-o-q SAAR. Growth in 4Q21 is forecast to reach 4.6% q-o-q SAAR, 0.2 percentage points below last month's estimate. Quarterly growth in 2022 is forecast to be relatively equally distributed.

The **September PMI** levels as provided by the Institute for Supply Management (ISM) point to an ongoing recovery. The index level for the services sector, representing around 70% of the US economy, remained almost unchanged. It rose to 61.9 in September, from 61.7 in August, and compared with 64.1 in July. The manufacturing PMI rose more significantly to stand at 61.1 in September, compared with 59.9 in August and 59.5 in July.

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



Sources: Institute for Supply Management and Haver Analytics.

Taking the somewhat slowing 2H21 momentum into account, the **2021 US GDP growth forecast** was revised down slightly to stand at 5.8% compared with 6.1% in the previous month. The **current forecast** anticipates that COVID-19 will not materially impact 2H21 and 2022 growth, and other challenges such as inflation or supply chain disruptions are also not anticipated to hinder growth. A strong rise in consumption and investment is forecast to provide the two main pillars for a solid recovery. This will be accompanied not only by accommodative monetary policy but also by further fiscal stimulus and inventory restocking.

Table 3 - 3: US economic growth rate and revision, 2021–2022*, %

	US
2021	**5.8**
Change from previous month	-0.3
2022	**4.1**
Change from previous month	0.0

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

Growth in **2022** is forecast to normalize but will continue to be very well supported by fiscal stimulus, as well as ongoing accommodative monetary policies. These supporting factors and ongoing momentum are forecast to lift growth to 4.1%, unchanged from the previous month. Major uncertainties, mainly associated with the pandemic, but also supply chain issues and inflation, remain.

OECD Europe

Euro-zone

Update on the latest developments

Growth in the Euro-zone performed well in 1H21 and 2Q21 numbers were revised up again by Eurostat, the EU statistical office, to 2.2% q-o-q SAAR. The momentum is coming from a combination of fiscal stimulus, ongoing accommodative monetary policy and the successful reopening of most of the region's economies that has lifted consumption. Moreover, the recovery in world trade was another supportive factor, especially for Germany, but also for the other major Euro-zone economies, France, Italy and Spain. The momentum seems to have carried over into 3Q21 and accelerated in July. It remains to be seen if that will continue as the latest rise in infections in some economies highlighted the ongoing COVID-19-related uncertainty. In addition, inflation rose further, which may lead to a gradually less accommodative monetary policy in the near term. The inflationary development is also accentuated by global supply issues that have led to price rises in input goods, which have especially impacted the manufacturing sector. Passenger car production in Germany declined further in September as output fell by a substantial 44.1% y-o-y, according to the German car industry association, the Verband der Automobilindustrie (VDA). This marked the largest of four consecutive months of decline. At the same time, improvements in the labour market have continued and consumer confidence picked up slightly again in September.

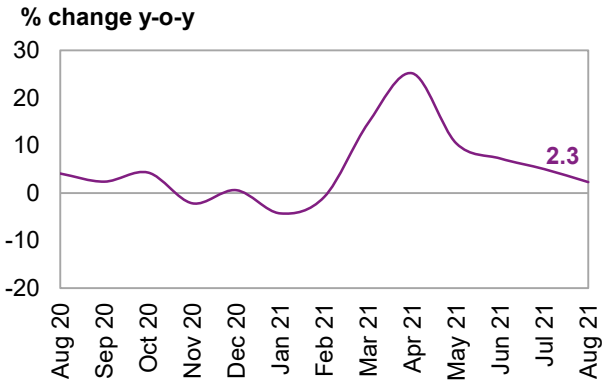
The European Central Bank (ECB) has maintained its **accommodative monetary policies** for the time being, while the inflationary gauges are monitored carefully. Inflation in the Euro-zone reached 3.4% y-o-y in September, up from 3% in August. When excluding the volatile items of food and energy, inflation stood at 1.9% y-o-y in September, up from 1.6% y-o-y in August. Lending to the private sector by monetary financial institutions held up well, rising by 2% y-o-y, but was below the two previous months' levels. Still, the largest rise in lending activity continues to be seen in the real estate sector. Mortgages rose by 5.6% y-o-y, while lending to non-financial corporations retracted further and stood at only 0.1% y-o-y in August, compared with already low growth of 0.4% y-o-y in July.

The **labour market** has continued to improve, indicating a clear positive trend. According to the latest numbers from Eurostat, the unemployment rate stood at 7.5% in August, compared with 7.6% in July, 7.8% y-o-y in June and down from 8% in May.

Retail sales in value terms have risen, albeit at a slower pace than in the past months, with growth of 2.3% y-o-y in August, compared with 5.1% y-o-y in July, both on a seasonally adjusted basis. This translates into a monthly August rise of 0.3%.

Industrial production (IP) retracted as well in July, rising by 7.4% y-o-y, compared with 10.3% y-o-y in June and 20.9% y-o-y in May. An important reason for the yearly measure is certainly the base effect from last year's pandemic impact, which needs to be taken into consideration. However, the slowdown is also likely impacted by current supply issues.

Graph 3 - 5: Euro-zone retail sales



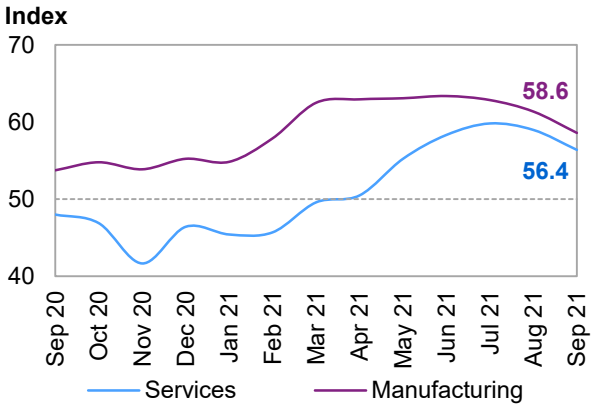
Sources: Statistical Office of the European Communities and Haver Analytics.

Near-term expectations

The **healthy dynamic in 1H21** seems to have carried over into 3Q21, supported by pent-up demand after the end of lockdown measures and an apparent recovery in contact-intensive sectors. However, the rise in infections in recent weeks in combination with supply constraints affecting semiconductors, gas and other input goods likely dampened the momentum. With regard to the pandemic, it remains to be seen whether vaccination rates will achieve sufficient levels in the autumn and winter to prevent the further spread of new variants. In the meantime, fiscal stimulus and the ongoing accommodative monetary policies by the ECB are counterbalancing the negative impact of the COVID-19 situation to some extent. However, the supply constraints, if not temporary, are more challenging to manage. Based on the latest 1H21 revision, the quarterly forecast was updated, with even more emphasis on growth in 1H21. The underlying assumptions for the rest of the year and 2022 have not changed. It is anticipated that COVID-19 containment efforts in 2H21 will be effective enough to support the recovery and not derail the economy and the supply chain issues will be of temporary nature in such a way that they will not negatively impact growth. After reported growth of -1.2% q-o-q SAAR in 1Q21 and 9.2% q-o-q SAAR in 2Q21, GDP growth in 3Q21 is anticipated to reach 7.8% q-o-q SAAR, slightly below the 2Q21 level. In 4Q21, growth is forecast at 3.2% q-o-q SAAR.

The September **PMI** for the Euro-zone economy pointed to an ongoing improvement in the manufacturing and services sectors, though at a slightly slower pace. The PMI for services, the largest sector in the Euro-zone, retracted to 56.4, compared with 59 in August. The manufacturing PMI retracted as well to stand at 58.6 from 61.4 in August.

Graph 3 - 6: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

As the easing of lockdown measures led to a stronger-than-expected recovery in 1H21, **2021 GDP growth** was revised up to 5%, compared with 4.7%, in the previous month. 2H21 assumptions have not changed.

GDP growth in **2022** is forecast to slow, similar to other OECD economies, but was revised up slightly as well. 2022 GDP growth is forecast to reach 3.9%, compared with 3.8% in the previous month.

Table 3 - 4: Euro-zone economic growth rate and revision, 2021–2022*, %

	Euro-zone
2021	**5.0**
Change from previous month	0.3
2022	**3.9**
Change from previous month	0.1

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

OECD Asia Pacific

Japan

Update on latest developments

Japan's economy has shown relatively healthy growth, especially when considering that is has been continuously impacted by the pandemic for most of the year. 2Q21 GDP growth was reported better-than-expected and indicators point at ongoing momentum in 3Q21. Emergency measures designed to fight the pandemic were lifted only at the end of September. With a new prime-minister in place now since the end of September and general elections coming up soon, the political developments remain to be seen. However, further stimulus after the elections, which were announced to be held October 31 seems likely. The latest mobility indicators, however, point to some negative impact towards the end of August, potentially influenced by the rise in infections. On the negative side, the ongoing supply issues that are significantly impacting the auto sector, among others, could continue to be a drag on growth in 4Q21.

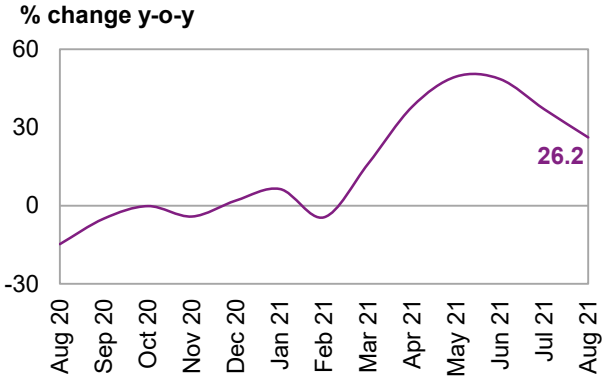
Growth in **industrial production (IP)** retracted in August on a yearly basis, however, the numbers continue to be distorted by the sharp declines last year. August's growth stood at 6.3% y-o-y, compared with 13% y-o-y in July. On a monthly basis, IP fell by 3.2% in August, after a decline of 1% in July, all on a seasonally adjusted basis.

Exports continued to stage a strong recovery, rising by 26% y-o-y in August, compared with a rise of 37% y-o-y in July and 48.6% y-o-y in June, all on a non-seasonally adjusted basis. On a monthly base August exports rose 0.8% seasonally adjusted.

However, **retail sales** declined in August, falling by 3.2% y-o-y, after a rise of 2.4% y-o-y in July. This decline was seemingly impacted by the emergency measures in large parts of the country and also driven by the after effects of the Summer Olympics in the form of again rising infections and some tapering off in retail activity.

Consumer confidence rose slightly to an index level of 37.9 in September, as reported by the Cabinet Office. It stood at 36.4 in August and 37.4 in July. This points at a rebound in domestic consumption that is likely supported as well by further stimulus measures.

Graph 3 - 7: Japan's exports



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

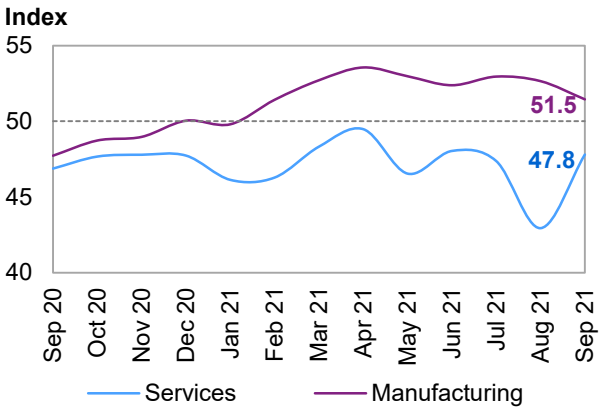
Near-term expectations

Japan's economic trend is forecast to further recover into 4Q21, as the pandemic related impacts are forecast to taper off somewhat and also further stimulus measures are expected to be announced and implemented after the elections. Some slowdown in August and September was anticipated, amid the slowing activity in mobility as shown by the latest data. The further trend will, however, also very much depend on COVID-19-related developments. Also, supply chain developments may impact the Japanese recovery. Politics may prove to be influential as well, given the upcoming general elections at the end of October.

By taking into consideration a somewhat lower 3Q21 **GDP growth assumption**, impacted by social distancing measures, the GDP growth forecasts for 2021 was slightly lowered. As reported by Japan's statistical office, 1Q21 GDP declined by 4.2% q-o-q SAAR. Despite the lockdown measures in 2Q21, growth was reported to have recovered and reached 1.9% q-o-q SAAR, compared with the previous month's estimate of 1.2% q-o-q SAAR. Quarterly growth in 3Q21 and 4Q21 should then pick up further. Growth is forecast at 3.3% q-o-q SAAR in 3Q21 and to accelerate to 5% in 4Q21.

The gradual rebound in the economy's services sector is also reflected in the **September PMI**, which rose significantly, but remains below the growth-indicating level of 50. The PMI for the services sector, which constitutes around two-thirds of the Japanese economy, rose considerably to 47.8, compared with 42.9 in August. The manufacturing PMI retracted to stand at 51.5 in September, compared with 52.7 in August and 53 in July.

Graph 3 - 8: Japan's PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

In addition to the ongoing recovery in external trade, GDP growth is expected to remain supported by domestic demand in the near term, although COVID-19-related developments remain influential. Ongoing stimulus measures are expected to support the recovery in private household consumption and investment. However, **GDP growth in 2021** was revised down slightly and is forecast at 2.6%. This assumes that COVID-19 will be widely contained towards the end of the year.

Table 3 - 5: Japan's economic growth rate and revision, 2021–2022*, %

	Japan
2021	**2.6**
Change from previous month	-0.2
2022	**2.0**
Change from previous month	0.0

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

GDP growth is expected to normalize towards pre-pandemic levels next year. GDP growth in **2022** is forecast to slow to 2%, supported by ongoing global growth momentum and stabilising domestic demand. This is also unchanged from the previous month.

Non-OECD

China

Update on the latest developments

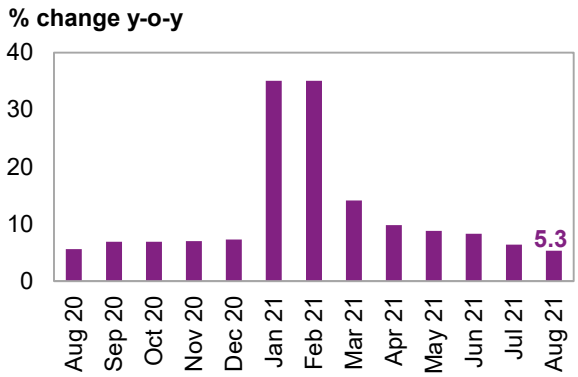
Economic activities in China continued to slow down due to the lingering effects of the latest COVID-19 outbreak and its containment measures, as well as the supply chain disruptions caused by the power shortages across some of the country's provinces. Indeed, the strict " zero-tolerance policy" may be weighing on private consumption at a time electricity shortages are disrupting manufacturing output and government housing control policies are weighing on property investment. According to Bloomberg, the strict COVID-19 measures may have resulted in slower growth in mobility during China's Golden Week national vacation compared to pre-pandemic levels. On the fifth day of the Golden Week, the number of daily road trips taken where 33.8% below 2019 trips and only 5% above the 2020 level.

On the consumption side, retail trade advanced by only 2.5% y-o-y in August 2021 following the 8.5% y-o-y level in July 2021 affected by the setbacks related to the re-imposition of stringent pandemic-related restrictions. These mobility restrictions might be dampening offline spending as e-commerce sales advanced by 12.6% y-o-y in 2Q21 following 10.9% growth in 2020.

However, private consumption might see a modest recovery in 4Q considering that over 80% of China's population would be vaccinated in the coming months. Moreover, the "zero tolerance" policy might help in reducing the chances of rapid growth in new infections.

China's **industrial production** growth slowed in August, falling to 5.3% y-o-y from 6.4% y-o-y in July. Meanwhile, the ongoing power shortages might lead to slower growth in industrial output in the coming months.

Graph 3 - 9: China's industrial production



Sources: China National Bureau of Statistics and Haver Analytics.

Currently, tight government regulations and credit policies for property developers have weighed on real estate and infrastructure investment. Liquidity crises have hit highly indebted property developers, such as Evergrande, one of China's largest real estate firms that accounts for about two-fifths of total borrowing of developers in the red category. Yet, China's banking sector is under strict government control, which enables the Chinese financial system to respond quickly to a liquidity crisis. Nonetheless, the impact of these developments on the overall economy might not be ignored considering that large developers like Evergrande own a considerable amount of its liabilities in trade and payables, which are owed to its suppliers. Consequently, this may influence the profitability and stock valuations of the companies that do business with Evergrande, including construction design firms as well as the material suppliers. Indeed, these firms might incur major losses and be forced into bankruptcy. In addition, limited credit access might adversely affect smaller property developers despite the current relatively healthy overall financial indicators.

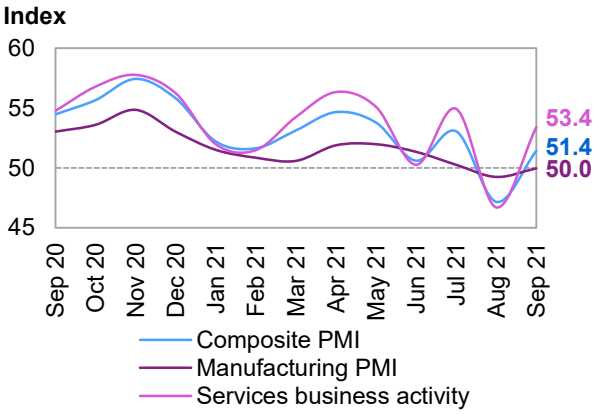
The latest trade data suggests that China's **trade surplus** stood at $58.34 billion in August 2021 compared with a surplus of $57.14 billion in the same month of 2020. Exports surged by 25.6% y-o-y to $294.32 billion, while imports jumped 33.1% to $235.98 billion. Nevertheless, the unforeseen growth in external demand might be slowed by ongoing supply chain disruptions as well as localized increases in COVID-19 infections. Moreover, global consumption might shift primarily towards service demand, which could result in a drop in external purchases of goods.

Near-term expectations

Supply chain disruptions and recent power outages along with COVID-19-related restrictions might adversely impact economic growth in 3Q21, while the government's "common prosperity" campaign might risk deteriorating overall business confidence.

The recent **PMI** indices mirrored the slowdown in economic activity in 2H21 especially with regard to manufacturing output. Indeed, the manufacturing PMI increased only to 50.0 in September 2021 from 49.2 in the prior month. In contrast, the services PMI increased to 53.4 in September 2021 from 46.7 in August 2021 as a major COVID-19 outbreak in the eastern province of Jiangsu eased. Nevertheless, business confidence remains positive. Indeed, the increasing downward pressure on the economy might push policymakers to increase near-term policy support to boost growth and improve business sentiment.

Graph 3 - 10: China's PMI



Sources: Caixin, IHS Markit and Haver Analytics.

Considering recent developments, China's **real GDP** growth for 2021 and 2022 have been revised down to 8.3% and 5.8%, respectively. The uncertainties surrounding these forecasts are high due to the latest COVID-19 outbreak as well as concerns over power outages and liquidity risks in the property sector.

Table 3 - 6: China's economic growth rate and revision, 2021–2022*, %

	China
2021	**8.3**
Change from previous month	-0.2
2022	**5.8**
Change from previous month	-0.2

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

Other Asia

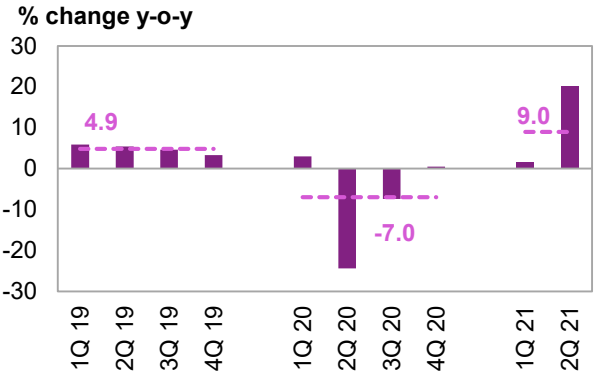
India

Update on the latest developments

The lingering effects of the Delta variant infections are still weighing on economic activities in India. **Private consumption** has been impacted by the 2021 COVID-19 outbreak. This has been mirrored in passenger vehicle sales, which contracted for the second consecutive month to 9% m-o-m sa in August.

Car sales declined 15.5% m-o-m, while utility vehicle sales shrank to 7.1% m-o-m sa and two-wheeler sales dropped down to 3% m-o-m sa. **Tractor sales**, which are more representative of rural demand, contracted by 6% m-o-m sa.

Graph 3 - 11: India's GDP quarterly growth

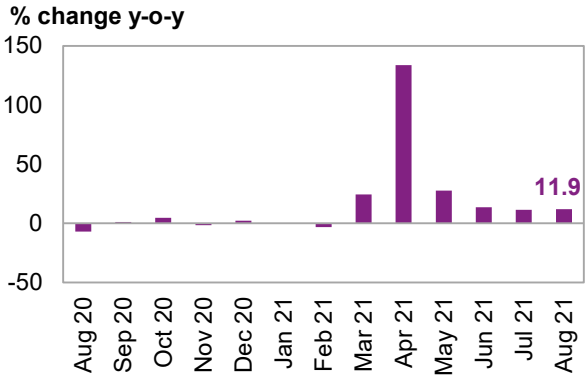


Sources: National Informatics Centre (NIC) and Haver Analytics.

Industrial output is also still facing headwinds driven by COVID-19 curbs, semiconductor shortages as well as pollution control measures.

Industrial production growth moderated to 11.9% y-o-y in August 2021 following a 11.5% y-o-y in July 2021.

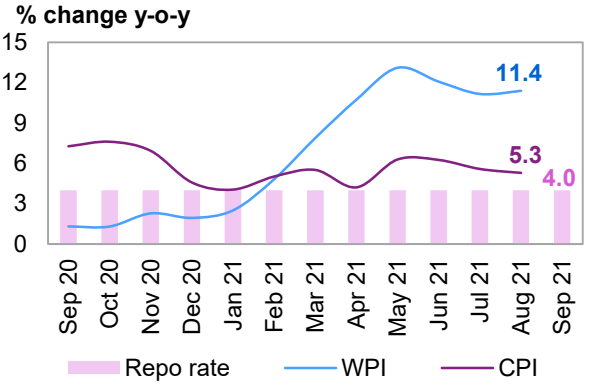
Graph 3 - 12: India's industrial production



Sources: Ministry of Statistics and Program Implementation of India and Haver Analytics.

The inflationary indices diverged in August according to the Ministry of Statistics and Programme Implementation's data, as the modest growth in food prices might offset inflationary pressures driven by elevated global fuel and commodity prices. The **consumer price index (CPI)** eased to 5.3% y-o-y in August from 5.6% in July, while the **wholesale price (WPI)** increased to 11.4% y-o-y in August from 11.2% in July 2021.

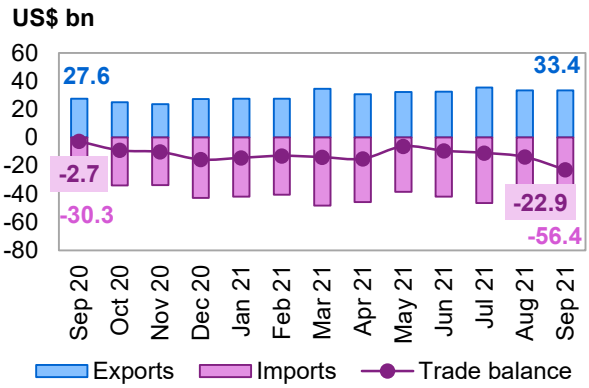
Graph 3 - 13: Repo rate and inflation in India



Sources: Ministry of Commerce and Industry, Reserve Bank of India and Haver Analytics.

In terms of external demand, preliminary trade data released by the Ministry of Commerce and Industry suggests that in September 2021 India's **trade deficit** widened to $22.94 billion from $2.74 billion in September 2020. This was the largest trade deficit on record as **imports** jumped 86% to $56.38 billion and exports increased at a softer rate of 21.3% to $33.44 billion. The import growth indicates a domestic demand recovery from the 2Q slump. In 2Q21, the current account recorded a surplus of $6.5 billion, compared with a deficit of $8.2 billion in 1Q21.

Graph 3 - 14: India's trade balance



Sources: Ministry of Commerce and Industry and Haver Analytics.

In the meantime, India's sovereign credit risk score has maintained a stable outlook due to a gradual recovery in the economy, however, it is still held back by a low GDP per capita, overall stress in the banking sector, as well as a substantial fiscal deficit. Indeed, the increasing fiscal deficit is of high concern for the rating agencies despite low external debt and increasing foreign direct investment (FDI) inflows. Labour market pressures eased in September to 6.90% from 8.30% in August 2021, signalling increased control over the spread of the COVID-19 Delta Variant.

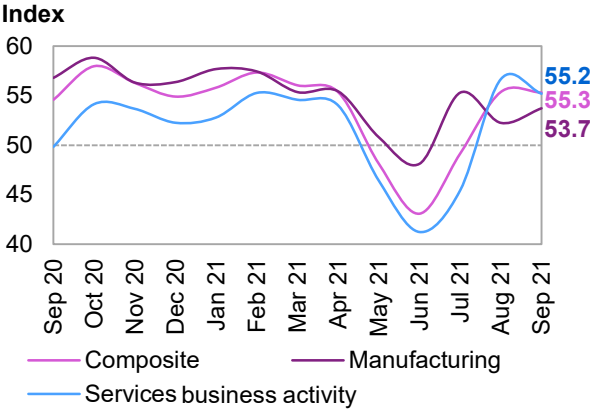
On the policy front, the RBI left the **repo rate** at 4% in August, and the reverse repo rate was at 3.4%, maintaining an accommodative monetary policy stance aimed at supporting economic recovery and helping mitigate the negative impacts of COVID-19.

Near-term expectations

Although the current infection wave may have peaked, India's economic activities, in particularly in-person ones, might stay slow considering the slow pace of vaccinations. Moreover, concerns over the risk of a resurgence in COVID-19 infections and a new COVID-19 wave are high considering that the restrictions may have been eased too soon. For now, India's low coal supply could trigger a power crisis as 70% of India's electricity is powered by coal. Additionally, a coal supply shortage would threaten operations of commodity-related businesses, including oil refineries, aluminium smelting and even meat processing, resulting in a potential stalling of the economic recovery.

For now, the **PMI indices** have carried mix signals as the manufacturing PMI increased to 53.7 in September 2021 from 52.3 in the prior month driven by an expansion in manufacturing new orders as well as an improvement in business sentiment. In contrast, the service PMI declined to 55.2 in September from 56.7 in August, yet the current reading remarked the second month of expansion in the services activities. However, services business sentiment may have weakened due to inflationary pressures.

Graph 3 - 15: India's PMIs



Sources: IHS Markit and Haver Analytics.

Overall, the economic situation is still clouded by a high level of uncertainty, and a potential power crisis might add more downward pressure. As for this month and considering recent developments, India's 2021 and 2022 **GDP growth** remained unchanged from September's MOMR at 9.0% and 6.8%, respectively.

Table 3 - 7: India's economic growth rate and revision, 2021–2022*, %

	India
2021	**9.0**
Change from previous month	0.0
2022	**6.8**
Change from previous month	0.0

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

Latin America

Brazil

Update on latest developments

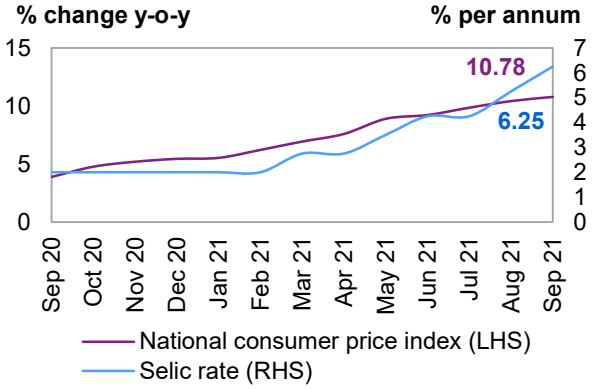
Brazilian economic activities continued to build up strong momentum supported by services output. However, international supply chain disruptions are weighing on industrial economic activities. Industrial production shrank by 0.7% y-o-y in August following 1.2% y-o-y growth in the month of July. **The consumer confidence index** dropped to 76% in August from 81.5% in June. Similarly, **retail sales** contracted 3.1% in September from a month earlier in August of 2021, and recorded the sharpest drop in retail trade since December of 2020.

On the **labour market** front, the pressure continued to ease. In July 2021, the unemployment rate dropped to 13.7% from 14.1% in June. Additionally, the labour force participation rate rose to 58.20% in July from 57.70% in June.

The **inflation rate** accelerated to 10.8% y-o-y in September 2021 from 10.4% in August, registering the highest rate since February of 2016. The upward price pressures are mirroring the effects of the currency depreciation coupled with a severe drought and the ongoing global supply bottleneck.

In response to inflationary concerns, the central bank raised the **Selic rate** for the fifth time this year to 6.25% in September from 5.25% in August, and will probably tighten it more sharply in an effort to anchor inflation expectations for the coming two years.

Graph 3 - 16: Brazil's inflation vs. interest rate



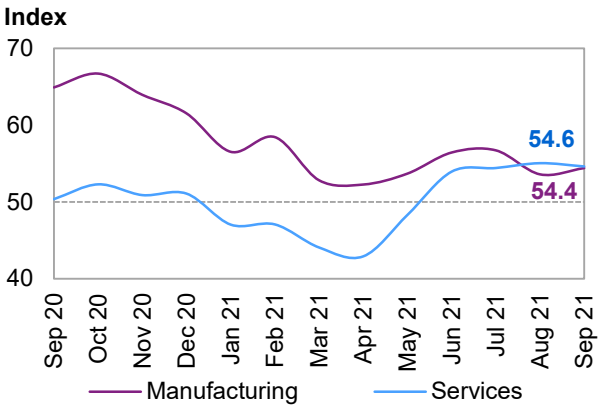
Sources: Banco Central do Brasil, Instituto Brasileiro de Geografia e Estatística and Haver Analytics.

Near-term expectations

The economy of Brazil continued to record a positive performance despite the global supply disruptions and the drought that has impacted agricultural output. In the meantime, the pace of vaccination has accelerated, and 70% of the adult population will be vaccinated by the end of 2021, which should further support a full reopening of the economy. Nevertheless, elevated inflation rates might weigh negatively on the economic recovery.

The country's private sector continued to expend as indicated by the recent composite **PMI**, which rose to 54.7 in September 2021 from 54.6 in August supported by advanced manufacturing activities as well as services output. The manufacturing PMI rose to 54.4 in September from 53.6 in August, pointing to strong manufacturing growth as the index registered the sixteenth straight month of expansion. While the services PMI declined marginally to 54.6 in September of 2021 from 55.1 in August, the reading pointed to another month of expansion, which also reflects strengthening confidence in the overall services business.

Graph 3 - 17: Brazil's PMIs



Sources: IHS Markit and Haver Analytics.

Brazil's 2021 and 2022 **real GDP growth forecasts** were kept unchanged from September's MOMR at 4.7% and 2.5%, respectively. Downside risks for these forecasts involve higher inflationary pressures, fiscal concerns along with developments related to the pandemic both domestically and globally. More importantly, political uncertainties are associated with the upcoming 2022 election.

Table 3 - 8: Brazil's economic growth rate and revision, 2021–2022*, %

	Brazil
2021	**4.7**
Change from previous month	0.0
2022	**2.5**
Change from previous month	0.0

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

Africa

South Africa

Update on the latest developments

South Africa officially announced the end of the third wave of COVID-19 given the significant decline in new cases and deaths during the month of September. The announcement combined with the recent registered uptick in growth levels would give economic activity a notable boost towards the end of the year, especially in sectors that are highly affected by the pandemic-related restrictions such as hospitality and recreation. Meanwhile, the annual inflation rate advanced to 4.9% in August of 2021 from 4.6% in July, slightly above the 4.5% midpoint of the South African Reserve Bank's monetary policy target range of 3-6%. On a monthly basis, consumer prices increased by 0.4%, easing from a 1.1% rise in the previous month. The South Africa Reserve Bank kept its benchmark repo rate unchanged in July at a record low level of 3.5%. Moreover, the reserve bank revised its CPI forecast for 2021 up to 4.3% from 4.2% and lowered it to 4.2% for 2022 from 4.4%, while keeping it unchanged at 4.5% for 2023. Meanwhile, the official GDP forecast for 2022 and 2023 was set to be 2.3% and 2.4%, respectively, unchanged from the bank's May forecast.

Regarding trade activities, the trade surplus expanded to ZAR 42.4 billion in August from a revised ZAR 37.01 billion in July. Exports rose 9.7% to ZAR 158.92 billion. Imports, on the other hand, increased at a slower rate of 8% to ZAR 116.52 billion.

Near-term expectations

The decline in new COVID-19 infections combined with the easing of restrictions along with the update of the country's Economic Reconstruction and Recovery Plan introduced last year provided positive sentiment and a strong boost to economic activities. However, recent local political instability, along with recent headwinds in main trading partner China could have a significant impact on the economy in 2H21. However, the external demand boom witnessed earlier in 2021 may keep the recovery on track. The seasonally adjusted Absa Purchasing Managers' Index dropped to 56.8 in September of 2021 from 57.9 in August. The current PMI reading indicted that business is still impacted by the rioting and looting that occurred in July.

South Africa's **GDP forecast** for 2021 was revised up, incorporating the current GDP data to stand at 4.2%, while the 2022 forecast remains unchanged at 2.5%. There is still a high level of uncertainty in the forecast, with potential upside including post-pandemic planning priorities such as investment, job creation and power supply. Downside risks are largely related to a potential new wave of COVID-19.

Table 3 - 9: South Africa's economic growth rate and revision, 2021–2022*, %

	South Africa
2021	**4.2**
Change from previous month	0.7
2022	**2.5**
Change from previous month	0.0

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

Russia and Central Asia

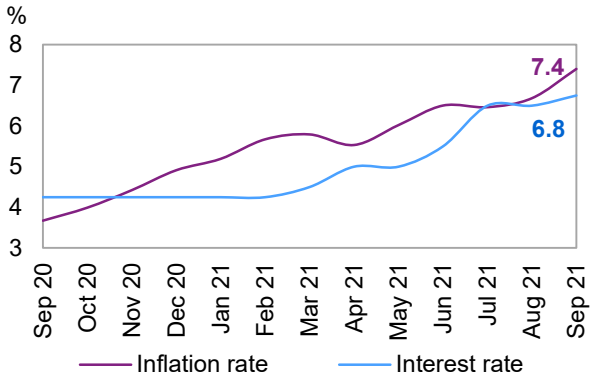
Russia

Update on the latest developments

Russia's recent **industrial output** growth eased to 4.7% y-o-y in August from 7.2% in July, reflecting the bottlenecks in electronic components and other manufacturing inputs. The demand-side indicators signalled moderate growth reflecting the effects of monetary tightening. Retail sales advanced 5.3% y-o-y in August of 2021 following a 5.1% y-o-y increase in July.

Inflationary pressures continued to weigh on the recovery, climbing in September to 7.4% y-o-y from 6.7% in August. In response, the Central Bank of the Russian Federation (CBR) increased its **policy rate** by another 25 bps at 6.75%. Meanwhile, the central bank increased its annual inflation forecast to 5.7-6.2% in 2021 and 4.0-4.5% in 2022. The CBR noted that the global economy was recovering faster than anticipated, driving demand for many key goods to outpace supply.

Graph 3 - 18: Russia's inflation vs. interest rate



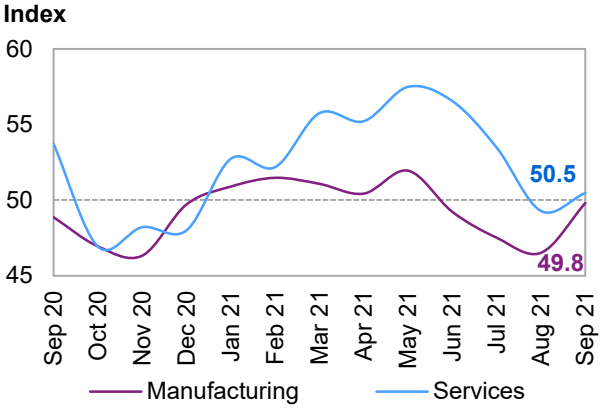
Sources: Federal State Statistics Service, Central Bank of Russia and Haver Analytics.

Near-term expectations

Russia's economy appears to be more resilient and is benefitting from the increase in commodity prices, especially due to the ongoing support of the DoC producers. The economy is back to pre-pandemic levels, however, uncertainties related to the current global supply chain disruptions, local COVID-19 developments and a slow rate of vaccination might hinder this progress.

In September, **PMI** indices continued to show moderate growth .the manufacturing PMI increased to 49.8 in September of 2021 from 46.5 in the previous month, marking the fourth successive monthly deterioration in the Russian manufacturing sector. Meanwhile, the services PMI moved back into expansion territory to 50.5 in September 2021 from 49.3 in August as service sector business activity picked up, supported by stronger domestic client demand.

Graph 3 - 19: Russia's PMI



Sources: IHS Markit and Haver Analytics.

Considering the increase in commodity prices and the recently released GDP growth data, along with recent developments, Russia's **GDP forecast** for 2021 has been revised up to 4.0% from 3.5% in the last MOMR.

In 2022, real GDP is forecast to expand by 2.7%, an upward revision from September's MOMR forecast of 2.5%.

Table 3 - 10: Russia's economic growth rate and revision, 2021–2022*, %

	Russia
2021	**4.0**
Change from previous month	0.5
2022	**2.7**
Change from previous month	0.2

*Note: * 2021-2022 = Forecast.*

Source: OPEC.

OPEC Member Countries

Saudi Arabia

Saudi Arabia's real GDP grew by 1.8%y-o-y in 2Q21, above initial estimates of a 1.5%, and following a 3% y-o-y contraction in 1Q21. The 2Q21 growth remarked the first economic expansion since 2Q19, driven by an 8.4% y-o-y expansion in non-oil activities. The private sector advanced 11.1% y-o-y, and the government sector expanded 2.3% y-o-y. On a seasonally adjusted quarterly basis, the GDP advanced 0.6%, following a contraction of 0.5% in 1Q21. In September, the IHS Markit Saudi Arabia PMI rose to 58.6 from 54.1 in August, registering to the highest reading since August 2015. The overall outlook for the Saudi economy is positive considering the easing of restrictions as well as the strong business confidence.

Nigeria

Nigeria's non-oil economic activities grew despite the lingering effects of the current COVID-19 wave. The Stanbic IBTC Bank PMI edged up to 52.3 in September from 52.2 in August, remarking the 15th consecutive monthly expansion. Yet labour market pressures continued to be a concern. Recently released national Bureau of Statistics data indicated that the unemployment rate increased to 33.30% in 4Q20 from 27.10% in 2Q20. However, both consumer and business confidence have increased, driven by the overall positive sentiments related to the easing of COVID-19 restrictions and rising commodity prices.

The United Arab Emirates (UAE)

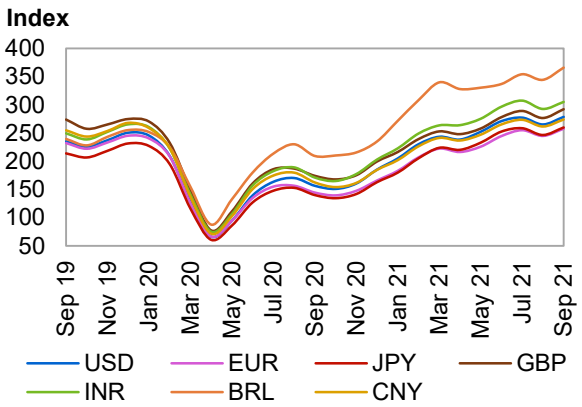
Non-oil private sector growth slowed significantly in September. The PMI reading fell to 53.3 from 53.8 in August remarking, the lowest reading in the three last months, but nevertheless signalling an expansion in business conditions in the non-oil economy. Expo 2020 Dubai opened on 1 October and is anticipated to provide a significant boost to Dubai and the broader UAE economy. Yet the Delta variant could have an impact on attendance. Nevertheless, the overall outlook for the UAE's economy is still positive with a government focus on building long-term economic growth that would further underpin stability supported by high consumer and business confidence, strong credit growth, as well as greater mobility following the gradual easing of the latest restrictions.

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

The **US dollar (USD) advanced against majors in anticipation that some reduction in** monetary policy support by the US Federal Reserve will be announced in the upcoming meetings. The dollar rose on average by 0.1% against the euro m-o-m, by 1.0% against the Swiss franc, by 0.4% against the pound sterling, and by 0.3% against the yen.

The dollar was mixed against emerging market currencies. It declined against the Chinese yuan by 0.3%, while it rose by 0.5% against the Indian rupee. Meanwhile, it declined against the Russian ruble by 0.9%, while it rose against the Brazilian real, by 0.5%. Against the Mexican peso, the dollar declined by 0.2%.

Graph 3 - 20: ORB crude oil price index compared with different currencies (base January 2016 = 100)



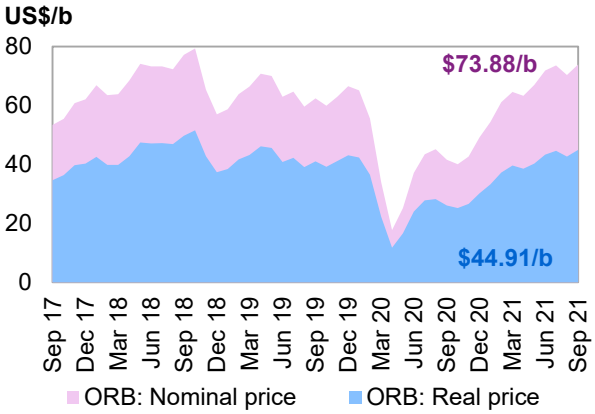
Sources: IMF and OPEC.

In **nominal terms**, the price of the ORB increased by $3.55, or 5.0% from $70.33/b in August to reach $73.88/b in September.

In **real terms**, after accounting for inflation and currency fluctuations, the ORB increased to $44.91 from a revised $42.62/b (base June 2001=100) the previous month.

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

Graph 3 - 21: Impact of inflation and currency fluctuations on the spot ORB price (base June 2001 = 100)



Source: OPEC.

World Oil Demand

In 2021, world oil demand is estimated to increase by 5.8 mb/d y-o-y compared with 6.0 mb/d last month. Despite positive assumptions on oil demand going into the final quarter of the year, supported by seasonal petrochemical and heating fuel demand as well as the potential of switching from natural gas to oil in the power generation sector, the downward revision mainly takes into account actual data. Both OECD and non-OECD figures were adjusted lower; while the downward revision in OECD regions focused on 1H21, non-OECD revisions were concentrated in 3Q21.The world is anticipated to consume 96.6 mb/d of petroleum products during the current year.

In the OECD, demand was revised lower by more than 0.11 mb/d in 2021, mainly to account for actual data. Lower-than-expected demand data for 1Q21 and 2Q21 in OECD Americas and OECD Europe was seen due to lower-than-anticipated transportation and industrial fuel demand.

In the non-OECD, 2021 oil demand outlook was revised lower by around 0.03 mb/d compared with the previous MOMR, amid lower-than-expected data from China and India in 3Q21. The resurgence of COVID-19 cases reduced mobility in China during August, while the demand recovery in India was slower than initially anticipated.

In 2022, world oil demand growth was kept unchanged compared with last month's estimates at 4.2 mb/d. Total global demand is foreseen reaching 100.8 mb/d for the year. The main oil demand assumption remains as highlighted last month, with healthy economic momentum in the main consuming countries and better COVID-19 management. For 2022, the oil demand outlook takes into consideration an increase of 4.2% in economic activity with COVID-19 pandemic-related risks well managed due to higher vaccination rates and better treatment. In terms of products, gasoline and diesel are estimated to increase the most, supported by an ongoing recovery in mobility and improving industrial activity.

Table 4 - 1: World oil demand in 2021*, mb/d

							Change 2021/20	
World oil demand	**2020**	**1Q21**	**2Q21**	**3Q21**	**4Q21**	**2021**	**Growth**	**%**
Americas	22.60	22.77	24.56	25.15	24.73	24.31	1.71	7.55
of which US	*18.51*	*18.69*	*20.21*	*20.53*	*20.46*	*19.98*	*1.47*	*7.96*
Europe	12.44	11.90	12.60	13.71	13.69	12.99	0.55	4.42
Asia Pacific	7.14	7.67	7.04	7.17	7.57	7.36	0.22	3.10
Total OECD	**42.18**	**42.34**	**44.19**	**46.03**	**45.99**	**44.66**	**2.48**	**5.87**
China	13.20	13.15	14.32	14.63	15.02	14.28	1.08	8.17
India	4.51	4.94	4.50	4.77	5.57	4.95	0.44	9.70
Other Asia	8.13	8.36	8.98	8.49	8.62	8.61	0.48	5.93
Latin America	6.01	6.15	6.16	6.54	6.40	6.31	0.30	5.02
Middle East	7.55	7.95	7.77	8.24	7.97	7.99	0.44	5.84
Africa	4.06	4.35	4.06	4.16	4.44	4.25	0.19	4.66
Russia	3.37	3.57	3.42	3.61	3.74	3.58	0.22	6.44
Other Eurasia	1.07	1.18	1.24	1.14	1.28	1.21	0.14	12.70
Other Europe	0.70	0.78	0.72	0.73	0.79	0.75	0.06	8.29
Total Non-OECD	**48.60**	**50.44**	**51.17**	**52.30**	**53.83**	**51.94**	**3.34**	**6.87**
Total World	**90.79**	**92.77**	**95.36**	**98.33**	**99.82**	**96.60**	**5.82**	**6.41**
Previous Estimate	90.73	92.82	95.62	98.46	99.70	96.68	5.96	6.56
Revision	0.06	-0.04	-0.26	-0.13	0.12	-0.08	-0.14	-0.15

*Note: * 2021 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

Table 4 - 2: World oil demand in 2022*, mb/d

World oil demand	2021	1Q22	2Q22	3Q22	4Q22	2022	Change 2022/21 Growth	Change 2022/21 %
Americas	24.31	24.10	25.66	26.17	25.53	25.38	1.07	4.39
of which US	*19.98*	*19.75*	*21.09*	*21.50*	*21.18*	*20.89*	*0.91*	*4.54*
Europe	12.99	12.55	13.27	14.32	14.17	13.59	0.60	4.61
Asia Pacific	7.36	7.91	7.22	7.30	7.68	7.53	0.17	2.27
Total OECD	**44.66**	**44.56**	**46.15**	**47.79**	**47.39**	**46.49**	**1.83**	**4.10**
China	14.28	14.00	15.20	15.12	15.46	14.95	0.66	4.65
India	4.95	5.40	4.90	5.15	5.89	5.34	0.39	7.90
Other Asia	8.61	9.05	9.59	9.07	8.95	9.16	0.55	6.39
Latin America	6.31	6.39	6.34	6.69	6.56	6.50	0.18	2.89
Middle East	7.99	8.29	8.01	8.49	8.20	8.25	0.26	3.31
Africa	4.25	4.53	4.19	4.28	4.57	4.39	0.14	3.29
Russia	3.58	3.67	3.47	3.66	3.79	3.65	0.07	1.82
Other Eurasia	1.21	1.25	1.29	1.17	1.32	1.26	0.05	3.72
Other Europe	0.75	0.80	0.73	0.74	0.81	0.77	0.02	2.18
Total Non-OECD	**51.94**	**53.39**	**53.73**	**54.38**	**55.54**	**54.26**	**2.32**	**4.46**
Total World	**96.60**	**97.95**	**99.88**	**102.16**	**102.93**	**100.76**	**4.15**	**4.30**
Previous Estimate	96.68	97.99	100.15	102.29	102.81	100.83	4.15	4.29
Revision	-0.08	-0.04	-0.26	-0.13	0.12	-0.08	0.00	0.00

*Note: * 2021-2022 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

OECD

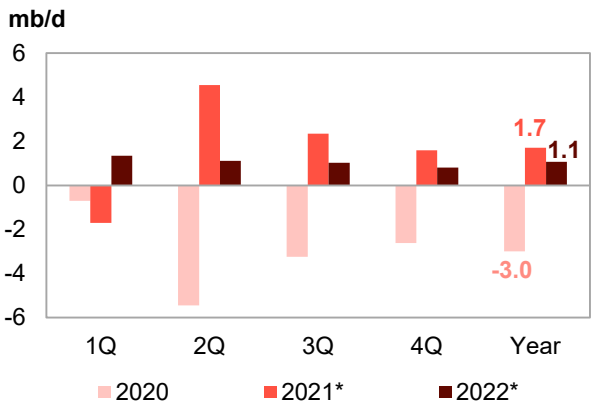
OECD Americas

Update on the latest developments

The latest available oil demand data in **OECD Americas** implies a y-o-y increase of 2.0 mb/d y-o-y in **July**, following an increase of 3.1 mb/d y-o-y in June. Gasoline demand remained robust during the traditional travelling period in the region and accounted for around 42% of the overall increase, while jet/kerosene demand accounted for 30%. These developments make up approximately 77% of the losses during the same month in 2020, while during the first seven months of 2021 the recovery stood at only 45%. In July 2021, gasoline demand continued to grow for the fifth month in a row, posting gains of around 0.9 mb/d y-o-y. Oil demand continued to remain below July 2019 levels, with a differential of 1.3 mb/d. All countries in the region posted solid demand gains.

The latest available US monthly demand data for July imply increasing oil demand by approximately 1.5 mb/d y-o-y, making up 64% of losses incurred during July 2020, though remaining lower than July 2019 by 0.8 mb/d. Gasoline, jet/kerosene and diesel requirements contributed the most to this increase, with y-o-y gains by gasoline of 0.9 mb/d, jet kerosene of 0.5 mb/d and on-road diesel of 0.3 mb/d (total diesel demand increased by 0.04 mb/d). Demand for these three transportation-related fuels fell sharply during July 2020, by 1.3 mb/d, 0.8 mb/d and 0.4 mb/d y-o-y, respectively. According to the Federal Highway Administration, vehicle miles of travel in the US increased by 13.1% y-o-y in July 2021 after rising by 14.9% y-o-y in June. In July 2020, the indicator fell by 12.6% y-o-y.

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



*Note: * 2021-2022 = Forecast. Source: OPEC.*

Light vehicle retail sales, as reported by Autodata and Haver Analytics, were at 14.7 million units according to seasonally adjusted annual rates (SAAR), compared with 15.4 million units in June. In July of last year, total sales were at 14.7 million units and 17.1 million units were sold in July 2019. Industrial production was also higher by 6.6% y-o-y in July after increasing by 10.0% y-o-y in June. Preliminary data for August, based on

weekly data, indicate the continuation of a recovery in transportation fuel performance, with both gasoline and jet kerosene demand increasing by more than 1.4 mb/d y-o-y in total.

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

By product	Jul 20	Jul 21	Change Growth	Jul 21/Jul 20 %
LPG	2.79	2.86	0.06	2.2
Naphtha	0.20	0.22	0.02	7.5
Gasoline	8.46	9.31	0.85	10.1
Jet/kerosene	0.97	1.49	0.52	54.0
Diesel	3.62	3.66	0.04	1.2
Fuel oil	0.35	0.33	-0.02	-5.5
Other products	2.29	2.32	0.04	1.6
Total	**18.67**	**20.18**	**1.51**	**8.1**

Note: Totals may not add up due to independent rounding. Sources: EIA and OPEC.

OECD Americas recovered swiftly in 1H21 from the historical decline in 2020. Oil demand showed a strong rebound by around 1.4 y-o-y, with data from **January to July** compared with the same period last year. However, this increase was around 1.7 mb/d lower than the demand recorded during the same period in 2019. The recovery is led by strongly rebounding demand in the US, despite a weak start to the year, with rising infection figures limiting mobility and consumption for transportation fuels. Demand has improved, posting strong gains supported by an acceleration in vaccination programmes in the US, which led to improved miles travelled in addition to progressing industrial production activities, supporting demand for industrial fuels. Elsewhere in the region, demand in Canada continued to decline as heavy distillates weighed negatively on overall fuel performance, while Mexican demand was marginally higher, supported by additional demand for fuel oil. Despite a distorted baseline of comparison, demand for gasoline led gains in OECD America, as mobility indicators continued to trend higher during the first part of the year, with a respectable uptick in aviation activity towards the end of 2Q21. Both fuels increased by around 0.9 mb/d y-o-y from January to July. It's worth highlighting that both fuels declined sharply during the same period compared with 2019 amid the onset of COVID-19 and subsequent prevalence of government measures reducing movement and limiting mobility, resulting a massive drop in transportation fuel demand of around 2.4 mb/d y-o-y. Additionally, healthy petrochemical margins were supported by steady end-user demand, particularly from the health sector, as well as the ramping up of new ethane cracker capacity, which supported demand for light distillates. LPG and naphtha demand increased by around 0.2 mb/d y-o-y compared with the same period last year. This is compared with a decline of around 0.1 mb/d y-o-y in 1H20 over the same period in 2019. Diesel was up by more than 0.1 mb/d compared with 2020, supported by steady industrial demand. Most gains appeared in the US, supported by stimulus programmes and improving industrial momentum compared with the same period in 2020. Diesel demand in Canada showed a marginal increase, while posting a decline in Mexico.

Near-term expectations

Going forward, overall COVID-19 pandemic developments support optimism for short term oil demand prospects in the region. The economy is expected to remain strong, supported by various stimulus programmes. Some downside risks are linked to COVID-19 developments during the emergence of colder weather in 4Q21 and possible localized government countermeasures. Meanwhile, 3Q21 remains robust in terms of travelling activities and limited downside risks only arise from the impact of COVID-19 on consumer behavior, as well as the effectiveness of vaccination programmes.

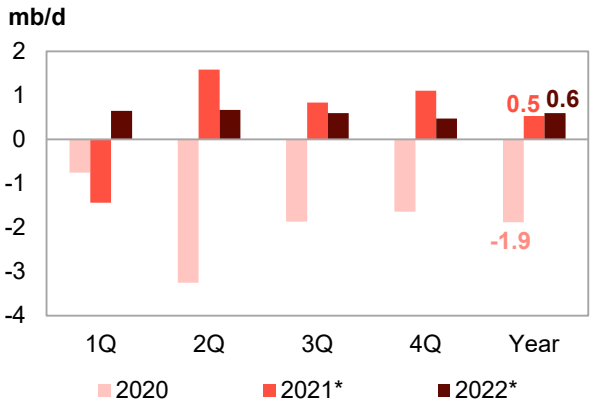
In **2022**, OECD Americas oil demand is expected to receive strong support from an encouraging short-term economic outlook, boosting oil demand by around 1.1 mb/d y-o-y, with US oil demand accounting for 0.9 mb/d y-o-y. Petrochemicals and transportation will remain the sectors requiring more oil in 2022. Gasoline demand will be backed by an increase in vehicle sales, while expansion in the petrochemical industry will provide support to light distillates in 2022. On the other hand, some challenges remain, such as COVID-19 pandemic developments, a continuation of fuel substitution programmes and fuel efficiency gains.

OECD Europe

Update on the latest developments

OECD Europe's oil demand increased by 0.7 mb/d, y-o-y, in **July**, following an increase of 1.6 mb/d, y-o-y, in June, implying a recovery rate of 34.1%. Demand for all petroleum product categories showed y-o-y gains, as a result of the low historical baseline and increasing regional travelling activities in line with the removal of restrictions and amid warmer weather. The strongest gains were for jet kerosene, light distillates, gasoline and diesel. On top of a low historical baseline, demand for jet kerosene marked the strongest monthly recorded growth in history, y-o-y, and remained on a growing trajectory since April 2021, in line with rising travelling activities. Demand for transportation fuels shows gains since April 2021.

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



*Note: * 2021-2022 = Forecast. Source: OPEC.*

In July, demand in the UK grew by 0.2 mb/d, while requirements in Italy and France increased by 0.1 mb/d, though in Germany they fell by 0.1 mb/d y-o-y. Oil demand gains were eminent in all other countries of the region, coupled with travel across and within country borders. The industrial production index, which excludes construction, rose by 8.0% compared with the same month in 2020, as reported by Eurostat and Haver Analytics. New passenger car registrations fell by 23.9% y-o-y, following a 11.3% y-o-y increase in June.

From January to July, European oil demand showed a modest increase of around 0.1 mb/d y-o-y compared with the same period in 2020, mainly because the recovery from 2020's oil demand slump was affected by a slow start to the year due to a resurgence of COVID-19 cases in 1Q21, forcing the reintroduction of lockdown measures across many economies in the region. Within the big four consuming countries, demand performance was mixed. Demand in Italy and France showed decent gains of around 0.2 mb/d and 0.1 mb/d y-o-y, respectively. UK demand increased marginally, while in Germany demand declined by a hefty 0.2 mb/d. In the OECD region as a whole, increases in oil demand were attributed to gasoline, on road diesel and light distillates. An easing of measures to control the spread of COVID-19 resulted in improving oil demand across the region, with significant variation between countries. This can be illustrated in the mobility index, which reported increases of 66% from pre-pandemic levels in January to 128% in July and August. Preliminary data suggests further increases. Within countries, Italy and France showed the highest gains during the month of July, supported by an easing of restriction measures, as well as summer seasonal driving. The index was at 127% in Italy and 116% in France. Gasoline increased by more than 0.1 mb/d y-o-y in 1H21 compared with a massive y-o-y drop during the same period of 2020 of 0.3 mb/d. Industrial production, an indicator for industrial fuel demand, also showed gains during 1H21. As reported by the Statistical Office of the European Communities and Haver Analytics, the indicator increased by around 104.9 during 1H21 compared with 93.5 during the same period in 2020. The index uses 2015 as a reference. It's worth knowing that diesel (including on-road diesel) and fuel oil dropped by around 0.7 mb/d y-o-y during the peak days of the pandemic in 2020 (January-July), while data from January-July 2021 show both fuels recovered only 0.1 mb/d of last year losses.

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

			Change Jul 21/Jul 20	
By product	Jul 20	Jul 21	Growth	%
LPG	0.42	0.41	-0.01	-2.6
Naphtha	0.57	0.55	-0.01	-2.1
Gasoline	1.16	1.22	0.06	4.8
Jet/kerosene	0.32	0.47	0.15	47.8
Diesel	3.13	3.18	0.05	1.5
Fuel oil	0.18	0.18	0.00	-0.5
Other products	0.50	0.51	0.01	1.2
Total	**6.28**	**6.51**	**0.24**	**3.8**

*Note: * Germany, France, Italy and the UK. Totals may not add up due to independent rounding.*

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

Near-term expectations

Going forward, the outlook for the region's oil demand for the rest of the year 2021 has improved since last month, amid COVID-19 containment efforts, increasing vaccination rates and falling cases; 3Q21 has proven to be robust and warmer weather favoured oil demand developments. The current outlook assumes that the pandemic will largely remain controlled in the coming months, supporting transportation fuel demand. The petrochemical sector will also be supported by seasonality factors, with naphtha being favoured due to its price advantage. A further upside could stem from high gas prices incentivising a switch to oil-based fuels largely in the power-generation sector. However, this upside is anticipated be limited and dependant on the severity of the winter season.

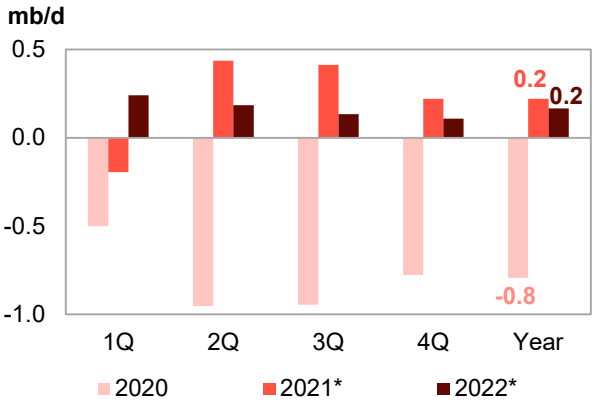
In **2022**, OECD Europe's oil demand is expected to rise by around 0.6 mb/d. Positive projections for the economy, along with the containment of COVID-19, are the main factors supporting OECD Europe oil demand growth in 2022. Improvements in mobility, along with positive developments in the industrial and construction sectors, are expected to raise oil demand in the transportation and industrial sectors. Downside risks are related to COVID-19, as well as high debt levels and budgetary constraints in almost every country in the region.

OECD Asia Pacific

Update on the latest developments

OECD Asia Pacific oil demand increased by 0.3 mb/d, y-o-y in **July**, less than the corresponding increases recorded in June of 0.4 mb/d. Gains were largely attributed to rising light distillate requirements in South Korea as well as gasoline and diesel demand in all countries of the region. Oil demand gained additional strength from the Summer Olympics in Japan. Demand for light distillates in Asia Pacific during July grew by 0.1 mb/d y-o-y after increasing by 0.2 mb/d in June. Transportation fuel demand was flat y-o-y in July, following gains of 0.2 mb/d in June y-o-y. Oil demand in Japan and South Korea grew by 0.2 mb/d y-o-y. Preliminary data from by Japan's Ministry of Economy, Trade and Industry (METI), indicate flat oil demand in August y-o-y.

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



*Note: * 2021-2022 = Forecast. Source: OPEC.*

Between **January and July**, oil demand increased by about 0.1 mb/d y-o-y in the whole **OECD Asia Pacific** region compared with a decline of around 0.8 mb/d during the same period in 2020. Demand also declined compared with the same period of 2019 by around 0.7 mb/d. The recovery from the 2020 slump in oil demand was affected by an increase in infection cases in Japan and South Korea and most recently Australia and New Zealand, as regional restrictions remained in place for most of 2021, despite marginal support from the summer Olympic Games in Japan. The recovery process was rather slow, with jet fuel declining further from 2020 levels. OECD Asia Pacific light distillate demand increased by around 0.1 mb/d y-o-y during 1H21, supported by a low baseline, healthy end-user consumption for plastics and the return of naphtha crackers from maintenance, particularly in South Korea. Demand for light distillates was at par with 2019 levels. Regarding transportation fuels, both gasoline and jet fuel were lower than 2019 levels, however gasoline increased y-o-y by around 0.05 mb/d as road mobility improved in Japan to slightly above pre-pandemic levels, though remaining below 2019 levels in South Korea. According to google maps and Apple apps, the index increased from 86% of pre-pandemic levels in Japan in January to 112% in July. Meanwhile, in South Korea the index was at 71% of pre-pandemic levels in January and 89% in July.

Table 4 - 5: Japan's oil demand, mb/d

By product	Aug 20	Aug 21	Change Aug 21/Aug 20 Growth	%
LPG	0.33	0.31	-0.03	-8.1
Naphtha	0.69	0.69	0.00	0.4
Gasoline	0.85	0.79	-0.06	-6.6
Jet/kerosene	0.19	0.18	-0.01	-4.7
Diesel	0.64	0.63	-0.01	-1.7
Fuel oil	0.17	0.23	0.06	37.3
Other products	0.20	0.22	0.02	12.1
Total	**3.08**	**3.06**	**-0.01**	**-0.4**

Note: Totals may not add up due to independent rounding. Sources: JODI, METI and OPEC.

Near-term expectations

Going forward, Japan and South Korea have largely controlled the COVID-19 pandemic, with immediate impacts on their economies and oil demand. Australia and New Zealand's zero COVID-19 policies are expected to negatively impact oil demand, at least for 4Q21. Overall demand in 2021 in the region is projected to increase y-o-y, with petrochemical feedstock being one of the main contributors to oil demand growth.

In **2022**, OECD Asia Pacific oil demand is expected to increase by 0.2 mb/d, under the assumption of an expanding GDP and COVID-19 containment. Gasoline will be the petroleum product category to increase the most, followed by industrial diesel, jet kerosene and light distillate petrochemical feedstock.

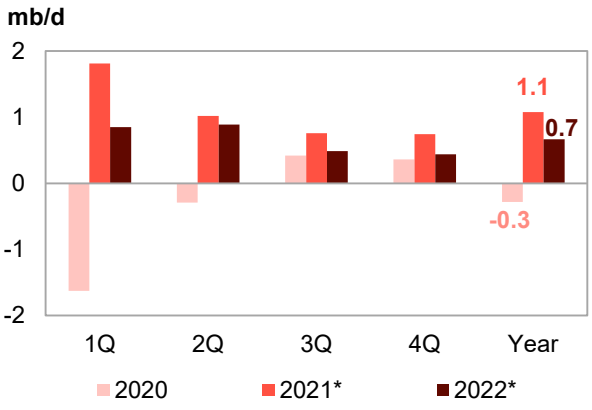
Non-OECD

China

Update on the latest developments

Chinese oil demand data for the month of **August** continued to grow, despite a localized resurgence in COIVD-19 cases and government reactions to contain the spread. August oil demand data show growth of around 0.3 mb/d following a growth of 0.2 mb/d y-o-y in July. August's total demand is also higher than pre-pandemic levels by around 0.7 mb/d compared with August 2019, amid strong petrochemical feedstock demand. Demand for LPG and naphtha was also supportive on a y-o-y basis in August, increasing by more than 0.3 mb/d y-o-y, collectively.

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



*Note: * 2021-2022 = Forecast. Source: OPEC.*

Naphtha demand was robust as it was the favoured petrochemical feedstock for steam crackers. LPG demand also grew y-o-y, despite increased maintenance activities for PDH plants due to weaker margins amid high propane feedstock prices and increasing maintenance plans. Fuel oil grew by around 0.3 mb/d y-o-y in August, mainly supported by an increase in bunkering activities. Gasoline was higher by 0.1 mb/d y-o-y in August compared with a 0.1 mb/d y-o-y increase in July, mainly due to restrictions related to an increase in Delta infection cases. On the other hand, jet fuel demand decreased further in August by 0.3 mb/d y-o-y in contrast to a drop of around 0.1 mb/d y-o-y in July. Daily domestic flights fell by around 40% compared with July amid an increase in the Delta variant.

Table 4 - 6: China's oil demand*, mb/d

By product	Aug 20	Aug 21	Change Aug 21/Aug 20 Growth	%
LPG	1.93	2.16	0.23	12.1
Naphtha	1.85	1.95	0.11	5.9
Gasoline	2.90	2.99	0.10	3.3
Jet/kerosene	0.82	0.50	-0.32	-38.8
Diesel	3.21	3.06	-0.15	-4.8
Fuel oil	0.47	0.75	0.28	60.5
Other products	1.66	1.68	0.02	1.2
Total	**12.83**	**13.10**	**0.27**	**2.1**

*Note: * Apparent oil demand. Totals may not add up due to independent rounding.*
Sources: Argus Global Markets, China OGP (Xnhua News Agency), Facts Global Energy, JODI, National Bureau of Statistics China and OPEC.

Near-term expectations

Going forward, the outbreak of COIVD-19 in some Chinese provinces might lead to localized lockdowns. However, the low tolerance policy of the government is assumed to quickly control potential spreads. On the other hand, festivities during autumn will help boost driving activity, in addition to Golden Week holidays, which will also bolster gasoline consumption. The end-of-summer fishing ban, together with the autumn harvest season, will support industrial fuel demand in the coming months. LPG and naphtha will continue to back demand growth going into the final quarter of the year, supported by seasonal demand, with naphtha gaining advantage over LPG due to price differentials. Generally, improved economic activity, together with the rigorous control of COVID-19 infection cases, leads to the assumption that oil demand will increase solidly, led by transportation and industrial fuels.

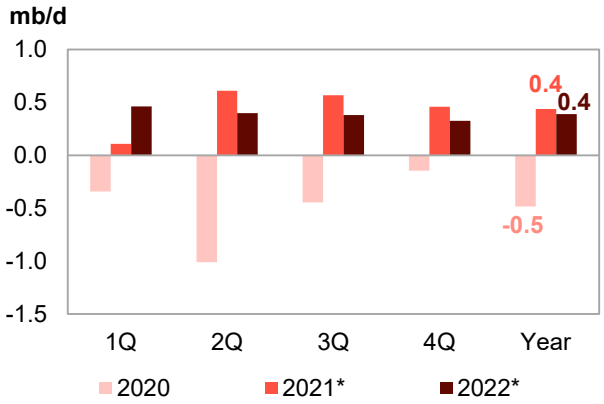
In **2022**, China's oil demand is estimated to rise y-o-y, supported by firm economic growth forecasts. The transportation and industrial sectors are anticipated to increase the most, with support coming from growth in vehicle miles driven, an increase in passenger vehicle sales and a firm industrial sector. Gasoline is likely to rise, followed by diesel. A strong petrochemical sector is anticipated to provide robust support to light distillate consumption in 2022.

India

Update on the latest developments

Indian oil demand increased by 0.4 mb/d y-o-y in **August**, rising for the third consecutive month since the resurgence of the Delta variant in May this year. Demand remained below pre-pandemic levels in India, showing a drop of around 0.3 mb/d compared with August 2019. The containment of COVID-19 infection cases led to the easing of government restriction measures across the country and improved mobility, both in road and aviation. Diesel increased the most by 0.2 mb/d y-o-y, compared with a similar rise in July. However, diesel demand was still lower than in August 2019 by 0.1 mb/d, despite the y-o-y increase. Diesel demand remained under pressure from a slower recovery in industrial activities, as well as the monsoon season. Gasoline and jet/kerosene demand increased y-o-y, affected by improving mobility and an increase in flight operations. Gasoline demand rose by around 0.1 mb/d y-o-y, while jet/kerosene added 0.03 mb/d. Gasoline requirements were trending marginally above August 2019 levels, while jet/kerosene was still 0.1 mb/d below. The mobility index, as reported by Google maps and Apple, continued to improve from 106% of pre-pandemic levels during the month of July to 116% in August. Early September indications show a further gain in mobility data in September with the easing of COVID-19 measures. Demand for the heavy end of the barrel rose by 35 tb/d versus August 2019. The heavy part of the barrel, which includes fuel oil and the other products category, was up by nearly 0.1 mb/d y-o-y in August and on par with August 2019.

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



*Note: * 2021-2022 = Forecast. Source: OPEC.*

Table 4 - 7: India's oil demand, mb/d

By product	Aug 20	Aug 21	Change Aug 21/Aug 20 Growth	%
LPG	0.82	0.84	0.02	2.5
Naphtha	0.21	0.20	-0.01	-7.0
Gasoline	0.65	0.74	0.09	13.1
Jet/kerosene	0.16	0.19	0.03	19.2
Diesel	1.31	1.51	0.20	14.9
Fuel oil	0.24	0.24	0.01	3.7
Other products	0.52	0.59	0.07	13.5
Total	**3.91**	**4.30**	**0.40**	**10.1**

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

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

Near-term expectations

Going forward, India's oil demand should continue to pick up pace after the monsoon season with the festive season, as well as improving industrial activity providing consumption support for the reminder of the year. However, uncertainty will remain high, largely associated with new COVID-19 variants, in addition to the pace of vaccination rollout programmes. Similarly, high retail prices and government reaction to those prices are to be closely monitored in the coming months. That said, oil demand is anticipated to pick up pace over the short term, encouraged by a low baseline and a rise in transportation and industrial fuel demand. The transportation fuel recovery is estimated to continue going forward, supported by better management of the COVID-19 pandemic. As a result, transportation fuel demand is projected to lead product demand, followed by middle distillates.

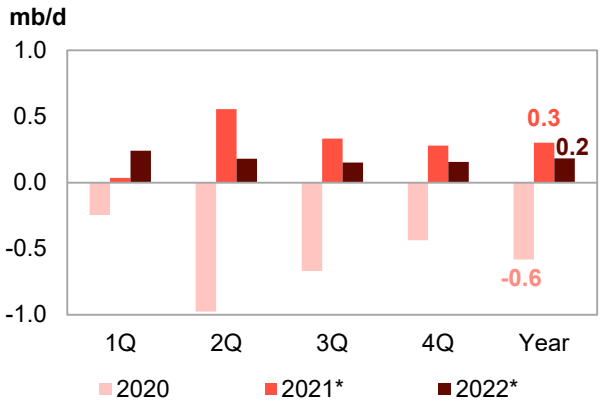
In **2022**, oil demand is anticipated to increase by around 0.4 mb/d, with total volumes expected to exceed pre-pandemic levels on an annualized basis. COVID-19 containment measures are anticipated be sustained by an increase in vaccination, natural immunization and improved management of the virus. Regarding products, gasoline is anticipated to be the strongest product in 2022, supported by an acceleration in mobility, uptick in vehicle sales and overall steady economic development. Diesel is assumed to be supported by healthy industrial, construction and agriculture activities in 2022.

Latin America

Update on the latest developments

Latin American oil demand posted steady gains for the fifth consecutive month, increasing by 0.4 mb/d y-o-y in **July**, after seeing a similar y-o-y rise in June. However, demand remained lower than in June 2019 by around 0.1 mb/d. Brazil and Argentina led those increases, rising by around 0.3 mb/d y-o-y and 0.1 mb/d y-o-y, respectively. In terms of fuel, rebounding gasoline led gains, adding nearly 0.2 mb/d y-o-y after posting 0.1 mb/d y-o-y in June. A recovery in mobility indices in the region, in addition to low consumption in July due to COVID-19, were the main supportive factors for increasing gasoline demand. Mobility in Latin America was at 102% from pre-pandemic levels, compared with 95% in June as reported by google maps and the Apple mobility index. In Brazil, mobility was at 108% in July, spurring the higher consumption of gasoline, which posted growth of more than 0.1 mb/d y-o-y.

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



*Note: * 2021-2022 = Forecast. Source: OPEC.*

Latin American's diesel requirements also increased by more than 0.1 mb/d y-o-y in July, slightly higher than the June growth. Support stemmed from the steady development of industrial activities and stable trucking consumption, particularly in Brazil.

Table 4 - 8: Brazil's oil demand*, mb/d

By product	Aug 20	Aug 21	Change Growth	Aug 21/Aug 20 %
LPG	0.24	0.24	0.00	-0.8
Naphtha	0.14	0.14	0.00	2.9
Gasoline	0.60	0.70	0.10	16.8
Jet/kerosene	0.04	0.08	0.04	93.2
Diesel	1.05	1.16	0.11	10.9
Fuel oil	0.07	0.12	0.05	68.5
Other products	0.44	0.39	-0.05	-12.0
Total	**2.58**	**2.83**	**0.25**	**9.7**

*Note: * = Inland deliveries. Totals may not add up due to independent rounding.*

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

In **August**, oil demand increased by around 0.3 mb/d y-o-y in Brazil, after rising by similar levels in July. In contrast to August 2019, demand was slightly higher, mainly due to a steady recovery in industrial fuel demand, led by diesel. In August, transportation fuels showed strong performance as restrictive policies to control the spread of COVID-19 eased. Gasoline and jet fuel increased by more than 0.1 mb/d y-o-y collectively, after rising by similar levels in July. On-road mobility was at 112% from pre-pandemic levels in August after posting 108% in July. Diesel increased on a y-o-y basis since September 2020. Demand for diesel in August increased by more than 0.1 mb/d, after rising by similar levels in July. Industrial activity increased at the beginning of 3Q21, up by around 1.4% y-o-y, though August levels are not yet published. However, they are anticipated to show an ongoing positive trend.

Near-term expectations

Going forward, Latin American COVID-19 cases should continue to ease as vaccination accelerates. However, variants will remain to be a downside risk if lockdown measures are reinstituted. Additionally, mobility is continuing to improve, which in turn will promote transportation fuel consumption. On the other hand, recent trucker blockades in Brazil were short-lived and did not materially impact industrial fuel demand. However, government policies in response to fuel prices will have to be closely monitored. Brazil is expected to provide support to oil demand recovery for the remainder of 2021, as transportation fuel demand is projected to pick up pace. From a product point of view, diesel and transportation fuels are projected to lead oil demand growth in 4Q21.

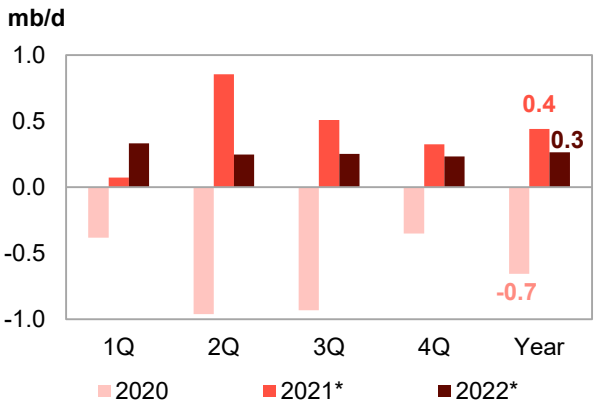
In **2022**, Latin America's oil demand is expected to remain below 2019 levels but rise y-o-y. A steady economic outlook is anticipated to support demand in the region, mostly in the region's largest-consuming counties Brazil and Argentina. Transportation fuels are anticipated to account for most of the gains in 2022, supported by COVID-19 containment measures and overall gains in economic momentum.

Middle East

Update on the latest developments

Middle Eastern oil demand increased by more than 0.5 mb/d y-o-y in **July**, after rising by 0.7 mb/d y-o-y in June. However, demand for petroleum products remained below July 2019 levels by more than 0.1 mb/d, despite higher petrochemical feedstock requirements, compared with pre-pandemic levels. A steady rise in oil requirements in Kuwait, Iraq and the UAE supported the region's demand in spite of slightly declining y-o-y demand in Saudi Arabia, the largest consuming country in the region. Looking at the product mix, gasoline and diesel demand grew the most by around 0.1 mb/d y-o-y each. Most of the gains were recorded in Kuwait and Iraq, encouraged by an uptick in mobility and low baseline in 2020.

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



*Note: * 2021-2022 = Forecast. Source: OPEC.*

Improving economic momentum, including construction and infrastructure projects, supported industrial fuel demand. Demand for petrochemical feedstock LPG and naphtha remained ample, particularly in Kuwait due to the recent addition of naphtha cracking units. Demand for naphtha was higher in the country by around 0.1 mb/d y-o-y, showing gains compared with July 2019 of 0.1 mb/d.

Table 4 - 9: Saudi Arabia's oil demand, mb/d

By product	Aug 20	Aug 21	Change Growth	Aug 21/Aug 20 %
LPG	0.05	0.04	0.00	-5.1
Gasoline	0.48	0.47	-0.01	-1.8
Jet/kerosene	0.03	0.04	0.01	40.2
Diesel	0.52	0.53	0.01	2.1
Fuel oil	0.69	0.65	-0.03	-4.9
Other products	0.78	0.72	-0.06	-7.5
Total	**2.55**	**2.47**	**-0.08**	**-3.1**

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

Sources: JODI and OPEC.

Near-term expectations

Going forward, as daily COVID-19 cases continue to decline, a return to normality is projected to continue in the coming months. Effective COVID-19 management and an acceleration in vaccination has led countries such as Saudi Arabia, the UAE, Kuwait and Qatar to gradually lift movement restrictions, supporting mobility in the coming months. Generally, oil demand is anticipated to continue its recovery process to show respectable growth. COVID-19-related risks will remain, though at a lower magnitude than previously seen. Gasoline demand is anticipated to continue to improve, while gasoil will also rise on improved industrial activity.

In **2022**, Middle East oil demand growth is anticipated increase by around 0.3 mb/d amid sustained economic growth. Regarding countries, Saudi Arabia is projected to provide the largest contribution to oil demand growth in the region, driven by steady economic expectations, controlled COVID-19 cases and a healthy petrochemical sector. Transportation fuels and light distillates are the products expected to lead oil demand in 2022.

World Oil Supply

Non-OPEC liquids supply growth in 2021 (including processing gains) was revised down by 0.3 mb/d from the previous month's assessment to 0.7 mb/d y-o-y. This is mainly due to the drop in liquids supply in August by 0.6 mb/d m-o-m, mainly in OECD Americas, due to oil production outages in the US Gulf of Mexico (GoM), a force majeure at Canada's Suncor oil sands site, and at the offshore platform in Mexico. Output disruptions also took place in other regions, including field maintenance in the Caspian. The US liquids supply forecast was once again revised down by 132 tb/d following the aftermath of Hurricane Ida and is now forecast to decline by 0.1 mb/d y-o-y. The 2021 oil supply forecast primarily sees growth in Canada, Russia, China, Brazil and Norway, while output is projected to decline in the UK, Colombia, Indonesia and Egypt.

The non-OPEC supply growth forecast for 2022 has been revised up by 0.1 mb/d, mainly in Kazakhstan, to now stand at 3.0 mb/d y-o-y. The main drivers of liquids supply growth are expected to be Russia (1.0 mb/d) and the US (0.8 mb/d), followed by Brazil, Norway, Canada, Kazakhstan, Guyana and other non-OPEC countries in the DoC. Nevertheless, uncertainty regarding the financial and operational aspects of US production remains high.

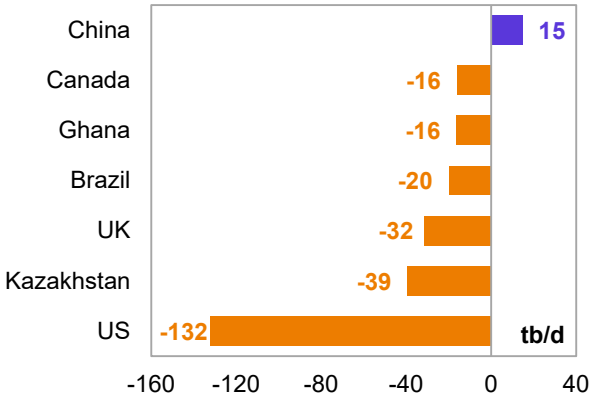
OPEC NGLs and non-conventional liquids production in 2021 are estimated to grow by 0.1 mb/d y-o-y to average 5.2 mb/d and to grow by 0.1 mb/d y-o-y in 2022, to average 5.3 mb/d. OPEC-13 crude oil production in September increased by 0.49 mb/d m-o-m to average 27.33 mb/d, according to secondary sources.

Preliminary non-OPEC liquids production in September, including OPEC NGLs, is estimated to have grown by 0.1 mb/d m-o-m to average 68.6 mb/d, up by 2.1 mb/d y-o-y. As a result, preliminary data indicates that global oil supply in September has grown by 0.61 mb/d m-o-m to average 95.93 mb/d, up by 5.39 mb/d y-o-y.

Non-OPEC liquids production growth in 2021 was revised down by 256 tb/d from the previous assessment, including 172 tb/d in the OECD and 85 tb/d in the non-OECD regions, mainly due to a total downward revision of 604 tb/d in 3Q21, as well as 317 tb/d in 4Q21. With this revision, liquids supply is now forecast to grow by 0.66 mb/d in 2021 to average 63.64 mb/d.

The main downward revision took place in OECD Americas' supply forecast by 148 tb/d (266 tb/d in 3Q21 and 303 tb/d in 4Q21), due to oil production outages in the US GoM following Hurricane Ida, and a force majeure in Canada at the Suncor oil sands site. Supply growth in the US and Canada in 2021 was revised down by 0.13 mb/d, and 0.02 mb/d, respectively. UK supply growth was also revised lower by 0.03 mb/d, due to lower-than-expected output in 3Q21 and revisions to the 4Q21 outlook.

Graph 5 - 1: Revisions to annual supply change forecast in 2021*, October MOMR/September MOMR



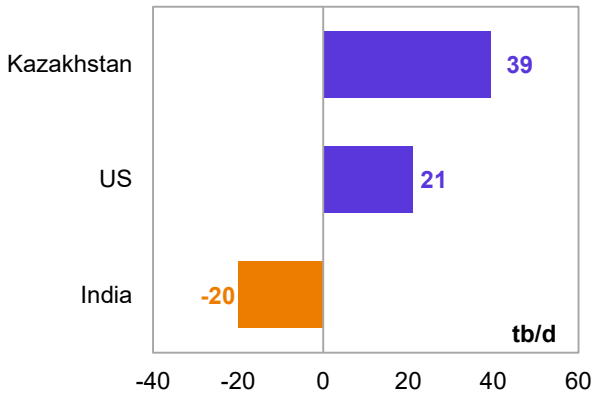
*Note: * 2021 = Forecast. Source: OPEC.*

The supply forecast of Brazil was also revised down by 0.02 mb/d due to lower-than-forecast output in 3Q21. The supply forecast of Kazakhstan, a member of the DoC, was also revised down by 0.04 mb/d. In Africa, Ghana's supply forecast was revised down by 0.02 mb/d due to downward revisions in all quarters.

The **non-OPEC supply growth forecast for 2022** has been revised up by a minor 0.07 mb/d to now stand at 3.0 mb/d. Revisions are limited to the US and Kazakhstan, as well as several minor upward revisions in other countries, due to a base change.

US supply growth was revised up by 0.02 mb/d to average 0.83 mb/d. In Kazakhstan, the supply forecast was also revised up by 0.04 mb/d, because of a base change. The oil supply forecast of India was revised down by 0.02 mb/d, and is now forecast to grow by 0.03 mb/d in 2022.

Graph 5 - 2: Revisions to annual supply change forecast in 2022*, October MOMR/September MOMR

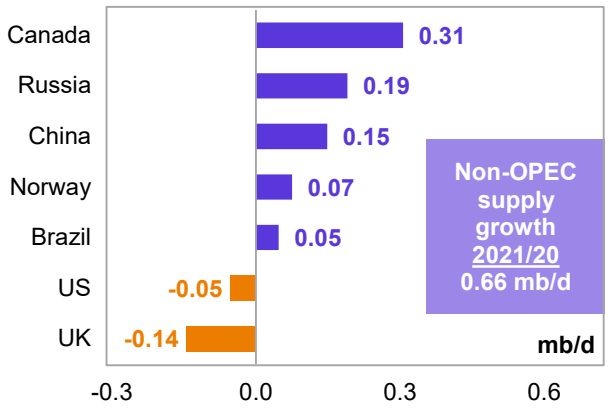


*Note: * 2022 = Forecast. Source: OPEC.*

Key drivers of growth and decline

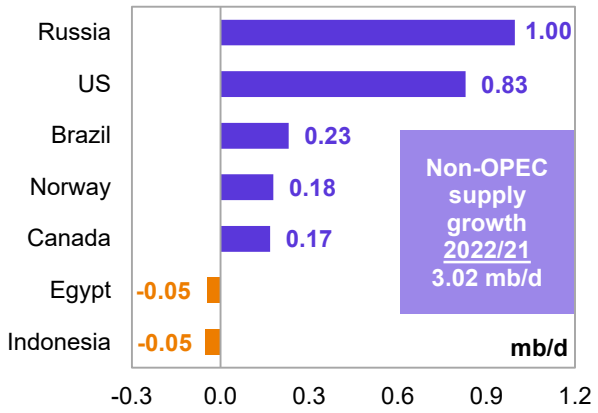
The **key drivers of non-OPEC liquids supply growth in 2021** are projected to be Canada, Russia, China, Norway, Brazil and Guyana. Oil production is expected to decline mainly in the UK, the US, Indonesia, Colombia and Egypt.

Graph 5 - 3: Annual liquids production changes for selected countries in 2021*



*Note: * 2021 = Forecast. Source: OPEC.*

Graph 5 - 4: Annual liquids production changes for selected countries in 2022*



*Note: * 2022 = Forecast. Source: OPEC.*

For **2022**, the key drivers of non-OPEC supply growth are forecast to be Russia, the US, Brazil, Norway, Canada, Kazakhstan and Guyana, while oil production is projected to decline mainly in Indonesia, Egypt and Thailand.

Non-OPEC liquids production in 2021 and 2022

Table 5 - 1: Non-OPEC liquids production in 2021*, mb/d

Non-OPEC liquids production	2020	1Q21	2Q21	3Q21	4Q21	2021	Change 2021/20 Growth	Change 2021/20 %
Americas	24.70	24.10	25.17	24.98	25.58	24.96	0.26	1.07
of which US	*17.61*	*16.63*	*17.93*	*17.63*	*18.01*	*17.55*	*-0.05*	*-0.30*
Europe	3.90	3.95	3.51	3.86	4.02	3.83	-0.07	-1.72
Asia Pacific	0.52	0.50	0.45	0.53	0.54	0.51	-0.01	-2.84
Total OECD	**29.12**	**28.55**	**29.13**	**29.36**	**30.14**	**29.30**	**0.18**	**0.62**
China	4.16	4.30	4.34	4.32	4.28	4.31	0.15	3.56
India	0.77	0.76	0.75	0.75	0.74	0.75	-0.01	-1.78
Other Asia	2.51	2.52	2.45	2.40	2.48	2.46	-0.04	-1.75
Latin America	6.04	5.97	6.00	6.12	6.47	6.14	0.10	1.60
Middle East	3.19	3.22	3.23	3.25	3.30	3.25	0.06	1.77
Africa	1.41	1.36	1.35	1.34	1.31	1.34	-0.08	-5.31
Russia	10.59	10.47	10.74	10.80	11.11	10.78	0.19	1.80
Other Eurasia	2.91	2.96	2.89	2.79	3.01	2.91	0.00	-0.05
Other Europe	0.12	0.12	0.11	0.11	0.10	0.11	-0.01	-6.16
Total Non-OECD	**31.71**	**31.66**	**31.85**	**31.89**	**32.83**	**32.06**	**0.35**	**1.10**
Total Non-OPEC production	60.83	60.21	60.99	61.25	62.96	61.36	0.53	0.87
Processing gains	2.15	2.28	2.28	2.28	2.28	2.28	0.13	6.03
Total Non-OPEC liquids production	**62.98**	**62.49**	**63.27**	**63.53**	**65.24**	**63.64**	**0.66**	**1.05**
Previous estimate	62.93	62.43	63.22	64.13	65.56	63.85	0.92	1.46
Revision	0.05	0.06	0.04	-0.60	-0.32	-0.21	-0.26	-0.41

*Note: * 2021 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

Table 5 - 2: Non-OPEC liquids production in 2022*, mb/d

Non-OPEC liquids production	2021	1Q22	2Q22	3Q22	4Q22	2022	Change 2022/21 Growth	Change 2022/21 %
Americas	24.96	25.76	25.88	25.96	26.38	25.99	1.03	4.14
of which US	*17.55*	*18.12*	*18.45*	*18.31*	*18.65*	*18.38*	*0.83*	*4.73*
Europe	3.83	4.03	3.93	3.98	4.31	4.06	0.23	6.02
Asia Pacific	0.51	0.55	0.54	0.54	0.54	0.54	0.04	6.97
Total OECD	**29.30**	**30.33**	**30.35**	**30.49**	**31.22**	**30.60**	**1.30**	**4.44**
China	4.31	4.31	4.31	4.35	4.43	4.35	0.04	1.01
India	0.75	0.75	0.77	0.80	0.82	0.79	0.03	4.25
Other Asia	2.46	2.47	2.44	2.42	2.40	2.43	-0.03	-1.28
Latin America	6.14	6.50	6.44	6.38	6.59	6.48	0.34	5.52
Middle East	3.25	3.34	3.34	3.36	3.36	3.35	0.10	3.09
Africa	1.34	1.29	1.26	1.23	1.20	1.25	-0.09	-7.03
Russia	10.78	11.51	11.83	11.88	11.88	11.78	1.00	9.24
Other Eurasia	2.91	3.09	3.11	3.15	3.22	3.14	0.23	7.86
Other Europe	0.11	0.11	0.10	0.10	0.10	0.10	-0.01	-7.22
Total Non-OECD	**32.06**	**33.36**	**33.61**	**33.68**	**34.01**	**33.67**	**1.61**	**5.01**
Total Non-OPEC production	61.36	63.70	63.95	64.16	65.23	64.27	2.91	4.74
Processing gains	2.28	2.39	2.39	2.39	2.39	2.39	0.11	4.91
Total Non-OPEC liquids production	**63.64**	**66.09**	**66.34**	**66.56**	**67.63**	**66.66**	**3.02**	**4.74**
Previous estimate	63.85	66.22	66.48	66.69	67.76	66.79	2.95	4.61
Revision	-0.21	-0.13	-0.13	-0.13	-0.13	-0.13	0.07	0.13

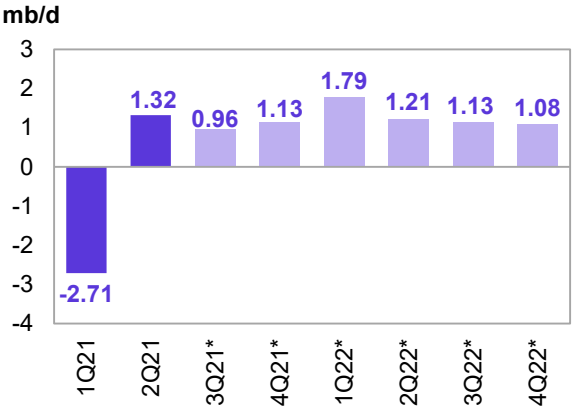
*Note: * 2021-2022 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

OECD

OECD liquids production in 2021 is forecast to increase by 0.18 mb/d y-o-y to average 29.30 mb/d, revised down by 0.17 mb/d m-o-m owing to a downward revision of 0.15 tb/d in the production forecast for OECD Americas, which is now projected to grow by 0.26 mb/d to average 24.96 mb/d. OECD Europe was revised down by 0.03 m-o-m and is now forecast to decline by 0.07 mb/d, with an average supply of 3.83 mb/d. However, oil production in OECD Asia Pacific was revised up by a minor 3 tb/d m-o-m and is now forecast to decline by 0.01 mb/d y-o-y to average 0.51 mb/d.

For **2022**, oil production in the OECD is forecast to increase by 1.30 mb/d y-o-y to average 30.60 mb/d, revised up by 13 tb/d m-o-m, with growth in OECD Americas of 1.03 mb/d to average 25.99 mb/d. Oil production in OECD Europe and OECD Asia Pacific is anticipated to grow respectively by 0.23 mb/d and 0.04 mb/d y-o-y to average 4.06 mb/d and 0.54 mb/d.

Graph 5 - 5: OECD quarterly liquids supply, y-o-y changes



*Note: * 3Q21-4Q22 = Forecast. Source: OPEC.*

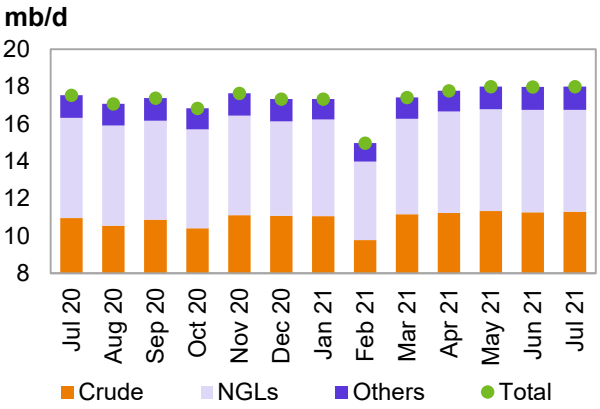
OECD Americas

US

US liquids production in July 2021 was up by 0.03 mb/d m-o-m to average 18.01 mb/d, higher by 0.46 mb/d compared with July 2020.

Crude oil production increased in July 2021 by 31 tb/d m-o-m to average 11.31 mb/d, up by 0.35 mb/d y-o-y. Meanwhile, production of non-conventional liquids (mainly ethanol) in June increased by 14 tb/d m-o-m to average 1.23 mb/d, according to the Department of Energy (DOE). It is estimated that output reached 1.25 mb/d in July. NGLs production was down by 19 tb/d to average 5.46 mb/d in July. Regarding crude and condensate production breakdown by region (PADDs), production increased on the US Gulf Coast (USGC) by 113 tb/d to average 8.11 mb/d, and a minor 3 tb/d in the Rocky Mountains to average 0.77 mb/d, while declining in the other three PADDs in July.

Graph 5 - 6: US monthly liquids output by key component



Source: OPEC.

Looking at states, production increased m-o-m in Texas, New Mexico, and the GoM (before Hurricane Ida) on the US Gulf Coast, adding 28 tb/d, 28 tb/d and 56 tb/d, to average 4.8 mb/d, 1.3 mb/d and 1.85 mb/d, respectively. Part of this monthly growth was offset by lower output in Alaska, Oklahoma and North Dakota.

In the US Midwest, production in North Dakota decreased by 9 tb/d to average 1.1 mb/d after four consecutive months of increase, while output in Oklahoma declined for the second consecutive month by 12 tb/d to average 380 tb/d in July. For the week ending 1 October, 39 oil rigs were active in Oklahoma.

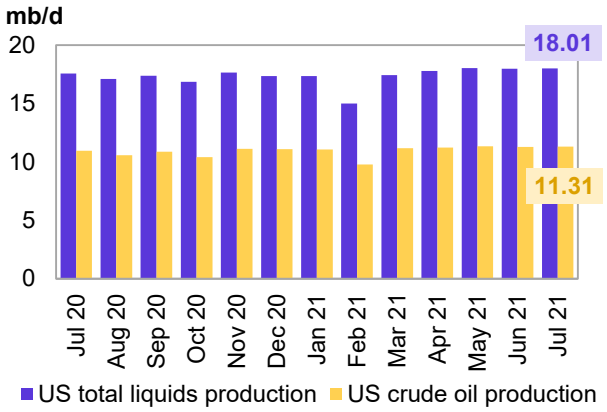
Table 5 - 3: US crude oil production by selected state and region, tb/d

State	Jun 21	Jul 21	Change Jul 21/Jun 21
Oklahoma	392	380	-12
Colorado	390	390	0
Alaska	440	380	-60
North Dakota	1,064	1,055	-9
New Mexico	1,267	1,295	28
Gulf of Mexico (GoM)	1,789	1,845	56
Texas	4,782	4,810	28
Total	**11,276**	**11,307**	**31**

Sources: EIA and OPEC.

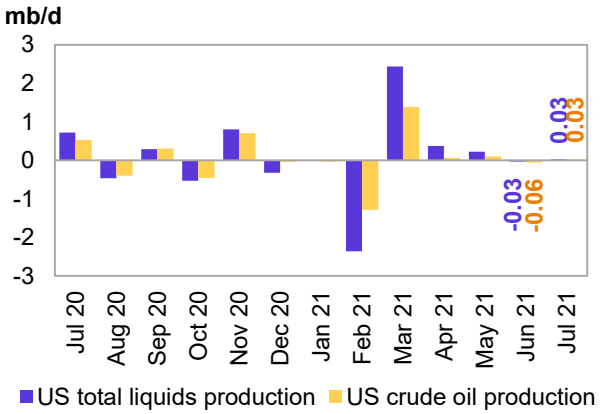
In June and July, the oil rig count increased from 28 to 30, however this increase did not offset the decline rate. Output in Colorado, the host of Niobrara shale, was flat at 0.39 mb/d. On the West Coast, production in Alaska declined for the eighth consecutive month, falling by 60 tb/d m-o-m to average 0.38 mb/d due to maintenance. Production is expected to recover in August, following the return of the 50 tb/d Alpine field. For the next year, production in Alaska will be boosted by two new projects, the Fiord West and GMT-2, with total peak capacity of 55 tb/d.

Graph 5 - 7: US monthly crude oil and total liquids supply



Sources: EIA and OPEC.

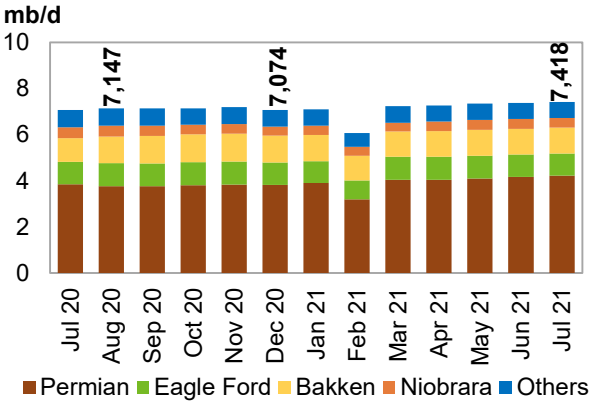
Graph 5 - 8: US monthly crude oil and total liquids supply, m-o-m changes



Sources: EIA and OPEC.

US tight crude output in July increased by 36 tb/d m-o-m to average 7.42 mb/d, 342 tb/d higher than the same month a year earlier, according to Energy Information Administration (EIA) estimates. The m-o-m increase from shale and tight formations through horizontal wells came from the Permian, rising by 57 tb/d, to average 4.22 mb/d. In the Williston Basin, production in the Bakken shale was broadly steady at an average of 1.12 mb/d, up by 85 tb/d y-o-y. Tight crude output at Eagle Ford in Texas and Niobrara-Codell in Colorado and Wyoming declined by 8 tb/d and 9 tb/d, respectively, to average 0.96 mb/d and 0.41 mb/d. In the onshore lower 48, July production increased by 35 tb/d to 9.08 mb/d. Average tight crude output in the first seven months of the year was estimated at 7.12 mb/d, 426 tb/d lower than during the same period in 2020.

Graph 5 - 9: US tight crude output breakdown

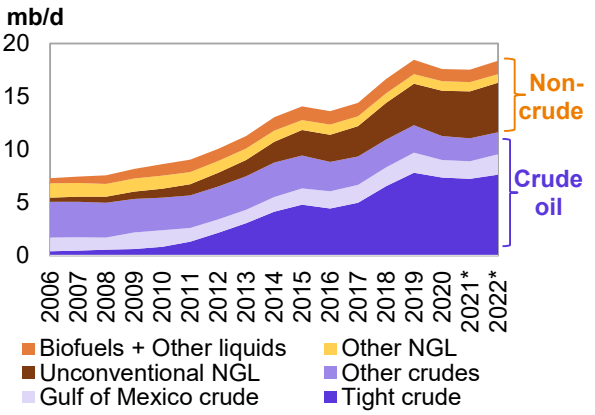


Sources: EIA, Rystad Energy and OPEC.

The **US liquids production growth forecast for 2021** was revised down by 132 tb/d and now stands to decline by 0.05 mb/d y-o-y to average 17.55 mb/d. This was due to downward revisions by 208 tb/d in 3Q21, following an oil production shut-in in the GoM due to Hurricane Ida, as well as downward revisions in the 4Q21 supply forecast by 303 tb/d.

Regarding the liquids breakdown, the **US crude production forecast for 2021** was revised down by 0.12 mb/d and is now expected to decline by 0.22 mb/d to average 11.06 mb/d. The growth forecast for NGLs and non-conventional liquids remained unchanged at 0.13 mb/d and 0.04 mb/d to average 5.31 mb/d and 1.19 mb/d, respectively.

Graph 5 - 10: US liquids supply developments by component, including forecast for 2021 and 2022



*Note: * 2021-2022 = Forecast. Source: OPEC.*

Assuming 1.57 mb/d of production in August and around 1.0 mb/d in September following Hurricane Ida-related output disruptions, average oil production from the GoM in 2021 is now forecast to stand at 1.67 mb/d with growth of only 0.02 mb/d y-o-y. US crude oil production is expected to exit December 2021 at 11.31 mb/d (as

of October 2021), although production might again be affected negatively in October, as was seen in 2020. US tight and conventional crude oil are forecast to see contractions of 0.03 mb/d and 0.22 mb/d in 2021, to average 7.25 mb/d and 2.14 mb/d, respectively.

US liquids production in 2022, excluding processing gains, is anticipated to grow by 0.83 mb/d y-o-y to average 18.38 mb/d, revised up by 0.02 mb/d. With the current pace of drilling and well completion in oil fields, production of crude oil is forecast to grow by 0.6 mb/d y-o-y in 2022, revised up by 0.01 mb/d. NGLs and non-conventional liquids will continue to grow by 0.15 mb/d and 0.08 mb/d, respectively.

Regarding the **US crude oil production** forecast breakdown, production from the GoM will grow by 0.23 mb/d to average 1.90 mb/d. At the same time, the US tight crude and conventional crude oil forecast was updated to account for the latest production and activity trends, with growth of 0.41 mb/d to average 7.66 mb/d, and a contraction of 0.04 mb/d to average 2.10 mb/d, respectively.

Table 5 - 4: US liquids production breakdown, mb/d

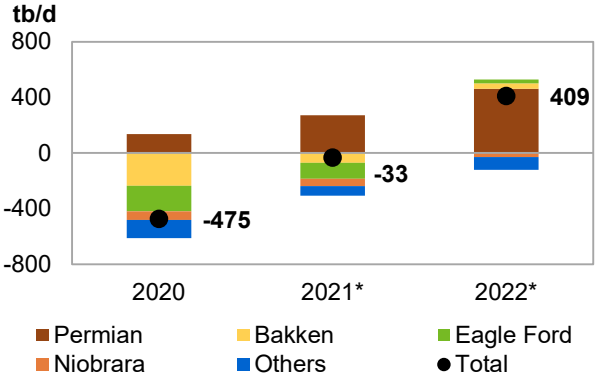
US liquids	2020	Change 2020/19	2021*	Change 2021/20	2022*	Change 2022/21
Tight crude	7.37	-0.45	7.25	-0.03	7.66	0.41
Gulf of Mexico crude	1.64	-0.25	1.67	0.02	1.90	0.23
Conventional crude oil	2.26	-0.30	2.14	-0.22	2.10	-0.04
Total crude	11.28	-1.01	11.06	-0.22	11.66	0.60
Unconventional NGLs	4.27	0.35	4.45	0.18	4.65	0.20
Conventional NGLs	0.91	0.00	0.86	-0.05	0.81	-0.05
Total NGLs	5.17	0.35	5.31	0.13	5.46	0.15
Biofuels + Other liquids	1.15	-0.20	1.19	0.04	1.27	0.08
US total supply	**17.61**	**-0.86**	**17.55**	**-0.05**	**18.38**	**0.83**

*Note: * 2021-2022 = Forecast. Sources: EIA, OPEC and Rystad Energy.*

US tight crude production in 2021 and 2022 is expected to show continuous y-o-y growth in the Permian Basin, though this has been revised down by 0.05 mb/d and 0.15 mb/d from last month's assessment to now stand at average growth of 0.2 mb/d and 0.46 mb/d, to reach 4.13 mb/d and 4.59 mb/d, respectively.

Bakken shale production fell by 0.23 mb/d in 2020 and is expected to contract by 0.07 mb/d in 2021 to average 1.11 mb/d, while for 2022, output is expected to grow by 0.04 mb/d to average 1.15 mb/d. Eagle Ford in Texas is expected to decline this year by 0.10 mb/d, but is forecast to grow next year by 0.03 mb/d to average 0.97 mb/d. Production in other shale plays is not expected to grow in 2021 or 2022, given current drilling and completion activities.

Graph 5 - 11: US tight crude output by shale play, y-o-y changes



*Note: * 2021-2022 = Forecast.*
Sources: EIA, Rystad Energy and OPEC.

US tight crude saw a contraction of 0.45 mb/d in 2020 and is expected to decline by 0.13 mb/d y-o-y this year, but is forecast to grow by 0.41 mb/d in 2022 to average 7.66 mb/d.

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

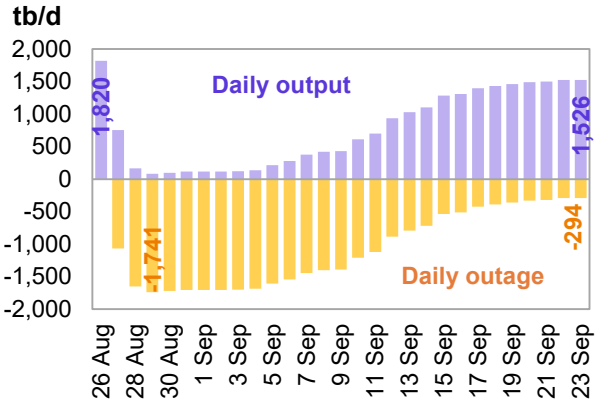
US tight oil	2020	Change 2020/19	2021*	Change 2021/20	2022*	Change 2022/21
Permian tight	3.92	0.16	4.13	0.21	4.59	0.46
Bakken shale	1.18	-0.23	1.11	-0.07	1.15	0.04
Eagle Ford shale	1.04	-0.18	0.94	-0.10	0.97	0.03
Niobrara shale	0.47	-0.06	0.40	-0.07	0.37	-0.03
Other tight plays	0.77	-0.14	0.67	-0.10	0.58	-0.09
Total	**7.37**	**-0.45**	**7.25**	**-0.13**	**7.66**	**0.41**

*Note: * 2021-2022 = Forecast. Source: OPEC.*

Hurricane Ida and its impact on US Gulf of Mexico production

According to data since 27 August on GoM oil production from the first day of evacuation and well shut-in until the final report given by the US Bureau of Safety and Environmental Enforcement (BSEE) on 23 September, more than 30 mb was cumulatively offline. From 24 September up to the end of the month, around 0.3 mb/d was still shut in. With this, it is estimated that average monthly production dropped from 1.85 mb/d in July to average 1.57 mb/d in August and around 1.0 mb/d in September. Hurricane Ida, which came ashore on 29 August, had the largest impact on US GoM supplies since Hurricane Katrina struck back in 2005.

Graph 5 - 12: Production shut in the Gulf of Mexico related to Hurricane Ida



Sources: BSEE and OPEC.

Offshore production has been gradually returning in October, including the re-starting of production at the Olympus TLP (Tension Leg Platform) following repairs to a portion of its West Delta 143 offshore facility in the aftermath of Hurricane Ida, Royal Dutch Shell announced on 4 October. However, about 175 tb/d is expected to remain offline until the end of the year from the connection side of the West Delta-143 to another two TLPs, Mars and Ursa, due to damage. Shell expects to bring these volumes back online in 1Q22. Shell's West Delta 143 offshore facility carries oil and gas from three major fields for processing at onshore terminals.

According to Shell, the largest GoM oil producer, and hardest-hit by Ida, operations at other GoM assets — Appomattox, Enchilada/Salsa, Auger, Perdido and Stones — are all producing, except for Mars and Ursa. Around 60% of Shell-operated production in the GoM is back online after the incident.

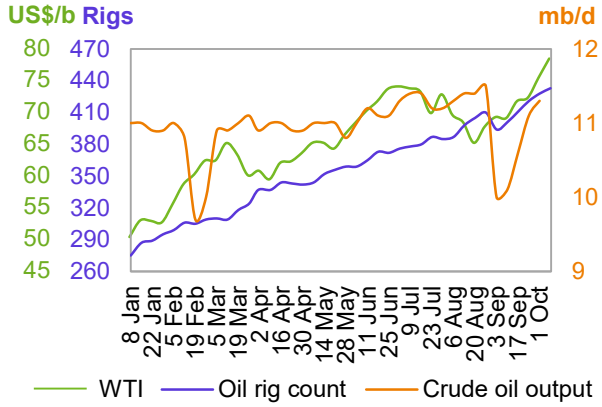
US rig count, spudded, completed, DUC wells and fracking activity

Total US **active drilling rigs** were up by 5 units w-o-w to 533 rigs in the week ended 8 October. During Hurricane Ida, the biggest weekly rig drop was seen since early June last year, according to Baker Hughes', which reported that the number of active offshore rigs had fallen to 2. US offshore rigs have currently recovered to 11 units. Moreover, 520 rigs (oil & gas) were active onshore and 2 in inland waters.

US rigs targeting crude oil rose by 5 units to 433 rigs, while gas rigs remained flat at 99 and one rig was classified as miscellaneous.

On a monthly basis, the US oil rig count increased by 16 units in September m-o-m to 415 rigs, higher by 232 rigs compared with September 2020.

Graph 5 - 13: US weekly rig count vs US crude oil output and WTI price



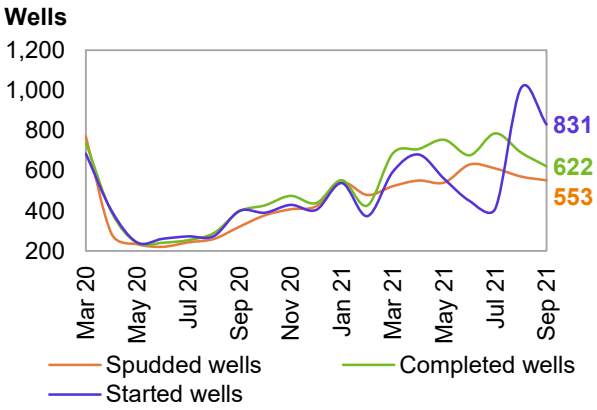
Sources: Baker Hughes, EIA and OPEC.

Rigs targeting oil in the Permian Basin almost doubled y-o-y to 266. The total rig count is 98% higher than the same time last year and up more than 118% since falling to a record low of 244 in August 2020.

Drilling and completion (D&C) activities for spudded, completed and started wells in all US shale plays saw 553 horizontal wells spudded in September (as per preliminary data), down from 572 in August, but 72% higher than in September 2020. It is worth noting that the average of spudded wells in the first eight months of year was 557, compared with September at 553 wells.

In September 2021, preliminary data indicates a lower number of completed wells at 622, as well as a lower number of started wells at 831. However, the number of completed and started wells increased respectively by 56% and 108% y-o-y.

Graph 5 - 14: Spudded, completed and started wells in US shale plays

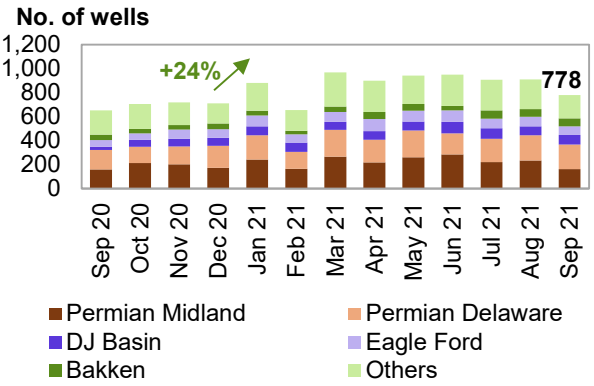


Sources: Rystad Energy and OPEC.

Regarding identified **US oil and gas fracking operations by region**, Rystad Energy reported that after 907 fracking wells were seen in July and 909 in August, 778 started fracking in September. This preliminary number is based almost exclusively on analysis of high-frequency satellite data.

Preliminary data on fracking in September shows that 163 and 203 wells were fracked in the Permian Midland Tight and Permian Delaware Tight, respectively. It also indicated that 81 wells were fracked in the DJ Basin compared with 71 in Eagle Ford and 67 in Bakken in North Dakota.

Graph 5 - 15: Fracked wells count per month



Note: September 2021 = Preliminary data.
Sources: Rystad Energy Shale Well Cube and OPEC.

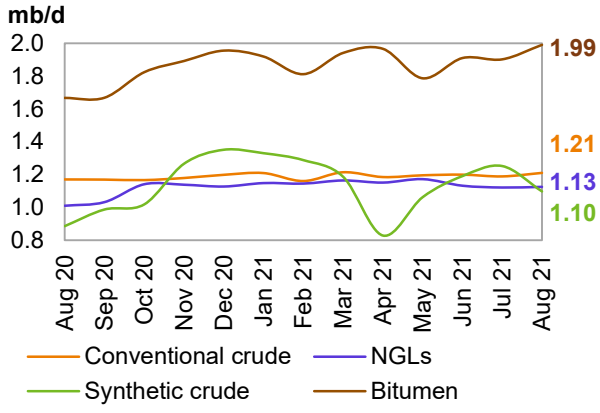
Canada

Canada's liquids production in August is estimated to have declined by 0.04 mb/d m-o-m to average 5.46 mb/d, mainly due to lower synthetic crude output.

While production of **crude bitumen** in August rose by 0.09 mb/d m-o-m to 1.99 mb/d, the highest on record and reaching October 2019 levels, **synthetic crude** declined by 154 tb/d m-o-m to average 1.1 mb/d.

Moreover, in a force majeure notice sent by one of Syncrude's four owners earlier this month, customers were informed of a supply cut by as much as 20% in September, Bloomberg reported. Regarding capacity, the Suncor synthetic upgrader in Northern Alberta produced about 275 tb/d between January and May, according to the Alberta Energy Regulator (AER).

Graph 5 - 16: Canada's monthly liquids production development by type



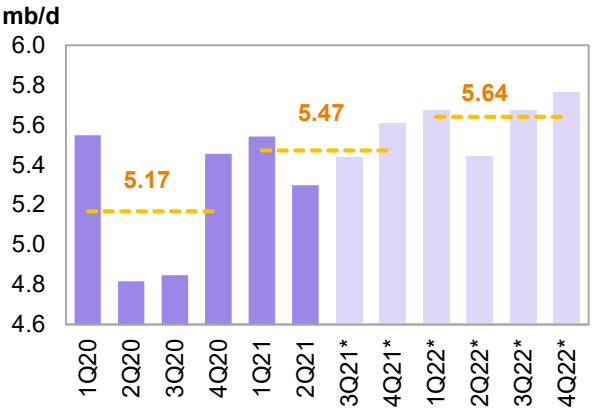
Sources: National Energy Board and OPEC.

NGLs production remained unchanged at 1.12 mb/d, but **conventional crude** output rose by 22 tb/d to average 1.21 mb/d.

With a minor downward revision of 6 tb/d in historical production data in 2Q21 and 58 tb/d in 3Q21 seen this month, the liquids supply growth forecast for the current year was revised down by 16 tb/d to stand at 0.31 mb/d, with average yearly supply at 5.47 mb/d.

For **2022**, Canada's production is forecast to increase at a slower pace compared with the current year, rising by 0.17 mb/d to average 5.64 mb/d. This is unchanged from the previous month's assessment in terms of y-o-y growth.

Graph 5 - 17: Canada's quarterly liquids production and forecast

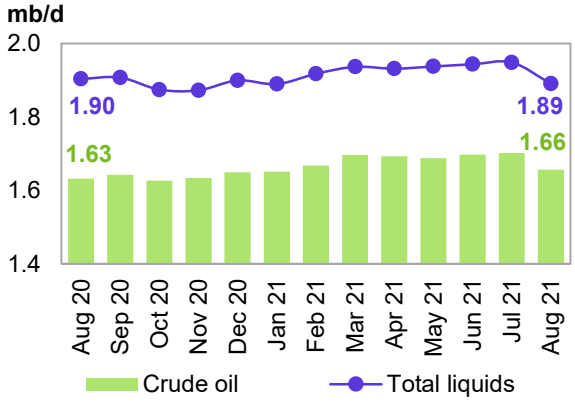


*Note: * 3Q21-4Q22 = Forecast. Source: OPEC.*

Mexico

Mexico's crude output declined **in August** by 45 tb/d to average 1.66 mb/d, following a fire on one of the Ku-Maloob-Zaap platforms located in the Mexican territories of the GoM. Mexico's Pemex exported 1.1 mb/d of crude in August, largely flat monthly and yearly, despite more than 420 tb/d of crude output being affected by the fire. The crude output breakdown indicates that the production of heavy crude oil declined from 1,031 tb/d in July to average 939 tb/d in August, partially compensated by higher extra-light crude output. According to PEMEX's updated production report, production from the KMZ had fully recovered on 30 August. Mexico's **total liquids production,** including 0.23 mb/d of NGLs, was down by 58 tb/d m-o-m in August to average 1.89 mb/d and also down by 0.01 mb/d y-o-y.

Graph 5 - 18: Mexico's monthly liquids and crude production development



Sources: PEMEX and OPEC.

For **2021**, liquids production in Mexico is forecast to grow by 0.01 mb/d to average 1.93 mb/d, unchanged from last month's assessment.

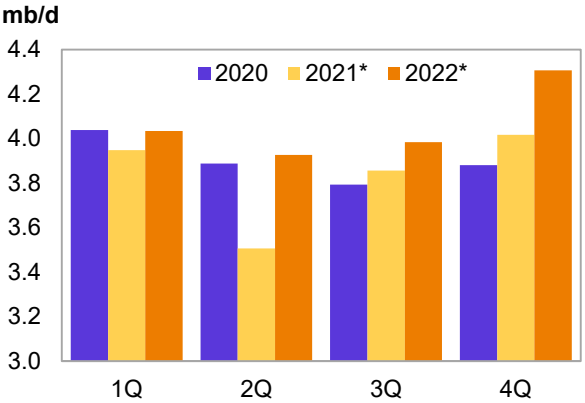
For **2022**, the supply forecast shows yearly growth of 0.04 mb/d to average 1.96 mb/d.

OECD Europe

OECD Europe's liquids production in 2021 was revised down by 0.03 mb/d from the previous assessment. The downward revision is due to lower-than-expected oil output in 3Q21 by 31 tb/d, mainly in the UK. Additionally, the 4Q21 forecast was revised down by 80 tb/d due to a re-assessment of the UK supply forecast.

OECD Europe's liquids supply is now projected to decline by 0.07 mb/d y-o-y in 2021 to average 3.83 mb/d, owing to a contraction in UK output of 0.14 mb/d and a slowdown in Norway's production growth estimated at 0.07 mb/d, compared with remarkable growth of 0.26 mb/d in 2020. Oil production in Denmark will decline by 0.01 mb/d, while oil output is expected to see minor growth of 0.01 mb/d in other OECD Europe.

Graph 5 - 19: OECD Europe quarterly liquids production and forecast



*Note: * 2021-2022 = Forecast. Source: OPEC.*

OECD Europe's oil production in 2Q21 was 3.51 mb/d, lower by 0.4 mb/d y-o-y, not only because of maintenance, natural declines and technical failure, but also due to COVID-related considerations and special controls on platforms.

For **2022**, production is expected to grow by 0.23 mb/d and surge to 4.06 mb/d through continued production ramp-ups in Norway, the UK and Other OECD Europe.

Norway

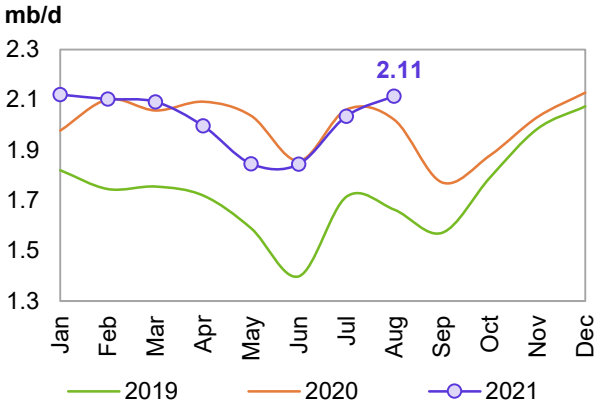
Norwegian crude production in August grew by 59 tb/d m-o-m to 1.81 mb/d, 3.0% higher than the Norwegian Petroleum Directorate's (NPD) forecast, and up by 81 tb/d y-o-y. Production of NGLs and condensates also rose by 20 tb/d m-o-m to average 0.30 mb/d.

As a result, t**otal liquids supply** increased by 0.08 mb/d m-o-m to average 2.11 mb/d, back to the same level as in 1Q21, prior to seasonal maintenance in 2Q21. However, average liquids production in the first seven months of the year stood at 2.01 mb/d, the same as in 4Q20, despite the start-up of Equinor's Martin Linge field in July, and the rebounding of production by around 0.2 mb/d over the low output seen in May and June due to seasonal maintenance, indicating no growth during this period. Nevertheless, with new projects such as Solveig, with peak capacity of 30 tboe/d, which came on stream by Lundin Energy on 30 September, and additional projects coming onstream by the end of the year, such as Duva, with a peak capacity of 30 tb/d, Yme, with 35 tb/d, and Martin Linge with 40 tb/d, Norwegian liquids output is projected to rise from 2.09 mb/d in 3Q21 to average 2.21 mb/d in 4Q21.

For **2021**, Norway's liquids supply growth forecast has been revised up by a minor 5 tb/d m-o-m due to higher-than-expected output in 3Q21 by 19 tb/d. Production is now expected to average 2.08 mb/d, with growth of 0.07 mb/d y-o-y.

For **2022**, Norway's tax incentives initiated last year in response to the pandemic have led to increased investment in oil and gas projects. Consequently, Norwegian liquids production is expected to grow by 0.18 mb/d to average 2.26 mb/d through the anticipated start-up of new offshore projects such as Nova, Hod (redevelopment), Njord Future, Bauge and Fenja-phase 1. Moreover, Johan Sverdrup phase-2 is expected to come on-stream in late 2022, and is projected to lift Norwegian crude oil production to more than 2 mb/d.

Graph 5 - 20: Norway's monthly liquids production development



Sources: NPD and OPEC.

UK

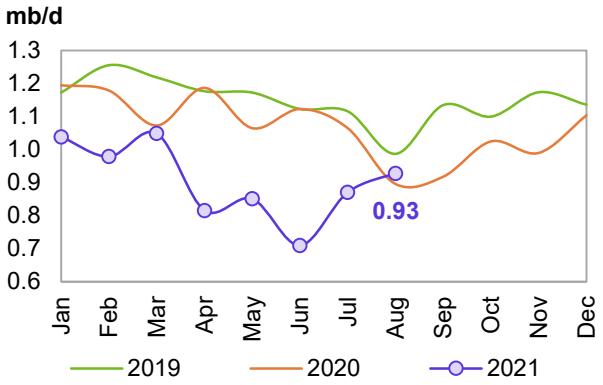
UK liquids production in August was up by 0.06 mb/d m-o-m to average 0.93 mb/d, higher by 0.14 mb/d than the average output in 2Q21, and up by 0.03 mb/d y-o-y. The lowest-ever production recorded this year in 2Q21 of 0.79 mb/d was due to extensive maintenance on the Forties Pipeline System (FPS), planned workovers, and full production shut-in at the UK's largest producing field, Buzzard. Crude oil output rose by 41 tb/d m-o-m to average 0.8 mb/d, according to official data, up by 0.02 mb/d y-o-y. NGLs output also increased by 16 tb/d m-o-m in August to average 84 tb/d, up by a minor 4 tb/d y-o-y.

Historical production data in 2Q21 has been revised up by a minor 5 tb/d, but the supply forecast for 3Q21, and 4Q21 has been revised down by 50 tb/d and 80 tb/d, respectively, leading to a downward revision of 32 tb/d for the 2021 UK supply forecast, compared to the previous assessment.

For **2021**, UK liquids production is forecast to contract by 0.14 mb/d to average 0.92 mb/d.

For **2022**, UK liquids production is forecast to grow by 0.03 mb/d to average 0.96 mb/d, following two consecutive years of heavy declines. Production ramp-ups will take place in some small fields. The Penguins oil field (Redevelop) and Buzzard Phase 2 (20/06-3), each with a peak capacity of 30 tb/d, are due to start up. However, several new UK projects that are in the pipeline could be delayed. Argus reported that "BP has delayed an FID on the third development phase of the Claire field, Claire South, until 2022 as it considers the impact of the pandemic and energy transition on its upstream portfolio".

Graph 5 - 21: UK monthly liquids production development



Sources: Department of Energy & Climate Change and OPEC.

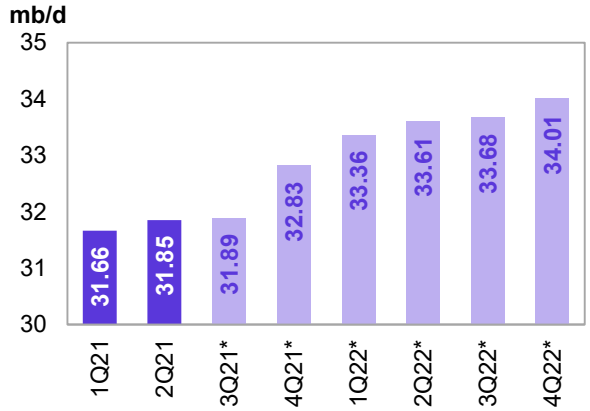
The UK's future oil and gas activities in the North Sea face serious challenges and uncertainty, which may force the government to change its decision to continue allowing E&P activities in the region.

Non-OECD

Non-OECD liquids production growth for 2021 was revised down by 85 tb/d this month on the back of downward adjustments for the Other Asia region (-15 tb/d), Latin America (-29 tb/d), Africa (-24 tb/d) and Other Eurasia, mainly Kazakhstan (-41 tb/d), and is now forecast to grow by 0.35 mb/d to average 32.06 mb/d.

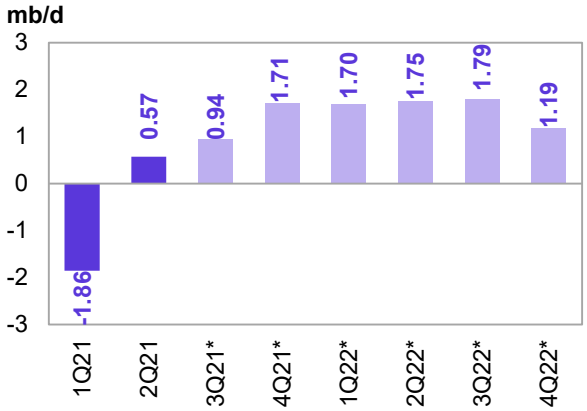
The liquids supply forecast of the 10 non-OPEC countries participating in the DoC was revised down by 0.04 mb/d to average 17.4 mb/d, now standing at growth of 0.2 mb/d y-o-y.

Graph 5 - 22: Non-OECD quarterly liquids production and forecast



*Note: * 3Q21-4Q22 = Forecast. Source: OPEC.*

Graph 5 - 23: Non-OECD quarterly liquids supply, y-o-y changes



*Note: * 3Q21-4Q22 = Forecast. Source: OPEC.*

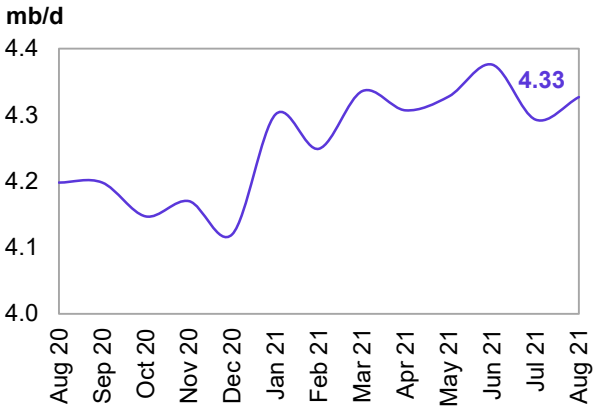
The key driver for growth in 2021 will be Russia, with y-o-y growth forecast at 0.19 mb/d, followed by China, which is expected to see growth of 0.15 mb/d, Latin America with 0.10 mb/d and the Middle East with 0.06 mb/d. Liquids supply in India, Other Asia, Africa, and Other Europe will decline by 0.01 mb/d, 0.04 mb/d, 0.08 mb/d and 0.01 mb/d, respectively, while supply in Other Eurasia is forecast to remain flat y-o-y.

For **2022**, liquids production in non-OECD countries is forecast to grow by 1.61 mb/d to average 33.67 mb/d, revised up by 59 tb/d, coming mainly from Kazakhstan's forecast, due to a low base. The key drivers will again be Russia, with growth of 1.0 mb/d, followed by Latin America with 0.34 mb/d, Other Eurasia at 0.23 mb/d and the Middle East at 0.10 mb/d. China and India are expected to grow by 0.04 mb/d and 0.03 mb/d, respectively. Liquids supply is forecast to decline in Other Asia, Africa, and Other Europe.

China

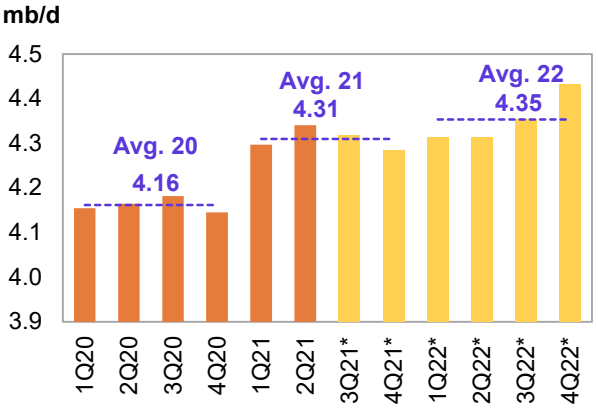
China's liquids production in August was up by 0.04 mb/d m-o-m to average 4.33 mb/d and higher by 0.13 mb/d y-o-y, according to official data. Crude oil output in August increased by 37 tb/d to average 4.01 mb/d and was higher by around 89 tb/d y-o-y. Production from the Bozhong 19-4 oilfield comprehensive adjustment project in the southern Bohai Sea offshore China was started under CNOOC on 24 September. It is anticipated that peak oil production will be around 11 tb/d in the next year.

Graph 5 - 24: China's monthly liquids production development



Sources: CNPC and OPEC.

Graph 5 - 25: China's quarterly liquids production and forecast



*Note: * 3Q21-4Q22 = Forecast. Sources: CNPC and OPEC.*

For **2021**, China's liquids supply is projected to see growth of 0.15 mb/d, revised up by 0.02 mb/d. It is worth noting that China's historical liquids production in 2020 was revised up by 0.04 mb/d to average 4.16 mb/d, with y-o-y growth of 0.11 mb/d. Moreover, supply for all quarters in 2021 was revised up, leading to an upward revision of 15 tb/d for the year. According to a list of new projects, three (namely Liuhua 16-2, Luda 21-2 and Caofeidian 6-4, all offshore) are expected to start production in 2021.

For **2022**, y-o-y growth of 0.04 mb/d is anticipated to average 4.35 m/d. For the next year, two other offshore CNNOC projects – Wushi 17-2, with peak capacity of 24 tb/d and Lufeng 14-4/14-8, with 23 tb/d at peak capacity – are planned to come onstream.

Latin America

Brazil

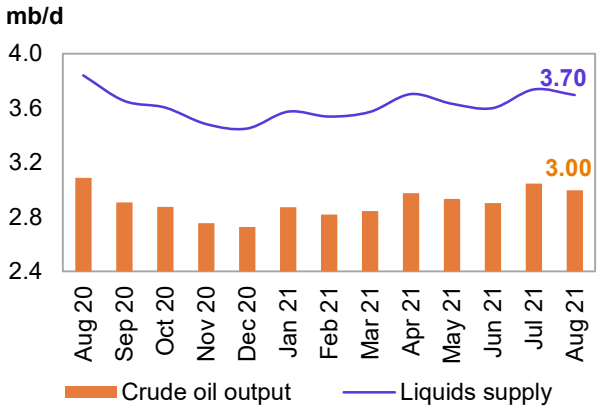
Brazil's crude output in August declined once again by 0.05 mb/d to average 3.0 mb/d, despite a production start-up at the Sepia field in the Santos Basin at the Carioca FPSO with a production capacity of 0.18 mb/d. Longer-than-expected unplanned maintenance, however, led to lower output from other fields in the Santos Basin, such as the Buzios, Lula, Tupi and Lara. Many of these disruptions were due to COVID-related mandates and health regulations observed on platforms. Production at Buzios via four FPSOs — P-74, P-75, P-76 and P-77 — is operated by Petrobras and production rates are among the highest in the pre-salt province. The tender for the P-80 FPSO — a unit which will have the capacity to produce 225 tb/d of oil and 12 mcm/d of natural gas — has been pushed back to 2022.

In **August**, **total liquids production** was pegged at 3.70 mb/d, including biofuels and NGLs, down by 0.04 mb/d m-o-m and lower by 0.14 mb/d y-o-y.

Brazilian **liquids supply in 2021**, including biofuels, is forecast to grow by 0.05 mb/d y-o-y to an average of 3.72 mb/d, revised down by 0.02 mb/d.

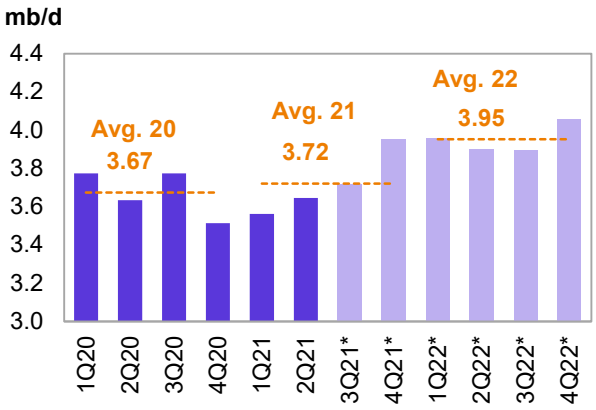
For **2022**, Brazil's liquids supply forecast, including biofuels, is set to increase by 0.23 mb/d y-o-y to average 3.95 mb/d. Crude oil production is expected to rise through two new project start-ups: Mero-1 (Guanabara), which was initially planned to start up in 2021 and Peregrino-Phase 2. Moreover, in Buzios, a fifth unit, the Almirante Barroso FPSO — to be supplied by Japan's Modec — is due to begin operation in 2022.

Graph 5 - 26: Brazil's monthly liquids production development by type



Sources: ANP, Petrobras and OPEC.

Graph 5 - 27: Brazil's quarterly liquids production and forecast



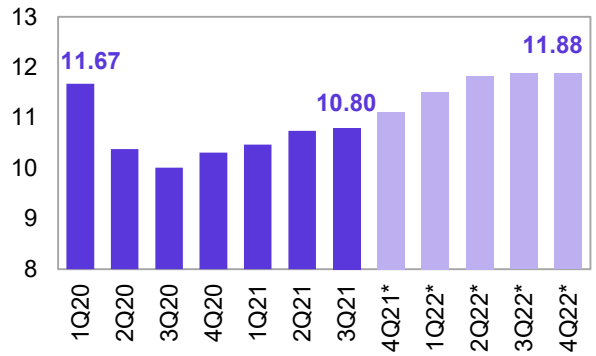
*Note: * 3Q21-4Q22 = Forecast. Sources: ANP and OPEC.*

Russia

Preliminary data for **Russia's liquids production in September** shows an increase of 0.29 mb/d m-o-m to average 10.98 mb/d, higher by 0.84 mb/d y-o-y. Regarding crude output in August, growth of 0.10 mb/d to average 9.72 mb/d was reported by Nefte Compass.

The production of **condensate and NGLs** from gas condensate fields was disrupted by 0.16 mb/d in August, due to fire. It is believed to have recovered to average 1.13 mb/d, the same as in July, according to a preliminary estimate.

Graph 5 - 28: Russia's quarterly liquids production and forecast



*Note: * 4Q21-4Q22 = Forecast.*
Sources: Nefte Compass and OPEC.

Annual liquids production in 2021 is forecast to increase by 0.19 mb/d y-o-y to average 10.78 mb/d, unchanged m-o-m. Gazprom is taking steps to increase the production capacity of its depleted Urengoi field in West Siberia, which should allow it to respond more swiftly to winter demand fluctuations, according to Argus.

For **2022**, Russian liquids output is expected to increase by 1.0 mb/d to average 11.78 mb/d, with 3Q22 and 4Q22 both expected to reach 11.88 mb/d, the same as in the last MOMR. However, insufficient drilling and brownfield declines may yet impact the forecast.

Caspian

Kazakhstan & Azerbaijan

In **Kazakhstan**, maintenance in the Tengiz field led to a cumulative production shut-in of 11.6 mb **in August and September**. Kazakh crude output declined by 0.22 mb/d m-o-m in August, as per preliminary data.

NGLs output in August is estimated to have declined by 31 tb/d to average 309 tb/d.

The Kazakhstan liquids supply forecast for **2021** is expected to decline by 0.01 mb/d and average 1.81 mb/d, revised down by 0.04 mb/d, due to production outages in August and September owing to maintenance in the Tengiz field.

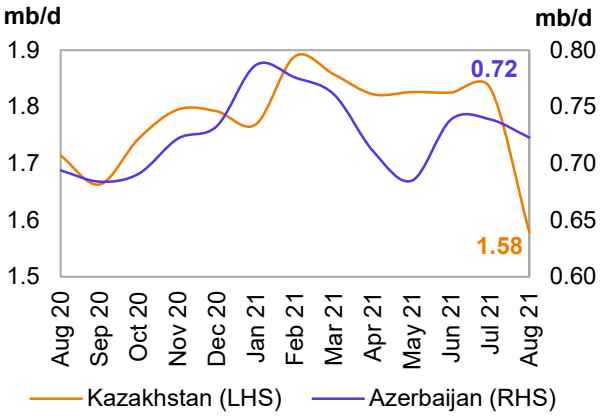
In **2022**, liquids supply is likely to grow by 0.17 mb/d to average 1.98 mb/d. CPC data shows lower export volumes in August than reported by other sources by 0.21 mb/d.

Azerbaijan's liquids production in August declined by 0.02 mb/d to average 0.72 mb/d m-o-m, up by 0.03 mb/d y-o-y. While crude production declined by 11 tb/d m-o-m to average 596 tb/d, NGLs production also declined by a minor 5 tb/d to average 127 tb/d. A 25-day maintenance programme at the Chirag platform began on 23 September. Chirag field production fell by 21% in the first half of the year to 30 tb/d compared with the previous year, with overall ACG output of Azeri Light crude 6% lower at 468 tb/d in January–June, according to BP.

In **2021**, Azerbaijan's liquids supply is expected to show growth of 0.02 mb/d y-o-y to average 0.75 mb/d.

In **2022,** the liquids supply is forecast to grow by 0.07 mb/d y-o-y to average 0.82 mb/d.

Graph 5 - 29: Caspian monthly liquids production development by selected country



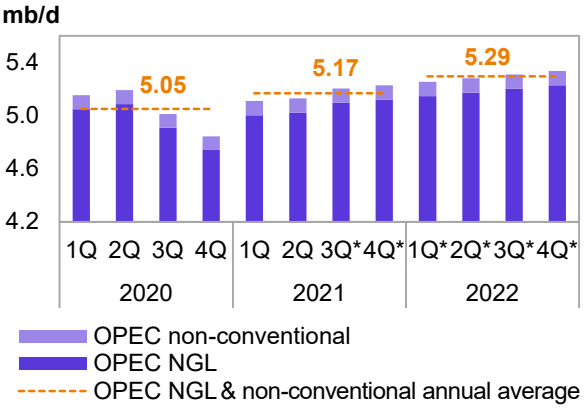
Sources: Nefte Compass and OPEC.

OPEC NGLs and non-conventional oils

OPEC NGLs and non-conventional liquids in 2021 are estimated to grow by 0.12 mb/d, following a decline of 0.17 mb/d in 2020, to average 5.17 mb/d, revised down from last month's assessment by 24 tb/d.

The preliminary **2022** forecast indicates growth of 0.13 mb/d to average 5.29 mb/d. NGLs production is expected to grow by 0.13 mb/d to average 5.19 mb/d, while non-conventional liquids is projected to remain unchanged at 0.11 mb/d.

Graph 5 - 30: OPEC NGLs and non-conventional liquids quarterly production and forecast



*Note: * 3Q21-4Q22 = Forecast. Source: OPEC.*

Table 5 - 6: OPEC NGL + non-conventional oils, mb/d

OPEC NGL and non-coventional oils	2020	Change 20/19	2021	Change 21/20	1Q22	2Q22	3Q22	4Q22	2022	Change 22/21
OPEC NGL	**4.94**	*-0.18*	**5.06**	*0.11*	5.15	5.17	5.20	5.23	**5.19**	*0.13*
OPEC non-conventional	**0.10**	*0.01*	**0.11**	*0.00*	0.11	0.11	0.11	0.11	**0.11**	*0.00*
Total	**5.05**	***-0.17***	**5.17**	***0.12***	**5.25**	**5.28**	**5.31**	**5.33**	**5.29**	***0.13***

Note: 2021-2022 = Forecast. Source: OPEC.

OPEC crude oil production

According to secondary sources, total **OPEC-13 crude oil production** averaged 27.33 mb/d in September 2021, higher by 0.49 mb/d m-o-m. Crude oil output increased mainly in Nigeria, Saudi Arabia and Iraq.

Table 5 - 7: OPEC crude oil production based on *secondary sources*, tb/d

Secondary sources	2019	2020	1Q21	2Q21	3Q21	Jul 21	Aug 21	Sep 21	*Change* Sep/Aug
Algeria	1,022	897	870	886	921	911	920	932	*12*
Angola	1,401	1,255	1,141	1,111	1,105	1,067	1,116	1,133	*17*
Congo	324	288	271	262	256	258	252	259	*6*
Equatorial Guinea	117	115	107	109	100	100	101	100	*-1*
Gabon	208	195	185	186	187	179	180	202	*22*
IR Iran	2,356	1,988	2,214	2,443	2,493	2,493	2,482	2,503	*22*
Iraq	4,678	4,049	3,881	3,940	4,052	3,965	4,056	4,139	*84*
Kuwait	2,687	2,432	2,328	2,356	2,445	2,424	2,442	2,468	*26*
Libya	1,097	367	1,175	1,151	1,153	1,158	1,153	1,148	*-5*
Nigeria	1,786	1,579	1,413	1,423	1,376	1,385	1,296	1,451	*156*
Saudi Arabia	9,794	9,182	8,445	8,503	9,544	9,420	9,539	9,678	*139*
UAE	3,094	2,802	2,610	2,644	2,761	2,722	2,774	2,789	*14*
Venezuela	796	500	517	511	528	526	533	527	*-6*
Total OPEC	**29,361**	**25,650**	**25,156**	**25,526**	**26,922**	**26,609**	**26,842**	**27,328**	***486***

Notes: Totals may not add up due to independent rounding, given available secondary sources to date. Source: OPEC.

Table 5 - 8: OPEC crude oil production based on *direct communication*, tb/d

Direct communication	2019	2020	1Q21	2Q21	3Q21	Jul 21	Aug 21	Sep 21	*Change* Sep/Aug
Algeria	1,023	899	874	886	924	915	921	937	*16*
Angola	1,373	1,271	1,136	1,125	1,114	1,103	1,129	1,110	*-19*
Congo	329	300	276	265	265	248	270	277	*8*
Equatorial Guinea	110	114	104	99	97	100	101	91	*-10*
Gabon	218	207	183	179	180	185	179	175	*-4*
IR Iran	..	..	..	..	..	..	..	..	*..*
Iraq	4,576	3,997	3,846	3,890	3,979	3,886	3,961	4,093	*132*
Kuwait	2,678	2,438	2,327	2,355	2,447	2,423	2,445	2,474	*29*
Libya	..	389	1,214	1,213	1,220	1,273	1,223	1,161	*-62*
Nigeria	1,737	1,493	1,404	1,343	1,270	1,323	1,239	1,247	*8*
Saudi Arabia	9,808	9,213	8,473	8,535	9,565	9,474	9,562	9,662	*100*
UAE	3,058	2,779	2,610	2,645	2,758	2,722	2,768	2,786	*18*
Venezuela	1,013	569	533	556	635	614	641	650	*9*
Total OPEC	**..**	**..**	**..**	**..**	**..**	**..**	**..**	**..**	***..***

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

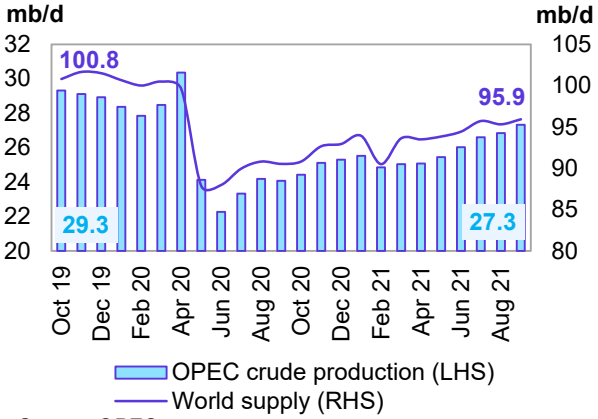
World oil supply

Preliminary data indicates that **global liquids production in September** increased by 0.61 mb/d to average 95.93 mb/d compared with the previous month.

Non-OPEC liquids production (including OPEC NGLs) increased in September by 0.12 mb/d compared with the previous month to average 68.61 mb/d, higher by 2.14 mb/d y-o-y. Preliminary increases in production in September were driven by the non-OECD, particularly Russia, while output is likely to decline in the OECD by 0.43 mb/d m-o-m.

The **share of OPEC crude oil in total global production** increased by 0.3 pp to 28.5% in September 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.

Graph 5 - 31: OPEC crude production and world oil supply development



Source: OPEC.

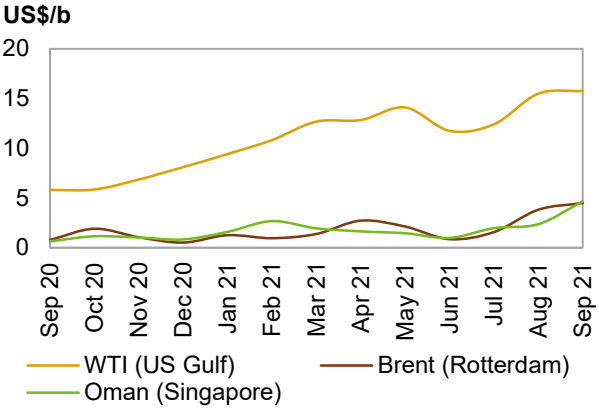
Product Markets and Refinery Operations

In September, refinery margins globally further extended their upward trend, with strong support coming from the middle section of the barrel. The tightness in product balances caused by supply side constraints in recent months was exacerbated by the beginning of the peak refinery maintenance season amid lower product exports from China. Middle distillates were the main margin driver in all regions and in Asia this upside was outpaced by robust fuel oil performance. Meanwhile, gasoline markets weakened as their crack spreads stepped down from the post-pandemic highs registered in the previous month, as the driving season draws to an end.

Refinery margins

US Gulf Coast (USGC) refining margins increased by the smallest extent compared to the other main trading hubs, and slightly extended the gains witnessed the previous month, as a robust performance from the middle section of the barrel provided support and offset the weakness from the top section of the barrel, as gasoline cracks stepped down from the post-pandemic highs witnessed in the previous month. The hurricane-related refinery outages witnessed in recent months had a greater impact on gasoil balances relative to other products, as the affected refineries were mostly focused on middle distillate production. The gasoil tightness, combined with declines in refinery outputs during the month due to peak refinery maintenance season, led to a bullish gasoil market and drove gasoil to replace gasoline as the main margin leader in September.

Graph 6 - 1: Refining margins



Sources: Argus and OPEC.

In response to the reduction in gasoil availability, US refiners were incentivized to maximize gasoil yields in detriment to that of jet fuel, which likely weighed further on jet fuel stock levels and contributed to the gains in US refining economics. USGC margins against WTI averaged $15.76/b in September, up by 28¢ m-o-m and $9.94/b y-o-y.

Refinery margins in **Europe** rose and benefitted from firm product demand, a growing product tightness in the region as well as a fall in product output due to turnarounds in several refineries. In addition, supressed fuel supplies from Russia led to downward pressure on product inventory levels, despite weaker gasoline exports to the US. In addition, healthy European industrial activity as well as strong manufacturing output led to robust gasoil performance, which drove European gasoil crack spreads to a $3.08 m-o-m gain, which represented the largest monthly rise across the barrel in the Atlantic Basin. Record-high natural gas prices registered in September were reported to have affected European refineries adversely, due to rising electrical costs, which likely capped the upside in refining economics, and limited further gains. European refinery run rates in September decreased by 520 tb/d m-o-m, according to preliminary data, with the start of peak maintenance refinery turnarounds in the region. In the near term, offline capacity is expected to rise further in line with historical trends, which should provide supply-side support to European product markets in the coming month. Refinery margins for Brent in Europe averaged $4.48/b in September, up by 67¢ compared with a month earlier and $3.71 y-o-y.

In **Asia**, margins showed the strongest gains relative to the other regions, supported by low fuel exports from China, which kept product supplies in the region relatively constrained and helped limit excess product availability in the region, ultimately lifting middle distillates and fuel oil crack spreads. Moreover, a solid fuel consumption outlook, amid recovering industrial demand due to the easing of COVID-19 restrictions and increased usage of the fuel for power generation on the back of high coal and gas prices provided a further boost in Asian fuel markets. The rise in natural gas and thermal coal prices is likely to encourage increased gas-to-oil switching, supporting markets for residual fuel oil and gasoil, in the coming months. Refinery margins for Oman in Asia gained $2.28 m-o-m to average $4.66/b in September, which was higher by $4.01 y-o-y.

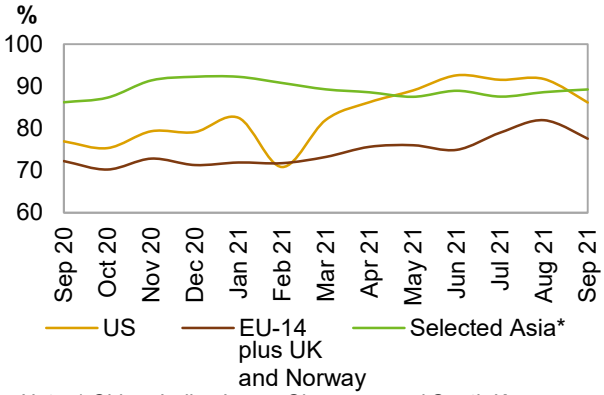
Refinery operations

US refinery utilization rates increased moderately in September to average 86.13%, which corresponds to a throughput of 15.62 mb/d. This represented a decline of 5.6 pp and 1.0 mb/d, respectively, compared with the previous month. Y-o-y, the September refinery utilization rate was up by 9.2 pp, with throughput showing a rise of 1.4 mb/d.

European refinery utilization averaged 77.56%, corresponding to a throughput of 9.24 mb/d. This is a m-o-m decline of 4.4 pp or 520 tb/d. On a y-o-y basis, utilization rates increased by 5.3 pp, while throughput was up by 287 tb/d.

In **selected Asia** – comprising Japan, China, India, Singapore and South Korea – refinery utilization rates rose, averaging 89.20% in September, corresponding to a throughput of 25.55 mb/d. Compared with the previous month, throughputs were up by 0.6 pp and 180 tb/d. Meanwhile, they were up y-o-y by 3.1 pp and 957 tb/d.

Graph 6 - 2: Refinery utilization rates



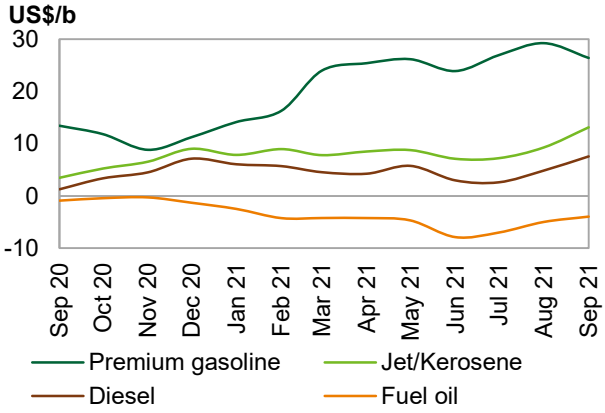
*Note: * China, India, Japan, Singapore and South Korea.*
Sources: Argus, EIA, Euroilstock, PAJ and OPEC.

Product markets

US market

US gasoline crack spreads reversed trend and declined, affected by a seasonal decline in demand, while mobility indicators for North America trended lower. Although gasoline inventory levels further extended the downward trend registered since June, and lost nearly 2.1 mb in September, expectations of seasonally lower demand going forward overshadowed the support from a tightening balance. At the same time, US gasoline prices reversed trend and rose by 90¢ to settle at $97.86/b in response to the narrowing balance in the country. As gasoline specifications are expected to change to winter grade, the combined effect of higher volumetric gains from additional lower-cost blending components amid weaker transportation activity could likely weigh further on US gasoline prices going forward. The US gasoline crack spreads lost $2.83 m-o-m to average $26.40/b in September, but were up by $12.97 y-o-y.

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



Sources: Argus and OPEC.

USGC **jet/kerosene crack spreads** rose in September to become the main margin leader across the barrel in the country, as jet fuel production rates declined m-o-m, while US jet/kerosene stocks fell by 1.1 mb over the month. A deliberate shift to maximize gasoil yields by US refiners, given that it was the product affected the hardest by unplanned weather-related outages witnessed in the recent weeks, likely added to the jet/kerosene bullishness. Furthermore, announced plans to relax air travel restrictions and allow foreign nationals to enter the US led to a jump in European flight bookings to the US, which ultimately may have contributed to the positive market outlook and supported jet/kerosene crack spreads. The US jet/kerosene crack spread against WTI averaged $13.12/b, up by $3.87 m-o-m and higher by $9.69 y-o-y.

US **gasoil crack spreads** against WTI saw further improvement in September and extended the upward trend affected by the lingering effects of sizeable cuts in production levels due to the recent hurricane-related refinery outages which led to a more severe product tightness in the US gasoil segment. In addition, a reduction in Brazil's national biodiesel blending mandates amid the harvest season and lower biofuel availability resulted in added optimism with regard to higher gasoil exports to that country. The US gasoil crack spread against WTI averaged $7.58/b, up by $2.73 m-o-m and by $6.33 y-o-y.

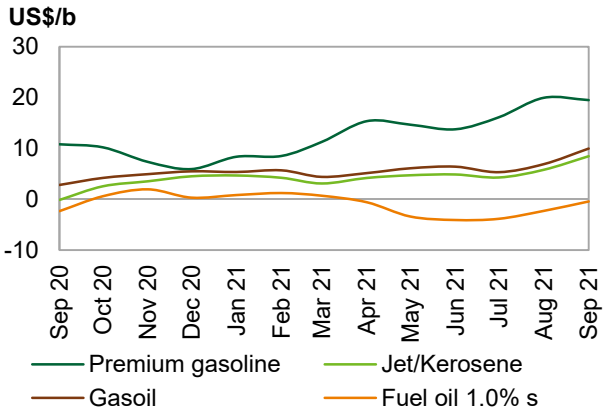
US **fuel oil crack spreads** against WTI strengthened further in September, sustained by supply-side cuts. Weakness seen at the top section of the barrel drove strength from complex configuration to their simple

counterparts, as conversion economics became less attractive. Going forward, the start of the autumn peak maintenance season should support fuel oil markets as traders' efforts to balance fuel supplies between the various regions are expected to boost bunker activity. In September, the US fuel oil crack spread against WTI averaged minus $3.96/b, higher by $1.03 m-o-m, but lower by $3.07 y-o-y.

European market

Gasoline crack spreads weakened in September, pressured by lower gasoline import requirements from the US, while gasoline inventories in the Amsterdam-Rotterdam-Antwerp trading hub increased. Although, European gasoline demand remained robust, European refiners depend on trans-Atlantic exports, primarily to the US Atlantic Coast, to absorb surplus gasoline. In addition to the downturn in gasoline exports to the US, the end of peak summer gasoline demand led to negative market sentiment in the market. The gasoline crack spread against Brent averaged $19.49/b in September, down by 45¢ m-o-m but up by $8.71 y-o-y.

Graph 6 - 4: Rotterdam crack spreads vs. Brent



Sources: Argus and OPEC.

In September, **jet/kerosene crack spreads** against Brent extended the gains seen in the previous month, backed by an improvement in demand as a relaxation of air travel restrictions in the UK helped further draw stock levels. The Rotterdam jet/kerosene crack spread against Brent averaged $8.47/b, up by $2.68 m-o-m and $8.63 y-o-y.

Gasoil crack spreads showed a robust performance in September and represented the main margin leader across the barrel in Europe. Longer-dated ICE gasoil time spreads were in a contango market structure and climbed as diesel balances in the Atlantic Basin look increasingly tight for winter. Dec-21/Dec-22 ICE gasoil spreads widened as markets priced in several months of higher utility demand for liquids this winter. Gasoil inventory levels at the Amsterdam-Rotterdam-Antwerp storage hub fell to a near 18-month low in late-September. European gasoil prices rose to $84.35 and surpassed the post-pandemic record high $80.29 registered in July, in line with a m-o-m rise in crude price. The gasoil crack spread against Brent averaged $9.95/b, which was higher by $3.08 m-o-m and $7.17 y-o-y.

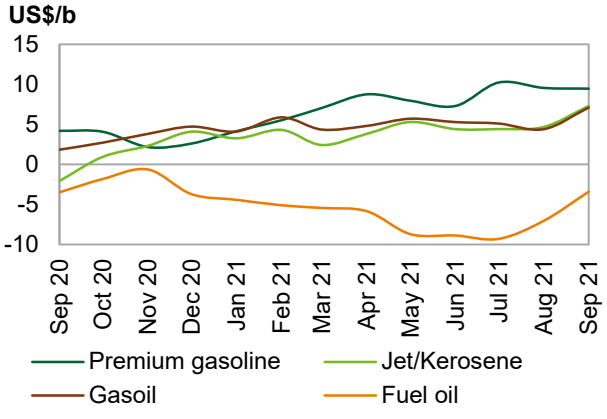
At the bottom of the barrel, **fuel oil 1.0% crack spreads** improved in September, in line with robust exports to outside the region. Robust requirements from Asia Pacific amid tight domestic supplies provided support. At the same time, an ongoing pick-up in fuel oil exports to fulfil higher power generation requirements going forward, amid the current high gas price environment should keep the balance tight and lend support to fuel oil markets in the near term. In Europe, fuel oil cracks averaged minus 47¢/b in September, having gained $1.86 m-o-m and $1.91 y-o-y.

Asian market

The **Asian gasoline 92 crack spread** lost some ground, affected by a downturn in volume requirements from outside the region, despite firm domestic demand, with weakness in European and US gasoline markets filtering through Asia. The Singapore gasoline crack spread against Oman in September averaged $9.48/b, down by 9¢ m-o-m but up by $5.27 y-o-y.

Asia **naphtha crack spreads** recovered from the sharp loss witnessed in the previous month, supported by healthy demand from the petrochemical sector although the arbitrage to the west was mostly closed during the month. The Singapore naphtha crack spread against Oman averaged $2.58/b, having increased by 94¢ m-o-m, and 84¢ y-o-y.

Graph 6 - 5: Singapore crack spreads vs. Dubai



Sources: Argus and OPEC.

In the middle of the barrel, **jet/kerosene crack spreads** in Asia strengthened, supported by lower supplies from China amid firm regional requirements for domestic air travel, mainly in China. Firmer demand from the faster-recovering aviation sector in the West could provide some support to the regional jet fuel market, amid expected improvements towards the end of the year, as the vaccinated share of the population grows and seasonal heating demand for kerosene picks up. The Singapore jet/kerosene crack spread against Oman averaged $7.31/b, up by $2.63 m-o-m and $9.39 y-o-y.

The Singapore **gasoil crack spread** moved higher, supported by a solidifying demand outlook. Tighter regional supplies amid strong Australian demand for gasoil and lower flows into Singapore have helped draw stockpiles from the Asian fuel hub. Moreover, tighter supplies amid lower Chinese exports in the spot market and steady arbitrage shipments to the West provided further support. At the same time, recovering industrial demand due to easing COVID-19 restrictions and increased usage of the fuel for power generation on the back of high coal and gas prices provided further support. The Singapore gasoil crack spread against Oman averaged $7.09/b, up by $2.69 m-o-m and $5.24 y-o-y.

The Singapore **fuel oil 3.5% crack spread** soared in response to a pick-up in volume requirements from the power generation sector. However, despite the sharp improvement, Asian fuel oil margins remained in negative territory. This was partly attributed to the tightening fuel oil balance in the region, while fuel oil prices surged in Asia as some power generators sought alternatives given the high natural gas price environment. Demand from utilities, primarily in Pakistan and Bangladesh, have lent backing to fuel oil prices, which continued to support fuel oil crack spreads. The expected seasonal rise in refinery outages globally should boost bunkering activities, as traders seek to rebalance product volumes between the various regions, supporting fuel oil markets in the near term. Singapore fuel oil cracks against Oman averaged minus $3.39/b, up by $3.65 m-o-m and 8¢ y-o-y.

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

Event	Time frame	Asia	Europe	US	Observations
Potential reinforcement of mobility restrictions	4Q21	↓ Negative impact on product markets	↓ Negative impact on product markets	↓ Negative impact on product markets	Concerns over the spread of new COVID-19 variants could exert pressure on fuel consumption levels and lead to product surplus in the near term.
Autumn refinery maintenance	Oct 21	↑ Positive impact on product markets	↑ Positive impact on product markets	↑ Positive impact on product markets	A lift in refining economics is expected once refineries go into maintenance and product output contracts.
Potential pick-up in fuel oil and diesel markets	4Q21	↑ Positive impact on fuel oil markets	↑ Positive impact on fuel oil markets	↑ Positive impact on fuel oil markets	Stronger seasonal demand for power generation, and a potentially tighter balance, should provide support to fuel oil markets in the current and coming month, mainly in Asia.

Source: OPEC.

Table 6 - 2: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				*Refinery utilization, %*			
	Jul 21	Aug 21	Sep 21	Change Sep/Aug	Jul 21	Aug 21	Sep 21	Change Sep/Aug
US	**16.59**	**16.63**	**15.62**	**-1.01**	**91.53**	**91.71**	**86.13**	**-5.6 pp**
Euro-14, plus UK and Norway	**9.41**	**9.76**	**9.24**	**-0.52**	**79.01**	**81.95**	**77.56**	**-4.4 pp**
France	0.79	0.86	0.79	-0.07	68.47	74.90	68.73	-6.2 pp
Germany	1.71	1.79	1.71	-0.08	83.16	87.35	83.33	-4.0 pp
Italy	1.21	1.28	1.19	-0.09	63.63	67.26	62.45	-4.8 pp
UK	1.01	1.03	0.94	-0.08	86.44	87.38	80.31	-7.1 pp
Selected Asia*	**25.06**	**25.37**	**25.55**	**0.18**	**87.50**	**88.56**	**89.20**	**0.6 pp**

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

Sources: Argus Media, EIA, EuroilStock, NBS, PAJ and OPEC.

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

Refinery crude throughput	2018	2019	2020	3Q20	4Q20	1Q21	2Q21	3Q21
OECD Americas	**19.31**	**18.96**	**16.54**	**16.35**	**16.24**	**16.29**	**18.16**	**18.31**
of which US	*17.31*	*16.99*	*14.72*	*14.55*	*14.32*	*14.20*	*16.17*	*16.28*
OECD Europe	**12.17**	**12.13**	**10.64**	**10.65**	**10.39**	**10.17**	**10.66**	**11.28**
of which:								
France	*1.10*	*1.00*	*0.67*	*0.76*	*0.71*	*0.58*	*0.65*	*0.81*
Germany	*1.80*	*1.78*	*1.72*	*1.72*	*1.67*	*1.58*	*1.66*	*1.74*
Italy	*1.35*	*1.35*	*1.11*	*1.15*	*1.08*	*1.06*	*1.24*	*1.22*
UK	*1.06*	*1.08*	*0.92*	*0.87*	*0.89*	*0.75*	*0.94*	*0.99*
OECD Asia Pacific	**6.98**	**6.79**	**5.89**	**5.50**	**5.88**	**5.82**	**5.49**	**5.78**
of which Japan	*3.11*	*3.02*	*2.48*	*2.25*	*2.51*	*2.56*	*2.22*	*2.67*
Total OECD	**38.46**	**37.88**	**33.08**	**32.49**	**32.52**	**32.28**	**34.31**	**35.37**
Latin America	**4.31**	**4.09**	**3.27**	**3.19**	**3.37**	**3.48**	**3.37**	**3.53**
Middle East	**6.98**	**6.84**	**6.02**	**6.24**	**6.37**	**6.46**	**6.54**	**6.78**
Africa	**2.16**	**2.16**	**2.02**	**1.93**	**2.06**	**2.13**	**2.08**	**2.14**
India	**4.89**	**5.04**	**4.42**	**4.00**	**4.73**	**4.93**	**4.55**	**4.44**
China	**12.03**	**13.02**	**13.48**	**14.00**	**14.14**	**14.12**	**14.38**	**13.85**
Other Asia	**5.18**	**4.95**	**4.62**	**4.22**	**4.49**	**4.48**	**4.84**	**5.02**
Russia	**5.72**	**5.70**	**5.39**	**5.28**	**5.29**	**5.55**	**5.52**	**5.59**
Other Eurasia	**1.32**	**1.30**	**1.11**	**1.09**	**1.24**	**1.16**	**1.23**	**1.30**
Other Europe	**0.63**	**0.62**	**0.49**	**0.46**	**0.50**	**0.46**	**0.53**	**0.48**
Total Non-OECD	**43.23**	**43.72**	**40.82**	**40.42**	**42.19**	**42.76**	**43.03**	**43.13**
Total world	**81.70**	**81.60**	**73.90**	**72.92**	**74.71**	**75.04**	**77.34**	**78.50**

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

		Aug 21	Sep 21	Change Sep/Aug	Annual avg. 2020	Year-to-date 2021
US Gulf (Cargoes FOB)						
Naphtha*		71.98	75.40	3.42	38.31	67.18
Premium gasoline	(unleaded 93)	96.96	97.86	0.90	51.89	88.44
Regular gasoline	(unleaded 87)	91.70	92.15	0.45	47.72	83.75
Jet/Kerosene		76.98	84.58	7.60	46.83	73.56
Gasoil	(0.2% S)	72.58	79.04	6.46	44.92	69.77
Fuel oil	(3.0% S)	60.92	65.14	4.22	34.72	57.28
Rotterdam (Barges FoB)						
Naphtha		71.63	75.19	3.56	39.00	66.51
Premium gasoline	(unleaded 98)	90.74	93.89	3.15	51.34	81.77
Jet/Kerosene		76.59	82.87	6.28	45.72	72.54
Gasoil/Diesel	(10 ppm)	77.67	84.35	6.68	49.17	73.74
Fuel oil	(1.0% S)	68.47	73.93	5.46	40.87	66.26
Fuel oil	(3.5% S)	60.89	64.71	3.82	37.71	59.07
Mediterranean (Cargoes FOB)						
Naphtha		71.28	74.92	3.64	37.58	65.86
Premium gasoline**		84.88	87.67	2.79	45.41	76.92
Jet/Kerosene		75.05	81.21	6.16	43.06	70.52
Diesel		77.48	83.98	6.50	48.55	73.28
Fuel oil	(1.0% S)	70.01	75.26	5.25	43.54	67.49
Fuel oil	(3.5% S)	58.97	63.76	4.79	33.31	56.74
Singapore (Cargoes FOB)						
Naphtha		71.01	75.15	4.14	40.66	67.05
Premium gasoline	(unleaded 95)	81.13	84.06	2.93	46.59	75.78
Regular gasoline	(unleaded 92)	78.94	82.05	3.11	44.99	73.97
Jet/Kerosene		74.05	79.88	5.83	44.75	70.61
Gasoil/Diesel	(50 ppm)	76.23	82.56	6.33	49.19	72.93
Fuel oil	(180 cst)	73.55	79.46	5.91	47.86	71.14
Fuel oil	(380 cst 3.5% S)	62.33	69.18	6.85	36.75	59.72

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

Sources: Argus and OPEC.

Tanker Market

The dirty tanker market remained soft in September amid a continued imbalance between tonnage supply and demand, keeping rates at low or even loss-making levels. However, there has been a definite pickup in sentiment amid hopes for a good – or certainly better – performance in the final quarter of the year. Loading schedules for both Russian and North Sea grades show noticeable increases in tonnage demand at a time of steadily higher flows from the Middle East. As a result, ship owners are reluctant to take on extended voyages at current levels heading into 4Q21 in order to not miss out when better rates finally arrive. Concerns about a shortfall in natural gas and cold for winter heating demand could also lift clean tanker rates as countries import more diesel to power small-scale generators.

Looking further ahead, a sustained recovery in the tanker market could take up to 12 months to materialize to allow for both a recovery in demand from emerging and developing markets and sufficient scrapping to reduce the overhang in tonnage availability.

Spot fixtures

Global spot fixtures fell further in September, declining by around 1.0 mb/d, or 7%, to average 13.55 mb/d. Declines came as activity in Asia had yet to take off and buying slowed in Europe. Compared to the previous year, spot fixtures were 1.4 mb/d or 9% lower.

Table 7 - 1: Spot fixtures, mb/d

Spot fixtures	Jul 21	Aug 21	Sep 21	*Change* Sep 21/Aug 21
All areas	14.74	14.60	13.55	-1.05
OPEC	10.41	9.94	9.39	-0.55
Middle East/East	6.17	5.97	5.99	0.02
Middle East/West	0.87	0.88	0.70	-0.18
Outside Middle East	3.37	3.09	2.70	-0.39

Sources: Oil Movements and OPEC.

OPEC spot fixtures also declined m-o-m in September, falling by almost 0.6 mb/d, or around 6%, to average 9.39 m/b. Compared with the same month last year, OPEC spot fixtures were about 0.5 mb/d or 5% lower.

Fixtures from the **Middle East-to-East** saw the only positive developments in September, edging up marginally from the previous month to average just under 6.0 mb/d, amid relatively steady flows to Asia. However, the route were around 1% lower compared to the same month last year.

Middle East-to-West fixtures declined by 0.2 mb/d or more than 20% m-o-m to average 700 tb/d, amid lower flows to the US. This was a decline of around 0.2 mb/d, or more than 21%, compared to the same month last year.

Outside the Middle East, fixtures declined 0.4 mb/d, or 13% m-o-m, to average 2.70 mb/d in September. Y-o-y, fixtures were 7%, or around 0.2 mb/d lower.

Sailings and arrivals

OPEC sailings increased m-o-m in September, gaining around 1.1 mb/d, or around 5%, to average 22.33 mb/d. Y-o-y, OPEC sailings were 1.9 mb/d, or about 9% higher than in the same month last year.

Middle East sailings continued to gain m-o-m in September, rising 0.6 mb/d, or about 4%, to average 16.5 mb/d. Y-o-y, sailings from the region rose 1.8 mb/d, or over 12%, compared with the same month last year.

Crude arrivals in September declined m-o-m on all routes. Arrivals in the Far East led declines, down 0.6 mb/d or over 4% to average 13.6 mb/d. Compared with the same month last year, arrivals were sharply higher by 5.1 mb/d or 61%. Arrivals in North America averaged 8.8 mb/d last month, a decline of 0.3 mb/d, or 3% m-o-m, but 0.9 mb/d or 12% higher than the same month last year. In West Asia, arrivals slipped 0.1 mb/d, or around 2%, to average 7.1 mb/d. Y-o-y, West Asia arrivals were 2.3 mb/d, or just under 49%, higher. European arrivals remained relatively stable in September at 12.6 mb/d, down by less than 1% from the previous month but some 2.7 mb/d, or 27%, higher than the same period last year.

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

Sailings	Jul 21	Aug 21	Sep 21	Change Sep 21/Aug 21
OPEC	21.02	21.23	22.33	1.10
Middle East	15.73	15.96	16.53	0.57
Arrivals				
North America	8.67	9.07	8.76	-0.31
Europe	12.62	12.70	12.62	-0.08
Far East	13.54	14.19	13.56	-0.63
West Asia	6.49	7.17	7.06	-0.11

Sources: Oil Movements and OPEC.

Dirty tanker freight rates

Very large crude carriers (VLCCs)

VLCC spot rates saw a welcoming increase in September, gaining 11% m-o-m, with an uptick on all major routes albeit from low summer levels and amid higher bunker costs. Y-o-y, VLCC rates showed a similar improvement of 11% with all major routes performing better.

Rates on the **Middle East-to-East** route rose 16% m-o-m to average WS36 points, amid a general uptick in eastward activity for the vessel class. Y-o-y, rates were 20% higher.

Rates on the **Middle East-to-West** route regained the previous month's losses, gaining 5% in September to stand at WS22 points, amid steady flows to the US. Y-o-y, rates were 10% higher.

The **West Africa-to-East** route also improved, up 12% m-o-m in September to average WS37 as improving flows to China offset declines elsewhere in the region. Rates were 9% higher compared with September 2020.

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

VLCC	Size *1,000 DWT*	Jul 21	Aug 21	Sep 21	Change Sep 21/Aug 21
Middle East/East	230-280	31	31	36	5
Middle East/West	270-285	22	21	22	1
West Africa/East	260	34	33	37	4

Sources: Argus and OPEC.

Suezmax

Suezmax rates experienced m-o-m gains in September, rising 9%, picking up from low levels on most routes. Rates were 45% higher compared to the same month last year.

On the **West Africa-to-USGC** route, rates fell m-o-m to average WS48, representing a drop of 4% compared to the month before as flows were impacted by weather-related disruptions in the Gulf of Mexico. However, rates were 55% higher than in September 2020.

Meanwhile, spot freight rates on the **USGC-to-Europe** route jumped 29% m-o-m to average WS49 points, on higher flows into the Netherlands. This was a 36% gain compared to the same month last year.

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

Suezmax	Size *1,000 DWT*	Jul 21	Aug 21	Sep 21	Change Sep 21/Aug 21
West Africa/US Gulf Coast	130-135	46	50	48	-2
US Gulf Coast/ Europe	150	37	38	49	11

Sources: Argus and OPEC.

Aframax

Aframax rates continued the previous month's gains, increasing 3% m-o-m on average, supported by weather disruptions in the Gulf of Mexico which impacted activities. Y-o-y, rates were 55% higher.

The **Indonesia-to-East** route fell back from the previous month's strong performance, declining 11% m-o-m to average WS89, which was still 29% higher than in the same month last year. In contrast, the **Caribbean-to-USEC** route improved in September, rising 27% m-o-m to average WS105, while rates were 88% higher y-o-y.

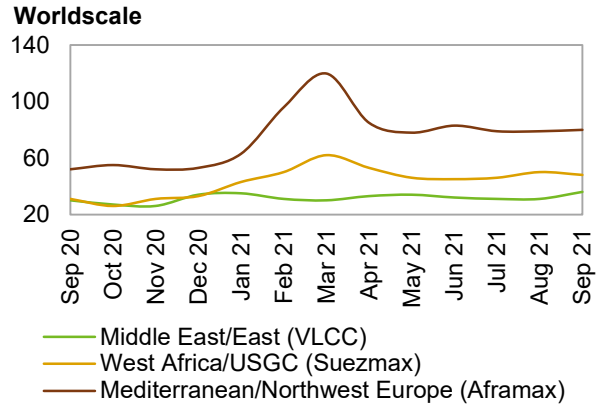
Table 7 - 5: Dirty Aframax spot tanker freight rates, WS

Aframax	Size 1,000 DWT	Jul 21	Aug 21	Sep 21	Change Sep 21/Aug 21
Indonesia/East	80-85	81	100	89	-11
Caribbean/US East Coast	80-85	79	83	105	22
Mediterranean/Mediterranean	80-85	89	86	89	3
Mediterranean/Northwest Europe	80-85	79	79	80	1

Sources: Argus and OPEC.

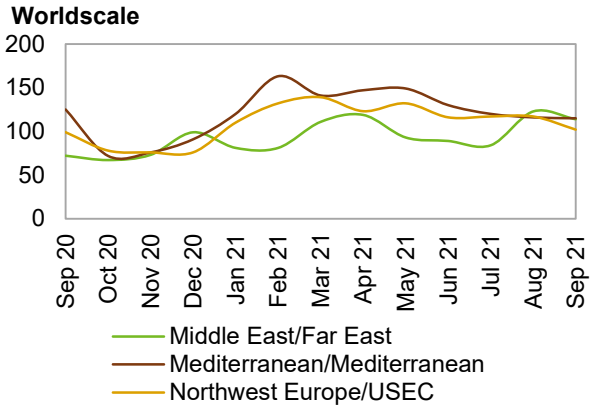
Med routes experienced marginal gains September. The **Cross-Med** route averaged WS89 in September, representing an increase of 3% compared with the previous month. Y-o-y, however, rates were 56% higher. On the **Mediterranean-to-NWE** route, rates were marginally higher m-o-m at WS80. Compared with the same month last year, rates on the route were 54% higher.

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



Sources: Argus and OPEC.

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



Sources: Argus and OPEC.

Clean tanker freight rates

Average **clean spot freight rates** in September gave up some of the gains enjoyed in the previous month, slipping 5% m-o-m. A decline was seen in both East and West of Suez rates, with the winding down of the driving season in the Norther Hemisphere and the winter demand yet to kick contributing to a seasonal decline. Rates in the west were 6% lower compared to both the previous month and previous year, while East of Suez rates fell 4% m-o-m but were 68% higher y-o-y.

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

East of Suez	Size 1,000 DWT	Jul 21	Aug 21	Sep 21	Change Sep 21/Aug 21
Middle East/East	30-35	84	123	114	-9
Singapore/East	30-35	105	158	155	-3
West of Suez					
Northwest Europe/US East Coast	33-37	117	117	102	-15
Mediterranean/Mediterranean	30-35	120	116	115	-1
Mediterranean/Northwest Europe	30-35	130	125	121	-4

Sources: Argus and OPEC.

In the East of Suez, the **Middle East-to-East** route declined 7% to average WS114, but were 58% higher y-o-y. Freight rates on the **Singapore-to-East** route declined 2% m-o-m to average WS155. Rates were 74% higher compared with September 2020.

In the West of Suez market, rates on the **NWE-to-USEC** route declined 13% m-o-m, averaging WS102 points. However, rates were 3% higher compared with the same month last year.

Rates on the **Cross-Med** and **Med-to-NWE** routes declined by 1% and 3% respectively to average WS115 and WS121 points. Y-o-y, rates were 8% lower on the Cross-Med route and down 10% on the Med-to-NWE route.

Crude and Refined Products Trade

Preliminary data shows US crude imports in September recovering from a slight dip the month before to average a healthy 6.4 mb/d. US crude exports averaged 2.6 mb/d in September, continuing an alternating pattern of rises and dips, this month on the lower side. US product exports hit a 16-month low in September, averaging 4.6 mb/d, amid broad declines due to hurricane disruptions.

After four months of relatively muted levels, China's crude imports jumped to 10.5 mb/d in August, pushed higher by the arrival of storm-delayed cargoes, although policy-led uncertainties continue to impact China's trade flows. On the one hand, there have been delays in issuing crude import quotas to independent refineries; on the other hand, officials have instructed energy firms to ensure supplies at any cost.

India's crude imports finally saw a recovery after following a general downward trend since December 2020, to average 4.1 mb/d in August. Tanker tracking data shows India's crude imports remaining steady in September, with higher inflows from the Americas and Africa, offsetting declines in the Middle East.

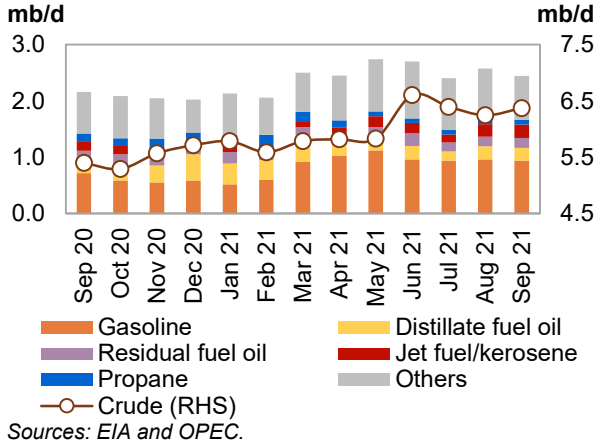
Japan's crude imports continued to recover from low levels, reaching 2.7 mb/d in August, the highest since April 2020. Japan crude and product imports are expected to see a boost from demand in the power sector for fuel oil as well as crude for direct burning, amid reports of a restart of oil-fired power units.

OECD Europe crude imports remained close to 14-month highs in June, averaging 8.5 mb/d, while crude exports recovered some of the previous month's decline in June, averaging 0.3 mb/d. Loading schedules show North Sea exports picking up in 4Q21.

US

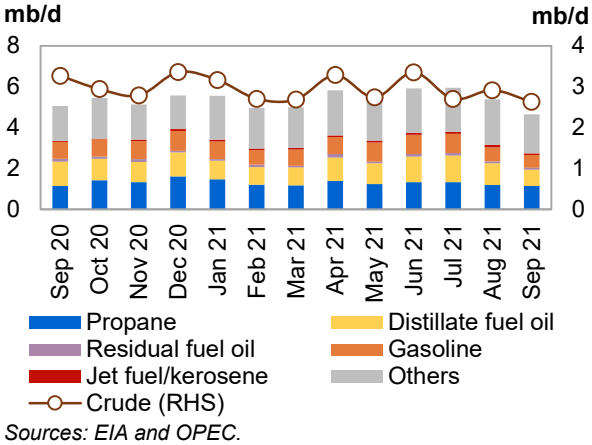
Preliminary data shows **US crude imports** picking back up again in **September** to average a healthy 6.4 mb/d. Crude inflows were 0.1 mb/d or 2% higher m-o-m. Compared with the same month last year, crude imports were 0.9 mb/d, or 18%, higher. **US crude exports** averaged 2.6 mb/d in September, continuing an alternating pattern of rises and dips, this time with a pickup of flows to China preventing a stronger decline. Compared with the same month last year, crude exports were around 0.3 mb/d lower, representing a drop of around 10%.

Graph 8 - 1: US imports of crude and products



Sources: EIA and OPEC.

Graph 8 - 2: US exports of crude and products



Sources: EIA and OPEC.

The latest monthly data for **US crude exports by destination** for **July** shows outflows to Taiwan and India sharply lower and partly offset by higher exports to Europe, particularly the Netherlands. South Korea was the leading destination at 490 tb/d, followed by India at 370 tb/d and Canada at 310 tb/d.

US net crude imports averaged 3.7 mb/d in **September**, compared with 3.3 mb/d the month before and 2.1 mb/d in the same month last year.

On the **product** side, preliminary data shows **US imports** broadly reversed the previous month's gains in September, falling to 2.4 mb/d, amid the winding down of the driving season. This represents a m-o-m decline of 0.1 mb/d or almost 5%. Y-o-y, product imports were close to 0.3 mb/d, or 13%, higher. **US product exports** hit a 16-month low in September, averaging 4.6 mb/d, amid broad based declines due to hurricane disruptions. Product outflows declined by 0.7 mb/d or around 14%, m-o-m. Compared with the same month last year, product exports were close to 0.4 mb/d, or almost 8%, lower.

As a result, **US net product exports** averaged around 2.2 mb/d in September, compared with 2.8 mb/d in the previous month and 2.9 mb/d in the same month last year.

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

US	Jul 21	Aug 21	Sep 21	Change Sep 21/Aug 21
Crude oil	3.70	3.33	3.74	0.41
Total products	-3.55	-2.81	-2.21	0.60
Total crude and products	**0.15**	**0.52**	**1.53**	**1.01**

Note: Totals may not add up due to independent rounding.
Sources: EIA and OPEC.

Preliminary data indicates that the US **net crude and product imports** averaged 1.5 mb/d in September, the highest since May 2019, driven by declines in products as well as crude. This compares with net imports of 0.5 mb/d the month before and net exports of almost 0.8 mb/d in September 2020.

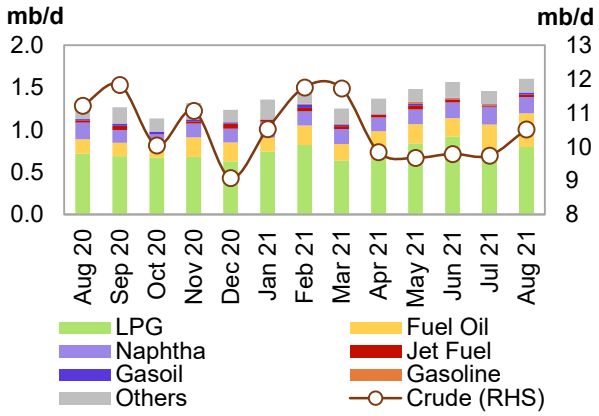
Looking ahead, US crude imports should be supported by seasonal strength in 4Q21. Crude exports are expected to remain at the current stable levels, despite higher prices as US shale producers continue to exhibit fiscal discipline. Product flows should pick up later in 4Q21, supported by seasonal factors and the return from weather-related outages.

China

China's crude imports jumped to 10.5 mb/d in **August**, representing a gain of 0.8 mb/d or 8% m-o-m. The increase comes after relatively muted inflows over the previous four months which had been dampened in part by government efforts to reign in the refining sector, both on oversight and environmental grounds. Further factors driving the increase have been the arrival of some cargoes delayed by Typhoon In-fa, the second-wettest tropical cyclone on record, as well as improving domestic demand amid easing lockdown measures and preparations for the Golden Week holiday later in October. Y-o-y, crude imports were 0.7 mb/d or 6% lower, as inflows failed to match the exaggerated levels in the same month last year, when importers took advantage of low oil prices to build inventories.

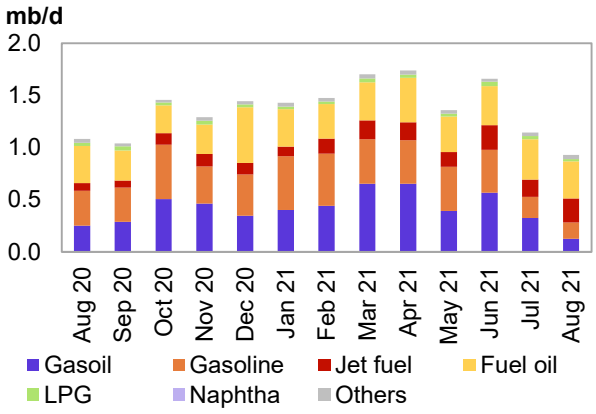
In terms of **crude imports by source**, Saudi Arabia saw a strong increase to take clear hold of the top position in August, with a share of 18%. Russia saw its share drop to below 15%, while Iraq boosted its share to 13% and Brazil also saw a strong increase for a share of 8%.

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



Sources: China, Oil and Gas Petrochemicals and OPEC.

Graph 8 - 4: China's export of total products



Sources: China, Oil and Gas Petrochemicals and OPEC.

Products imports also showed strength in August, reaching the highest since June 2020 at 1.6 mb/d. Gains were primarily driven by fuel oil, which independent refiners have been increasingly turning to as a feedstock to make up for a lack of access to crude import quotas. Product imports rose almost 10%, or 0.1 mb/d, m-o-m and were close to 23%, or 0.3 mb/d, higher compared to the same month last year.

Product exports fell to a 13-month low in August, averaging 0.9 mb/d, as gasoline and gasoil outflows fell to the lowest since 2015. Declines came amid an expected pickup in domestic demand as mobility restrictions were lifted and as the government appeared to be questioning the need for high refined product outflows given the perceived environmental cost. Product exports were 0.2 mb/d or 19% lower m-o-m and down 0.2 mb/d or 14% y-o-y.

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

China	Jun 21	Jul 21	Aug 21	*Change* Aug 21/Jul 21
Crude oil	9.75	9.60	10.52	0.92
Total products	-0.09	0.31	0.67	0.36
Total crude and products	**9.66**	**9.91**	**11.19**	**1.28**

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

Sources: China, Oil and Gas Petrochemicals and OPEC.

As a result, China remained a **net product importer** for the second-consecutive month in August, with net product imports averaging 0.7 mb/d, compared with net imports of 0.3 mb/d the month before and 0.2 mb/d in the same month last year.

Looking ahead, policy-led uncertainties continues to impact China's trade flows. On the one hand, there have been delays in issuing crude import quotas to independent refineries; on the other hand, officials have instructed energy firms to ensure supplies at all costs. Officials have also questioned the value of exporting products abroad, given the emissions produced at home, indicating that local refineries will likely be reluctant to step up product outflows to a noticeable degree.

India

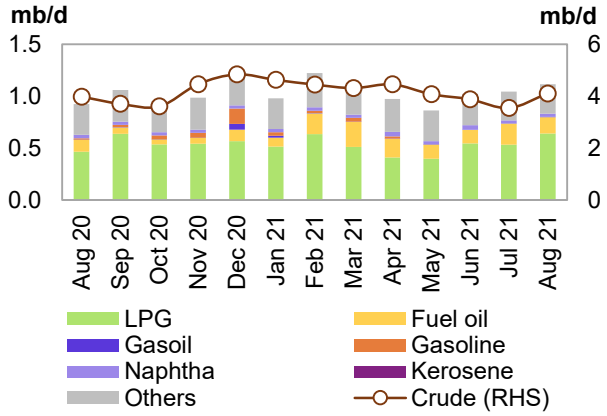
India's crude imports finally saw a recovery in **August** to average 4.1 mb/d, after following a general downward trend since December 2020. Compared with the previous month, crude imports rose by 0.6 mb/d, or almost 16%. Imports were also 0.1 mb/d, or 3%, higher than in the same month last year.

In terms of **crude imports by source**, the latest data for July shows Iraq retaining the top position with a share of almost 27%. Saudi Arabia was second with around 16%, followed by the United Arab Emirates (UAE) with around 10%. The Nigeria was fourth with 9% closely followed by the United States.

For **products**, **imports** rose for the third month in a row, averaging 1.1 mb/d, led by a strong jump in fuel oil, which offset declines in naphtha and kerosene. Product inflows in August were 7% higher m-o-m and around 21% over the levels seen in the same month last year.

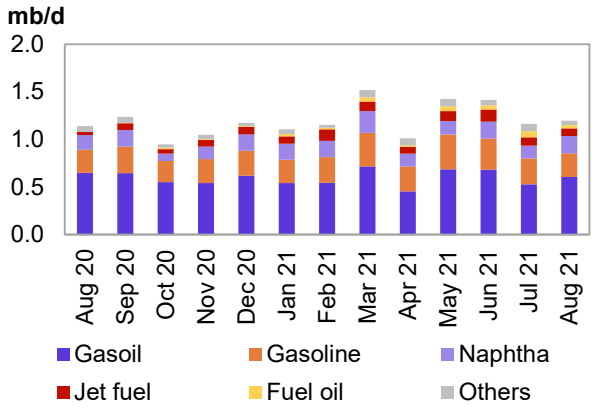
Product exports in August edged up slightly m-o-m to average 1.2 mb/d, with declines in gasoline and fuel oil offsetting gains in naphtha. Product outflows were around 3% higher m-o-m and 5% higher y-o-y.

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, **net product exports** averaged 81 tb/d in August, compared with 119 tb/d the month before and 214 tb/d in the same month last year.

Looking ahead, tanker tracking data shows crude imports remaining steady in September, with higher inflows from the Americas and Africa, offsetting declines in the Middle East. Product trade flows were seen higher in September, with imports showing gains from most regions while exports were seen heading to trading hubs.

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

India	Jun 21	Jul 21	Aug 21	Change Aug 21/Jul 21
Crude oil	3.88	3.55	4.11	0.56
Total products	-0.39	-0.12	-0.08	0.04
Total crude and products	**3.49**	**3.43**	**4.02**	**0.60**

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

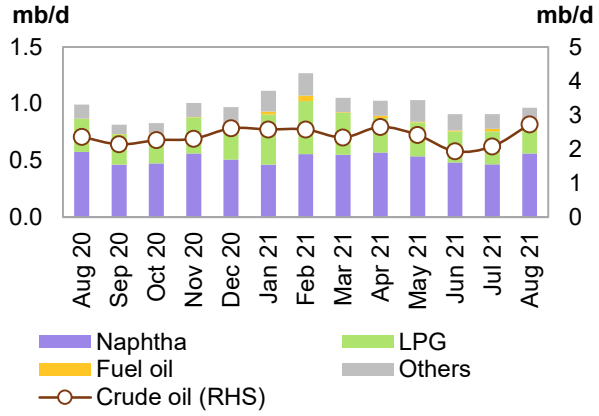
India data table does not include information for crude import and product export by Reliance Industries.

Sources: PPAC and OPEC.

Japan

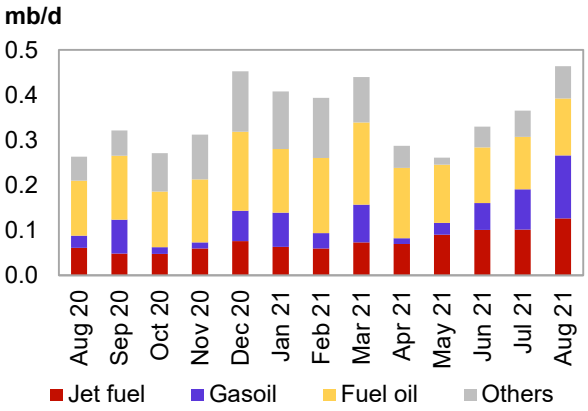
Japan's crude imports recovered from low levels seen in the previous months to average 2.7 mb/d in **August**. The Tokyo Olympics held 23 July-8 August provided limited support due to COVID-19 safeguards. Crude imports were 644 tb/d or around 31% higher than in the previous month and 366 tb/d or 16% higher y-o-y.

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.

In terms of shares of **crude imports by source**, UAE remained in the top spot with a share of almost 40%. Saudi Arabia came second, with a share of 37%, followed by Kuwait and Qatar, with 6.7% and 6.1% respectively.

Product imports including LPG were broadly increased 6% in August to 965 tb/d, driven by higher inflows of naphtha and LPG. Compared with the same month last year, product imports rose by around 3%.

Product exports continued to show strong m-o-m gains, increasing 27% to average 0.5 mb/d, with higher outflows across all major products. Compared with the previous year, product exports were 76% higher.

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

Japan	Jun 21	Jul 21	Aug 21	Change Aug 21/Jul 21
Crude oil	1.94	2.08	2.73	0.64
Total products	0.58	0.54	0.50	-0.04
Total crude and products	**2.52**	**2.63**	**3.23**	**0.60**

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

Sources: METI and OPEC.

As a consequence, Japan's **net product imports** averaged 502 tb/d in August, down from 543 tb/d and 0.7 mb/d in August 2020.

Looking ahead, Japan's crude and product imports could see a boost from the emerging energy crunch in the power sector, boosting demand for fuel oil and crude for direct burning, amid reports of a restart of oil-fired power units.

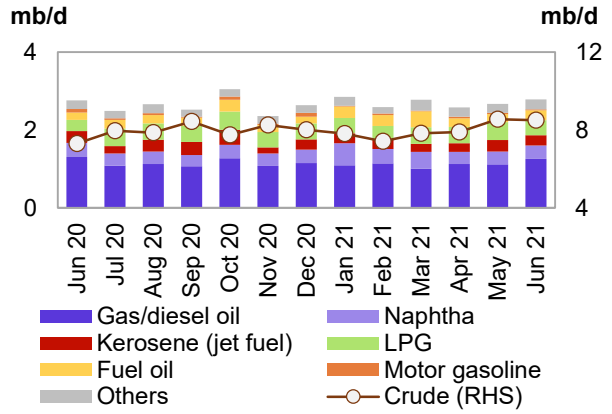
OECD Europe

The most recent available official data show **OECD Europe** crude imports remained close to a 14-month high in **June**, averaging 8.5 mb/d. Imports were largely unchanged m-o-m, but were 1.2 mb/d or almost 17% higher than June 2020 which marked the low point during the pandemic last year.

Crude exports recovered some of the previous month's decline in June, averaging 0.3 mb/d. This represents an increase of 21%. The gain came amid higher flows to Asia. Compared with the same period last year, crude exports were 0.3 mb/d, or around 45%, higher.

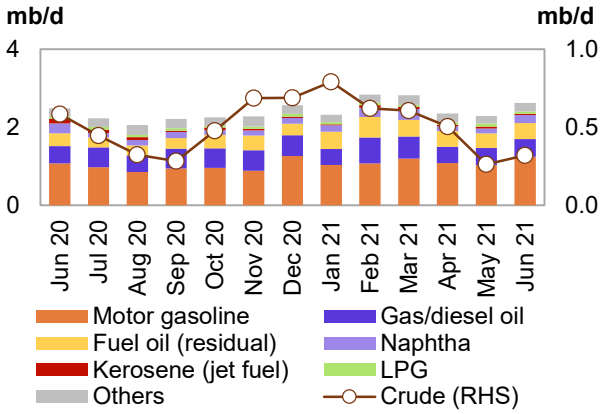
As a result, **net crude imports** averaged 8.2 mb/d in June, down from 8.3 mb/d the month before and the 6.7 mb/d recorded in the same month of 2020.

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



Sources: IEA and OPEC.

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



Sources: IEA and OPEC.

On the **product** side, **imports** reached a five-month high, averaging 2.8 mb/d, with the m-o-m increase driven by strong growth in diesel inflows. Product imports were around 4%, or 0.1 mb/d, higher m-o-m. Imports were broadly in line with the level seen in June 2020.

Meanwhile, **product exports** rebounded after two consecutive declines to average 2.6 mb/d in June, supported by higher outflows of motor fuels and naphtha, and to a lesser extent fuel oil. Outflows were around 0.3 mb/d or almost 15% higher than in the previous month and some 0.1 mb/d or almost 6% higher y-o-y.

As a result, the region was a **net product importer** in June, registering net inflows of 0.2 mb/d, compared with 0.4 mb/d the month before and 0.3 mb/d in the same month last year.

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

OECD Europe	Apr 21	May 21	Jun 21	Change Jun 21/May 21
Crude oil	7.39	8.29	8.18	-0.10
Total products	0.23	0.38	0.16	-0.22
Total crude and products	**7.61**	**8.66**	**8.34**	**-0.32**

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

Sources: IEA and OPEC.

Combined, **net crude and product imports** averaged 8.3 mb/d in June, up from 8.7 mb/d the month before and 7.0 mb/d in June 2020.

Looking ahead, more recent data show crude imports strengthening slightly through to September. Tanker tracking data shows OECD crude exports strengthened in September and loading schedules indicate further gains in 4Q21.

Eurasia

Total crude oil exports from Russia and Central Asia declined for the second consecutive month to average 5.8 mb/d in **August**. M-o-m, crude exports declined 0.2 mb/d or just under 3%. Compared to the same month last year, total crude exports from the region were broadly in line with August 2020 levels. The fall in exports was driven by declines in outflows from the Black Sea's Novorossiysk port and on the Druzhba pipeline.

Overall, crude exports through the **Transneft system** rose in August, as higher volumes on the Ust-Luga port terminal and elsewhere were enough to offset the declines via the Druzhba pipeline. Outflows via the Transneft system rose by 89 tb/d, or about 3%, to average 3.5 mb/d. Compared with the same month last year, exports were 0.1 mb/d, or 3%, higher.

Within the system, total shipments from the **Black Sea** edged up 39 tb/d m-o-m, or 12%, to average 367 tb/d. **Baltic Sea** exports recovered some of the previous month's losses, rising 138 tb/d m-o-m, or almost 15%, to average 1.1 mb/d. Shipments from Ust-Luga jumped 55% or 139 tb/d to average 391 tb/d, while Primorsk exports were broadly flat at 688 tb/d. As already noted, shipments via the **Druzhba** pipeline fell back from the higher levels seen in the previous month, declining 144 tb/d m-o-m, or around 18%, to average 707 tb/d. **Kozmino** shipments were unchanged m-o-m at 698 tb/d. Exports to China via the **ESPO pipeline** increased 55 tb/d m-o-m to average 633 tb/d in August.

In the **Lukoil system**, exports via the Barents Sea declined by around 32% m-o-m to average 69 tb/d in August, while those from the Baltic Sea edged down marginally.

On other routes, **Russia's Far East** exports gained about 2% m-o-m in August to average 0.3 mb/d. This was 7% lower compared with the same month last year.

Central Asia's total exports averaged around 0.2 mb/d in August, representing a drop of close to 3% compared with the month before but a gain of 7% y-o-y.

Black Sea total exports fell sharply in August, down 264 mb/d or almost 19% compared to the previous month and were around 5% lower than the same month last year. Outflows from the Novorossiysk port terminal (CPC) drove the decline, falling 21% or 286 tb/d, while exports from Supsa rose 27% or 22 tb/d. Exports via the **Baku-Tbilisi-Ceyhan (BTC) pipeline** increased 9% m-o-m to 504 tb/d, but still showed a loss of 2% y-o-y.

Total product exports from Russia and Central Asia rose 0.4 mb/d or 16% m-o-m to average 3.0 mb/d in August. M-o-m gains were seen in all major products. Y-o-y, total product exports were 29% higher in August, with gains seen on all major product except jet fuel.

Commercial Stock Movements

Preliminary August data sees total OECD commercial oil stocks down by 19.5 mb m-o-m. At 2,855 mb, they were 363 mb lower than the same time one year ago, 183 mb lower than the latest five-year average and 131 mb below the 2015-2019 average. Within the components, crude stocks fell m-o-m by 22.8 mb, while product stocks were up by 3.2 mb.

At 1,362 mb, crude stocks in the OECD were 102 mb less than the latest five-year average and 87 mb below the 2015-2019 average. OECD product stocks stood at 1,493 mb, representing a deficit of 81 mb compared with the latest five-year average and 43 mb below the 2015-2019 average.

In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.1 days in August to stand at 62.5 days. This is 12.3 days below August 2020 levels, 2.5 days less than the latest five-year average and 0.3 days lower than the 2015-2019 average.

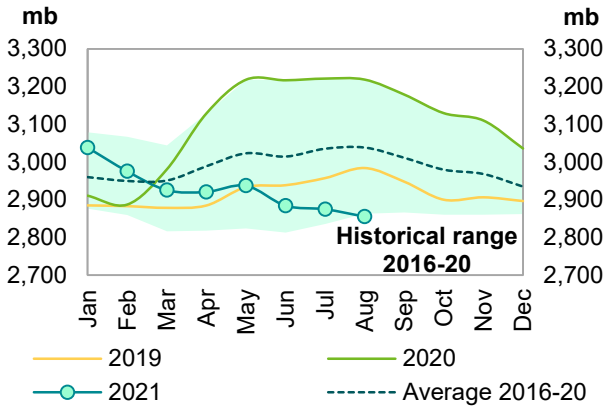
Preliminary data for September showed that total US commercial oil stocks fell m-o-m by 10.0 mb to stand at 1,234 mb. This is 189.4 mb, or 13.3%, lower than the same month a year ago and 95.6 mb, or 7.2%, below the latest five-year average. Crude and products stocks fell m-o-m by 4.5 mb and 5.5 mb, respectively.

OECD

Preliminary August data sees **total OECD commercial oil stocks** down by 19.5 mb m-o-m. At 2,855 mb, they were 363 mb lower than the same time one year ago and 183 mb lower than the latest five-year average.

Within the components, crude stocks fell m-o-m by 22.8 mb, while product stocks were up by 3.2 mb. Total commercial oil stocks in August fell in OECD America and OECD Europe, while they rose in OECD Asia Pacific.

Graph 9 - 1: OECD commercial oil stocks



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

OECD **commercial crude stocks** fell m-o-m in August by 22.8 mb to stand at 1,362 mb. This is 171.5 mb lower than the same time a year ago and 87.3 mb below the latest five-year average. Compared with the previous month, OECD Americas and OECD Europe registered stock draws of 13.5 mb and 10.8 mb, respectively, while OECD Asia Pacific saw a stock build of 1.5 mb.

In contrast, **total product inventories** rose m-o-m by 3.2 mb in August to stand at 1,493 mb. This is 191.7 mb less than the same time a year ago, and 80.9 mb lower than the latest five-year average. Within the OECD, product stocks in OECD Asia Pacific and OECD Europe rose m-o-m by 4.8 mb and 3.0 mb, respectively, while OECD America fell by 4.5 mb.

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

OECD stocks	Aug 20	Jun 21	Jul 21	Aug 21	*Change* Aug 21/Jul 21
Crude oil	1,534	1,393	1,385	1,362	*-22.8*
Products	1,685	1,491	1,490	1,493	*3.2*
Total	**3,218**	**2,884**	**2,875**	**2,855**	***-19.5***
Days of forward cover	**74.8**	**62.7**	**62.6**	**62.5**	***-0.1***

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

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

In terms of **days of forward cover**, OECD commercial stocks fell m-o-m by 0.1 days in August to stand at 62.5 days. This is 12.3 days below August 2020 levels, 2.5 days less than the latest five-year average and 0.3 days lower than the 2015-2019 average. OECD Americas and OECD Asia Pacific were below the latest five-year average: the Americas by 2.7 days at 61.5 days and Asia Pacific by 5.1 days at 49.9 days. OECD Europe also showed a deficit of 1.3 days with the latest five-year average, at 70.8 days.

OECD Americas

OECD Americas total commercial stocks fell m-o-m by 18.1 mb in August to settle at 1,528 mb. This is 174.6 mb less than the same month last year and 68.8 mb lower than the latest five-year average.

Commercial crude oil stocks in OECD Americas fell m-o-m by 13.5 mb in August to stand at 768 mb, which is 78.4 mb lower than in August 2020 and 22.5 mb less than the latest five-year average. The stock draw came on the back of higher crude runs in August.

Total product stocks in OECD Americas fell m-o-m by 4.5 mb in August to stand at 761 mb. This was 96.1 mb lower than the same month one year ago and 46.3 mb below the latest five-year average. Lower total consumption in the region was behind the stock build.

OECD Europe

OECD Europe total commercial stocks fell m-o-m by 7.8 mb in August to settle at 977 mb. This is 115.1 mb less than the same month last year and 38.6 mb below the latest five-year average.

OECD Europe's **commercial crude stocks** in August fell m-o-m by 10.8 mb to end the month at 417 mb, which is 37.8 mb lower than one year ago and 18.5 mb below the latest five-year average. The fall in crude oil inventories came on the back of higher m-o-m refinery throughputs in the EU-14 plus the UK and Norway, which increased by around 350 tb/d to 9.76 mb/d in August.

In contrast, OECD Europe's **commercial product stocks** rose m-o-m by 3.0 mb to end August at 560 mb. This is 77.3 mb lower than a year ago and 20.2 mb below the latest five-year average.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks rose m-o-m by 6.4 mb in August to stand at 349 mb. This is 73.6 mb lower than a year ago and 75.8 mb below the latest five-year average.

OECD Asia Pacific's **crude inventories** rose by 1.5 mb m-o-m to end August at 177 mb, which is 55.3 mb lower than one year ago and 61.4 mb below the latest five-year average.

OECD Asia Pacific's **total product inventories** increased by 4.8 mb m-o-m to end August at 172 mb. This is 18.3 mb lower than the same time a year ago and 14.4 mb less than the latest five-year average.

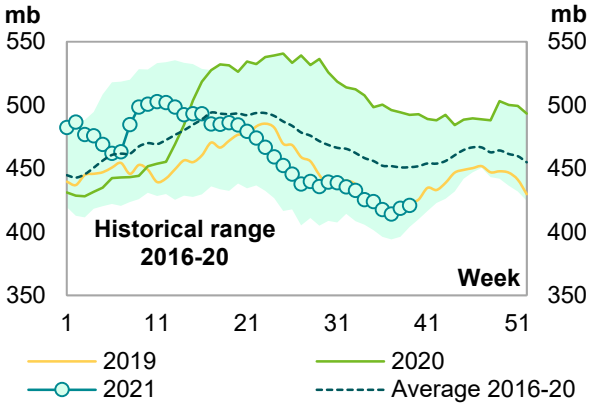
US

Preliminary data for September showed that **total US commercial oil stocks** fell m-o-m by 10.0 mb to stand at 1,234 mb. This is 189.4 mb, or 13.3%, lower than the same month a year ago and 95.6 mb, or 7.2%, below the latest five-year average. Crude and product stocks fell m-o-m by 4.5 mb and 5.5 mb, respectively.

US **commercial crude stocks** in September fell m-o-m by 4.5 mb to stand at 420.9 mb. This is 76.8 mb, or 15.4%, lower than the same month last year, and 35.3 mb, or 7.7%, below the latest five-year average. The stock draw came despite lower crude runs, which declined by around 1.0 mb/d to an average of 15.6 mb/d.

Total product stocks in September fell m-o-m by 5.5 mb to stand at 812.9 mb. This is 112.6 mb, or 12.2%, below September 2020 levels, and 60.3 mb, or 6.9%, lower than the latest five-year average. The stock draw was mainly driven by higher US consumption.

Graph 9 - 2: US weekly commercial crude oil inventories



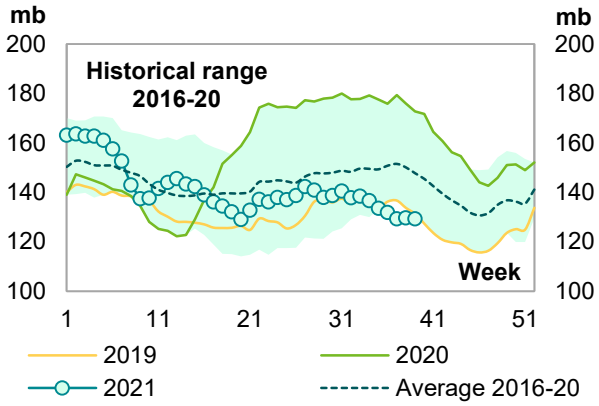
Sources: EIA and OPEC.

Gasoline stocks in September fell m-o-m by 2.1 mb to settle at 225.1 mb. This is 2.5 mb, or 1.1%, below the same month last year, and 5.0 mb, or 2.2%, lower than the latest five-year average. The monthly stock draw came mainly on the back of higher gasoline consumption.

Distillate stocks dropped m-o-m by 7.4 mb in September to stand at 129.3 mb. This is 43.2 mb, or 25.0%, lower than the same month last year, and 18.7 mb, or 12.6%, below the latest five-year average.

Jet fuel fell m-o-m by 1.1 mb, ending September at 41.3 mb. This is 1.2 mb, or 2.9%, higher than the same month last year, and 2.7 mb, or 6.1%, above the latest five-year average.

Graph 9 - 3: US weekly distillate inventories



Sources: EIA and OPEC.

Residual fuel oil stocks dropped m-o-m in September, falling by 0.6 mb. At 28.2 mb, this was 3.9 mb, or 12.3%, lower than a year ago, and 4.5 mb, or 13.8%, below the latest five-year average.

Table 9 - 2: US commercial petroleum stocks, mb

US stocks	Sep 20	Jul 21	Aug 21	Sep 21	Change Sep 21/Aug 21
Crude oil	**497.7**	**438.9**	**425.4**	**420.9**	***-4.5***
Gasoline	227.6	230.8	227.2	225.1	*-2.1*
Distillate fuel	172.5	142.0	136.7	129.3	*-7.4*
Residual fuel oil	32.1	29.1	28.7	28.2	*-0.6*
Jet fuel	40.1	43.8	42.4	41.3	*-1.1*
Total products	**925.5**	**830.0**	**818.4**	**812.9**	***-5.5***
Total	**1,423.2**	**1,268.9**	**1,243.8**	**1,233.8**	***-10.0***
SPR	**642.2**	**621.3**	**621.3**	**617.8**	***-3.5***

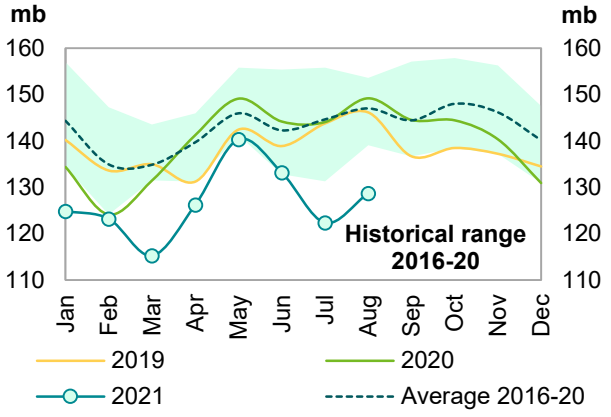
Sources: EIA and OPEC.

Japan

In **Japan**, **total commercial oil stocks** in August rose m-o-m by 6.4 mb to settle at 128.7 mb. This is 20.5 mb, or 13.7%, lower than the same month last year, and 18.3 mb, or 12.5%, below the latest five-year average. Crude and products stocks rose m-o-m by 1.5 mb and 4.8 mb, respectively.

Japanese **commercial crude oil stocks** rose in August to stand at 67.1 mb. This is 16.9 mb, or 20.1%, below the same month a year ago, and 15.1 mb, or 18.4%, lower than the latest five-year average. The build came on the back of higher crude imports, which increased by 11.4%.

Graph 9 - 4: Japan's commercial oil stocks



Sources: METI and OPEC.

Japan's **total product inventories** rose m-o-m by 4.8 mb to end August at 61.6 mb. This is 3.6 mb, or 5.5%, lower than the same month last year, and 3.2 mb, or 5.0%, below the latest five-year average.

Gasoline stocks rose m-o-m by 0.1 mb to stand at 10.0 mb. This was 2.1 mb, or 17.6%, lower than a year ago, and 0.6 mb, or 5.4%, below the latest five-year average. Higher gasoline production, which rose by 6.4%, was behind the build in gasoline stocks.

Distillate stocks rose m-o-m by 3.3 mb to end August at 29.8 mb. This is 2.5 mb, or 7.9%, lower than the same month a year ago, and 1.5 mb, or 4.7%, below the latest five-year average. Within distillate components, **jet fuel, kerosene and gasoil stocks** rose m-o-m by 21.7%, 10.2% and 11.2%, respectively. This stock build was driven by higher production.

Total residual fuel oil stocks rose m-o-m by 0.6 mb to end August at 12.4 mb. This is 0.1 mb, or 0.5%, higher than the same month last year, and 0.7 mb, or 5.3%, below the latest five-year average. Within the components, fuel oil A and fuel oil B.C stocks rose by 6.6% and 3.6%, respectively.

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

Japan's stocks	Aug 20	Jun 21	Jul 21	Aug 21	Change Aug 21/Jul 21
Crude oil	**84.0**	**70.6**	**65.5**	**67.1**	***1.5***
Gasoline	12.2	14.4	10.0	10.0	*0.1*
Naphtha	8.3	9.3	8.5	9.4	*0.9*
Middle distillates	32.4	27.1	26.5	29.8	*3.3*
Residual fuel oil	12.3	11.8	11.8	12.4	*0.6*
Total products	**65.2**	**62.6**	**56.8**	**61.6**	***4.8***
Total**	**149.2**	**133.2**	**122.3**	**128.7**	***6.4***

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

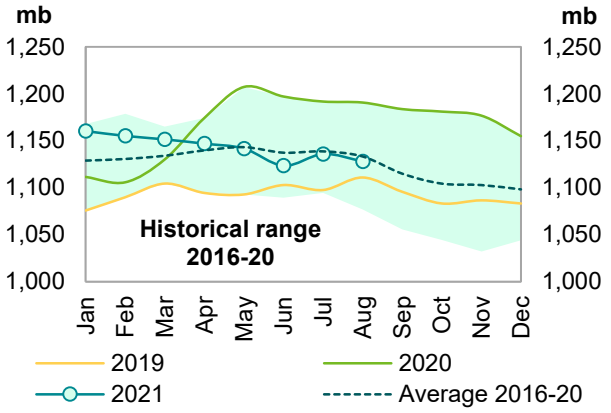
Sources: METI and OPEC.

EU-14 plus UK and Norway

Preliminary data for August showed that **total European commercial oil stocks** fell m-o-m by 7.8 mb to stand at 1,128 mb. At this level, they were 62.6 mb, or 5.3%, below the same month a year ago, and 5.3 mb, or 0.5%, lower than the latest five-year average. Crude stocks dropped m-o-m by 10.8 mb, while product stocks witnessed a build of 3.0 mb.

European **crude inventories** fell in August to stand at 465.7 mb. This is 25.7 mb, or 5.2%, lower than the same month a year ago and 19.3 mb, or 4.0%, lower than the latest five-year average. The fall in crude oil inventories came on the back of higher m-o-m refinery throughputs in the EU-14 plus the UK and Norway, which increased by around 350 tb/d to 9.76 mb/d in August.

Graph 9 - 5: EU-14 plus UK and Norway's total oil stocks



Sources: Argus, Euroilstock and OPEC.

In contrast**, total European product stocks** rose m-o-m by 3.0 mb to end August at 662.4 mb. This is 36.9 mb, or 5.3%, lower than the same month a year ago, but 14.0 mb, or 2.2%, above the latest five-year average.

Gasoline stocks rose m-o-m by 2.6 mb in August to stand at 116.2 mb. At this level, they are in line with the same time a year ago, but 5.6 mb/d, or 5.0%, above the latest five-year average.

Distillate stocks increased m-o-m by 0.6 mb in August to stand at 450.2 mb. This is 31.7 mb, or 6.6%, below the same month last year, but 6.8 mb, or 1.5%, above the latest five-year average.

Naphtha stocks rose by 0.2 mb m-o-m in August, ending the month at 31.3 mb. This is 0.9 mb, or 2.8%, above August 2020 levels, and 4.8 mb, or 18.1%, higher than the latest five-year average.

In contrast, **residual fuel stocks** fell m-o-m by 0.4 mb in August to 64.7 mb. This is 6.1 mb, or 8.6%, lower than the same month one year ago, and 3.1 mb, or 4.6%, below the latest five-year average.

Table 9 - 4: EU-14 plus UK and Norway's total oil stocks, mb

EU stocks	Aug 20	Jun 21	Jul 21	Aug 21	Change Aug 21/Jul 21
Crude oil	**491.4**	**464.1**	**476.5**	**465.7**	***-10.8***
Gasoline	116.2	113.6	113.6	116.2	*2.6*
Naphtha	30.5	30.1	31.2	31.3	*0.2*
Middle distillates	481.8	448.8	449.6	450.2	*0.6*
Fuel oils	70.8	66.8	65.1	64.7	*-0.4*
Total products	**699.2**	**659.2**	**659.4**	**662.4**	***3.0***
Total	**1,190.6**	**1,123.4**	**1,135.9**	**1,128.0**	***-7.8***

Sources: Argus, Euroilstock and OPEC.

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

Singapore

In August, **total product stocks in Singapore** fell m-o-m by 1.9 mb to 45.4 mb. This is 6.5 mb, or 12.6%, lower than the same month a year ago.

Light distillate stocks dropped m-o-m by 0.5 mb in August to stand at 13.2 mb. This is 0.7 mb, or 5.1%, lower than the same month one year ago.

Residual fuel oil stocks fell m-o-m by 1.9 mb, ending August at 20.8 mb, which is 1.7 mb, or 7.4%, lower than in August 2020.

In contrast, **middle distillate stocks** rose m-o-m by 0.5 mb in August to stand at 11.4 mb. This is 4.1 mb, or 26.7%, lower than a year ago.

ARA

Total product stocks in ARA fell for the sixth consecutive month in August and were down by 1.6 mb m-o-m at 39.6 mb. This is 9.3 mb, or 19.0%, lower than the same month a year ago.

Gasoline stocks in August fell m-o-m by 0.9 mb to stand at 5.7 mb, which is 6.2 mb, or 52.2%, lower than the same month one year ago.

Gasoil stocks dropped m-o-m by 0.2 mb in August to stand at 15.4 mb, which is 3.8 mb, or 19.9%, lower than in August 2020.

Jet oil stocks fell m-o-m by 1.0 mb to end August at 8.0 mb. This is 0.9 mb, or 12.8%, higher than the level registered one year ago.

In contrast**, residual fuel oil stocks** rose m-o-m by 0.5 mb to end August at 7.7 mb. This is 0.8 mb, or 10.9%, lower than the level seen one year ago.

Fujairah

During the week ending 4 October 2021, **total oil product stocks in Fujairah** rose w-o-w by 1.18 mb to stand at 16.71 mb, according to data from Fed Com and S&P Global Platts. At this level, total oil stocks were 3.99 mb lower than the same time a year ago. While light distillates witnessed a stock draw w-o-w, middle and heavy distillate stocks showed a stock build.

Light distillate stocks fell by 0.43 mb w-o-w to stand at 4.68 mb in the week to 4 October 2021, which is 1.60 mb lower than the same period a year ago. In contrast, **middle distillate stocks** rose by 0.16 mb to stand at 3.86 mb, which is 0.01 mb lower than a year ago. **Heavy distillate stocks** increased by 1.45 mb to stand at 8.18 mb, which is 2.38 mb lower than the same time last year.

Balance of Supply and Demand

Demand for OPEC crude in 2021 was revised up by 0.1 mb/d from the previous MOMR to stand at 27.8 mb/d, around 5.0 mb/d higher than in 2020.

According to secondary sources, OPEC crude production averaged 25.2 mb/d in 1Q21, almost the same level as demand for OPEC crude in the same period. In 2Q21, OPEC crude production averaged 25.5 mb/d, 1.4 mb/d lower than demand for OPEC crude. In 3Q21, OPEC crude oil production averaged 26.9 mb/d, 2.7 mb/d lower than demand for OPEC crude.

Demand for OPEC crude in 2022 was also revised up by 0.1 mb/d from the previous month to stand at 28.8 mb/d, around 1.0 mb/d higher than in 2021.

Balance of supply and demand in 2021

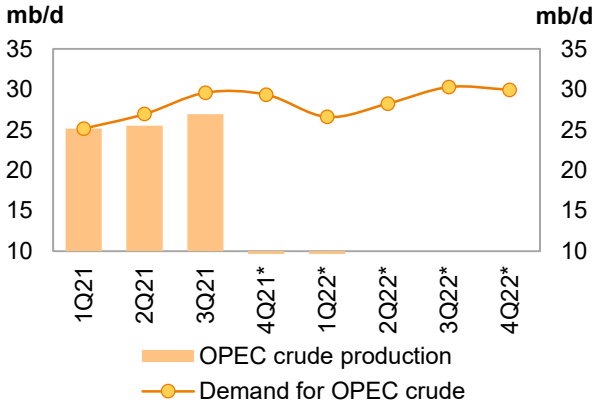
Demand for OPEC crude in 2021 was revised up by 0.1 mb/d from the previous MOMR to stand at 27.8 mb/d, around 5.0 mb/d higher than in 2020.

Compared with the previous assessment, 1Q21 and 2Q21 were revised down by 0.1 mb/d and 0.3 mb/d, respectively, while 3Q21 and 4Q21 were revised up by 0.5 mb/d and 0.4 mb/d, respectively.

When compared with the same quarters in 2020, demand for OPEC crude in 1Q21 and 2Q21 is estimated to be higher by 3.6 mb/d and 9.7 mb/d, respectively. In 3Q21 and 4Q21, there is an expected rise of 4.6 mb/d and 2.3 mb/d, respectively.

According to secondary sources, OPEC crude production averaged 25.2 mb/d in 1Q21, almost the same level as demand for OPEC crude in the same period. In 2Q21, OPEC crude production averaged 25.5 mb/d, 1.4 mb/d lower than demand for OPEC crude. In 3Q21, OPEC crude oil production averaged 26.9 mb/d, 2.7 mb/d lower than demand for OPEC crude.

Graph 10 - 1: Balance of supply and demand, 2021–2022*



*Note: * 4Q21-4Q22 = Forecast. Source: OPEC.*

Table 10 - 1: Supply/demand balance for 2021*, mb/d

	2020	1Q21	2Q21	3Q21	4Q21	2021	Change 2021/20
(a) World oil demand	**90.79**	**92.77**	**95.36**	**98.33**	**99.82**	**96.60**	***5.82***
Non-OPEC liquids production	62.98	62.49	63.27	63.53	65.24	63.64	*0.66*
OPEC NGL and non-conventionals	5.05	5.11	5.13	5.20	5.23	5.17	*0.12*
(b) Total non-OPEC liquids production and OPEC NGLs	**68.03**	**67.60**	**68.40**	**68.73**	**70.47**	**68.81**	***0.78***
Difference (a-b)	**22.76**	**25.17**	**26.96**	**29.60**	**29.36**	**27.80**	***5.04***
OPEC crude oil production	**25.65**	**25.16**	**25.53**	**26.92**			
Balance	**2.89**	**-0.01**	**-1.44**	**-2.68**			

*Note: * 2021 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

Balance of supply and demand in 2022

Demand for OPEC crude in 2022 was also revised up by 0.1 mb/d from the previous month to stand at 28.8 mb/d, around 1.0 mb/d higher than in 2021.

Compared with the previous assessment, 1Q22 and 4Q22 were revised up by 0.1 mb/d and 0.3 mb/d, respectively, while 2Q22 was revised down by 0.1 mb/d. The 3Q22 was unchanged.

Compared with the same quarters in 2021, demand for OPEC crude in 1Q22 and 2Q22 is forecast to be higher by 1.4 mb/d and 1.3 mb/d, respectively. Meanwhile, 3Q22 and 4Q22 are projected to show an increase of 0.7 mb/d and 0.6 mb/d, respectively.

Table 10 - 2: Supply/demand balance for 2022*, mb/d

	2021	1Q22	2Q22	3Q22	4Q22	2022	*Change* 2022/21
(a) World oil demand	**96.60**	**97.95**	**99.88**	**102.16**	**102.93**	**100.76**	***4.15***
Non-OPEC liquids production	63.64	66.09	66.34	66.56	67.63	66.66	*3.02*
OPEC NGL and non-conventionals	5.17	5.25	5.28	5.31	5.33	5.29	*0.13*
(b) Total non-OPEC liquids production and OPEC NGLs	**68.81**	**71.34**	**71.63**	**71.86**	**72.96**	**71.95**	***3.15***
Difference (a-b)	**27.80**	**26.61**	**28.26**	**30.30**	**29.97**	**28.80**	***1.01***

*Note: * 2021-2022 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

Appendix

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

World oil demand and supply balance	2018	2019	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
World demand													
Americas	25.59	25.61	22.60	22.77	24.56	25.15	24.73	24.31	24.10	25.66	26.17	25.53	25.38
of which US	*20.77*	*20.78*	*18.51*	*18.69*	*20.21*	*20.53*	*20.46*	*19.98*	*19.75*	*21.09*	*21.50*	*21.18*	*20.89*
Europe	14.31	14.31	12.44	11.90	12.60	13.71	13.69	12.99	12.55	13.27	14.32	14.17	13.59
Asia Pacific	8.01	7.93	7.14	7.67	7.04	7.17	7.57	7.36	7.91	7.22	7.30	7.68	7.53
Total OECD	**47.90**	**47.86**	**42.18**	**42.34**	**44.19**	**46.03**	**45.99**	**44.66**	**44.56**	**46.15**	**47.79**	**47.39**	**46.49**
China	13.01	13.48	13.20	13.15	14.32	14.63	15.02	14.28	14.00	15.20	15.12	15.46	14.95
India	4.82	4.99	4.51	4.94	4.50	4.77	5.57	4.95	5.40	4.90	5.15	5.89	5.34
Other Asia	8.91	9.00	8.13	8.36	8.98	8.49	8.62	8.61	9.05	9.59	9.07	8.95	9.16
Latin America	6.53	6.59	6.01	6.15	6.16	6.54	6.40	6.31	6.39	6.34	6.69	6.56	6.50
Middle East	8.13	8.20	7.55	7.95	7.77	8.24	7.97	7.99	8.29	8.01	8.49	8.20	8.25
Africa	4.33	4.37	4.06	4.35	4.06	4.16	4.44	4.25	4.53	4.19	4.28	4.57	4.39
Russia	3.55	3.57	3.37	3.57	3.42	3.61	3.74	3.58	3.67	3.47	3.66	3.79	3.65
Other Eurasia	1.21	1.19	1.07	1.18	1.24	1.14	1.28	1.21	1.25	1.29	1.17	1.32	1.26
Other Europe	0.74	0.76	0.70	0.78	0.72	0.73	0.79	0.75	0.80	0.73	0.74	0.81	0.77
Total Non-OECD	**51.23**	**52.17**	**48.60**	**50.44**	**51.17**	**52.30**	**53.83**	**51.94**	**53.39**	**53.73**	**54.38**	**55.54**	**54.26**
(a) Total world demand	**99.13**	**100.03**	**90.79**	**92.77**	**95.36**	**98.33**	**99.82**	**96.60**	**97.95**	**99.88**	**102.16**	**102.93**	**100.76**
Y-o-y change	***1.46***	***0.90***	***-9.24***	***-0.96***	***11.86***	***6.75***	***5.54***	***5.82***	***5.17***	***4.52***	***3.83***	***3.10***	***4.15***
Non-OPEC liquids production													
Americas	24.03	25.81	24.70	24.10	25.17	24.98	25.58	24.96	25.76	25.88	25.96	26.38	25.99
of which US	*16.66*	*18.47*	*17.61*	*16.63*	*17.93*	*17.63*	*18.01*	*17.55*	*18.12*	*18.45*	*18.31*	*18.65*	*18.38*
Europe	3.84	3.71	3.90	3.95	3.51	3.86	4.02	3.83	4.03	3.93	3.98	4.31	4.06
Asia Pacific	0.41	0.52	0.52	0.50	0.45	0.53	0.54	0.51	0.55	0.54	0.54	0.54	0.54
Total OECD	**28.28**	**30.04**	**29.12**	**28.55**	**29.13**	**29.36**	**30.14**	**29.30**	**30.33**	**30.35**	**30.49**	**31.22**	**30.60**
China	3.98	4.05	4.16	4.30	4.34	4.32	4.28	4.31	4.31	4.31	4.35	4.43	4.35
India	0.86	0.82	0.77	0.76	0.75	0.75	0.74	0.75	0.75	0.77	0.80	0.82	0.79
Other Asia	2.73	2.69	2.51	2.52	2.45	2.40	2.48	2.46	2.47	2.44	2.42	2.40	2.43
Latin America	5.79	6.09	6.04	5.97	6.00	6.12	6.47	6.14	6.50	6.44	6.38	6.59	6.48
Middle East	3.19	3.19	3.19	3.22	3.23	3.25	3.30	3.25	3.34	3.34	3.36	3.36	3.35
Africa	1.49	1.51	1.41	1.36	1.35	1.34	1.31	1.34	1.29	1.26	1.23	1.20	1.25
Russia	11.52	11.61	10.59	10.47	10.74	10.80	11.11	10.78	11.51	11.83	11.88	11.88	11.78
Other Eurasia	3.08	3.07	2.91	2.96	2.89	2.79	3.01	2.91	3.09	3.11	3.15	3.22	3.14
Other Europe	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.11	0.11	0.10	0.10	0.10	0.10
Total Non-OECD	**32.75**	**33.15**	**31.71**	**31.66**	**31.85**	**31.89**	**32.83**	**32.06**	**33.36**	**33.61**	**33.68**	**34.01**	**33.67**
Total Non-OPEC production	61.03	63.19	60.83	60.21	60.99	61.25	62.96	61.36	63.70	63.95	64.16	65.23	64.27
Processing gains	2.34	2.36	2.15	2.28	2.28	2.28	2.28	2.28	2.39	2.39	2.39	2.39	2.39
Total Non-OPEC liquids production	**63.37**	**65.55**	**62.98**	**62.49**	**63.27**	**63.53**	**65.24**	**63.64**	**66.09**	**66.34**	**66.56**	**67.63**	**66.66**
OPEC NGL + non-conventional oils	5.29	5.22	5.05	5.11	5.13	5.20	5.23	5.17	5.25	5.28	5.31	5.33	5.29
(b) Total non-OPEC liquids production and OPEC NGLs	**68.67**	**70.77**	**68.03**	**67.60**	**68.40**	**68.73**	**70.47**	**68.81**	**71.34**	**71.63**	**71.86**	**72.96**	**71.95**
Y-o-y change	***3.05***	***2.10***	***-2.74***	***-4.55***	***2.19***	***2.15***	***3.28***	***0.78***	***3.74***	***3.23***	***3.13***	***2.49***	***3.15***
OPEC crude oil production (secondary sources)	31.34	29.36	25.65	25.16	25.53	26.92							
Total liquids production	100.01	100.13	93.68	92.76	93.92	95.65							
Balance (stock change and miscellaneous)	0.88	0.10	2.89	-0.01	-1.44	-2.68							
OECD closing stock levels, *mb*													
Commercial	2,873	2,896	3,036	2,925	2,884								
SPR	1,552	1,535	1,541	1,546	1,524								
Total	**4,425**	**4,432**	**4,577**	**4,471**	**4,408**								
Oil-on-water	1,058	1,033	1,148	1,138	1,130								
Days of forward consumption in OECD, *days*													
Commercial onland stocks	60	69	68	66	63								
SPR	32	36	35	35	33								
Total	**92**	**105**	**102**	**101**	**96**								
Memo items													
(a) - (b)	**30.47**	**29.26**	**22.76**	**25.17**	**26.96**	**29.60**	**29.36**	**27.80**	**26.61**	**28.26**	**30.30**	**29.97**	**28.80**

Note: 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

World oil demand and supply balance	2018	2019	2020	1Q21	2Q21	3Q21	4Q21	2021	1Q22	2Q22	3Q22	4Q22	2022
World demand													
Americas	-0.05	-0.08	0.07	-	-0.18	0.09	0.01	-0.02	-	-0.18	0.09	0.01	-0.02
of which US	*-0.05*	*-0.08*	*0.07*	*-*	*0.10*	*0.09*	*0.01*	*0.05*	*-0.05*	*0.05*	*0.04*	*0.01*	*0.05*
Europe	-	-	-	-	-0.13	-	0.08	-0.01	-	-0.13	-	0.08	-0.01
Asia Pacific	-	-	-	-	-0.09	-	0.05	-0.01	-	-0.09	-	0.05	-0.01
Total OECD	**-0.05**	**-0.08**	**0.07**	**-**	**-0.40**	**0.09**	**0.14**	**-0.04**	**-**	**-0.40**	**0.09**	**0.14**	**-0.04**
China	-	-	0.01	-	0.05	-0.20	-	-0.04	-	0.05	-0.20	-	-0.04
India	0.05	0.08	-	-	0.08	-0.14	-0.04	-0.03	-	0.08	-0.14	-0.04	-0.03
Other Asia	-	-	-	-	-	-	0.06	0.01	-	-	-	0.06	0.01
Latin America	-	-	-	-	-	0.08	-	0.02	-	-	0.08	-	0.02
Middle East	-	-	-	-	-	-	-	-	-	-	-	-	-
Africa	-	-	-0.02	-0.04	-	-	-0.04	-0.02	-0.04	-	-	-0.04	-0.02
Russia	-	-	-	-	-	0.04	-	0.01	-	-	0.04	-	0.01
Other Eurasia	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	**0.05**	**0.08**	**-0.01**	**-0.04**	**0.13**	**-0.22**	**-0.02**	**-0.04**	**-0.04**	**0.13**	**-0.22**	**-0.02**	**-0.04**
(a) Total world demand	**-**	**-**	**0.06**	**-0.04**	**-0.26**	**-0.13**	**0.12**	**-0.08**	**-0.04**	**-0.26**	**-0.13**	**0.12**	**-0.08**
Y-o-y change	***-***	***-***	***0.06***	***-0.17***	***-0.39***	***-0.18***	***0.19***	***-0.14***	***-***	***-***	***-***	***-***	***-***
Non-OPEC liquids production													
Americas	-	-	-	-	-0.02	-0.27	-0.30	-0.15	-0.13	-0.13	-0.13	-0.13	-0.13
of which US	*-*	*-*	*-*	*-*	*-0.01*	*-0.21*	*-0.30*	*-0.13*	*-0.11*	*-0.11*	*-0.11*	*-0.11*	*-0.11*
Europe	-	-	-	-	-	-0.03	-0.08	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
Asia Pacific	-	-0.01	-0.01	-0.01	-	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Total OECD	**-**	**-0.01**	**-0.01**	**-0.01**	**-0.02**	**-0.31**	**-0.39**	**-0.18**	**-0.17**	**-0.17**	**-0.17**	**-0.17**	**-0.17**
China	-	-	0.05	0.05	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06
India	-	-	-	-	-	-	-	-	-0.02	-0.02	-0.02	-0.02	-0.02
Other Asia	-	-	-	0.01	-	-0.08	-	-0.02	-	-	-	-	-
Latin America	-	-	-	0.01	-	-0.12	-	-0.03	-0.02	-0.02	-0.02	-0.02	-0.02
Middle East	-0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.03	0.03	0.03	0.03
Africa	-0.02	-	-	-0.02	-0.02	-0.04	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Russia	-	-	-	-	-	0.01	-	-	-	-	-	-	-
Other Eurasia	-	-	-	-	-	-0.16	-	-0.04	-	-	-	-	-
Other Europe	-	-	-	0.01	0.01	0.01	-	0.01	0.01	0.01	-	-	0.01
Total Non-OECD	**-0.03**	**0.01**	**0.06**	**0.07**	**0.06**	**-0.30**	**0.08**	**-0.02**	**0.04**	**0.04**	**0.04**	**0.04**	**0.04**
Total Non-OPEC production	-0.03	0.01	0.05	0.06	0.04	-0.60	-0.32	-0.21	-0.13	-0.13	-0.13	-0.13	-0.13
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC liquids production	**-0.03**	**0.01**	**0.05**	**0.06**	**0.04**	**-0.60**	**-0.32**	**-0.21**	**-0.13**	**-0.13**	**-0.13**	**-0.13**	**-0.13**
OPEC NGL + non-conventional oils	-	-	-	-	0.02	-0.02	-	-	-	-	-	-	-
(b) Total non-OPEC liquids production and OPEC NGLs	**-0.03**	**0.01**	**0.05**	**0.06**	**0.06**	**-0.62**	**-0.32**	**-0.21**	**-0.13**	**-0.13**	**-0.13**	**-0.13**	**-0.13**
Y-o-y change	***-0.01***	***0.04***	***0.04***	***0.03***	***0.01***	***-0.68***	***-0.38***	***-0.26***	***-0.20***	***-0.20***	***0.49***	***0.18***	***0.07***
OPEC crude oil production (secondary sources)	-	-	-	-	-								
Total liquids production	-0.03	0.01	0.05	0.06	0.06								
Balance (stock change and miscellaneous)	-0.03	0.01	-0.01	0.11	0.33								
OECD closing stock levels, *mb*													
Commercial	-2	7	-1	-	-18								
SPR	-	-	-	-	-4								
Total	**-2**	**7**	**-1**	**-**	**-22**								
Oil-on-water	-	-	-	-	-								
Days of forward consumption in OECD, *days*													
Commercial onland stocks	-	-	-	1	-1								
SPR	-	-	-	-	-								
Total	**-**	**-**	**-**	**1**	**-1**								
Memo items													
(a) - (b)	**0.03**	**-0.01**	**0.01**	**-0.11**	**-0.33**	**0.50**	**0.44**	**0.13**	**0.09**	**-0.13**	**0.01**	**0.25**	**0.06**

*Note: * This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the September 2021 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

OECD oil stocks and oil on water	2018	2019	2020	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21
Closing stock levels, mb												
OECD onland commercial	**2,873**	**2,896**	**3,036**	**2,938**	**2,948**	**2,896**	**2,980**	**3,217**	**3,179**	**3,036**	**2,925**	**2,884**
Americas	1,542	1,525	1,612	1,565	1,559	1,525	1,581	1,718	1,688	1,612	1,573	1,549
Europe	930	978	1,044	983	988	978	1,033	1,099	1,079	1,044	1,006	978
Asia Pacific	402	394	380	391	401	394	366	400	411	380	346	358
OECD SPR	**1,552**	**1,535**	**1,541**	**1,549**	**1,544**	**1,535**	**1,537**	**1,561**	**1,551**	**1,541**	**1,546**	**1,524**
Americas	651	637	640	647	647	637	637	658	644	640	640	623
Europe	481	482	488	485	482	482	484	487	490	488	493	487
Asia Pacific	420	416	414	417	416	416	416	416	417	414	413	413
OECD total	**4,425**	**4,432**	**4,577**	**4,487**	**4,492**	**4,432**	**4,517**	**4,778**	**4,730**	**4,577**	**4,471**	**4,408**
Oil-on-water	**1,058**	**1,033**	**1,148**	**995**	**1,012**	**1,033**	**1,187**	**1,329**	**1,174**	**1,148**	**1,138**	**1,130**
Days of forward consumption in OECD, days												
OECD onland commercial	**60**	**69**	**68**	**61**	**61**	**63**	**79**	**76**	**74**	**72**	**66**	**63**
Americas	60	67	66	60	61	62	79	75	73	71	64	62
Europe	65	79	80	67	70	73	94	85	86	88	80	71
Asia Pacific	51	55	52	51	49	50	55	59	56	50	49	50
OECD SPR	**33**	**37**	**35**	**32**	**32**	**34**	**41**	**37**	**36**	**36**	**35**	**33**
Americas	26	30	27	25	25	26	32	29	28	28	26	25
Europe	34	39	38	33	34	36	44	38	39	41	39	36
Asia Pacific	53	59	57	54	51	53	63	62	57	54	59	58
OECD total	**94**	**107**	**104**	**93**	**94**	**97**	**120**	**113**	**110**	**108**	**101**	**96**

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

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

Non-OPEC liquids production and OPEC NGLs	2018	2019	2020	3Q21	4Q21	2021	Change 21/20	1Q22	2Q22	3Q22	4Q22	2022	Change 22/21
US	16.7	18.5	17.6	17.6	18.0	17.6	-0.1	18.1	18.4	18.3	18.6	18.4	0.8
Canada	5.3	5.4	5.2	5.4	5.6	5.5	0.3	5.7	5.4	5.7	5.8	5.6	0.2
Mexico	2.1	1.9	1.9	1.9	1.9	1.9	0.0	2.0	2.0	2.0	2.0	2.0	0.0
Chile	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
OECD Americas	**24.0**	**25.8**	**24.7**	**25.0**	**25.6**	**25.0**	**0.3**	**25.8**	**25.9**	**26.0**	**26.4**	**26.0**	**1.0**
Norway	1.9	1.7	2.0	2.1	2.2	2.1	0.1	2.2	2.2	2.2	2.4	2.3	0.2
UK	1.1	1.1	1.1	0.9	1.0	0.9	-0.1	1.0	0.9	0.9	1.0	1.0	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	0.7	0.7	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8	0.0
OECD Europe	**3.8**	**3.7**	**3.9**	**3.9**	**4.0**	**3.8**	**-0.1**	**4.0**	**3.9**	**4.0**	**4.3**	**4.1**	**0.2**
Australia	0.3	0.5	0.5	0.5	0.5	0.4	0.0	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**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.0**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.0**
Total OECD	**28.3**	**30.0**	**29.1**	**29.4**	**30.1**	**29.3**	**0.2**	**30.3**	**30.3**	**30.5**	**31.2**	**30.6**	**1.3**
China	**4.0**	**4.0**	**4.2**	**4.3**	**4.3**	**4.3**	**0.1**	**4.3**	**4.3**	**4.4**	**4.4**	**4.4**	**0.0**
India	**0.9**	**0.8**	**0.8**	**0.8**	**0.7**	**0.8**	**0.0**	**0.7**	**0.8**	**0.8**	**0.8**	**0.8**	**0.0**
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
Indonesia	0.9	0.9	0.9	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8	-0.1
Malaysia	0.7	0.7	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.7	0.7	0.7	0.0
Thailand	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.4	0.4	0.4	0.4	0.4	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	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Other Asia	**2.7**	**2.7**	**2.5**	**2.4**	**2.5**	**2.5**	**0.0**	**2.5**	**2.4**	**2.4**	**2.4**	**2.4**	**0.0**
Argentina	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
Brazil	3.3	3.6	3.7	3.7	4.0	3.7	0.0	4.0	3.9	3.9	4.1	4.0	0.2
Colombia	0.9	0.9	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.7	0.7	0.8	0.0
Ecuador	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
Guyana	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.2	0.3	0.2	0.1
Latin America	0.4	0.4	0.3	0.3	0.4	0.3	0.0	0.4	0.4	0.4	0.4	0.4	0.0
Latin America	**5.8**	**6.1**	**6.0**	**6.1**	**6.5**	**6.1**	**0.1**	**6.5**	**6.4**	**6.4**	**6.6**	**6.5**	**0.3**
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	1.0	1.1	1.1	1.0	0.1
Qatar	1.9	1.9	1.9	2.0	2.0	2.0	0.0	2.0	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	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0
Middle East	**3.2**	**3.2**	**3.2**	**3.2**	**3.3**	**3.3**	**0.1**	**3.3**	**3.3**	**3.4**	**3.4**	**3.4**	**0.1**
Cameroon	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	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	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.5	0.5	0.5	0.0
Ghana	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
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**	**1.4**	**1.3**	**1.3**	**1.3**	**-0.1**	**1.3**	**1.3**	**1.2**	**1.2**	**1.2**	**-0.1**
Russia	**11.5**	**11.6**	**10.6**	**10.8**	**11.1**	**10.8**	**0.2**	**11.5**	**11.8**	**11.9**	**11.9**	**11.8**	**1.0**
Kazakhstan	1.9	1.9	1.8	1.7	1.9	1.8	0.0	1.9	2.0	2.0	2.0	2.0	0.2
Azerbaijan	0.8	0.8	0.7	0.7	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8	0.1
Eurasia others	0.4	0.4	0.4	0.4	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.0
Other Eurasia	**3.1**	**3.1**	**2.9**	**2.8**	**3.0**	**2.9**	**0.0**	**3.1**	**3.1**	**3.2**	**3.2**	**3.1**	**0.2**
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**
Total Non-OECD	**32.8**	**33.1**	**31.7**	**31.9**	**32.8**	**32.1**	**0.4**	**33.4**	**33.6**	**33.7**	**34.0**	**33.7**	**1.6**
Non-OPEC	61.0	63.2	60.8	61.2	63.0	61.4	0.5	63.7	64.0	64.2	65.2	64.3	2.9
Processing gains	2.3	2.4	2.2	2.3	2.3	2.3	0.1	2.4	2.4	2.4	2.4	2.4	0.1
Non-OPEC liquids production	**63.4**	**65.6**	**63.0**	**63.5**	**65.2**	**63.6**	**0.7**	**66.1**	**66.3**	**66.6**	**67.6**	**66.7**	**3.0**
OPEC NGL	5.2	5.1	4.9	5.1	5.1	5.1	0.1	5.1	5.2	5.2	5.2	5.2	0.1
OPEC Non-conventional	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)	**5.3**	**5.2**	**5.0**	**5.2**	**5.2**	**5.2**	**0.1**	**5.3**	**5.3**	**5.3**	**5.3**	**5.3**	**0.1**
Non-OPEC & OPEC (NGL+NCF)	**68.7**	**70.8**	**68.0**	**68.7**	**70.5**	**68.8**	**0.8**	**71.3**	**71.6**	**71.9**	**73.0**	**72.0**	**3.1**

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

Table 11 - 5: World rig count, units

World rig count	2018	2019	2020	Change 2020/19	4Q20	1Q21	2Q21	3Q21	Aug 21	Sep 21	Change Sep/Aug
US	1,031	944	436	-508	311	393	452	498	501	509	8
Canada	191	134	90	-44	89	145	73	151	156	153	-3
Mexico	27	37	41	4	38	46	42	43	43	42	-1
OECD Americas	**1,251**	**1,116**	**567**	**-549**	**438**	**585**	**568**	**694**	**702**	**706**	**4**
Norway	15	17	16	-1	17	16	18	17	17	17	0
UK	7	15	6	-9	7	8	8	9	10	10	0
OECD Europe	**62**	**74**	**59**	**-15**	**55**	**54**	**59**	**59**	**60**	**61**	**1**
OECD Asia Pacific	**21**	**29**	**22**	**-7**	**18**	**16**	**21**	**28**	**31**	**30**	**-1**
Total OECD	**1,334**	**1,219**	**648**	**-571**	**511**	**656**	**648**	**781**	**793**	**797**	**4**
Other Asia*	222	221	187	-34	160	161	170	181	183	180	-3
Latin America	129	128	58	-70	60	76	89	93	93	96	3
Middle East	64	68	57	-11	48	57	56	57	56	59	3
Africa	46	55	43	-12	32	33	39	47	47	47	0
Other Europe	13	14	12	-2	12	12	7	9	9	9	0
Total Non-OECD	**474**	**486**	**357**	**-129**	**312**	**338**	**362**	**385**	**388**	**391**	**3**
Non-OPEC rig count	**1,808**	**1,705**	**1,005**	**-700**	**823**	**994**	**1,010**	**1,166**	**1,181**	**1,188**	**7**
Algeria	50	45	31	-14	25	22	27	24	24	26	2
Angola	4	4	3	-1	3	4	4	4	4	4	0
Congo	3	3	1	-2	0	0	0	0	0	0	0
Equatorial Guinea**	0	1	0	-1	0	0	0	0	0	0	0
Gabon	3	7	3	-4	0	1	1	3	3	4	1
Iran**	157	117	117	0	117	117	117	117	117	117	0
Iraq	59	74	47	-27	28	32	36	42	41	43	2
Kuwait	51	46	45	-1	29	28	23	25	26	24	-2
Libya	5	14	12	-2	10	12	12	14	13	14	1
Nigeria	13	16	11	-5	7	6	5	10	11	11	0
Saudi Arabia	117	115	93	-22	63	62	62	59	58	61	3
UAE	55	62	54	-8	40	43	44	39	37	38	1
Venezuela	32	25	24	-1	25	25	25	25	25	25	0
OPEC rig count	**549**	**529**	**441**	**-88**	**347**	**352**	**356**	**361**	**359**	**367**	**8**
World rig count* **	**2,357**	**2,234**	**1,446**	**-788**	**1,170**	**1,346**	**1,366**	**1,527**	**1,540**	**1,555**	**15**
of which:											
Oil	1,876	1,788	1,125	-663	896	1,044	1,076	1,212	1,218	1,236	18
Gas	448	415	275	-140	238	269	257	281	287	284	-3
Others	33	31	46	15	36	33	33	34	35	35	0

*Note: * Other Asia includes India and offshore rigs for China.*

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

**** Data excludes onshore China as well as Russia and other Eurasia.*

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

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
JODI	Joint Organisations Data Initiative
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

up 3.55 in September

September 2021	73.88
August 2021	70.33
Year-to-date	**66.83**

September OPEC crude production

mb/d, according to secondary sources

up 0.49 in September

September 2021	27.33
August 2021	26.84

Economic growth rate

per cent

	World	OECD	US	Euro–zone	Japan	China	India
2021	5.6	5.1	5.8	5.0	2.6	8.3	9.0
2022	4.2	3.6	4.1	3.9	2.0	5.8	6.8

Supply and demand

mb/d

2021		**21/20**	**2022**		**22/21**
World demand	96.6	5.8	World demand	100.8	4.2
Non-OPEC liquids production	63.6	0.7	Non-OPEC liquids production	66.7	3.0
OPEC NGLs	5.2	0.1	OPEC NGLs	5.3	0.1
Difference	**27.8**	**5.0**	**Difference**	**28.8**	**1.0**

OECD commercial stocks

mb

	Aug 20	Jun 21	Jul 21	Aug 21	Aug 21/Jul 21
Crude oil	1,534	1,393	1,385	1,362	–22.8
Products	1,685	1,491	1,490	1,493	3.2
Total	**3,218**	**2,884**	**2,875**	**2,855**	**–19.5**
Days of forward cover	75	63	63	62	–0.1

Next report to be issued on 11 November 2021.