



Organization of the Petroleum Exporting Countries



OPEC Monthly Oil Market Report

12 April 2022

Feature article:
Summer oil market outlook

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Oil Market Highlights

Crude Oil Price Movements

Crude oil spot prices rose for the third-consecutive month in March. The North Sea Dated benchmark gained more than \$20/b on a monthly average and WTI gained almost \$17/b, on the back of escalating geopolitical tensions in Eastern Europe and concerns this might result in large oil supply shortages, amid trade dislocations. The OPEC Reference Basket price increased \$19.53, or 20.8%, to settle at \$113.48/b. Oil futures prices witnessed elevated volatility due to the uncertain short-term oil supply and demand outlook. The ICE Brent front month rose \$18.36, or 19.5%, to average \$112.46/b and NYMEX WTI gained \$16.63, or 18.1%, to average \$108.26/b. Consequently, the Brent/WTI futures spread widened further by \$1.73 to average \$4.20/b. The market structure of all three major crude benchmarks – ICE Brent, NYMEX WTI and DME Oman – remained in steep backwardation. Hedge funds and other money managers cut net long positions in Brent and WTI-related futures contracts.

World Economy

World economic growth in 2022 is revised down to 3.9% from 4.2% in the previous month's assessment. This takes into account the impact of the conflict in Eastern Europe, as well as the ongoing effects from the pandemic, with the risks skewed to the downside. This follows growth of 5.8% in 2021, which represents a minor revision from last month. US GDP growth for 2022 is revised down to 3.8% from 4%, after growth was reported at 5.7% for 2021. Euro-zone economic growth for 2022 is revised down to 3.5% from 3.9%, following growth of 5.3% in 2021. Japan's economic growth for 2022 is revised down to 1.9% from 2.2%, after growth of 1.7% in 2021. China's 2022 growth is revised down to 5.3% from 5.6%, after growth of 8.1% in 2021. India's 2021 GDP growth is reported at 8.1%, while the growth forecast for 2022 remains at 7.2%. Brazil's 2022 growth is revised down to 1.2% from 1.5%, following growth of 4.6% in 2021. Russia's 2022 growth is revised down to show a contraction of 2%, following reported growth of 4.7% in 2021. The continuing pandemic, rising inflation, aggravated supply chain issues, high sovereign debt levels in many regions and expected monetary tightening by central banks in the US, the UK, Japan and the euro area require close monitoring.

World Oil Demand

World oil demand growth in 2021 is revised slightly down by 0.04 mb/d, reflecting actual data across the regions, standing now at 5.7 mb/d. The downward revision is necessitated by an upward revision to the 2020 baseline. Oil demand in the OECD increased by 2.6 mb/d in 2021, while the non-OECD showed growth of 3.1 mb/d. For 2022, world oil demand growth is revised down by 0.5 mb/d to stand at 3.7 mb/d, mostly reflecting the downward revision in world economic growth. Oil demand growth is forecast at 1.9 mb/d in the OECD and 1.8 mb/d in the non-OECD.

World Oil Supply

Non-OPEC liquids supply growth in 2021 is broadly unchanged at around 0.6 mb/d y-o-y. Total US liquids production in 2021 increased by 0.1 mb/d, y-o-y. The largest growth increases were seen in Canada, Russia and China. Meanwhile, production is estimated to have declined in the UK, Brazil, Colombia and Indonesia. Non-OPEC supply in 2022 is revised down by 0.3 mb/d to 2.7 mb/d, mainly on the back of a downward revision for Russia. On the other hand, the US liquids supply growth forecast for 2022 is revised up by 0.3 mb/d to 1.3 mb/d. The main contributors to liquids supply growth in 2022 are expected to be the US, Russia, Brazil, Canada, Kazakhstan, Guyana and Norway. OPEC NGLs are forecast to grow by around 0.1 mb/d both in 2021 and 2022, averaging 5.1 mb/d and 5.3 mb/d, respectively. In March, OPEC-13 crude oil production increased by 57 tb/d, m-o-m, to average 28.56 mb/d, according to available secondary sources.

Product Markets and Refining Operations

Refinery margins jumped in all main trading hubs in March, as product prices soared in response to a growing product supply-demand imbalance. A decline in total product output levels, amid the onset of a heavy turnaround season, resulted in a notable and disproportional rise in product netbacks relative to crude prices. Moreover, in contrast to other regions, US refinery runs trended higher over the month, with gasoline availability showing signs of recovery. However, middle distillate availability continued to contract beyond the already low levels. This resulted in massive upward pressure on product prices and the robust performance of middle distillate markets, particularly in Europe.

Tanker Market

Tanker markets are being broadly impacted by uncertainties related to the conflict in Eastern Europe, which is expected to affect trade patterns. Aframax and Suezmax freight rates, the main vessels used to transport Black Sea flows, have particularly been effected. Aframax spot freight rates around the Mediterranean are up more than 70% in March from January levels, while spot Suezmax rates in the Atlantic basin are some 50% higher over the same period. Clean rates have also seen strong support on all monitored routes, particularly on the Mideast-to-East route.

Crude and Refined Products Trade

Preliminary data shows US crude imports increased 3%, m-o-m, in March to average 6.4 mb/d, while crude exports gained 8%, m-o-m, from the low levels witnessed in the previous month to average 3.1 mb/d. US product exports surged 22%, m-o-m, up from a weak performance the month before. In China, the latest data shows crude imports averaged 9.5 mb/d in February, down from the strong performance seen the month before as the Lunar New Year Holidays and Winter Olympics reduced refinery runs. India's crude imports recovered some of the January losses, averaging 4.6 mb/d in February, as domestic demand continued to accelerate following the tapering off of the third wave of COVID-19 infections. Japan's crude imports averaged 2.8 mb/d in February, amid higher product exports.

Commercial Stock Movements

Preliminary data sees total OECD commercial oil stocks down 22.8 mb, m-o-m, in February. At 2,599 mb, they were 372 mb less than the same time one year ago, 334 mb lower than the latest five-year average, and 321 mb below the 2015–2019 average. Within the components, crude stocks rose by 0.7 mb, m-o-m, while products stocks fell by 23.5 mb, m-o-m. At 1,254 mb, OECD crude stocks were 185 mb less than the latest five-year average and 194 mb below the 2015–2019 average. OECD product stocks stood at 1,345 mb, representing a deficit of 148 mb compared with the latest five-year average, and 128 mb below the 2015–2019 average. In terms of days of forward cover, OECD commercial stocks fell by 0.6 days, m-o-m, in February to stand at 57.3 days. This is 11.0 days below February 2021 levels, 8.6 days less than the latest five-year average, and 5.2 days lower than 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 28.1 mb/d, which is around 5.0 mb/d higher than in 2020. In contrast, demand for OPEC crude in 2022 is revised down by 0.1 mb/d from the previous month's assessment, to stand at 29.0 mb/d, which is around 0.8 mb/d higher than in 2021.

Feature Article

Summer oil market outlook

At a global level, as most countries relaxed lockdown measures imposed during the COVID-19 pandemic, oil demand in 1Q22 witnessed strong growth of almost 5 mb/d y-o-y. However, due to recent geopolitical developments in Eastern Europe, 2Q22 and 3Q22 are both forecast at growth of 3.5 mb/d y-o-y.

Nevertheless, demand in the summer months is anticipated to be driven by increasing mobility, leading to a further pickup in gasoline demand, while diesel requirements are projected to continue on a healthy upward trend. The US is expected to see the bulk of this product demand growth, increasing by around 0.9 mb/d in 2Q22 and 3Q22, y-o-y. Although OECD Europe is strongly impacted by the current geopolitical developments, the region is expected to see demand growth of around 0.5 mb/d y-o-y on average in 2Q22 and 3Q22, with the impact of COVID-19 expected to fade in the summer season.

In the non-OECD countries, India's oil demand picked up strongly from the contraction seen in 4Q21

to average growth of 0.3 mb/d y-o-y in 1Q22. Gasoline and diesel demand have already surpassed 2021 levels as lockdown measures were mostly removed and as the recovery gained traction. However, China is confronted with a resurgence of COVID-19, causing oil demand growth in 1Q22 to drop to 0.4 mb/d, y-o-y, from 0.8 mb/d growth seen in 4Q21.

For 2Q22 and 3Q22, global oil demand is expected to grow by 3.5 mb/d, y-o-y, on average. The 2Q22 gasoline and diesel demand is expected at 25.4 mb/d and 27.7 mb/d, respectively. Moreover, 3Q22 is projected to recover and surpass pre-pandemic levels, with global gasoline demand forecast at 27.5 mb/d and diesel at 29.0 mb/d (**Graph 1**).

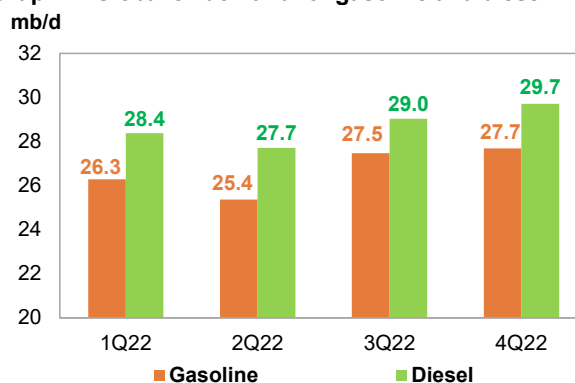
On the refining side, the heavy refinery turnaround season is expected to drive global offline capacity to a peak in April 2022, before declining again thereafter. This should lead to a return of nearly 5.0 mb/d of capacity for operations by July 2022, supporting refinery intakes (**Graph 2**). At the same time, the increasingly tight global product balance will drive refinery intakes.

Total OECD commercial product inventories in February were around 150 mb below the latest five-year average, with gasoline and distillate inventories standing at 27 mb and 84 mb below the latest five-year average. The combination of restricted fuel supplies and low product inventory levels, amid projections of rising product consumption during the summer season, could lead to a tighter product supply-demand balance, with a significant shortage in gasoline and distillates.

The geopolitical tensions in Eastern Europe are expected to dislocate product supply to other regions, lending support to refinery intakes in those regions. Indeed, the US has increased diesel exports to Europe and Latin America, with waterborne diesel exports out of the US Gulf Coast having climbed notably in late March, nearly reaching the highest level seen in over two years. Refinery intakes are also expected to pick-up in Asia and the Middle East in the coming months, in an attempt to make up for any shortfall in product supply.

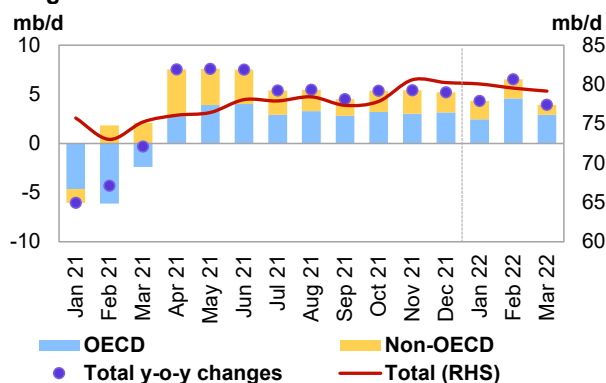
Given the current uncertainty surrounding the recent developments, the geopolitical turmoil and the outlook for the summer months, the countries participating in the 'Declaration of Cooperation' continue to reaffirm their unwavering commitment to supporting oil market stability by ensuring adequate crude oil supply to the global market.

Graph 1: Global oil demand for gasoline and diesel



Source: OPEC.

Graph 2: Global refinery crude intake by region, y-o-y changes



Sources: Argus and OPEC.

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Crude Oil Price Movements

Crude oil spot prices extended their gains in March. This was on the back of robust spot market fundamentals and as the recent bullish market sentiment was buoyed further by rising concerns about possible oil supply shortages in the wake of escalating geopolitical tensions in Eastern Europe. North Sea Dated rose about \$21/b on a monthly average in March.

The OPEC Reference Basket (ORB) value rose firmly in March, increasing by \$19.53, m-o-m, or 20.8%, to stand at \$113.48/b. This was on the back of higher ORB component-related crude benchmarks, and an increase in official selling prices and crude differentials, amid a strong physical crude market.

Crude oil futures prices soared in March extending the previous month's large gains. The market continued to be driven by rising concerns about a potential large oil supply shortage amid escalating geopolitical tensions in Eastern Europe, as well as supply disruptions in the Caspian. Oil futures prices witnessed elevated volatility due to the uncertain oil supply and demand outlooks. The ICE Brent front-month rose by \$18.36, or 19.5%, in March to average \$112.46/b, and NYMEX WTI increased by \$16.63, or 18.1%, to average \$108.26/b. DME Oman crude oil futures prices rose m-o-m in March by \$18.21, or 19.8%, to settle at \$110.18/b.

Hedge funds and other money managers sharply cut their bullish positions in March, particularly in positions related to ICE Brent, amid elevated oil price volatility and highly uncertain oil supply and demand outlooks.

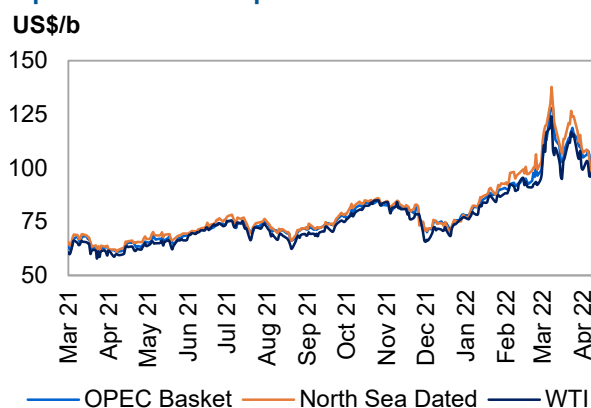
The market structure of the three main futures benchmarks – ICE Brent, NYMEX WTI and DME Oman – strengthened further into deeper backwardation. Investors were pricing in a potential short-term large oil supply shortage, amid escalating geopolitical tensions in Eastern Europe, as well as signs of strong physical oil market fundamentals and the continuing decline of OECD commercial oil stocks in January and February.

The sweet/sour crude differentials widened further in March in all major regions, as the value of light sweet crude rose significantly compared to the value of medium and heavy sour crude. This is a combination of a high-risk premium for the Brent international light sweet benchmark, a drop in the Urals price, and a widening of the spread between light and medium distillate margins, and the heavy sour distillate margins, such as the diesel-high sulphur fuel oil (HSFO) spread.

Crude spot prices

Crude oil spot prices extended their solid gains in March. This was on the back of robust spot market fundamentals and as the recent bullish market sentiment was buoyed further by rising concerns about possible oil supply disruptions in the wake of escalating geopolitical tensions in Eastern Europe. The spot market witnessed strong buying interest in March, specifically in northwest Europe, as buyers were looking for alternative crude to Urals, which pushed the value of North Sea Dated significantly higher compared to other benchmarks. The crude differentials of the North Sea's alternative crudes, such as Forties, rose to record high levels in March on strong demand and limited supply. North Sea Dated rose about \$21/b on a monthly average.

Graph 1 - 1: Crude oil price movement



Sources: Argus, OPEC and Platts.

Crude spot prices were also supported by a further draw in US crude oil stocks and strong refining margins in all major refining hubs, particularly for middle distillates like diesel/gasoil and jet fuel, amid tight oil product markets. A sign of a strengthening physical market is the rise of North Sea Dated compared to the futures benchmark ICE Brent by \$2.38 in March, settling at a premium of \$6.29/b, compared to a premium of \$3.91/b in February.

However, worries about COVID-19 developments in China that could slow demand growth weighed on spot price values.

Crude Oil Price Movements

In March, North Sea Dated rose the most, m-o-m by \$20.74, or 21.2%, to an average of \$118.75/b, supported by firm demand in the Atlantic Basin, particularly in Northwest Europe, while WTI and Dubai's first months increased respectively m-o-m by \$16.82 and \$18.38, or 18.3% and 20.0%, to settle at \$108.52/b and \$110.49/b.

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

OPEC Reference Basket (ORB)	Feb 22	Mar 22	Change		Year-to-date	
			Mar 22/Feb 22	%	2021	2022
ORB	93.95	113.48	19.53	20.8	60.22	98.11
Arab Light	93.82	112.99	19.17	20.4	60.71	98.19
Basrah Medium	92.44	112.21	19.77	21.4	59.37	96.71
Bonny Light	98.76	120.68	21.92	22.2	61.16	102.73
Djeno	90.56	111.30	20.74	22.9	53.62	94.27
Es Sider	98.06	117.90	19.84	20.2	59.37	101.29
Girassol	100.78	121.58	20.80	20.6	61.83	104.15
Iran Heavy	93.04	112.40	19.36	20.8	60.00	97.55
Kuwait Export	93.84	113.28	19.44	20.7	60.55	98.34
Merey	71.02	88.12	17.10	24.1	42.45	74.72
Murban	94.18	112.48	18.30	19.4	60.29	97.78
Rabi Light	97.55	118.29	20.74	21.3	60.61	101.26
Sahara Blend	100.71	121.80	21.09	20.9	61.30	104.19
Zafiro	99.51	120.50	20.99	21.1	61.40	103.04
Other Crudes						
North Sea Dated	98.01	118.75	20.74	21.2	61.07	101.72
Dubai	92.11	110.49	18.38	20.0	60.21	95.84
Isthmus	89.68	107.42	17.74	19.8	57.82	92.73
LLS	94.15	110.80	16.65	17.7	60.21	97.25
Mars	90.01	106.50	16.49	18.3	58.57	93.13
Minas	92.25	111.23	18.98	20.6	59.05	96.02
Urals	94.94	92.59	-2.35	-2.5	60.41	91.24
WTI	91.70	108.52	16.82	18.3	58.06	94.94
Differentials						
North Sea Dated/WTI	6.31	10.23	3.92	-	3.00	6.78
North Sea Dated/LLS	3.86	7.95	4.09	-	0.86	4.47
North Sea Dated/Dubai	5.90	8.26	2.36	-	0.86	5.89

Sources: Argus, Direct Communication, OPEC and Platts.

Crude differentials were strong in March in almost all markets and for all crude qualities. In northwest Europe, several North Sea crude differentials rose to record high levels on strong demand and tightening supply, specifically Urals supply in northwest Europe, and refining margins soared. The Forties crude differential rose again on a monthly average in March by \$1.23 to settle at a premium of \$3.92/b against the Brent benchmark. The value of the Ekofisk crude differential rose by \$1.19 to average a premium of \$4.52/b in March.

Crude differentials of light and medium sweet crude also rose in the Mediterranean and West African markets in March on robust buying interest from European buyers. However, the high value of the Brent benchmark compared to other major benchmarks of WTI and Dubai, high freight rates, and a steep Brent backwardation, limited the rise. Crude differentials of Bonny Light, Forcados and Qua Iboe rose on a monthly average in March by 20¢, 49¢, and 58¢, respectively, to stand at premiums of \$1.82/b, \$2.75/b, and \$2.70/b.

In the Mediterranean, Saharan Blend crude differentials remained in strong premium to North Sea Dated, although they eased by an average of 15¢, m-o-m, in March to stand at a \$2.07/b premium to the Brent benchmark. However, the Caspian sour grade CPC Blend crude differential dropped in March due to worries about loadings and shipping amid tensions in Eastern Europe. The CPC Blend crude differential fell by \$4.86 to a discount of \$6.59/b on average.

In the US Gulf Coast (USGC), Light Louisiana Sweet (LLS) and Mars sour crude differentials weakened in March amid expectation of higher availability of crude from the US Strategic Petroleum Reserve (SPR) release. On a monthly average, Mars sour crude differentials fell 29¢ to a discount of \$2.02/b, and LLS crude differentials fell by 18¢ on a monthly average to a premium of \$2.28/b.

Strong buying interest from Asian refiners and a wider Brent-Dubai arbitrage that limited west-to-east arbitrage opportunities pushed the value of Middle East spot prices higher. The value of the Oman crude differential rose m-o-m by \$5.32 in March to a premium of \$9.30/b.

OPEC Reference Basket (ORB)

The **ORB** value rose firmly in March, increasing by \$19.53, m-o-m, or 20.8%, to stand at \$113.48/b. This was on the back of higher ORB component-related crude benchmarks, and an increase in official selling prices and crude differentials, amid a strong physical crude market. Compared to the previous year, the ORB was up 62.9%, from \$60.22/b in 2021, to an average of \$98.11/b so far this year. All ORB components' values increased over the last month alongside their respective crude oil benchmarks. West and North African Basket components – Bonny Light, Djeno, Es Sider, Girassol, Rabi Light, Sahara Blend, and Zafiro – rose \$20.87, m-o-m, or 21.3% on average, to \$118.86/b. The multiple regions' destination grades – Arab Light, Basrah Light, Iran Heavy, and Kuwait Export – increased by \$19.44, m-o-m, or 20.8% on average, to settle at \$112.72/b. Murban crude rose by \$18.30, m-o-m, or 19.4% on average, to settle at \$112.48/b, while the Merye crude component rose by \$17.10, m-o-m, or 26.1% on average, to settle at \$88.12/b.

The oil futures market

Crude oil futures prices soared in March extending the previous month's large gains. The market continued to be driven by rising concerns about a potential large oil supply shortage amid escalating geopolitical tensions in Eastern Europe, as well as supply disruptions in the Caspian.

Oil futures prices witnessed elevated volatility due to uncertain oil supply and demand outlooks, recording \$20 intraday changes on 9 March, as investors were extremely sensitive to media reports and any new developments related to geopolitical developments in Eastern Europe and their impact on oil market fundamentals. High market volatility coincided with a sharp drop in open interest volumes of ICE Brent and NYMEX futures contracts.

Oil futures prices rose sharply after the US administration decided to ban Russian oil and gas imports, and the UK noted that it would phase out Russia's oil and oil products imports by the end of 2022, which added uncertainty to the global oil supply outlook. Meanwhile, several traders and refiners voluntarily avoided trading Russian crude and oil products, amid worries about the possibility of chartering tankers, insurance and letters of credit, and the EU policy regarding Russian oil imports remained uncertain.

The global oil supply outlook tightened further in late March on a major crude and condensate supply disruption due to damage caused by a storm on the Caspian Pipeline Consortium (CPC) terminal on the Black Sea. According to the Kazakhstan energy ministry, the country will have to reduce crude and condensate production by about 0.32 mb/d until the damage is repaired.

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

Crude oil futures	Feb 22	Mar 22	Change		Year-to-date	
			Mar 22/Feb 22	%	2021	2022
NYMEX WTI	91.63	108.26	16.63	18.1	58.14	95.01
ICE Brent	94.10	112.46	18.36	19.5	61.32	97.90
DME Oman	91.97	110.18	18.21	19.8	60.41	96.13
Spread						
ICE Brent-NYMEX WTI	2.47	4.20	1.73	70.0	3.18	2.89

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

Bullish weekly US crude oil and oil products stock data in the second half of March pointed to a tightening oil market, adding upward pressure to oil prices. According to the EIA weekly data, US crude oil stocks fell for two consecutive weeks, in the weeks of 18 and 25 March, declining by 6.0 mb to their lowest level since September 2018. Oil prices were also supported by a surge in diesel refining margins in Europe and signs of a tight market, as well as a large draw in US distillate stocks in March.

According to the EIA weekly data, stocks of distillate fuel oil fell by 7.0 mb between the week to 25 February and the week to 18 March.

The oil futures price rally, however, was capped by concerns about potential weakening oil demand due to a fresh wave of COVID-19-related lockdowns spreading across China, including the city of Shanghai, which could temper the country's oil demand growth. It should be noted that sustained Russian crude exports in March,

Crude Oil Price Movements

along with expectations that more Russian oil will be rerouted to Asia, and higher crude oil production from other producers, contributed to easing worries about large supply shortages.

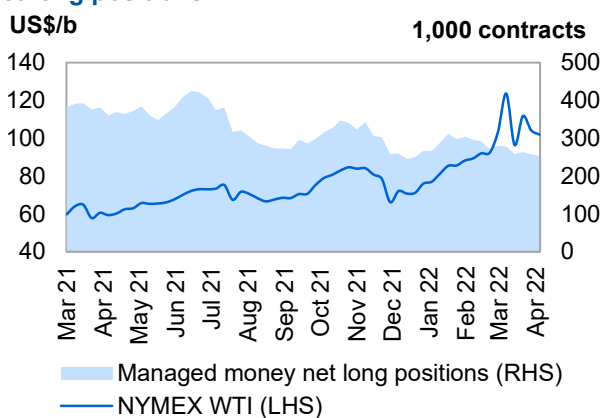
The ICE Brent front-month rose by \$18.36 in March, or 19.5%, to average \$112.46/b, and NYMEX WTI increased by \$16.63, or 18.1%, to average \$108.26/b. Year-to-date (y-t-d), ICE Brent was \$36.58, or 59.7%, higher at \$97.90/b, while NYMEX WTI was \$36.87, or 63.4%, higher at \$95.01/b, compared with the same month a year earlier. DME Oman crude oil futures prices rose m-o-m by \$18.21, or 19.8%, to settle at \$110.18/b. Y-t-d, DME Oman was higher by \$35.72, or 59.1%, at \$96.13/b.

The **front-month ICE Brent/NYMEX WTI spread** widened significantly in March on the back of a higher geopolitical risk premium for Brent futures and prospects of tightening supply in Europe as several traders and refiners voluntarily avoided purchasing Urals crude, which contributed to strengthening the Brent complex compared to NYMEX WTI. This is despite low crude stock levels at Cushing, Oklahoma, the delivery point for the NYMEX crude oil contract, which supported the price of the NYMEX WTI first contract. The ICE Brent/NYMEX WTI spread widened by an average of \$1.73 in March to stand at \$4.20/b.

The North Sea Dated premium to WTI Houston also widened significantly in March increasing by \$3.75 to an average of \$8.49/b, compared to a premium of \$4.74/b in February. The crude differentials of Benchmark North Sea Dated grades rose to a record high level in March buoyed by strong demand as refiners aimed to replace Urals crudes. Meanwhile, the prospect of higher crude supply in the USGC from the US SPR capped the rise of crude values in the region.

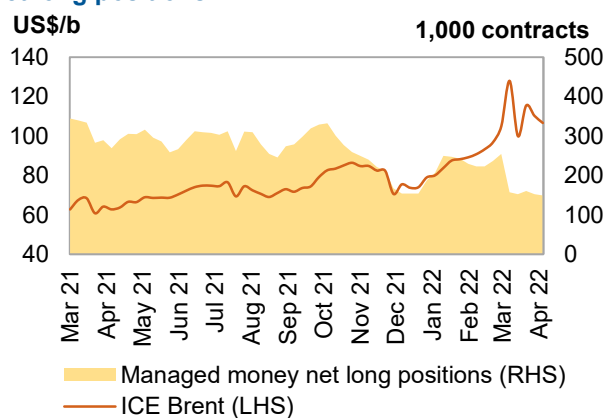
Hedge funds and other money managers sharply cut their bullish positions in March, particularly those related to ICE Brent, amid elevated oil price volatility and highly uncertain oil supply and demand outlooks due to geopolitical tensions and the resurgence of COVID-19 cases in China. This likely prompted speculators to reduce their exposure. The ICE Brent futures positions witnessed a sharp sell-off in March, with ICE Brent futures open interests falling to their lowest since 2015, while the ICE exchange raised the margins for May Brent crude futures from March 25. Money managers further reduced their net long positions in March, cutting combined futures and options net long positions in ICE Brent and NYMEX WTI by 124,755 contracts, or the equivalent of about 125 mb.

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 reduced their net long positions in ICE Brent in March to their lowest level since November 2020, when prices were around \$40/b. Combined futures and options net long positions in ICE Brent fell by 101,873 contracts, or 40.0%, between the weeks of 1 and 29 March to stand at 152,921 lots, according to the ICE Exchange. During the same period, gross short positions rose by 32,349 lots, or 53.3%, to 93,077 contracts, while gross long positions declined by 69,524 lots, or 22.0%, to 245,998 contracts.

Speculators also cut net long futures and options positions related to WTI futures in March, despite a sharp rise in oil prices and the prospect of tightening global oil market. Money managers reduced their net long positions in NYMEX WTI by 22,882 contracts, or 8.1%, to stand at 257,908 lots in the week of 29 March, its lowest level since December 2021. This is due to a decline in short positions by 3,125 lots, or 12.1%, to 22,599 contracts, and a drop in long positions of 26,007 contracts, or 8.5%, to 280,507 contracts, according to the US Commodity Futures Trading Commission (CFTC).

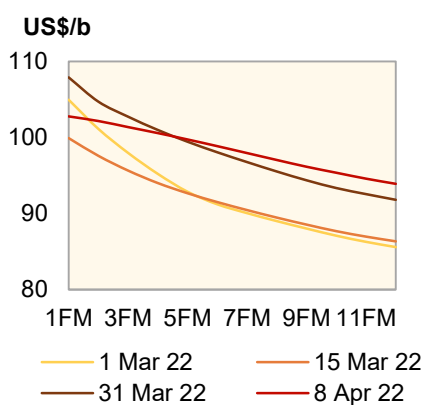
The **long-to-short ratio of speculative positions** in the ICE Brent contract fell in March, declining from about 5:1 in early March to about 3:1 in the week of 29 March. However, the NYMEX WTI long-to-short ratio remained steady at about 12:1 in the week to 29 March. Total futures and options open interest volumes on the two exchanges fell in March, decreasing by 6.8%, or 401,723 lots, to stand at 5.5 million contracts in the week ending 29 March.

The futures market structure

The **market structure** of the three main futures benchmarks – ICE Brent, NYMEX WTI and DME Oman – strengthened further in March and the calendar spread between the nearest futures contracts moved into deeper backwardation. Investors were pricing in a potential short-term large oil supply shortage amid escalating geopolitical tensions in Eastern Europe, as well as strong oil market fundamentals and the continuing decline of OECD commercial oil stocks in January and February. Global oil supply developments pushed first-month contracts significantly higher compared with forward months.

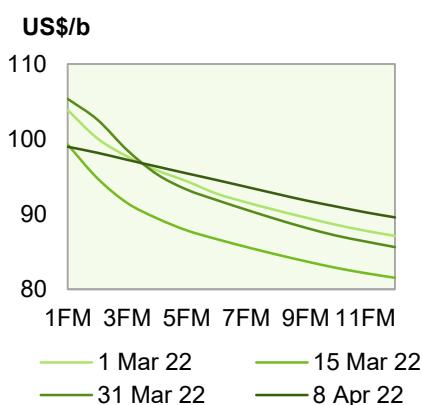
The forward curve for **Brent futures**, as a global benchmark, steepened significantly in March, compared to the previous month. ICE Brent's M1-M6 spread rose to \$16/b on a daily basis, evidence that investors were pricing in a severe tightening of the global market in the short term. Strong demand for North Sea prompt loading cargoes and the reduction of Urals supply into Europe contributed to supporting first-month contract and strengthening the ICE Brent futures forward curve. The ICE Brent first-month premium to the third month widened m-o-m by \$2.78 to a backwardation of \$6.63/b. The ICE Brent's M1-M6 also moved into deeper backwardation to settle at \$13.62 on average, compared to a backwardation of \$7.22/b in February.

Graph 1 - 4: ICE Brent forward curves



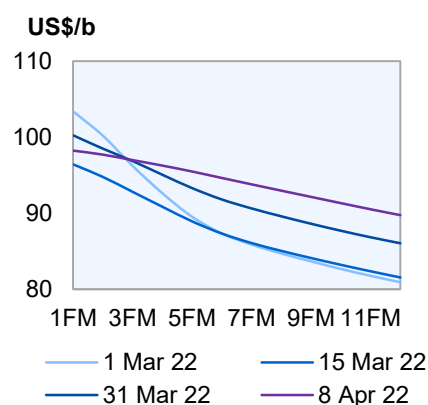
Sources: ICE and OPEC.

Graph 1 - 5: DME Oman forward curves



Sources: DME and OPEC.

Graph 1 - 6: NYMEX WTI forward curves



Sources: CME and OPEC.

The **DME Oman** forward curve strengthened in March, specifically on the front, as firm Asian demand and lower arbitrage opportunities from the Atlantic Basin amid a wide Brent-Dubai spread supported the first month contract. On a monthly average, the DME Oman M1-M3 backwardation widened m-o-m by \$4.20 in March to \$7.15/b on average from a backwardation of \$2.95/b in February.

In the US, the **NYMEX WTI** forward curve also steepened in March, specifically in the front, as signs of a tightening US oil market, healthy US oil demand, declining oil stocks, and geopolitical tensions pushed the value of the NYMEX WTI first month contract significantly higher compared to forward month contracts. However, the announcement of the release of a large volume of oil from the US SPR contributed to a flattening in the front of the futures forward curve and put upward pressure on the back end-back of the curve. The NYMEX WTI M1-M3 month spread widened by \$2.47 to a backwardation of \$5.74/b on average in March, compared with a backwardation of \$3.26/b in February.

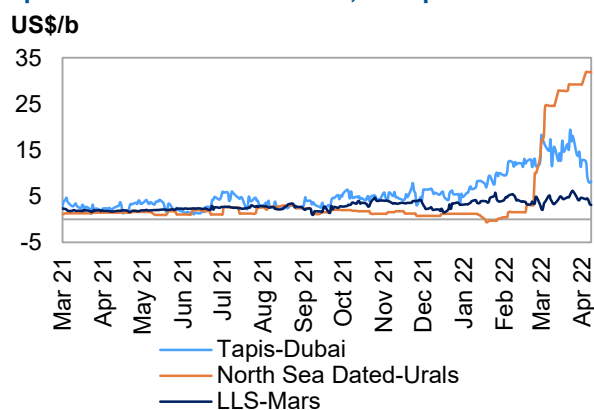
The **backwardation structure** of the physical crude market steepened significantly in the first half of March, supported by strong spot market in all regions, while some buyers were trying to replace Russian barrels with similar grades. In terms of the M1/M3 structure, the North Sea Brent M1/M3 backwardation widened in March by \$2.28 on a monthly average to \$7.59/b. In the US, the WTI M1/M3 backwardation widened by \$2.53 to \$5.58/b, compared with a backwardation of \$3.04/b in February. The Dubai M1/M3 monthly average spread was in a backwardation of \$8.83/b, widening from a backwardation of \$3.92/b in February.

Crude spreads

The **sweet/sour crude differentials** widened further in March in all major regions, as the value of light sweet crude rose significantly compared to the value of medium and heavy sour crude. This is a combination of a high-risk premium for the Brent international light sweet benchmark, a drop in the Urals price, and a widening of the spread between light and medium distillate and heavy distillate margins, such as the diesel-HSFO spread.

In **Europe**, the sweet-sour crude spread represented by the North Sea Dated-Urals differential jumped to a significantly high level in March, mainly due to the deep discount in the value of Urals, amid export challenges and the high value of North Sea Dated. The soaring value of Brent benchmark crude values – Brent, Forties, Oseberg, and Ekofisk (BFOE) – amid strong demand and signs of a tight Northwest Europe crude market, pushed the value of North Sea Dated significantly higher compared to all other benchmarks. The elevated geopolitical risk premium of the Brent complex and the widening spread between light distillate margins, such as diesel and gasoil, compared with the heavy sour distillate margins, like HSFO, also contributed to a widening of the sweet-sour crude differentials.

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



Sources: Argus, OPEC and Platts.

The North Sea Dated-Urals spread rose to a premium of \$26.16 in March, widening by \$23.09/b, m-o-m, from a premium of \$3.07/b in February. At the same time, Urals crude differentials dropped to a deeper discount in March to North Sea Dated in northwest Europe. On a monthly average, Urals crude differentials in northwest Europe dropped by \$23.31, to average at a discount of \$28.83/b to the North Sea Dated.

In **Asia**, sweet-sour crude differentials continued to rise sharply in March as the value of light sweet crude in the Asia-Pacific was strongly supported by a jump in similar crude qualities in the Atlantic Basin and Brent-related crudes. The Tapis-Dubai spread widened by \$3.49, m-o-m, in March, to an average of \$15.35/b. Like last month, the rise of light sweet crude prices in the Atlantic Basin and unfavourable west-to-east arbitrage due to the wide Brent-Dubai spread pushed the value of light sweet crude in the Asia-Pacific significantly higher compared to the Dubai-related sour crude value. The Brent-Dubai front-month exchange of futures-for-swaps (EFS Dubai), a barometer of west-to-east arbitrage, widened sharply again in March to an average of \$11.78/b, widening by \$5.48/b m-o-m.

In the **USGC**, the sweet-sour crude differentials also widened, but less than in other regions. LLS-Mars sour crude differential stood above \$4/b in March as the value of light sweet crude remained supported by low crude stocks at the Petroleum Administration for Defense Districts (PADD 3), sustained demand for exports, and demand from Gulf Coast refiners. US crude stocks in Gulf Coast (PADD 3) fell by 4.9 mb between the weeks of 25 February and 25 March, while the refiner's net input of crude oil rose by 557 tb/d over the same period, according to EIA weekly data. Meanwhile, the prospect of a higher sour crude supply in the USGC from the SPR weighed on the value of sour crudes like Mars sour. In March, the LLS-Mars sour crude differential widened by 16¢ m-o-m, to stand at \$4.29/b.

Commodity Markets

Commodity prices rallied month-on-month (m-o-m) amid geopolitical developments in Eastern Europe. Prices experienced significant volatility in the 1Q22, but continued to trend upwards supported by supply uncertainties. However, lockdowns in China's main economic hubs, amid COVID-19 outbreaks, are suppressing demand for commodities and creating downside risk to prices.

In the paper market, commodity forward curves remain strongly backwarddated incentivizing commodity producers to increase market exposure amid profit taking. However, commodity price volatility has led to some liquidity constraints in the futures market. Some money managers have struggled to meet margin calls to hold current positions and open new ones, which has resulted in low trading volume activity m-o-m.

As expected, the US Federal Reserve announced an interest rate increase in March 2022. This increase followed rate hikes by the Bank of England and hawkish comments by the European Central Bank as a means to cool rising inflation. So far, the shift towards hawkish monetary policies has not had a significant impact on selected commodity prices. Thus, additional tighter monetary policies may be seen in the near term as commodity prices remain elevated and will likely remain so if tensions in Eastern Europe continue. Additionally, OECD countries have started implementing relief programs to both commodity producers and consumers in the form of price caps and government subsidies, but these programs add upside demand potential for commodities and therefore sustain inflationary pressure.

Trends in selected commodity markets

The **energy price index** increased for the second consecutive month; the index jumped by 24.1%, m-o-m, following a sharp price increases across all the index components. On a quarterly basis, the index rose by 17.9% in 1Q22 compared to the 4Q21, thus maintaining its y-o-y upward trend that is now at 182.4%. The q-o-q rise was driven by increases in coal prices (34.7%), followed by higher average crude oil prices (23.4%) and Europe's natural gas prices (1.2%), although this was partially offset by a decline in US natural gas prices (-2.5%).

The **non-energy index** also continued its upward trend; the index advanced for the third consecutive month, increasing by 8.1% m-o-m. Additionally, the index is up by 12.2%, q-o-q, as geopolitical developments in Eastern Europe have added upward pressure to food prices in two ways. Firstly, production costs have increased due to high-energy prices, and secondly, food exports have been hit by tensions since Russia and Ukraine combined represent about 29% of global exports of wheat and 80% of global exports for sunflower oil. The index is up by 80.2%, y-o-y.

Table 2 - 1: Commodity prices

Commodity	Unit	Monthly averages			% Change	Year-to-date	
		Jan 22	Feb 22	Mar 22	Mar 22/Feb 22	2021	2022
Energy*	Index	120.3	129.7	160.9	24.1	76.1	136.9
Coal, Australia	US\$/mt	197.0	222.0	324.4	46.1	89.5	247.8
Crude oil, average	US\$/b	83.9	93.5	112.4	20.2	59.3	96.6
Natural gas, US	US\$/mbtu	4.3	4.7	4.9	4.9	3.4	4.6
Natural gas, Europe	US\$/mbtu	28.3	27.2	42.4	55.7	6.5	32.6
Non-energy*	Index	123.6	128.8	139.3	8.1	104.4	130.5
Base metal*	Index	133.2	138.9	149.9	7.9	104.6	140.7
Precious metals*	Index	139.1	142.2	149.6	5.3	141.2	143.6

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

Sources: World Bank and OPEC.

Average crude oil prices jumped by 20.2%, m-o-m. Declining OECD stocks, on top of lingering concerns of supply disruption from Russia amid western economic sanctions, continue to support high crude oil prices.

Henry Hub natural gas prices increased for the third consecutive month; prices are up by 4.9% m-o-m as colder weather patterns remain in the North America region, increasing draws for residential home heating while underground storage continues to decline. Additionally, the US has ramped up LNG exports to Europe in an effort to boost Europe's natural gas inventories. This LNG export increase is also supporting the upward pressure of Henry Hub prices as Europe and Asia are now competing for US LNG cargoes. Prices are down

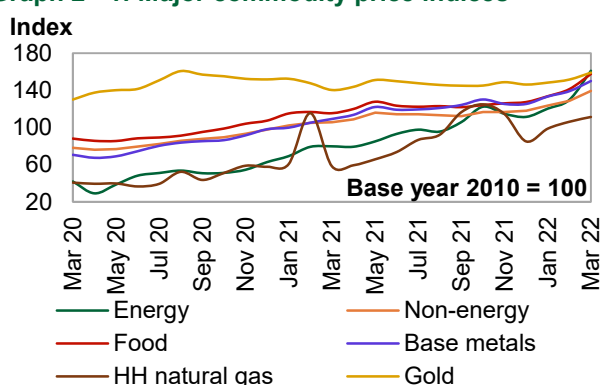
Commodity Markets

by 3.6%, q-o-q, since we are approaching the end of the heating season despite the continuing colder weather patterns. Y-o-y, prices continue to trend upwards and are up by 3.6%.

Natural gas prices in Europe jumped by 55.7% m-o-m; the average **Title Transfer Facility (TTF) price** went from \$27.2/mmbtu in February to \$42.4/mmbtu in March. It is worth mentioning that Russia has continued the supply of gas to Europe, demand has declined amid warmer weather and LNG inflows are at the highest levels y-o-y. TTF price increases are the result of the knock-on effect of geopolitical tensions. Prices are up by 1.2%, q-o-q.

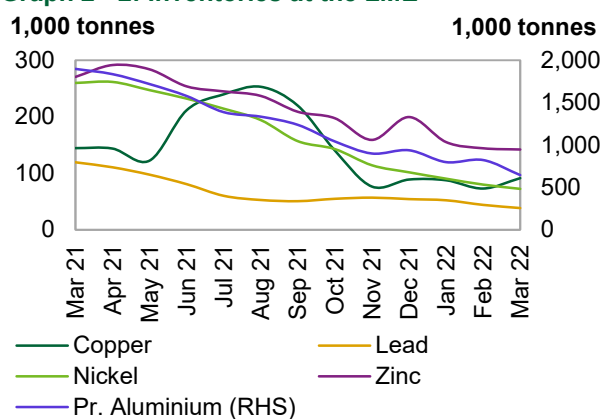
Australian thermal coal prices rallied for the fourth consecutive month, increasing by 46.1%, m-o-m. Coal prices rose sharply following western economic sanctions on Russia given that Russia is the world's third largest producer of thermal coal. Coal prices were set to decline after China started ramping up production, but lockdowns amid COVID-19 outbreaks in major producing areas dampened the outlook for China's coal production. As a result, Europe and Asia markets are currently competing for alternative sources of supply, and thus putting upward pressure on prices. Q-o-q, coal prices are up by 34.7% supported by the Indonesian export ban earlier in the year and geopolitical developments in Eastern Europe, two major events that were absent in 4Q21.

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 for the third consecutive month, increasing by 7.8%, m-o-m. Rising energy costs, and geopolitical developments compounded by declining stocks levels at the London Metal Exchange (LME) continue to support the upward trend. The index is up by 10.9%, q-o-q, maintaining its upward y-o-y trend, with the index 108.2% higher than this time last year.

Aluminium prices continue to trend upwards increasing by 7.8%, m-o-m. Smelters in Europe and China continue to face production challenges in the form of high-energy costs, which has resulted in declining output. LME data shows that aluminium stocks went from 824,025 mt in February to 646,850 mt in March, a 21.5% m-o-m decline. Moreover, lockdowns in China's major producing areas amid COVID-19 outbreaks have added more supply uncertainty and thus put further upward pressure on aluminium prices. Q-o-q, prices are up by 18%, while y-o-y they are 53.1% higher.

Average monthly copper prices rose for the third consecutive month, increasing by 2.9% m-o-m. LME reported stocks increased from 73,025 mt in February to 91,400 mt in March, a 25.2% m-o-m increase. However, stocks levels are down 67.6% y-o-y. Additionally, demand has been rising as the Chinese construction sector continues its recovery, putting upward pressure on prices.

Lead prices recovered from the previous month's decline, increasing by 2.1% m-o-m. China's monetary policy stimulus has provided a boost to the auto industry that has helped spur demand for lead while stocks levels remain historically low, therefore pushing up lead prices.

Nickel prices experienced high volatility in March after one of China's biggest producers of the metal (Tsingshan) attempted to close its short positions at the LME creating a short squeeze. Prices ended up rising by 41.3% m-o-m. Stock levels for nickel also remain low, down 9.4% m-o-m and 72.1% lower y-o-y. It is this decline in stock levels that continues to support the elevated nickel prices.

Zinc prices rallied for the third consecutive month increasing by 9.5% m-o-m. The rally on zinc prices is supported by declining stock levels at the LME. Stocks levels fell by 1.5% m-o-m and are currently 47.6% lower y-o-y.

The **precious metals index** rose for the third consecutive month; the index was up 5.3% m-o-m following a rally in gold prices. Despite interest rate increases from the US Federal Reserve in March, geopolitical developments in Eastern Europe continue to support the safe haven appeal of precious metals. Gold prices advanced by 4.9% m-o-m, platinum by 7.5%, although silver declined by 0.6%. Gold has turned around its y-o-y decline, and is now up by 4.2%. Silver and platinum are both down y-o-y, by 8.6% and 11.3%, respectively.

Investment flows into commodities

Money managers' net length positions remained essentially flat m-o-m on selected commodities following net length increases in gold and copper that were offset by a net length decline in crude oil and natural gas. Meanwhile, total open interest declined by a marginal 0.3% m-o-m following a decline in crude oil, natural gas and copper, which were partially offset by an increase in gold's open interest.

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

Selected commodity	Open interest		Net length			
	Feb 22	Mar 22	Feb 22	% OI	Mar 22	% OI
Crude oil	2,909	2,806	291	10	268	10
Natural gas	1,145	1,108	19	2	-7	-1
Gold	703	835	109	15	151	18
Copper	214	208	29	13	36	17

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

Sources: CFTC and OPEC.

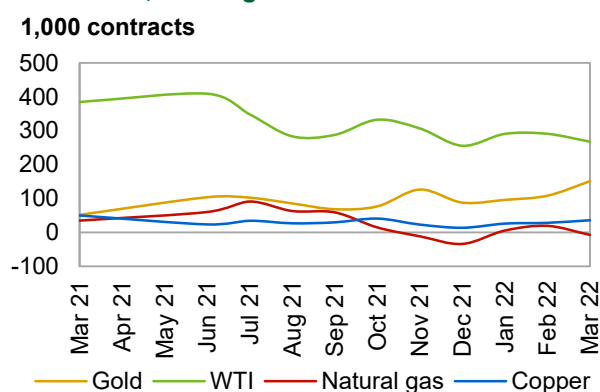
Total crude oil (WTI) open interest (OI) dropped by 3.5% m-o-m in addition to an 8.0% decline in money managers' net length over the same period. While crude oil market sentiment remains bullish, increasing margin calls have made it very expensive for money managers to hold positions and/or open new ones in crude oil futures, leading to a decline in both open interests and net long positions.

Total Henry Hub's natural gas OI decreased for the fourth consecutive month, declining by 3.2%. Money managers' net length positions dropped into negative territory -0.7%, which means that money managers held more short positions than long positions as the lack of market liquidity amid elevated prices has stretched credit limits for money managers, limiting their ability to trade futures contracts.

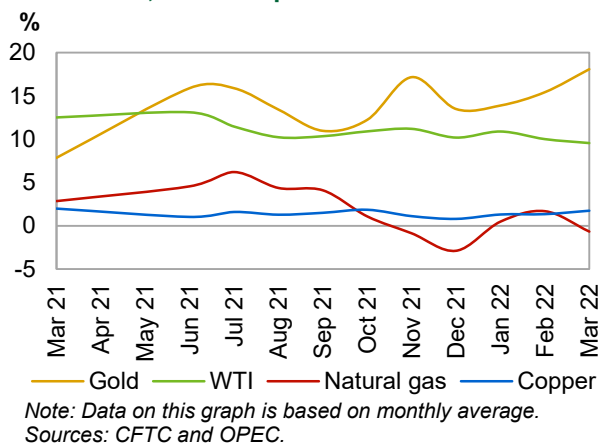
Gold's OI rose for the third consecutive month, increasing by 18.8% m-o-m, while money managers increased their net length positions to 39.2% over the same period. The increasing costs in trading crude oil and natural gas shifted investors' focus to gold futures as an alternative.

Copper's OI declined by 2.8% m-o-m, but money managers' net length increased by 24.1% over the same period. Thus, although OIs has declined, investors remain bullish due to strong market fundamentals.

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



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



World Economy

The year began with the expectation of an ongoing and solid underlying global economic recovery towards mid-year. However, this expectation changed as the conflict between Russia and Ukraine unfolded at the end of February. While the COVID-19 pandemic has been the overarching topic for the global economy over the course of two years, the outcome of the latest events in Eastern Europe in combination with the COVID-19 pandemic appear to redefine considerably global economic developments. For the short-term, the impact on global economic growth will be negative. While it is forecast that both Russia and Ukraine will be facing recessions in 2022, the rest of the global economy will be thoroughly impacted as well via a variety of channels. Inflation is the main factor impacting the global economy. The strong rise in commodity prices in combination with ongoing supply-chain bottlenecks and COVID-19-related logistical logjams in China and elsewhere are all fuelling global inflation, which was already at a high level. Food inflation will likely be an existential challenge for low-income and less-developed economies. Moreover, increasingly tight labour markets in major advanced economies are expected to further fuel wage and salary increases, feeding an extended inflation trend. The price pressure has guided central banks across the world to act swiftly to rein in inflation. Actions by the US Federal Reserve, but also gradual actions by the European Central Bank (ECB) among others, will need close monitoring. Given the geopolitical situation and the global impact of price rises, consumer and business sentiment is expected to decline in Europe particularly, but also in the rest of the world.

By taking these ongoing developments into consideration, while also considering some gradual improvement in 2H22 compared to 1H22, the 2022 global GDP growth forecast was revised down to 3.9% from last month's assessment of 4.2%. However, further downside risks to this forecast are estimated to be considerable, to stand at more than half a percentage point, especially if the current situation extends into 2H22 or even worsens. This follows a slight upwardly revised growth estimate for 2021, which now stands at 5.8%, compared with 5.7% in the previous month.

The assumptions on COVID-19 for 2022 have not changed materially from last month. It is expected that there has been a limited negative economic impact from the Omicron sub-variant in 1Q22. It remains to be seen if the COVID-19 situation worsens again, potentially leading to lockdowns and a slowdown in mobility – as it is the case currently in China – which would negatively impact both economic growth and oil demand further. Some COVID-19-related seasonality towards 4Q22 has already been taken into account, similar to the slowdowns in economic activity that were seen in 2020 and 2021.

Moreover, numerous additional uncertainties beyond the direct impact of the current geopolitical conflict in Eastern Europe and COVID-19-related issues continue to challenge current growth levels. In light of rising interest rates, an important challenge to note is the concern over the very high sovereign debt levels across the globe that could cause a considerable burden on the fiscal health of many economies. Counterbalancing measures to the economic downward trend could come from additional fiscal stimulus measures, especially in the western economies and China.

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

	World	OECD	US	Euro-zone	UK	Japan	China	India	Brazil	Russia
2021	5.8	5.4	5.7	5.3	7.4	1.7	8.1	8.1	4.6	4.7
Change from previous month	0.1	0.1	0.0	0.1	-0.1	0.0	0.0	0.0	-0.1	0.0
2022	3.9	3.4	3.8	3.5	3.7	1.9	5.3	7.2	1.2	-2.0
Change from previous month	-0.3	-0.2	-0.2	-0.4	-0.4	-0.3	-0.3	0.0	-0.3	-4.7

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

Source: OPEC.

Update on latest global developments

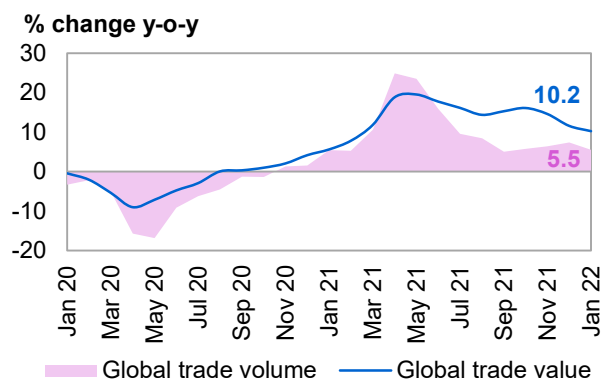
The beginning of the year remained affected by the pandemic, particularly in the Euro-zone, but growth dynamics in the US and Japanese economies were also impacted by a strong rise in infections and consequent social distancing measures. In China and Hong Kong, the Omicron wave also seems to have impacted growth considerably in 1Q22 with some spill-over into 2Q22. However, by the end of February, the Ukraine-Russia conflict took centre stage. The consequent substantial negative impact on both economies in combination with globally rising inflation levels have become the main topics that the global economy has dealt with since then

and will likely be factors for some time in the future. In addition, the conflict has impacted capital markets, transportation and supply chains, and global financial tightening is having a dampening effect on the global growth dynamic. Consequently, representatives of the major central banks have reiterated their general willingness to continue the tapering efforts of the unprecedented COVID-19-related monetary stimulus measures, and particularly the US Fed has announced its willingness to accelerated monetary tightening.

Growth in 1Q22 was likely slowing down, affected by the pandemic in major OECD economies, China and Hong Kong as well as rising uncertainties related to geopolitical developments. Inflation levels have reached new highs in the US and the Euro-zone. The Fed's minutes from the last rate-setting meeting indicated its willingness to raise interest rates and to tighten monetary policies more aggressively than previously thought. US inflation stood at 7.9% y-o-y in February. The ECB has so far been less interested in reducing its monetary support beyond the already announced path, given the impact and the spill-overs from the conflict in Ukraine. However, with inflation at 7.5% in March, it will probably change this policy sooner rather than later.

While **global trade developments** started slowing towards the beginning of this year, the trend indicated an underlying global economic growth recovery until the negative economic impact of the Ukraine tensions started unfolding. World trade volumes increased by 5.5% y-o-y in January, following 7.4% y-o-y in December, based on the CPB World Trade Monitor Index provided by the CPB Netherlands Bureau for Economic Policy Analysis. Trade in value terms rose by 10.2% y-o-y in January, compared with 11.6% y-o-y in December, after 14.6% y-o-y in November.

Graph 3 - 1: Global trade



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

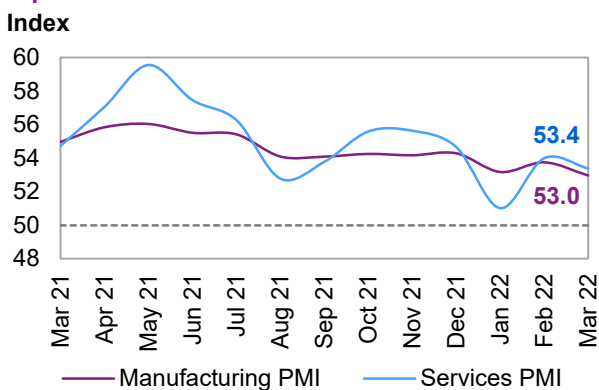
Near-term global expectations

Amid rising global economic uncertainties, near-term developments remain unclear. The ongoing conflict will clearly lead to rising global inflation, the factor that constitutes the major spill-over into the global economy from the conflict. These developments will clearly guide global economic growth lower than previously estimated. So far, it is assumed that the 2H22 growth will accelerate slightly relative to 1H22, while on a yearly basis it will remain clearly below 2021 growth levels. In this base case it is assumed that the armed conflict in Ukraine does not escalate further and will ease in 2H22. Another important assumption is that fossil fuel exports from Russia to the Euro-zone will not be impacted beyond the current limited levels. Also, price rises stemming from reduced exports of agricultural products from Ukraine and Russia will not cause global price rises of these products beyond the currently assumed levels. With regard to the additional uncertainty related to the pandemic, the key assumptions are that the negative impact of COVID-19 will be very limited throughout the year. Some COVID-19-related seasonality towards 4Q22 has been taken into account, similarly to the slowdowns in economic activity in 2020 and 2021 caused by rising infections and consequent social-distancing measures.

The downside risks are considerable. An extension of the conflict into 2H22 – with further economic consequences for not only Russia and Ukraine, but also for global inflation – will negatively impact global GDP growth. The ongoing pandemic could easily reduce economic activity further. An additional factor to be considered on the risk side is that central bank actions, especially by the US Fed and possibly later in the year by the ECB, will need to be more aggressive than currently anticipated, which in turn could dampen the global economic growth dynamic.

The latest **global purchasing managers' indices (PMIs)** still point to a relatively positive development for the global economy in March. The global manufacturing PMI for March retracted only slightly to stand at 53, compared with 53.7 in February and 53.2 in January. The global services sector PMI stood at 53.4 in March, compared with 54 in February, still significantly above the January level of 51.

Graph 3 - 2: Global PMI



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

Taking the above-mentioned base assumption for the baseline of the Secretariat's forecast into consideration, the **global economic growth** forecast in **2022** was reduced to 3.9% from 4.2% in the previous month. With some minor adjustments, especially upward revisions in full year data from OECD economies, the **2021** GDP growth forecast was revised up to 5.8% from 5.7%.

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

	World
2021	5.8
Change from previous month	0.1
2022	3.9
Change from previous month	-0.3

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

OECD

OECD Americas

US

Update on the latest developments

The latest data from 1Q22 shows that the **economic growth momentum has slowed**, given the latest Omicron wave, rising inflation and the evolving geopolitical tensions. Moreover, ongoing supply-chain shortages and a continued tightness in the labour market have impacted economic growth abilities in the most recent months. Central bank policies pursue a continued tapering of the extraordinary COVID-19-related stimulus measures. These policies, or an even more aggressive path in the near term, are very much guided by the latest **inflation** number, which hit 7.9% y-o-y in February, after reaching 7.5% y-o-y in January. Excluding the volatile components of energy and food, inflation stood at 6.4% y-o-y in February, compared with 6% y-o-y in January. The Fed's preferred measure of inflation – the core index of the personal consumption expenditures – stood at 5.4% y-o-y in February, compared to 5.2% y-o-y in January, significantly above the Fed's inflationary target level of around 2%.

Consumer confidence held up surprisingly well as the index provided by the Conference Board rose to 107.2 in March compared with 105.7 in February.

The **unemployment rate** fell further to stand at 3.6% in March, compared with 3.8% in February. The **participation rate** remained low compared to pre-pandemic levels but improved again in March, standing at 62.4%, compared with 62.3% in February and 62.2% in January. The participation rate before the pandemic was almost 63%.

Non-farm payrolls improved solidly again in March, marking an increase of 431,000 job additions compared with an upwardly revised increase of 750,000 in February. With ongoing tightness in the labour market, wage developments need close monitoring as they could materially lift inflation. Hourly earnings rose further by 5.6% y-o-y in March, after a rise of 5.2% y-o-y in February and compared with 5.5% y-o-y in January, continuing an upward trend that is substantially above pre-COVID-19 yearly growth of between 2% and 3%.

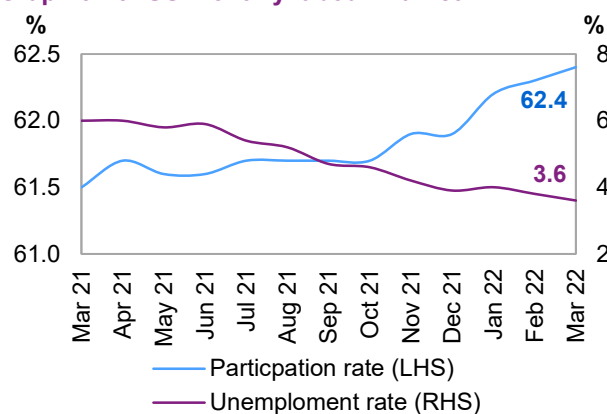
Near-term expectations

GDP growth in 1Q22 is estimated to have slowed after a **surge in COVID-19 infections** in combination with the negative impact of rising inflation. Although growth is forecast to again gain pace in the remainder of the year, it will be at a slower pace than previously anticipated as inflation is forecast to remain a more sustained phenomenon, dampening consumption and investment as well. Hence the US Fed will more likely need to tighten its monetary policy, with the consequent effect of slowing the economy in the remainder of the year, and possibly at a higher rate than currently foreseen. Monetary policies and their outcome will constitute an important element in the near-term economic development of the US. While growth at the beginning of the year was forecast to be supported by fiscal stimulus and COVID-19 was assumed to be widely contained, these two assumptions have proven to be premature. In addition, the armed conflict in Ukraine has pushed up inflation, which was already at a high level, and exports will also likely be affected given the relative slowdown in the global economy. Further fallout stemming from labour market tightness and supply-chain bottlenecks will also need careful monitoring.

US inflation is at the centre of an ongoing global inflation debate, given the importance of US interest rates and consequent repercussions an interest rate rise cycle may have on capital markets, global investment and the US dollar's value. In this respect, a continued strong price development in commodities and consequently a further rise in wages and salaries, as well as rent and rent equivalents (which account for around 40% of US core inflation), may keep inflation at elevated levels of more than 6% for the full year. The Fed's envisaged six rate hikes seem to be likely, but there is the uncertainty about the magnitude of these rate increases. A further rise in key interest rates of around 1.5 percentage points is very likely and has been considered in the Secretariat's forecast.

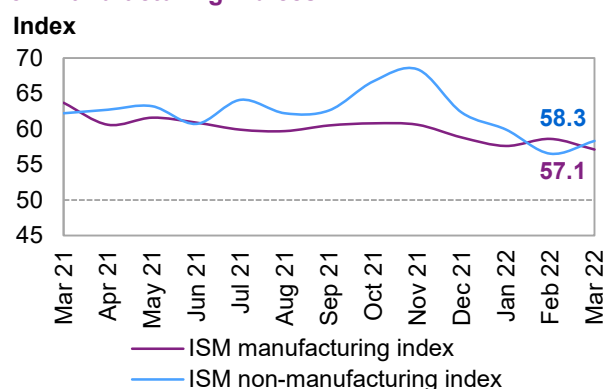
March PMI levels, as provided by the Institute for Supply Management (ISM), point to an ongoing recovery, despite the pandemic and the current global geopolitical challenges. The index level for the services sector, representing around 70% of the US economy, rose significantly to stand at 58.3 in March, compared with 56.5 in February and 59.9 in January. The manufacturing PMI fell in March 57.1, after 58.6 in February and 57.6 in January.

Graph 3 - 3: US monthly labour market



Sources: Bureau of Labor Statistics and Haver Analytics.

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



Sources: Institute for Supply Management and Haver Analytics.

GDP growth for 2022 was revised down to 3.8%, based on expectations of the Fed’s monetary tightening cycle, the impact of inflation in general and the impact that the geopolitical tensions may have on consumer and business sentiment as well as the repercussions these tensions may have for world trade and US exports. The **2021** US GDP growth estimate was confirmed at 5.7%, unchanged from the previous month.

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

	US
2021	5.7
Change from previous month	0.0
2022	3.8
Change from previous month	-0.2

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

OECD Europe

Euro-zone

Update on the latest developments

The latest update on 2021 GDP growth levels from Eurostat, the statistical office of the EU, confirmed the **strong growth momentum throughout 2021**. Growth in 2Q21 and 3Q21 was stronger than expected. Growth in 4Q21 was impacted by the lockdown measures that were implemented in the quarter and grew at 1% q-o-q SAAR, as reported by Eurostat. This follows growth of 9.3% q-o-q SAAR in 3Q21 and 9.1% q-o-q SAAR in 2Q21. This momentum towards the summer-spending season contributed mostly to the strong full-year growth in 2021 as 1Q21 growth was negative, standing at -0.5% q-o-q SAAR. It seems that the combination of fiscal stimulus and accommodative monetary policy continued to support consumption and investment throughout the year. The global trade recovery was another supportive factor in 2021, especially for major exporters such as Germany, France and Italy.

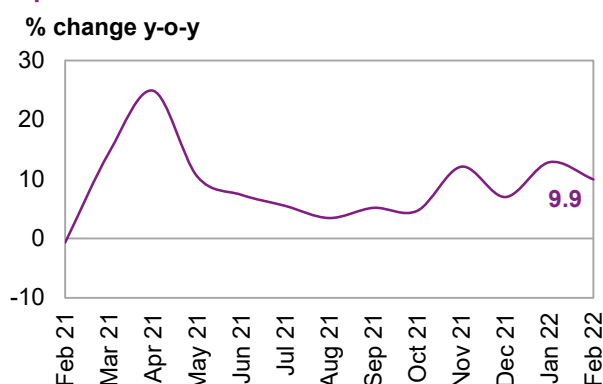
Inflation has risen further in 2022 and follows the upward trend seen towards the end of last year. In the meantime the European Central Bank (ECB) did shift its tone towards monetary tapering and rising interest rates, but the tone remained much less forceful than in the US. Inflation in the Euro-zone rose to 7.5% in March, compared to 5.8% y-o-y in February and 5.1% y-o-y in January. When excluding volatile items such as food and energy, inflation stood at 3.2% y-o-y in March, following 2.9% y-o-y in February and 2.4% y-o-y in January. On a positive note, lending to the private sector by financial institutions continued to expand in February, supported by ECB monetary easing, rising by a further 4.4% y-o-y after increasing by 4.2% y-o-y in January.

The **labour market** continued to improve. According to the latest numbers from Eurostat, the unemployment rate stood at 6.8% in February, after a level of 6.9% in January and 7% in December.

Retail sales rose strongly on a yearly basis in value terms, with growth of 9.9% y-o-y in February, following 12.8% y-o-y growth in January. On a monthly basis, February saw a rise of 1.4% m-o-m, compared with 0.7% m-o-m in January.

Industrial production declined in January at a rate of -0.7% y-o-y, compared with a rise of 1.7% y-o-y in December. This translates into an unchanged monthly development in January, compared with a monthly rise of 1.3% m-o-m in December

Graph 3 - 5: Euro-zone retail sales



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

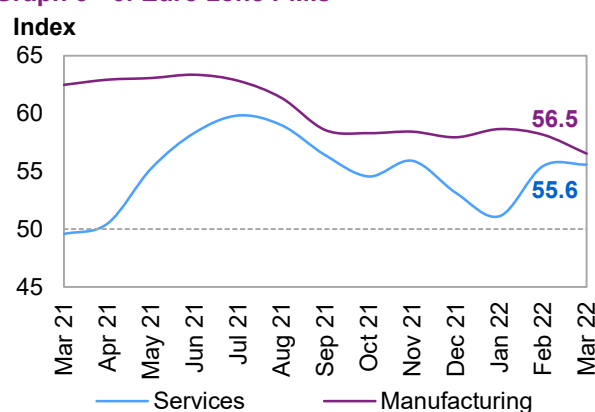
Near-term expectations

The **growth dynamic** in the Euro-zone has been solid so far, and despite a strong rise in inflation and the latest Omicron wave, it is estimated to have held up well in 1Q22. However, given the latest developments with regard to the Ukraine crisis, the growth trend is forecast to slow. So far it is not assumed that there will be major disruptions in energy supply beyond the current limited impact on imports from Russia. If the situation worsens, it is obvious that as this could affect energy supplies and economic growth in the Euro-zone could be materially affected. Moreover, the rising inflationary trend will probably guide the ECB to tighten monetary

policy earlier and more aggressively than currently envisaged. The ECB is clearly lagging the tightening cycle of its most important central bank counterpart, the US Fed, and it seems obvious that interest rates are by far lower than in previous periods of high inflation. Hence, more forceful actions by the ECB in 2H22 are likely and the outcome could push growth lower. Some seasonal effect from COVID-19 and slowing economic activity in 4Q22 have also been accounted for in the forecast.

In the meantime, the Euro-zone's March **PMI** pointed to ongoing momentum in the services sector, while the manufacturing sector's index retracted somewhat. The PMI for services, the largest sector in the Euro-zone, was almost steady, standing at 55.6 in March, compared with 55.5 in February and 51.1 in January. The manufacturing PMI retracted slightly to stand at 56.5 in March, after 58.2 in February and 58.7 in January.

Graph 3 - 6: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

GDP growth in 2022 is forecast to slow, similarly to other OECD economies, and while the impact of the Ukraine crisis and inflation are currently forecast to be limited, the GDP growth forecast is obviously impacted and revised down. The 2022 GDP growth forecast stands at 3.5%, compared with 3.9% in the previous month. With a slight upward revision by Eurostat for 2021 growth, GDP growth for **2021** was revised up to 5.3%, compared to 5.2% in the previous month.

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

	Euro-zone
2021	5.3
Change from previous month	0.1
2022	3.5
Change from previous month	-0.4

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

OECD Asia Pacific

Japan

Update on latest developments

The most recent economic indicators continue to indicate a **softening of the growth momentum** in 1Q21 as the economy was impacted by Omicron and by a deceleration in global trade. This comes after a solid improvement in Japan's 4Q21 dynamic as vaccination rates rose above 80% and consumer confidence and consequently retail spending improved. Momentum in 1Q22, however, slowed, impacted by the latest rise in COVID-19 infections and rising inflation, albeit it remained low in Japan as it stood at only 0.9% y-o-y in January, after a rise of 0.5% y-o-y in December and 0.8% y-o-y in November. Inflation was considerably below average levels in other industrialized economies, given Japan's price development peculiarities and a lower price trend.

Industrial production (IP) rebounded in February, rising by 0.7% y-o-y, after a decline of 1% y-o-y in January. Closely correlated to IP, **exports** also rebounded in February, rising by 19.1% y-o-y, following a rise of 9.6% y-o-y in January, all on a non-seasonally adjusted basis.

Retail sales similarly rose by 1.1% y-o-y in January, continuing the momentum from the rebound in 4Q21, when retail sales rose by the same level. However, as February seems to have been increasingly impacted by the latest COVID-19 wave, spending fell by 0.8% y-o-y.

In line with this trend **consumer confidence** retracted in both February and March, falling to 35 and 32.7 respectively, after a level of 36.6 in January, as reported by the Cabinet Office.

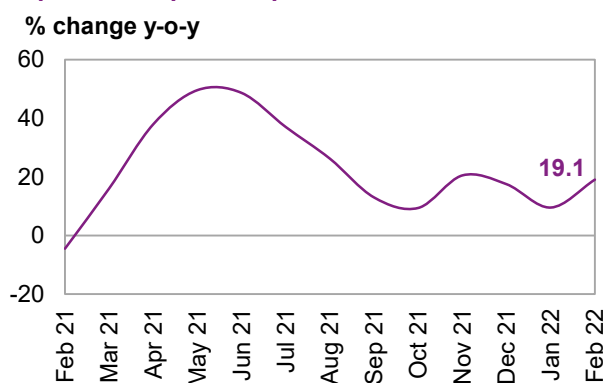
Near-term expectations

The Japanese economy is forecast to continue its **low-growth pattern**. The economy is forecast to remain entangled by a lacklustre domestic performance in general, given the ongoing pandemic in combination with rising inflation – albeit still at low levels – and a possible negative trend in trade volumes. Growth in Japan has been at around 2% of pre-pandemic levels and it seems likely that this trend will continue. Contrary to its OECD peer economies, inflation remains low and the Bank of Japan (BoJ), along with the government, will be able to continue their stimulus efforts, although possibly at a slightly lower level.

The current economic momentum is reflected in the **March PMI numbers**, albeit downside factors include the ongoing geopolitical tensions, China facing a new COVID-19 wave in some important cities, as well as rising inflation. The services sector PMI, which constitutes around two-thirds of the Japanese economy, rose significantly to stand at 49.4 in March, compared with 44.2 in February and 47.6 in January. Hence, the trend is clearly positive, although the level is still below the growth-indicating level of 50. The manufacturing PMI rose considerably, confirming the Japanese growth dynamic in this area. The PMI index for the manufacturing sector reached 54.1 in March, compared with 52.7 in February.

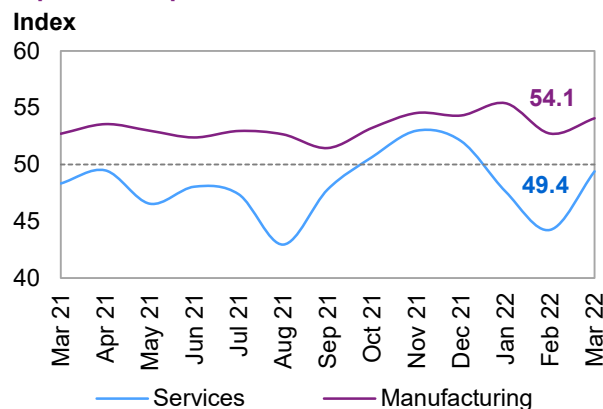
GDP growth for 2022 as revised down to 1.9% from 2.2%, given an anticipated low growth pattern throughout the year. Certainly COVID-19-related developments and even more so the geopolitical events in Eastern Europe remain influential factors that warrant close monitoring, especially in combination with inflationary developments and likely monetary policy responses by the central bank. The **2021** GDP growth forecast was confirmed at 1.7%.

Graph 3 - 7: Japan's exports



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

Graph 3 - 8: Japan's PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

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

	Japan
2021	1.7
Change from previous month	0.0
2022	1.9
Change from previous month	-0.3

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

Non-OECD

China

Update on the latest developments

China's economy was hit recently by a major new COVID-19 outbreak that led to new mobility restrictions in the major cities of Shenzhen and Shanghai in line with the country's "zero-COVID-19 policy". The new restrictions might weigh on household consumption and disrupt supply chains in the near term as they have curtailed spending and business activity, threatening to further slow the recovery momentum.

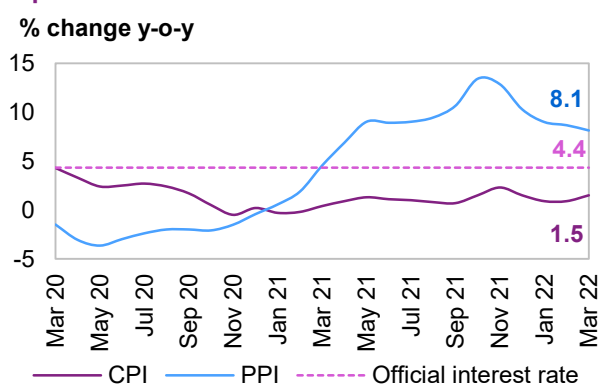
Nevertheless, the combined January–February 2022 retail trade data suggest that retail sales jumped by 6.7% y-o-y following slim growth of 1.7% y-o-y in December 2021, amid the consumption boost driven by the Lunar New Year festival. Likewise, on the **production side**, combined January-February industrial growth rose to 7.5% y-o-y, expanding from 4.3% y-o-y growth in December 2021.

The latest external demand numbers continued to play a significant role in the economic recovery as the trade surplus widened sharply to \$115.95 billion in January-February 2022 compared to \$97.05 billion in the same period a year earlier. Yet trade flows in the upcoming months are expected to slow amid worries over the outlook for global trade given the ongoing geopolitical tension in Eastern Europe. In 2021, China's trade surplus widened to \$676.4 billion, the highest figure on record and up from \$524 billion in 2020. Exports surged by 29.9% and imports by 30.1%.

China's **consumer price index (CPI)** increased to 1.5% in March from 0.9% in February. The **producer price index (PPI)** moderated to 8.1% y-o-y in March from 8.7% in February amid the government's measures to secure supply and control surging commodity prices.

On the policy front, Chinese officials acknowledged the domestic and global economic concerns and signalled monetary policy tools to support the real economy. Yet these tools are to be announced and implemented at the "appropriate time" and the nature of these tools has not been specified. In the meantime, Chinese authorities repeated their vows to stabilize the economy while facing the recent COVID-19 outbreak.

Graph 3 - 9: China's CPI and PPI



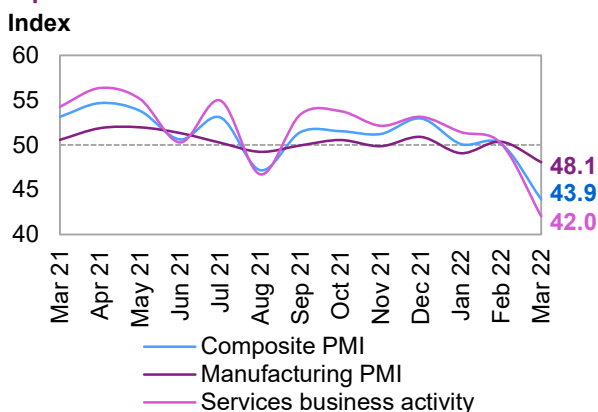
Sources: China Index Academy, National Bureau of Statistics, Soufan and Haver Analytics.

Near-term expectations

China's short-term outlook remains mixed as the recent outbreak might curtail spending and business activity in line with the zero-COVID-19 policy and as the real estate downturn weighed on the economy. Considering the slowing recovery trend, the government could offer significant policy support in the course of 2022 considering the official announced GDP target of 5.5%. Nevertheless, the geopolitical tension between Russia and Ukraine, the global supply bottlenecks as well as the anticipated drop in global trade could add additional challenges to the economic recovery.

March's **PMI** reflected the downturn in economic activity as both the manufacturing and service PMIs fell into the contraction territory. The manufacturing PMI fell to 48.1 from 50.4 in February as both output and new manufacturing order growth rates dropped to the lowest level since February 2020. Moreover, the deterioration in global transportation might lengthening the shipment delivery period. Likewise, the services PMI plunged to 42.0 in March from 50.2 in February 2022, marking the first contraction in the service activities in seven months.

Graph 3 - 10: China's PMI



Sources: Caixin, IHS Markit and Haver Analytics.

Incorporating the short-term impacts of the recent COVID-19 developments in China, the country's real **GDP forecast for 2022** is revised down to 5.3% from 5.6% in the last MOMR.

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

	China
2021	8.1
Change from previous month	0.0
2022	5.3
Change from previous month	-0.3

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

Other Asia

India

Update on the latest developments

India's recovery lost momentum in 4Q21 as GDP growth slowed to 5.4% y-o-y from 8.5% in 3Q21. However, 4Q21 marked a noticeable recovery in private consumption as vaccination progress gained pace. Nevertheless, February total vehicle sales data, an indicator of this cautious consumption trend, suggest the consumption recovery momentum has slowed as sales grew by only 3.4%, down from 15.9% in January. Indeed, high inflation has curtailed the consumption recovery trajectory and might affect discretionary consumption impulses.

On the production side, recent data indicated that industrial output growth advanced 1.3% y-o-y in January 2022, following upwardly revised growth of 0.7% y-o-y in December.

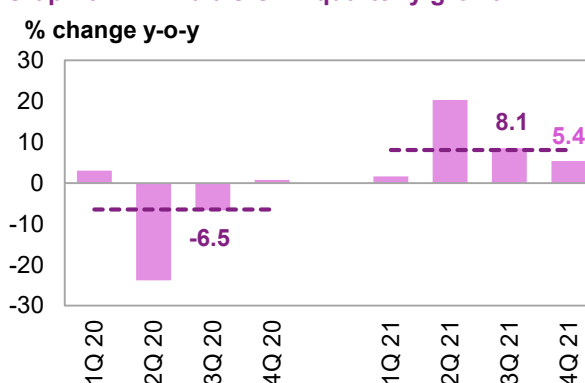
On the employment front, pressure on the labour market increased as the **unemployment rate** jumped to 8.1% in February 2022 from 6.6% in the previous month. Yet, according to the latest available data, the labour force participation rate increased to 47.5% in 1Q21 from 47.3% in 4Q20.

The **consumer price index (CPI)** accelerated 6.1% in February 2022 from 6.0% in January 2022, recording the highest rate since November 2020 and staying at the top of the central bank's target of 2-6% for the second month in a row. The main upward pressures are from increased food prices, especially for essential goods such as cooking oil, meat and vegetables.

Similarly, the **wholesale price index (WPI)** increased to 13.1% in February from 13.0% in January amid the elevated input cost and global shipments transportation delays.

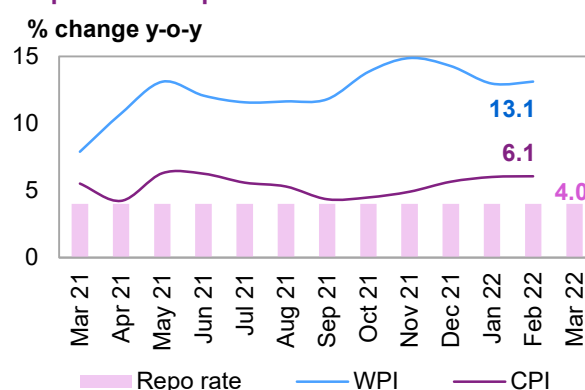
On the monetary policy front, the Reserve Bank of India (RBI) kept the **repo rate** at 4.0% in February and the **reverse repo rate** at 3.4%, maintaining an accommodative monetary policy stance to support the economic recovery and help mitigate the negative impacts of COVID-19.

Graph 3 - 11: India's GDP quarterly growth



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

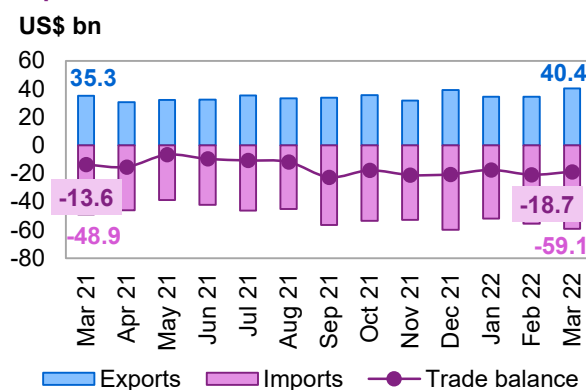
Graph 3 - 12: Repo rate and inflation in India



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

On the external demand outlook, preliminary data indicated that India's **trade deficit** widened to \$18.7 billion in March 2022, from \$13.6 billion in March 2021. Imports jumped by 20.8% y-o-y to \$59.1 billion, while exports rose a slower pace of 14.5% to \$40.4 billion.

Graph 3 - 13: India's trade balance



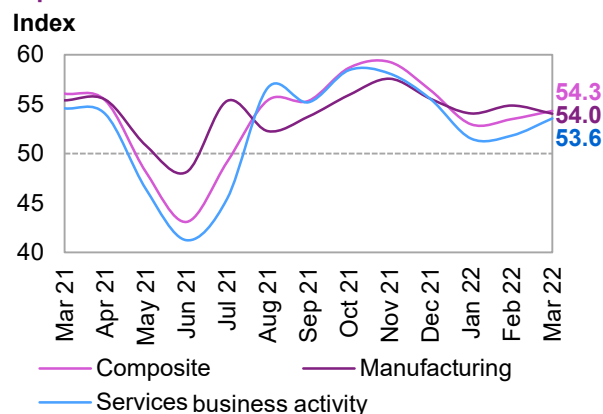
Sources: Ministry of Commerce and Industry and Haver Analytics.

Near-term expectations

Despite the high vaccination rate associated with the weaker nature Omicron variant, the uncertainties surrounding India's near-term recovery are still high considering the increases in energy and food prices as well as delays in global shipments. The recent geopolitical tension might lead to a critical drop in the current account balance considering India's dependency on imports to meet its energy requirements. Most importantly, the already elevating food inflation rate could slow the recovery in consumption. In addition, the indirect impact of high inflation might increase pressure on the labour market considering the decrease in real wages.

While the increase in domestic demand boosted the service **PMI** to 53.6 in March 2022 from 51.8 in February, the manufacturing PMI mirrored a cautious outlook as manufacturing edged down to 54.0 from 54.9 in February. Indeed, lingering concerns surrounding inflationary pressures and COVID-19 might lead to negative business sentiment.

Graph 3 - 14: India's PMIs



Sources: IHS Markit and Haver Analytics.

For this month's MOMR, India's 2022 **GDP** is kept unchanged at 7.2%, addressing the upside potential supported by increasing vaccination rates as well as anticipated fiscal support. The downside risk is mostly related to global economic uncertainties driven by geopolitical tensions and locally cautious consumption activity.

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

	India
2021	8.1
Change from previous month	0.0
2022	7.2
Change from previous month	0.0

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

Latin America

Brazil

Update on latest developments

Brazil's economy ended 2021 in a strong position as it expanded by about 4.6% y-o-y. Meanwhile the value of trade might surge amid the increasing commodity prices driven by the geopolitical tension in Eastern Europe. Nevertheless, major macroeconomic indicators for the last month of 2021 and 1Q22 suggested that the

recovery momentum in Brazil has flattened significantly due to the sharp increase in inflation rates as well as the tight monetary policy.

On the consumption side, the latest retail sales data mirrored the weak consumer purchasing power as households struggle to deal with high inflation. In January 2022, retail sales continued contract but at a slower rate, with sales dropping 1.4% y-o-y following a fall of about 2.7% y-o-y in December 2021.

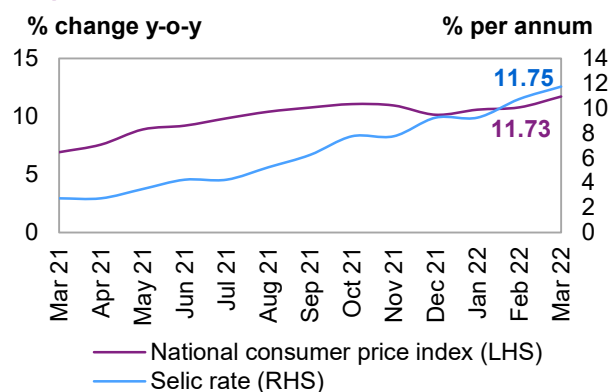
Leading supply-side indicators were down as well, with February's **industrial production** down for the seventh straight month, falling 4.3% y-o-y following a decline of 7.2% in January.

Brazil's **unemployment rate** stayed unchanged at 11.2% in February 2022, a lower rate compared to the 12.6% recorded in the three months to January 2020. For the three-month ending February 2022, the average unemployment rate was 11.2%, the lowest jobless rate in six years.

Inflationary pressures continued to build as inflation surged to 11.7% in March 2022 from 10.8% in the previous month. This was the seventh consecutive month of double-digit inflation and the sharpest rise since October 2003. The highest price increases were seen for transport, food, housing and residential electricity.

The central bank continued its rate normalization policy and raised the **Selic rate** by 100 basis points to 11.75% in March from 10.75% in previous month with a possibility of lifting the rate by another 100 basis points in the upcoming month. Although the contractionary monetary policy might weigh on the economic recovery, central bank authorities hope to combat secondary impacts of surging commodity prices by following these tighter monetary conditions. Forecasts from the monetary authorities suggest that inflation in 2022 could come close to 5.4%, above the central bank target of 5%.

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



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

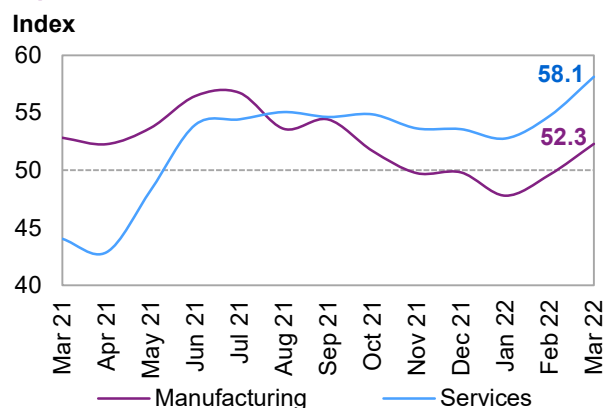
Near-term expectations

The impact of rising energy and food prices as well as the concerns surrounding **fertilizer imports** from Eastern Europe might weigh significantly on Brazil's consumer and business confidence. While the highly contractionary monetary policy and tighter credit conditions aim to combat inflationary pressures, they could slow domestic demand at a time when fiscal support might be relaxed marginally due to high public debt levels. Moreover, political uncertainty related to the 2022 election, ongoing global supply disruptions as well as a new wave of COVID-19 are major uncertainties that could dampen the 2022 outlook.

Recent PMI readings reflected a positive manufacturing recovery. The **manufacturing PMI** increased to 52.3 in March 2022 from 49.6 in February 2022. March reading marked the first expansion in manufacturing output.

The **services PMI** reflected a more optimistic outlook as it rose to 58.1 from 54.7 in February. However, this might still be driven by the resumption of postponed events and the easing of pandemic-related restrictions that had begun earlier.

Graph 3 - 16: Brazil's PMIs



Sources: IHS Markit and Haver Analytics.

Brazil's **GDP growth forecast for 2022** is revised down to 1.2% from 1.5% in the last MOMR. There are several downside factors that might lead the above forecast to be squeezed further to the downside, such as the political uncertainties associated with the upcoming 2022 as well as the developments related to geopolitical tension in Eastern Europe. While concerns over higher inflation, high fiscal stress following COVID-19 support efforts are additional risk factors for the recovery.

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

	Brazil
2021	4.6
Change from previous month	-0.1
2022	1.2
Change from previous month	-0.3

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

Africa

South Africa

Update on the latest developments

Following growth of 4.9% y-o-y in 2021, major economic activities showed signs of resilience despite the anticipated headwinds arising from the geopolitical tension in Eastern Europe. For instance, **consumer confidence** dropped to -13 in 1Q22 from -9 in 4Q21, yet January data showed continued momentum on the economic front as retail sales jumped by 7.7% compared with 3.2% in December 2021. Similarly, **industrial production** marked its strongest growth since June 2021 as it advanced 2.9% y-o-y in January 2022, following three consecutive monthly declines.

The annual **inflation rate** in February 2022 was unchanged from the previous month at 5.7%. However, the inflation rate remains close to the upper boundary of the South African Reserve Bank's target range of 3-6%. On a monthly basis, consumer prices increased by 0.6%, following a 0.2% rise in January.

Meanwhile, the central bank raised the policy rate to 4.25% from 4% to address the overall risks to the medium-term growth outlook and indicated a gradual normalisation of interest rates through to 2024. Moreover, the central bank revised sharply higher the 2022 CPI forecast to 5.8% from 4.9%. Similarly, the GDP growth projections were raised to 2% in 2022 from an earlier estimate of 1.7% and to 1.9% in 2023 from 1.8%.

Near-term expectations

In 1Q22 South Africa's recent major indicators showed strong performances. However, the geopolitical tension in Eastern Europe is likely to curtail growth going forward. The upside risks of elevated inflation would most likely be the main focus of the South African Reserve Bank's monetary policy committee in their short-term policy. For the time being, the seasonally adjusted Absa Purchasing Managers' Index increased to 60 in March 2022 from 58.6 in February, marking the eighth straight month of expansion in manufacturing activity and the highest reading since available records began in March 1999. The current reading supported by export orders, which remained positive, and local demand may have benefited from the overall normalization of business conditions.

South Africa's **2022 GDP forecast** is kept unchanged from last month's MOMR at 2.5%. However, uncertainty surrounding this forecast remains high especially with regard to ongoing geopolitical tension driving inflation, as well as near-term supply shortages.

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

	South Africa
2021	4.9
Change from previous month	0.4
2022	2.5
Change from previous month	0.0

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

Russia and Central Asia

Russia

Update on the latest developments

Recent macroeconomic indicators partially reflected the economic ramifications of the Russia-Ukraine geopolitical tension. Industrial production growth eased to 6.3% y-o-y in February 2022 from 8.6% y-o-y in January 2022. This trend might not continue in the near term due to the uncertainty surrounding the economy and market conditions. Retail sales growth accelerated 5.9% y-o-y from 3.6% y-o-y in January, yet declined by 0.1% on a monthly basis.

Inflationary pressure accelerated to 16.7% in March 2022, up from 9.2% in February 2022. This was the highest inflation rate since March 2015 amid the sharp rouble depreciation and increase in global food prices.

On the policy front, Russia's central bank recently cut the benchmark **interest rate** by 300 bps to 17% in April from 20% in March amid a change in the balance of risks of accelerated consumer price growth, as well as a decline in economic activity.

Moreover, the government has boosted the fund that cushions the economy with \$3.4 billion in additional oil and gas revenues benefiting from rising energy prices. According to the official statement, these funds "will be used, among other things, to implement measures aimed at ensuring economic stability in the context of external sanctions."

Regarding the labour market, the latest data suggested that Russia's **unemployment rate** dropped to 4.1% in February 2022 from 4.4% in January. Nevertheless, the short-term unemployment rate might rise as a result of the departure of several foreign firms.

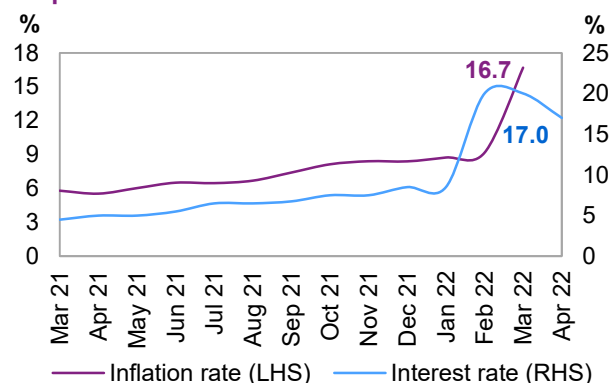
Near-term expectations

The external sanctions imposed on Russia might weigh on economic activity in 2022 and beyond. Russia's economy has benefitted from a strong macro-financial framework supported by increased energy prices, but these external conditions might lead to significant economic challenges especially if the ongoing political tension lengthens beyond 1H22. The consumption outlook might be grim despite the support of defence spending, as labour market pressures and the drop in real income driven by elevated inflation could challenge private consumption. Meanwhile, weak private spending and the external conditions could constrain industrial output. The headline inflation rate has already surged to double digits due to the weaker rouble and the expectation of much higher prices on imported goods with trade rapidly being cut off. Nevertheless, recently the rouble gained ground amid a strong flow of energy revenues and tough capital controls as well as mandated hard currency sales by exporters.

March **manufacturing PMI** tumbled to 44.1 from 48.6 in February, marking the second straight month of contraction in factory activity and the lowest pace since May 2020. Moreover, manufacturing business sentiment slumped to its lowest in 22 months to 48.6 in March from 51.8 in February.

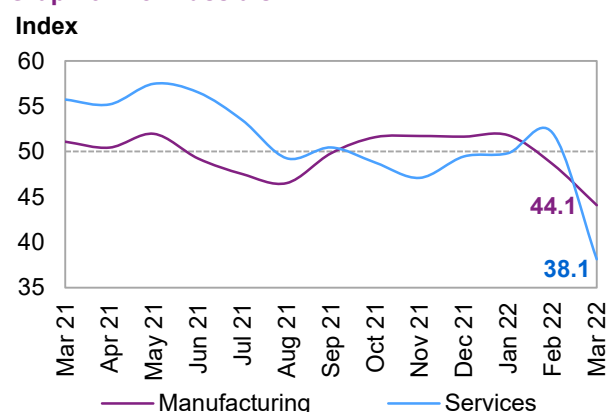
Similarly, the **services PMI** dropped to 38.1 in March 2022 from 52.1 in February, amid greater economic uncertainty driven by the geopolitical conditions.

Graph 3 - 17: Russia's inflation vs. interest rate



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

Graph 3 - 18: Russia's PMI



Sources: IHS Markit and Haver Analytics.

Incorporating the recent macroeconomics indicators and accounting for the rise in energy prices, Russia's **2022 GDP forecast** is revised down to -2.0% from 2.7% in the last MOMR.

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

	Russia
2021	4.7
Change from previous month	0.0
2022	-2.0
Change from previous month	-4.7

Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

OPEC Member Countries

Saudi Arabia

Saudi Arabia's real GDP grew by 6.7% y-o-y in 4Q21, following growth of 7.0% y-o-y in 3Q21. On a seasonally adjusted quarterly basis, the GDP advanced 1.6%, easing sharply from a 5.7% expansion in 3Q21. For 2021, the economy grew by 3.2%, rebounding sharply from the 4.1% contraction in 2020.

The S&P Global Saudi Arabia PMI increased slightly to 56.8 in March 2022 from 56.2 in February, amid the acceleration in output, new orders growth and the stronger improvements in purchasing and supplier delivery supported by a noticeable slowdown in COVID-19 cases.

Nigeria

Following a contraction of 1.8% y-o-y in 2020, **Nigeria's** economy expanded by 3.6% in 2021. This economic recovery is most likely to continue over the course of 2022 with support from improvements in the hydrocarbons sector and energy prices. Recent official data suggested that the annual **inflation rate** edged up slightly to 15.7% in February 2022 from 15.6% in January 2022, although food inflation remained elevated. Indeed, higher food costs related the geopolitical tensions could further fuel inflation.

In March 2022, the overall improvement business improvement softened as Stanbic IBTC Bank Nigeria's **PMI suggested**, indeed it dropped to 54.1 from 57.3 in February. Yet, the overall prospects for Nigeria's short-term economic outlook remain positive, despite concerns over inflationary pressures amid disruptions to global trade flows and supply shortages.

The United Arab Emirates (UAE)

According to **UAE's** National Bureau of Statistics, real GDP expanded 3.8% in 2021. Meanwhile the recent S&P Global United Arab Emirates PMI remained at 54.8 in March 2022, unchanged from the previous month. The latest reading pointed to the 16th straight month of expansion in both output and new orders. Looking ahead, confidence remained positive amid improvements in overall economic conditions, yet there are concerns about inflation, shipping and geopolitical tension in Eastern Europe.

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

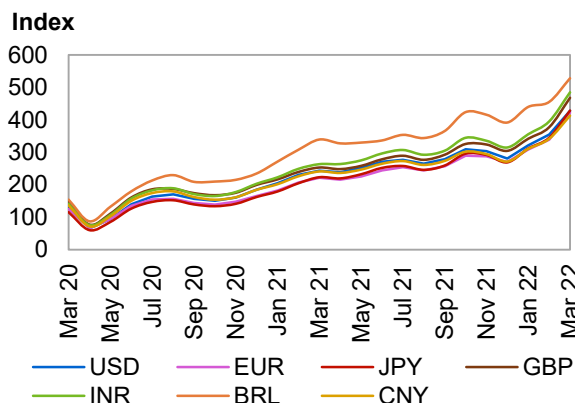
The **US dollar (USD)** rallied against major currencies following the announcement of interest rate increases by the US Federal Reserve (Fed) in early March. Although the rate hike was about 25 bps, the strong performance of the US labour market and mounting inflationary pressures support additional rate hikes and thus a stronger appreciation of the USD. In Developed Markets (DM), the USD increased by 2.9% against euro m-o-m, 2.9% against the Japanese yen, and by 2.7% against the pound sterling in the same period. Meanwhile in Emerging Markets (EM), the USD increased by 1.6% against the Indian rupee m-o-m, 0.1% against the Chinese yuan, while declining by 3.9% against the Brazilian real in the same period. The USD's appreciation is most noticeable in DM as central banks have adopted less aggressive monetary policy approaches to combat inflation, while in EM only Brazil has increased interest rates to cool off inflation.

The strengthening of the USD amid higher interest rates has helped cool off inflationary pressure on the OPEC Reference Basket (ORB). **Inflation** (nominal price minus real price) went from \$2.66/b in February 2022 to \$1.88/b in March 2022, a 29.3% decline m-o-m.

In **nominal terms**, accounting for inflation, the price of the ORB went from \$93.98/b in February 2022 to \$113.48/b in March 2022, a 20.8% increase m-o-m.

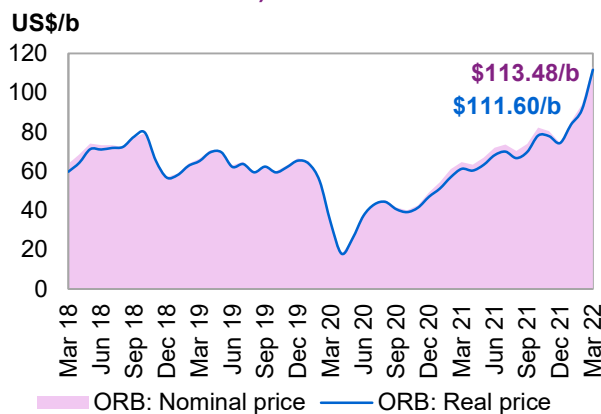
In **real terms** (excluding inflation), the ORB went from \$91.29/b in February 2022 to \$111.60/b in March 2022, a 22.2% increase m-o-m.

Graph 3 - 19: ORB crude oil price index compared with different currencies (base January 2016 = 100)



Sources: IMF and OPEC.

Graph 3 - 20: Impact of inflation and currency fluctuations on the spot ORB price (base June 2017 = 100)



Source: OPEC.

World Oil Demand

Based on the latest historical data, world oil demand growth in 2021 was revised slightly to the downside by 0.04 mb/d as compared to the previous month to now stand at 5.7mb/d. The downward revision is due to an upward revision to the 2020 baseline. During 2021, OECD oil demand increased by 2.6 mb/d, while non-OECD oil demand showed growth of 3.1 mb/d y-o-y.

In 2022, oil demand growth was revised to the downside by 0.5 mb/d to average 3.7 mb/d y-o-y, accounting for declines in global GDP on account of the geopolitical developments and the resurgence of the Omicron variant on global oil demand in China. World oil demand is projected to average 100.5 mb/d, which is 0.4 mb/d lower than the previous month's estimates and approximately 0.3 mb/d higher than 2019.

In 1Q22, world oil demand recorded robust growth, mainly due to a strong economic rebound, supported by stimulus programmes and further easing of COVID-19 containment measures. OECD oil demand grew by 2.8 mb/d y-o-y while non-OECD requirements gained 2.2 mb/d as compared to the same quarters in 2021. Downward revisions in 2Q22, 3Q22 and 4Q22 oil demand growth took into account mainly current economic forecasts and other factors that could potentially reduce world oil requirements.

Diesel and gasoline are anticipated to record the highest gains among petroleum products y-o-y on the back of increasing mobility and healthy industrial activities globally. Improvements in supply chain bottlenecks in major consuming countries will support oil demand, with light distillates largely supported by strong petrochemical demand, notably in China, the US and India. Finally, the recovery in global air travel amid declining COVID-19 is expected to further support jet kerosene demand.

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

World oil demand	2020	1Q21	2Q21	3Q21	4Q21	2021	Change 2021/20	
							Growth	%
Americas	22.56	22.82	24.38	24.83	25.01	24.27	1.71	7.58
<i>of which US</i>	18.35	18.60	20.17	20.35	20.56	19.93	1.58	8.60
Europe	12.43	11.91	12.64	13.85	13.88	13.08	0.64	5.18
Asia Pacific	7.14	7.67	7.04	7.11	7.82	7.41	0.27	3.77
Total OECD	42.13	42.40	44.05	45.79	46.70	44.75	2.62	6.23
China	13.56	13.85	14.61	14.57	15.21	14.56	1.00	7.39
India	4.51	4.94	4.50	4.59	5.02	4.76	0.25	5.61
Other Asia	8.13	8.56	8.98	8.34	8.62	8.63	0.50	6.09
Latin America	6.01	6.25	6.16	6.46	6.34	6.30	0.29	4.84
Middle East	7.55	7.95	7.77	8.24	7.97	7.98	0.44	5.80
Africa	4.08	4.37	4.08	4.15	4.43	4.26	0.17	4.27
Russia	3.39	3.65	3.42	3.63	3.76	3.61	0.23	6.69
Other Eurasia	1.07	1.23	1.24	1.09	1.28	1.21	0.14	12.69
Other Europe	0.70	0.78	0.72	0.73	0.79	0.75	0.06	8.27
Total Non-OECD	49.00	51.58	51.48	51.80	53.42	52.07	3.07	6.28
Total World	91.13	93.98	95.53	97.59	100.12	96.82	5.70	6.25
Previous Estimate	91.02	93.84	95.46	97.49	100.10	96.75	5.73	6.30
Revision	0.11	0.14	0.08	0.09	0.02	0.07	-0.04	-0.05

Note: * 2021 = Estimation. 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	%
Americas	24.27	24.38	25.43	25.82	25.78	25.36	1.09	4.50
of which US	19.93	19.70	21.01	21.30	21.26	20.82	0.89	4.49
Europe	13.08	12.83	13.17	14.40	14.24	13.66	0.59	4.49
Asia Pacific	7.41	7.96	7.22	7.25	7.93	7.59	0.18	2.42
Total OECD	44.75	45.16	45.82	47.47	47.95	46.61	1.86	4.16
China	14.56	14.34	15.10	15.06	15.65	15.04	0.48	3.27
India	4.76	5.28	4.82	4.97	5.35	5.10	0.34	7.16
Other Asia	8.63	9.20	9.59	8.93	8.95	9.16	0.54	6.24
Latin America	6.30	6.43	6.33	6.61	6.50	6.47	0.16	2.62
Middle East	7.98	8.28	8.01	8.49	8.20	8.25	0.26	3.28
Africa	4.26	4.52	4.21	4.27	4.56	4.39	0.13	3.11
Russia	3.61	3.70	3.33	3.50	3.59	3.53	-0.08	-2.29
Other Eurasia	1.21	1.24	1.19	1.04	1.28	1.19	-0.02	-2.06
Other Europe	0.75	0.80	0.71	0.73	0.80	0.76	0.01	0.69
Total Non-OECD	52.07	53.79	53.29	53.60	54.86	53.89	1.81	3.48
Total World	96.82	98.95	99.12	101.06	102.81	100.50	3.67	3.79
Previous Estimate	96.75	99.14	99.78	101.36	103.24	100.91	4.15	4.29
Revision	0.07	-0.19	-0.66	-0.30	-0.44	-0.41	-0.48	-0.50

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

OECD

OECD Americas

Update on the latest developments

According to the latest available monthly data for January 2022, **US oil demand** grew strongly by 1.1 mb/d y-o-y, up by 6.0%. **January 2022** oil demand witnessed growth for the majority of petroleum products, with naphtha being the only exception.

Gasoline demand grew by 0.3 mb/d y-o-y in line with Apple mobility trend reports of a 34% increase in the driving mobility index in the US.

Furthermore, the index of industrial output in the US rose by 2% y-o-y in January, and diesel witnessed growth of 0.2 mb/d y-o-y.

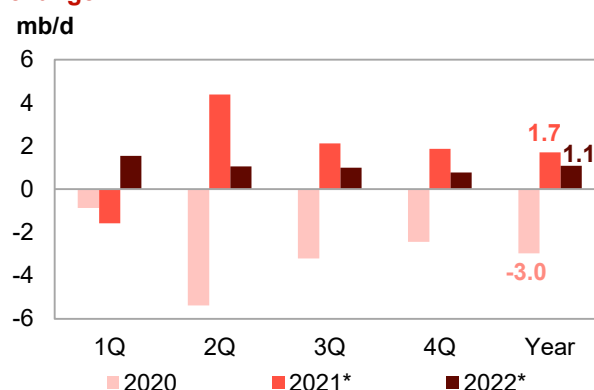
LPG demand exceeded pre-pandemic levels as propane and butane demand edged up in US NGL feedstock requirements for the industrial and petrochemical sectors.

However, according to IATA monthly statistics on the US domestic markets, the revenue-passenger-kilometers (RPK) growth rate slowed in January as the US market was substantially affected by flight cancellations and staff shortages related to COVID-19 containment measures. Consequently, jet kerosene demand recorded a month-on-month decline, but at the same time growth of 0.3 mb/d y-o-y and on top of a low baseline in the same month in 2021.

According to preliminary weekly data, February 2022 and March 2022 averages imply a continuation of the growing oil demand trajectory.

Oil demand grew firmly also in Canada and Mexico during the first two months of 2022 y-o-y, supported by rising oil requirements in the transportation and industrial sectors.

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



Note: * 2021 = Estimation and 2022 = Forecast. Source: OPEC.

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

By product	Jan 21	Jan 22	Change Jan 22/Jan 21	
			Growth	%
LPG	3.64	3.83	0.19	5.1
Naphtha	0.18	0.17	-0.01	-7.8
Gasoline	7.67	7.98	0.32	4.1
Jet/kerosene	1.14	1.44	0.30	26.2
Diesel	3.93	4.08	0.15	3.7
Fuel oil	0.24	0.33	0.09	38.0
Other products	2.08	2.19	0.11	5.3
Total	18.89	20.02	1.14	6.0

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

Near-term expectations

In 2022, US GDP growth is forecast to grow by 3.8% y-o-y, following robust growth of 5.7% in 2021. Early indications have shown a slowing in economic activities; the pace of new orders for manufactured goods in the near term seems to be slowing substantially in the US, which may affect service spending with undesirable effects, potentially leading to supply chain disruptions.

Despite some challenges, US oil demand is expected to record solid growth of 1.1 mb/d in 2022 y-o-y. A comprehensive stimulus package in the US is anticipated to provide strong support for oil demand, and accordingly, US oil demand is estimated to record strong growth of 1.6 mb/d in 1Q22, backed by rising mobility and social activities. This trend will continue into 2Q22 as higher vehicle miles travelled, in combination with improving unemployment figures and healthy petrochemical industry requirements will support oil demand growth of 1.1 mb/d. Furthermore, as the recovery in international air traffic continues, jet kerosene demand will continue to recover and grow. In 3Q22 and 4Q22, US oil demand growth is projected to slow to 1.0 mb/d and 0.8 mb/d, respectively. Overall, 2022 US oil demand is expected to exceed pre-COVID-19 levels.

Oil demand in other countries of the region during 2022 is projected to be driven by transportation and industrial sector requirements.

OECD Europe

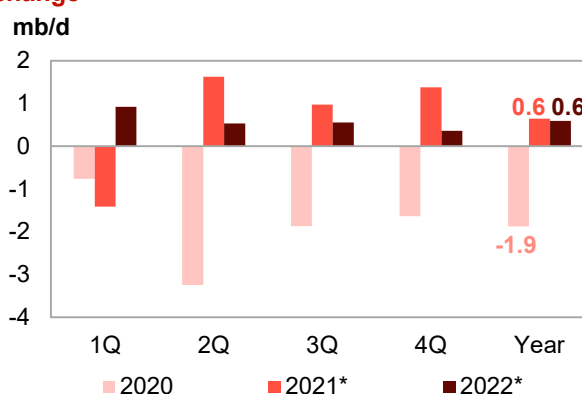
Update on the latest developments

Transportation fuel demand in **OECD Europe** continued its recovery trajectory as COVID-19 pandemic restrictions eased and economic activities recovered in most EU countries, with demand reaching slightly below pre-pandemic levels. In **January 2022**, oil demand in the region grew strongly by 1.3 mb/d y-o-y, supported by the usual seasonal boost in mobility as people travelled for leisure and business-related activities.

The Apple mobility trends indicate strong mobility in all of the Big Four European economies. In Spain, driving mobility grew by 54% in January 2022 as compared with same period in 2021, in the UK 49%, while in Germany 33% and France 24%, respectively.

In addition, industrial output also increased appreciably, leading to increased diesel demand to close to pre-pandemic levels in January. While diesel witnessed strong growth of 0.7 mb/d y-o-y, gasoline grew by 0.3 mb/d y-o-y. A recovery in air travel on both domestic and international routes resulted in demand for jet kerosene rising by 0.3 mb/d, or 53%, y-o-y. This is consistent with a report from IATA in January 2022, which indicated that January air travel in the Euro-zone, both domestic and international, was significantly better than at the beginning of 2021, despite the resurgence of the Omicron variant. However, naphtha and LPG demand recorded declines y-o-y, which were partly offset by overall gains.

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



Note: * 2021 = Estimation and 2022 = Forecast.
Source: OPEC.

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

By product	Jan 21	Jan 22	Change Jan 22/Jan 21	
			Growth	%
LPG	0.42	0.41	-0.01	-2.6
Naphtha	0.66	0.57	-0.08	-12.8
Gasoline	0.86	1.05	0.19	21.8
Jet/kerosene	0.38	0.56	0.18	48.2
Diesel	2.51	2.79	0.27	10.8
Fuel oil	0.14	0.17	0.03	20.1
Other products	0.38	0.41	0.03	7.1
Total	5.35	5.95	0.60	11.2

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

Current geopolitical developments will impact economic and oil demand growth in the region. Nevertheless, based on the low historical baseline during 2021, there is cautious optimism for growth in 2022 oil demand. Improving pandemic developments will also support European in 2022.

In 1Q22, oil demand was estimated to have grown by 0.9 mb/d y-o-y, however momentum is projected to slow down to 0.5 mb/d y-o-y in 2Q22 and 3Q22, and to drop further to 0.4 mb/d in 4Q22. Overall, oil demand is expected to grow by 0.6 mb/d y-o-y in 2022.

In terms of products, very high natural gas prices in the EU are expected to incentivize fuel switching between natural gas and diesel, mainly in the industrial sectors. International and domestic passenger air traffic are furthermore projected to support jet kerosene demand to grow during 2022 y-o-y. Strong mobility during 1Q22 and 2Q22 will provide solid support to gasoline demand. Finally, petrochemical industry demand for feedstock is projected to support rising demand for naphtha and LPG during 2022.

OECD Asia Pacific

Update on the latest developments

OECD Asia Pacific oil demand showed an improvement of 0.53 mb/d y-o-y growth in **January**. Requirements for petrochemical industry feedstock in Japan and South Korea strengthened demand for naphtha to grow by 0.18 mb/d y-o-y.

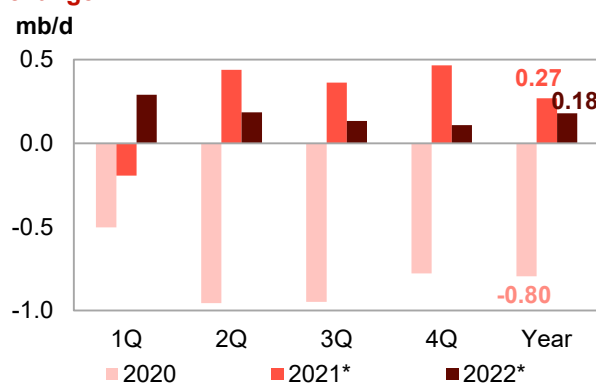
Similarly, additional industrial and residential requirements sparked a rise in LPG demand by 0.06 mb/d.

Mobility lent support to transportation fuels in OECD Asia Pacific with gasoline growing by 0.07 mb/d y-o-y.

Diesel demand increased by 0.11 mb/d y-o-y, supported by coal-to-gas switching as residential heating demand returned to normal after an exceptionally mild winter.

Jet fuel demand was unchanged y-o-y as the Asia Pacific airline sector remained under pressure with passenger traffic trending at weak levels following a surge in COVID-19 cases.

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



Note: * 2021 = Estimation and 2022 = Forecast.
Source: OPEC.

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

By product	Feb 21	Feb 22	Change Feb 22/Feb 21	
			Growth	%
LPG	0.51	0.54	0.03	6.7
Naphtha	0.74	0.67	-0.07	-10.0
Gasoline	0.74	0.69	-0.05	-6.4
Jet/kerosene	0.59	0.65	0.06	9.7
Diesel	0.81	0.78	-0.03	-3.1
Fuel oil	0.26	0.29	0.03	12.4
Other products	0.19	0.12	-0.07	-35.0
Total	3.83	3.75	-0.09	-2.3

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

Near-term expectations

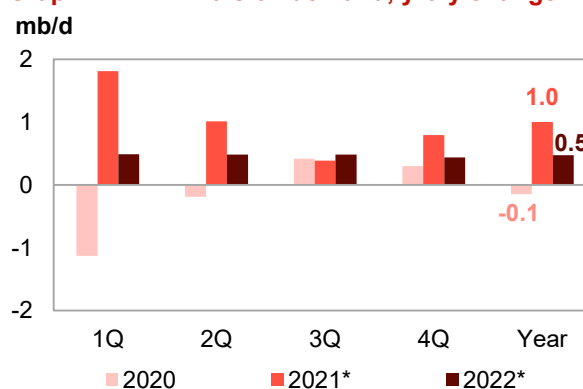
In 2022, the expected massive vaccination campaigns and other containment measures are forecast to support the containment of COVID-19 in the Asia Pacific region. This, coupled with additional government stimulus packages will back demand for oil in the region. In 2022, oil demand in the region is expected to grow by 0.18 mb/d y-o-y. The strongest growth is expected to be recorded in 1Q22 and to be driven by strong petrochemical and industrial feedstock requirements for naphtha and diesel. In addition, residential heating requirements will back LPG demand. In 2Q22 and 3Q22, transportation fuel requirements are forecast to increase, due to the expected mobility recovery in the region. Accordingly, gasoline and diesel will gain additional support in both 2Q22 and 3Q22, with oil demand expected to rise by 0.19 mb/d and 0.13 mb/d, respectively. However, in 4Q22, oil demand growth is expected to decrease slightly to 0.11 mb/d y-o-y. Although jet fuel recorded dismal growth during January, the fuel is likely to recover later in the year. Australia has already opened up its borders to tourists and international travellers after a nearly two-year-long hiatus. This will lend support to a jet-kerosene demand recovery in the region.

Non-OECD

China

Update on the latest developments

Oil demand in China remained resilient in February despite the resurgence of COVID-19 in some cities of China. February monthly data indicates oil demand growth of 0.4 mb/d y-o-y. Oil demand growth was driven by light distillate requirements on the back of China's propane dehydrogenation plants ramping up after returning from maintenance and households boosting heating requirements during a cold winter. LPG demand recorded annual growth of 0.2 mb/d y-o-y. Furthermore, strong demand from domestic refineries lent strong support to residual fuel, which grew by 0.1 mb/d y-o-y. Backed by healthy petrochemical industry requirements in 1Q22, demand for naphtha grew by 0.1 mb/d y-o-y.

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

Note: * 2021 = Estimation and 2022 = Forecast.
Source: OPEC.

However, the major transportation fuels were negatively impacted by stringent COVID-19 containment measures. Gasoline demand recorded moderate growth of 0.1 mb/d y-o-y, while demand for diesel declined slightly y-o-y. However, jet-kerosene slowed down, declining by 0.23 mb/d y-o-y in February, due to the deceleration of domestic and international RPKs.

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

By product	Feb 21	Feb 22	Change Feb 22/Feb 21	
			Growth	%
LPG	1.89	2.13	0.24	12.7
Naphtha	1.25	1.39	0.14	11.2
Gasoline	3.03	3.12	0.09	2.9
Jet/kerosene	0.72	0.49	-0.23	-31.8
Diesel	3.52	3.51	-0.01	-0.2
Fuel oil	0.62	0.77	0.15	24.1
Other products	1.10	1.16	0.06	5.5
Total	12.13	12.57	0.44	3.6

Note: * Apparent oil demand. Totals may not add up due to independent rounding.

Sources: Argus Global Markets, China OGP (Xinhua News Agency), Facts Global Energy, JODI, National Bureau of Statistics China and OPEC.

Near-term expectations

Despite the resurgence of COVID-19, there are expectations for positive oil demand growth in 2022. The Chinese economy is projected to grow solidly in 2022. In response, oil demand is forecast to grow by 0.5 mb/d in 2022. 1Q22, 2Q22 and 3Q22 are projected to each grow by 0.5 mb/d. In 4Q22, oil demand growth momentum is projected to slightly slow down to 0.4 mb/d.

In the first three quarters of the year, oil demand is expected to be supported by strong petrochemical and industrial demand for feedstock and NGLs, including LPG and naphtha. Furthermore, higher infrastructural spending will boost demand for diesel for haulage and naphtha for plastics. Furthermore, strong seasonal demand for agriculture will add additional support for diesel demand. LPG will gain additional support from household demand. Similarly, refineries' demand for feedstock will further boost fuel oil demand. As the country continues to accelerate COVID-19 vaccinations and other containment measures, supply chain disruptions are also expected to further ease. Accordingly, mobility-related activities are expected to recover in 3Q22 and 4Q22. Additionally, as reports from the official airline guide (OAG) indicated, global weekly airline seat capacity is expected to bounce back in China, helping the Chinese aviation industry to recover and positively impact jet kerosene demand.

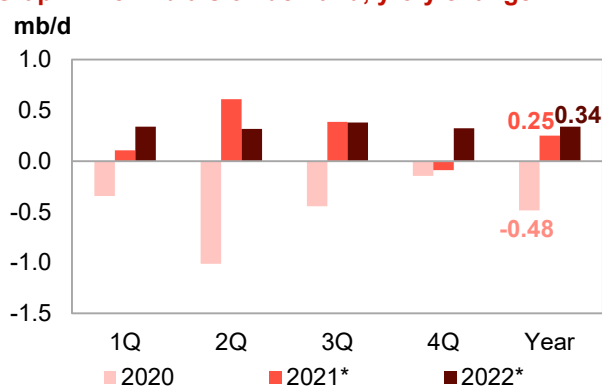
India

Update on the latest developments

The latest available **February 2022** data shows oil demand growing by more than 0.2 mb/d y-o-y, marking the highest monthly growth since September 2021 and averaging roughly at pre-COVID levels.

India's oil demand is expected to continue growing to new highs in 2022. Most of the trade-related supply chain bottlenecks have been eased by February. Oil demand developments are also in line with the lifting of restrictions on mobility and travel, and subsequent intensified vehicle use and full resumption of business and social activities. Accordingly, India's diesel consumption recovered from a four-month low, growing by 0.1 mb/d m-o-m, however down slightly y-o-y, supported by construction, agriculture and industrial activities. Gasoline demand grew during the same month by 24 tb/d y-o-y in line with the Apple mobility index indicating increasing trends in February. The main beneficiary of the Indian oil demand recovery in February is LPG, mostly used by households and small-scale industries.

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



Note: * 2021 = Estimation and 2022 = Forecast.
Source: OPEC.

Data from the Petroleum Planning and Analysis Cell (PPAC) of the Indian Oil Ministry implies that LPG sales in India increased by almost 7% in February y-o-y. Gains in February 2022 oil demand have also been registered for residual fuel oil, as well as petroleum coke and bitumen, in support of manufacturing and industrial activities. It is also worth noting that despite the strong growth of India's oil requirements, demand for diesel and jet kerosene remains below pre-pandemic levels.

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

By product	Feb 21	Feb 22	Change Feb 22/Feb 21	
			Growth	%
LPG	0.87	0.92	0.06	6.6
Naphtha	0.39	0.38	-0.01	-2.2
Gasoline	0.75	0.77	0.02	3.1
Jet/kerosene	0.20	0.19	0.00	-2.4
Diesel	1.88	1.87	-0.01	-0.7
Fuel oil	0.29	0.30	0.01	4.0
Other products	0.45	0.63	0.17	38.2
Total	4.82	5.06	0.24	5.0

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

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

Near-term expectations

With expected strong economic growth, effective COVID-19 management, and the dismantling of trade-related supply chain bottlenecks, India is expected to continue with its oil demand growth trajectory in 2022. Transportation fuels – gasoline and diesel – are projected to be the main drivers of oil demand growth, supported by mobility and the acceleration of industrial activities. Gasoline is forecast to grow by 0.15 mb/d annually, and diesel is expected to increase by 0.11 mb/d y-o-y. Furthermore, jet-kerosene and LPG are expected to contribute to overall oil demand growth, however with lower volumes of 0.06 mb/d and 0.03 mb/d annually. Oil demand is projected to increase by 0.3 mb/d in 1Q22, 2Q22 and 4Q22 each, with seasonally slightly higher growth of 0.4 in 3Q22 mb/d.

Latin America

Update on the latest developments

The latest available oil demand data in Latin America for January 2022 implies a decline of about 52 tb/d y-o-y. The bulk of the decline was related to Brazil and was partially offset by gains in other countries in the region, notably Argentina.

In Brazil, minor gains in the requirements of gasoline, jet/kerosene and diesel in January were more than offset by declines in ethanol demand. Brazilian oil demand grew in February 2022 y-o-y, supported by solid requirements in transportation fuels.

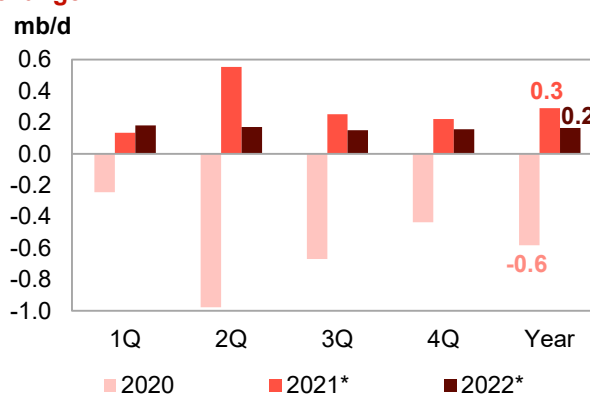
In January 2022, Argentina's oil demand increased by around 35 tb/d y-o-y, on the back of increases in diesel and gasoline.

Transportation fuel demand, notably gasoline and diesel, remained healthy in the region, in line with mobility trends in Argentina and Brazil, which improved by 33% and 36% in January, respectively, slightly better than in the previous month. However, jet/kerosene demand grew marginally by 20 tb/d as the aviation sector in Latin America was still affected by the resurgence of the Omicron variant, and the sector remained nearly 50% below pre-COVID-19 levels.

Near-term expectations

Looking ahead, the 2022 oil demand forecast for the region remains dependent on a number of factors, including the current wave of COVID-19 infections and its impacts on mobility and overall economic performance, in addition to economic development in the region. The current forecast foresees Latin America's 2022 oil demand growing by 0.16 mb/d y-o-y. Transportation fuels are expected to be the main drivers for 2022 oil demand growth in the region. Diesel, gasoline and jet/kerosene requirements are expected to grow by 53 tb/d, 39 tb/d and 28 tb/d y-o-y, respectively. The overall 2022 oil demand forecast risks appear to be slightly tilted to the downside in light of developments on the COVID-19 front and vaccination rollouts. Nevertheless, positive economic developments supported by fiscal stimulus programmes are anticipated to

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



Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

offset most of the negative risks. Brazil is projected to lead oil demand growth in the region during 2022, supported by fiscal stimulus programmes.

Middle East

Update on the latest developments

Oil demand in the Middle East grew during **January** as oil requirements increased by around 0.3 mb/d, or 6%, y-o-y. Fuel oil demand growth was the main driver of oil demand in January, rising by 0.08 mb/d, or 10%, y-o-y, backed by rising demand for power generation. Demand for industrial fuels was also boosted by an increase in capacity for oil-fired power generation plants in Saudi Arabia.

Mobility rates continued to recover as Omicron subsided in Saudi Arabia and the UAE. According to Apple Mobility Trends Reports, the driving mobility index in the UAE rose by 40% y-o-y in January 2022 (however it declined by 7% m-o-m). In Saudi Arabia, the mobility index grew by 12% y-o-y in January 2022 and on a monthly basis, mobility increased by 9%.

Accordingly, gasoline demand grew by 0.06 mb/d y-o-y. However, diesel grew marginally by 0.02 mb/d as jet fuel recorded a decline -0.02 mb/d due to slowdown of international air traffic due to the Omicron variant.

Table 4 - 8: Saudi Arabia's oil demand, mb/d

By product	Feb 21	Feb 22	Change Feb 22/Feb 21	
			Growth	%
LPG	0.05	0.05	0.00	-0.4
Gasoline	0.47	0.48	0.01	2.1
Jet/kerosene	0.05	0.05	0.00	5.0
Diesel	0.49	0.50	0.01	2.8
Fuel oil	0.40	0.47	0.07	17.4
Other products	0.43	0.36	-0.07	-15.7
Total	1.89	1.91	0.03	1.5

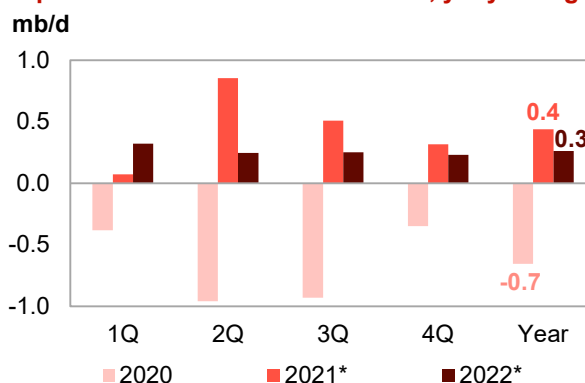
Note: Totals may not add up due to independent rounding.

Sources: JODI and OPEC.

Near-term expectations

In 2022, oil demand in the Middle East is forecast to grow by 0.3 mb/d y-o-y, with strong diesel and jet fuel demand projected to be the main drivers for oil demand growth. In 1Q22, oil demand is estimated to grow by 0.32 mb/d on the back of rising industrial and transportation requirements for fuel oil and diesel. Annually, diesel is forecast to grow by 85 tb/d y-o-y. In 2Q22 through 4Q22, as countries continue with massive vaccination campaigns and other COVID-19 containment measures, the pandemic's impacts are expected to start subsiding. The decline in COVID-19 coupled with a rise in GDP are expected to boost mobility rates further, and accordingly, demand for gasoline is expected to grow by 57 tb/d y-o-y. Although, based on the current report, jet fuel recorded a decline, however, demand for jet fuel in the Middle East is expected to rise with the lifting of travel bans. Jet kerosene is thus forecast to grow by 75 tb/d. Dubai jet fuel demand is expected to boom in 2022 as its international airport's passenger numbers are forecast to rise by 90% in 2022.

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



Note: * 2021 = Estimation and 2022 = Forecast.

Source: OPEC.

World Oil Supply

Non-OPEC liquids supply growth y-o-y in 2021 (including processing gains of 0.1 mb/d) has been revised down slightly by 0.01 mb/d to estimated growth of around 0.6 mb/d, for an average of 63.6 mb/d. Total US liquids production is estimated to have increased y-o-y by 0.15 mb/d to average 17.75 mb/d in 2021. The largest increases were seen in Canada, which rose by 0.3 mb/d, followed by Russia and China, which are estimated to each have grown by 0.2 mb/d. At the same time, production is estimated to have declined in the UK, Brazil, Colombia and Indonesia.

Non-OPEC supply growth for 2022 is revised down by 0.3 mb/d y-o-y to 2.7 mb/d, for a yearly average level of 66.26 mb/d. Russia's liquids production for 2022 is revised down by 0.53 mb/d. While most US oil companies continue to focus on paying off debts and returning capital to shareholders, increasing drilling and completion trends could translate into higher production levels in the coming months. Active drilling rigs in the US climbed by 243 rigs y-o-y, reaching 673 rigs, of which more than 90% are for horizontal wells. Therefore, the US liquids supply growth forecast for 2022 is revised up by 0.26 mb/d to 1.29 mb/d. The main drivers of liquids supply growth for the year are expected to be the US, Russia, Brazil, Canada, Kazakhstan, Guyana and Norway.

OPEC NGLs and non-conventional liquids production in 2021 is unchanged from the previous assessment and is estimated to have grown by 0.1 mb/d y-o-y for an average of 5.1 mb/d. Growth of 0.1 mb/d y-o-y is forecast for 2022 for an average of 5.3 mb/d. OPEC-13 crude oil production in March increased by 57 tb/d m-o-m to average 28.56 mb/d, according to available secondary sources.

Preliminary non-OPEC liquids production in March, including OPEC NGLs, is estimated to have grown m-o-m by 0.32 mb/d to average 71.10 mb/d, up by 2.54 mb/d y-o-y. As a result, preliminary data indicates that global oil supply in March increased by 0.37 mb/d m-o-m to average 99.66 mb/d, up by 6.03 mb/d y-o-y.

Non-OPEC liquids production growth in 2021 was revised down marginally by 6 tb/d from the previous month's assessment to average 0.6 mb/d.

In the OECD, a downward revision of 55 tb/d in 4Q21 led to a minor downward revision of 12 tb/d for the year. The main downward adjustment was in OECD Europe, due to a revision for biofuels for the whole year. In addition, production in the US and Canada was also slightly lower than expected.

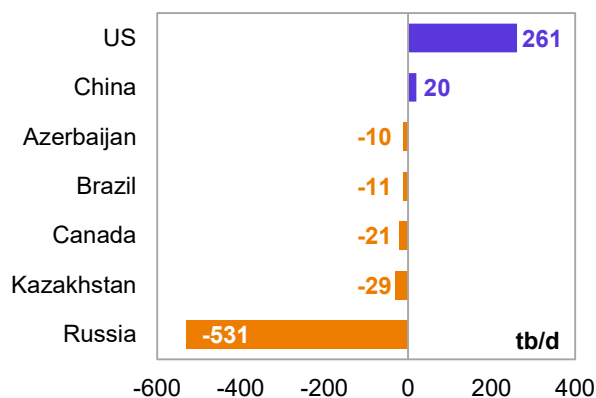
The non-OECD supply forecast for 2021 was revised up by a marginal 6 tb/d, mainly due to minor upward revisions in China and India's biofuel production.

The **non-OPEC supply growth forecast for 2022** was revised down by 0.32 mb/d from the previous month's assessment to 2.7 mb/d. This month's upward revisions were more than offset by downward adjustments in Eurasian countries.

The main upward revision was in US tight liquid production, while the main downward revision has been observed in Russia.

With this, the non-OPEC liquids supply forecast for 2022 was revised down by 322 tb/d to average 66.26 mb/d, with y-o-y growth revised down to 2.7 mb/d.

Graph 5 - 1: Major revisions to annual supply change forecast in 2022*, MOMR Apr 22/Mar 22

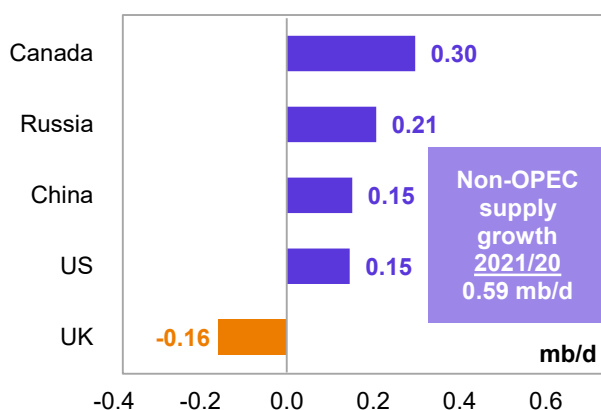


Note: * 2022 = Forecast. Source: OPEC.

Key drivers of growth and decline

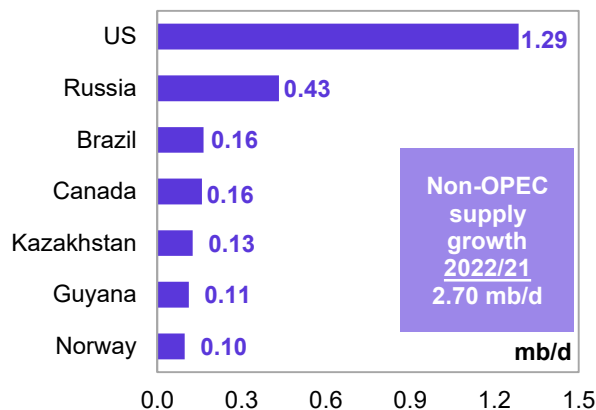
The **key drivers of non-OPEC liquids supply growth in 2021** are estimated to have been Canada, Russia, the US and China, while output is estimated to have declined in the UK, Brazil and Colombia.

Graph 5 - 2: Annual liquids production changes for selected countries in 2021*



Note: * 2021 = Estimation. Source: OPEC.

Graph 5 - 3: 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 the US, Russia, Canada, Brazil, Kazakhstan, Guyana and Norway, while oil production is projected to decline mainly in Indonesia 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	%
Americas	24.70	24.10	25.17	25.20	26.13	25.15	0.46	1.84
of which US	17.61	16.63	17.93	17.85	18.58	17.75	0.15	0.83
Europe	3.89	3.95	3.51	3.81	3.78	3.76	-0.13	-3.34
Asia Pacific	0.52	0.50	0.45	0.53	0.51	0.50	-0.02	-4.02
Total OECD	29.11	28.55	29.13	29.53	30.42	29.41	0.30	1.05
China	4.15	4.30	4.34	4.33	4.26	4.31	0.15	3.65
India	0.78	0.78	0.77	0.77	0.77	0.77	0.00	-0.44
Other Asia	2.51	2.51	2.45	2.33	2.35	2.41	-0.10	-4.09
Latin America	6.03	5.94	5.97	6.09	5.83	5.96	-0.08	-1.26
Middle East	3.19	3.22	3.23	3.24	3.27	3.24	0.05	1.46
Africa	1.41	1.37	1.35	1.32	1.32	1.34	-0.07	-5.28
Russia	10.59	10.47	10.74	10.81	11.17	10.80	0.21	1.95
Other Eurasia	2.92	2.96	2.89	2.79	3.08	2.93	0.02	0.57
Other Europe	0.12	0.12	0.11	0.11	0.11	0.11	-0.01	-4.66
Total Non-OECD	31.71	31.66	31.86	31.79	32.17	31.87	0.16	0.50
Total Non-OPEC production	60.82	60.22	60.98	61.32	62.59	61.28	0.46	0.76
Processing gains	2.15	2.28	2.28	2.28	2.28	2.28	0.13	6.03
Total Non-OPEC liquids production	62.97	62.50	63.26	63.60	64.87	63.56	0.59	0.94
Previous estimate	62.97	62.49	63.26	63.60	64.92	63.57	0.60	0.95
Revision	0.00	0.01	0.00	0.01	-0.05	-0.01	-0.01	-0.01

Note: * 2021 = Estimation. 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	%
Americas	25.15	25.92	26.30	26.95	27.32	26.63	1.47	5.86
of which US	17.75	18.42	18.95	19.23	19.54	19.04	1.29	7.24
Europe	3.76	3.77	3.74	3.80	4.12	3.86	0.10	2.64
Asia Pacific	0.50	0.50	0.54	0.53	0.53	0.52	0.02	5.00
Total OECD	29.41	30.19	30.58	31.28	31.97	31.01	1.60	5.43
China	4.31	4.45	4.31	4.35	4.43	4.38	0.08	1.80
India	0.77	0.77	0.78	0.80	0.83	0.79	0.02	2.78
Other Asia	2.41	2.41	2.39	2.37	2.36	2.38	-0.03	-1.19
Latin America	5.96	6.15	6.21	6.17	6.40	6.23	0.28	4.65
Middle East	3.24	3.30	3.35	3.37	3.37	3.35	0.11	3.27
Africa	1.34	1.31	1.27	1.25	1.23	1.27	-0.07	-5.58
Russia	10.80	11.33	11.23	11.16	11.20	11.23	0.43	4.01
Other Eurasia	2.93	3.05	3.03	3.17	3.22	3.12	0.19	6.36
Other Europe	0.11	0.11	0.11	0.10	0.10	0.10	-0.01	-6.90
Total Non-OECD	31.87	32.88	32.68	32.75	33.13	32.86	0.99	3.11
Total Non-OPEC production	61.28	63.08	63.26	64.03	65.10	63.87	2.59	4.22
Processing gains	2.28	2.39	2.39	2.39	2.39	2.39	0.11	4.91
Total Non-OPEC liquids production	63.56	65.47	65.65	66.42	67.50	66.26	2.70	4.25
Previous estimate	63.57	65.75	66.14	66.73	67.73	66.59	3.02	4.75
Revision	-0.01	-0.28	-0.49	-0.31	-0.23	-0.33	-0.32	-0.51

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

OECD

OECD liquids production in 2021 is estimated to have increased by 0.30 mb/d y-o-y to average 29.41 mb/d. This has been revised down m-o-m by 12 tb/d, owing to downward revisions in OECD Europe and OECD Americas by 7 tb/d and 6 tb/d, respectively, mainly due to biofuel revisions for the year.

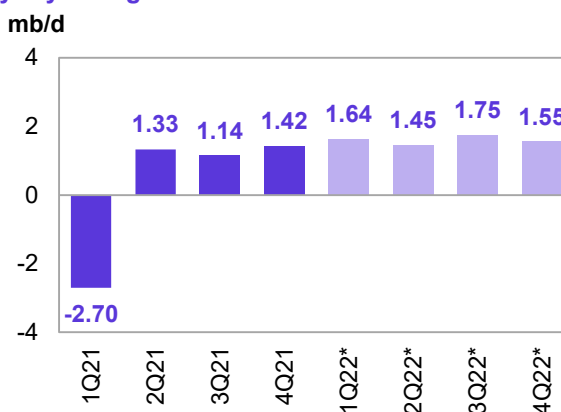
OECD Americas is estimated to have grown by 0.46 mb/d to average 25.15 mb/d for the year. Production in OECD Europe and OECD Asia Pacific is estimated to have declined y-o-y by 0.13 mb/d and 0.02 mb/d to average 3.76 mb/d and 0.50 mb/d, respectively.

For 2022, oil production in the OECD region is forecast to increase by 1.6 mb/d y-o-y, to average 31.01 mb/d. This has been revised up by 0.24 mb/d

compared to a month earlier, amid an upward revision of 0.24 mb/d to OECD Americas, mainly due to higher shale oil production expectation in the US. At the same time, OECD Europe was revised up by a minor 6 tb/d.

Based on these revisions, OECD Americas is forecast to grow by 1.47 mb/d, to average 26.63 mb/d. Oil production in OECD Europe and OECD Asia Pacific is anticipated to grow y-o-y by 0.10 mb/d and 0.02 mb/d to average 3.86 mb/d and 0.52 mb/d, respectively.

Graph 5 - 4: OECD quarterly liquids supply, y-o-y changes



Note: * 1Q22-4Q22 = Forecast. Source: OPEC.

OECD Americas

US

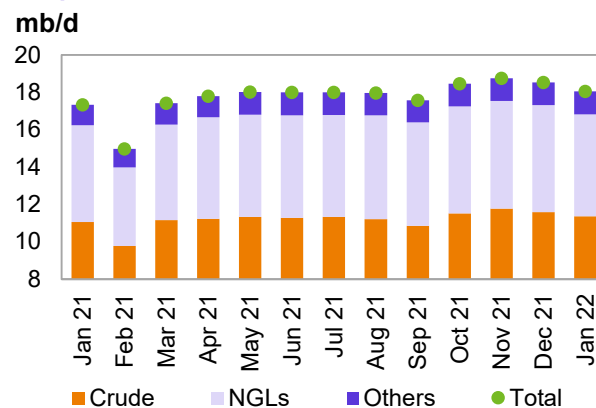
US liquids production in 2021 is estimated to have increased by 0.15 mb/d to average 17.75 mb/d, unchanged m-o-m. Crude oil output fell by 0.1 mb/d y-o-y to average 11.19 mb/d; on the other hand, NGLs production and non-conventional liquids, particularly ethanol, increased by 0.22 mb/d and 0.02 mb/d y-o-y to average 5.40 and 1.17 mb/d, respectively.

US liquids production declined m-o-m in **January 2022** by 0.47 mb/d to average 18.06 mb/d, but was higher by 0.72 mb/d compared with January 2021.

Crude oil and condensate production fell in **January 2022** by 216 tb/d m-o-m to average 11.37 mb/d, but was up by 0.32 mb/d y-o-y.

Regarding the crude and condensate production breakdown by region (PADDs), production declined mainly in the US Gulf Coast (USGC), dropping by 151 tb/d to average 8.06 mb/d. It also decreased slightly in all the other regions of the Midwest, Rocky Mountains, West Coast and East Coast, mainly due to freezing weather in January. The freeze-off of gas-gathering systems forced some oil wells to shut.

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



Source: OPEC.

NGLs production was down by 287 tb/d m-o-m to average 5.45 mb/d in January, but was higher by 0.26 mb/d y-o-y. Production of **non-conventional liquids** (mainly ethanol) increased by 31 tb/d m-o-m to average 1.24 mb/d, according to the US Department of Energy (DOE). Preliminary estimates see non-conventional liquids averaging 1.2 mb/d in February 2022, down by 43 tb/d compared to the previous month.

Production in the **Gulf of Mexico (GoM)** declined marginally m-o-m by 4 tb/d in January to average 1.7 mb/d.

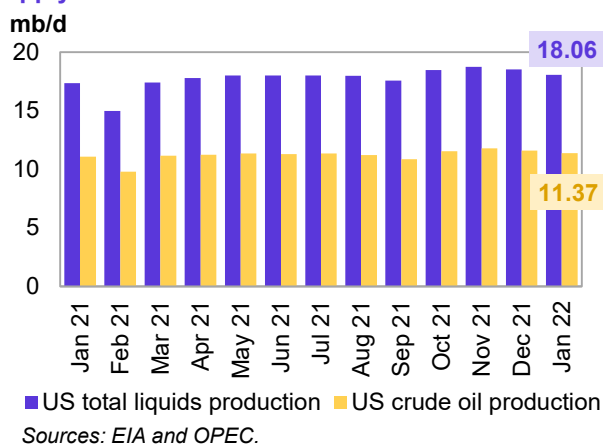
Looking at individual states, oil production in New Mexico declined by 24 tb/d m-o-m to average 1.3 mb/d, 253 tb/d higher than a year ago. Production in Texas decreased by 120 tb/d to average 4.9 mb/d, 206 tb/d higher than a year ago. Production in North Dakota dropped by 31 tb/d m-o-m to average 1.1 mb/d, broadly unchanged y-o-y. Production in Colorado was down slightly by 14 tb/d to average 0.4 mb/d. Oil output in Alaska and Oklahoma also showed marginal m-o-m decreases of 1 tb/d and 6 tb/d, respectively. In the onshore lower 48, January production fell m-o-m by 211 tb/d to average 9.2 mb/d.

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

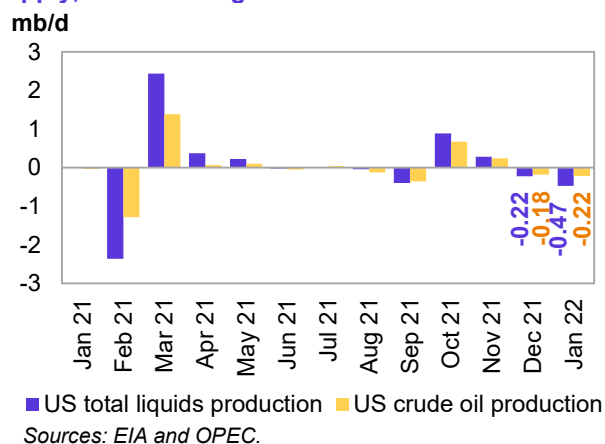
State	Jan 21	Dec 21	Jan 22	Change	
				m-o-m	y-o-y
Texas	4,661	4,987	4,867	-120	206
Gulf of Mexico (GOM)	1,784	1,710	1,706	-4	-78
New Mexico	1,088	1,365	1,341	-24	253
North Dakota	1,094	1,126	1,095	-31	1
Alaska	458	451	450	-1	-8
Colorado	377	412	398	-14	21
Oklahoma	420	400	394	-6	-26
Total	11,056	11,587	11,371	-216	315

Sources: EIA and OPEC.

Graph 5 - 6: US monthly crude oil and total liquids supply



Graph 5 - 7: US monthly crude oil and total liquids supply, m-o-m changes

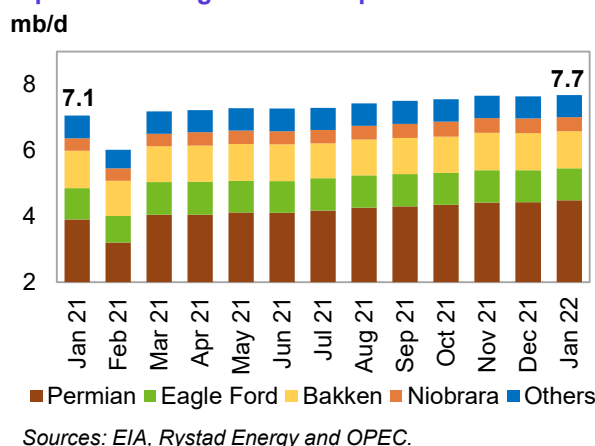


US tight crude output in January 2022 increased by 40 tb/d m-o-m to average 7.68 mb/d, which was 629 tb/d higher than the same month a year earlier, according to US Energy Information Administration (EIA) estimates.

The m-o-m increase from shale and tight formations through horizontal wells came mostly from the Permian, which increased by 51 tb/d to average 4.5 mb/d. This was up by 0.58 mb/d y-o-y.

In the Williston Basin, production in the Bakken shale rose marginally by 4 tb/d to average 1.13 mb/d, but was down by 5 tb/d y-o-y. Tight crude output at Eagle Ford in Texas rose by a minor 5 tb/d to average 0.97 mb/d up by 18 tb/d y-o-y, while production in Niobrara-Codell in Colorado and Wyoming was down by 20 tb/d to average 0.43 mb/d.

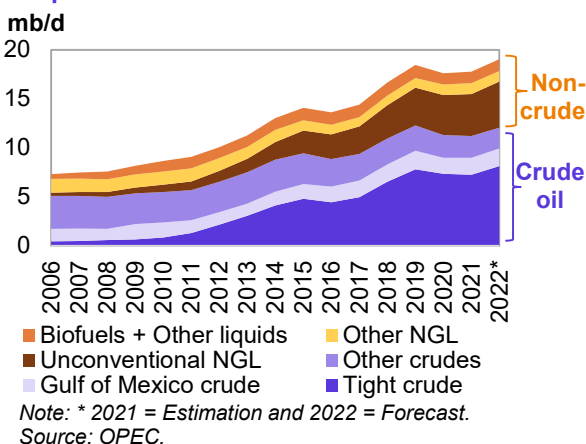
Graph 5 - 8: US tight crude output breakdown



Average tight crude output in **2021** is estimated at 7.26 mb/d, according to the latest information from the EIA.

US liquids production in 2022, excluding processing gains, is forecast to grow y-o-y by 1.29 mb/d to average 19.04 mb/d, up by 0.26 mb/d from the previous assessment. The 2022 gains are due primarily to expected tight crude production growth of 0.88 mb/d, unconventional NGLs growth of 0.42 mb/d and projected growth of 0.08 mb/d in the GoM. However, the expected growth will be partially offset by natural declines in onshore conventional fields of 0.1 mb/d y-o-y.

Graph 5 - 9: US liquids supply developments by component



Given the current pace of drilling and well completions in oil fields, **production of crude oil and condensate** is forecast to grow by 0.86 mb/d y-o-y to average 12.04 mb/d in 2022. This forecast assumes ongoing capital discipline, current inflation rates, continuing supply chain issues, and the oil field service section limitations.

US tight crude oil production is forecast to rise by 0.88 mb/d in 2022, to average 8.14 mb/d. Production of **NGLs**, mainly from unconventional shale, is forecast to increase by 0.4 mb/d to average 5.8 mb/d. **Non-conventional liquids** are projected to grow by 0.04 mb/d to average 1.21 mb/d.

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

US liquids	Change		Change		Change	
	2020	2020/19	2021	2021/20	2022*	2022/21
Tight crude	7.33	-0.46	7.26	-0.07	8.14	0.88
Gulf of Mexico crude	1.64	-0.25	1.70	0.06	1.78	0.08
Conventional crude oil	2.31	-0.30	2.23	-0.09	2.13	-0.10
Total crude	11.28	-1.01	11.19	-0.10	12.04	0.86
Unconventional NGLs	4.09	0.25	4.28	0.20	4.70	0.42
Conventional NGLs	1.09	0.10	1.12	0.03	1.10	-0.02
Total NGLs	5.17	0.35	5.40	0.22	5.80	0.40
Biofuels + Other liquids	1.15	-0.20	1.17	0.02	1.21	0.04
US total supply	17.61	-0.86	17.75	0.15	19.04	1.29

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

US tight crude production in the Permian in **2021** is estimated to have increased by 203 tb/d to 4.1 mb/d and is forecast to grow by 740 tb/d y-o-y to average 4.9 mb/d in **2022**.

The decline rate in Bakken shale production slowed in 2021 compared to 2020, from a contraction of 235 tb/d to a decline of 75 tb/d. Production is now estimated to average 1.1 mb/d in 2021. For 2022, tight crude production from the Bakken shale is forecast to grow by 11 tb/d on the back of increased drilling activity in North Dakota and available DUC wells.

The Eagle Ford in Texas is estimated to have declined by 93 tb/d in 2021 to average 0.96 mb/d, but it is forecast to expand in 2022 by 38 tb/d to average 1.0 mb/d. The rig-weighted average productivity (new-well oil production per rig) shows a m-o-m drop of 63 b/d in the Eagle Ford, according to the EIA-DPR (Drilling Productivity Report) forecast for April 2022. However, overall Eagle Ford production is expected to increase m-o-m by 23 tb/d over the month.

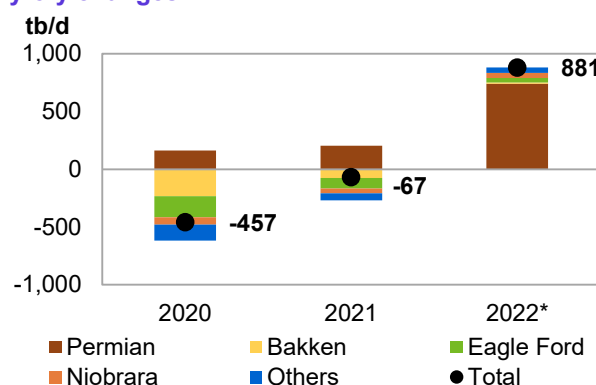
Production in the Niobrara, following an estimated decline of 40 tb/d in 2021, is likely to grow by 45 tb/d y-o-y in 2022, to average 0.46 mb/d. Other shale plays are expected to show marginal increases totalling 46 tb/d in 2022, given current drilling activities.

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

US tight oil	Change		Change		Change	
	2020	2020/19	2021	2021/20	2022*	2022/21
Permian tight	3.91	0.16	4.11	0.20	4.85	0.74
Bakken shale	1.18	-0.23	1.10	-0.07	1.12	0.01
Eagle Ford shale	1.05	-0.18	0.96	-0.09	1.00	0.04
Niobrara shale	0.45	-0.06	0.41	-0.04	0.46	0.04
Other tight plays	0.73	-0.14	0.67	-0.06	0.72	0.05
Total	7.33	-0.46	7.26	-0.07	8.14	0.88

Note: * 2021 = Estimation and 2022 = Forecast. Source: OPEC.

Graph 5 - 10: US tight crude output by shale play, y-o-y changes



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

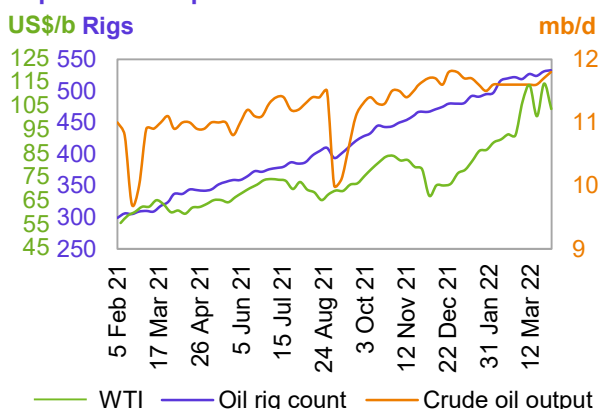
US rig count, spudded, completed, DUC wells and fracking activity

Total **US active drilling rigs** have increased by 3 to 673 rigs in the week ending 1 April, which is 243 more rigs than a year ago. The number of active offshore rigs was steady w-o-w at 14, the same as in 2021. Moreover, 657 rigs (oil and gas) were active onshore, up by four w-o-w, with two in inland waters.

The US horizontal rig count rose by three rigs w-o-w to 613 rigs, compared to 391 horizontal rigs a year ago. The number of drilling rigs for oil and gas climbed by two to 533 and by one to 138, respectively, w-o-w.

Overall, in all major basins the number of rigs did not drop, except for the oil part of the Williston basin, as well as the gas part of the Haynesville basin, which dropped by one rig on the weekly count.

Graph 5 - 11: US weekly rig count vs. US crude oil output and WTI price



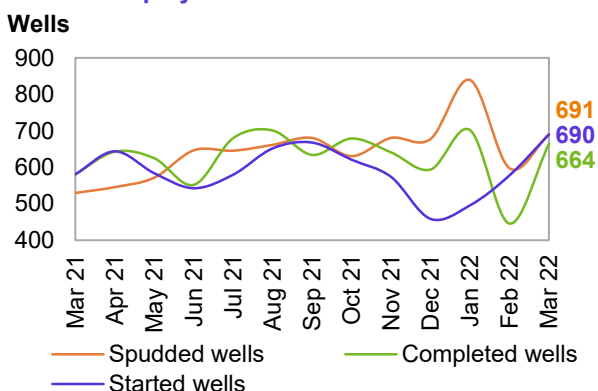
Sources: Baker Hughes, EIA and OPEC.

While the rig count in the Permian increased by four w-o-w to 323 rigs, the number of active rigs remains unchanged at 56 in the Eagle Ford and 14 in the DJ-Niobrara basins. They declined by one in the Williston to 33, while increasing by one in Cana Woodford to 25. Three rigs also have been operating in the Barnett basin for eight consecutive weeks.

Drilling and completion (D&C) activities for spudded, completed and started wells in all US shale plays, based on the EIA DPR regions, saw 598 horizontal wells spudded in February 2022 (as per preliminary data), down by 242 m-o-m, and 31% higher than in February 2021.

In February 2022, preliminary data indicates a lower number of completed wells at 446, up by 15%, y-o-y. Moreover, the number of started wells were estimated at 578, which is 65% higher than in February 2021. Preliminary data for March estimates 691 spudded, 664 completed and 690 started wells, according to Rystad Energy.

Graph 5 - 12: Spudded, completed and started wells in US shale plays

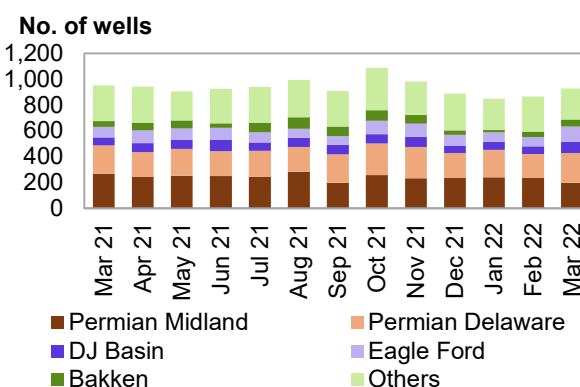


Note: Mar 22 = Preliminary data.
Sources: Rystad Energy and OPEC.

In terms of identified **US oil and gas fracking operations** by region, Rystad Energy reported that after the highest number of fracked wells seen since March 2020, with 1,089 fracked in October 2021, 871 and 956 wells started to frack in February and March, respectively. This preliminary number is based on analysis of high-frequency satellite data.

Preliminary data on fracking in March shows that 198 and 231 wells were fracked in the Permian Midland Tight and Permian Delaware Tight, respectively. In comparison with February, there was a drop of 36 wells fracked in the Midland and a jump of 45 wells fracked in the Delaware tight, according to preliminary data. Data also indicated that 86 wells were fracked in the DJ Basin, 118 in the Eagle Ford and 54 in the Bakken in March.

Graph 5 - 13: Fracked wells count per month



Note: Mar 22 = Preliminary data.
Sources: Rystad Energy Shale Well Cube and OPEC.

Canada

Canada's liquids production in February is estimated to have increased m-o-m by 179 tb/d to average 5.6 mb/d.

Crude bitumen production and synthetic crude output increased by 84 tb/d and 77 tb/d, respectively. Taken together, crude bitumen and synthetic crude output jumped by 161 tb/d to 3.2 mb/d. At the same time, production of conventional crude and NGLs also increased slightly to average 1.18 mb/d, each.

Following freezing weather in December and early January, most oil sands operators managed to continue to pump higher volumes of crude bitumen and synthetic crude in February. Additional turnarounds in sand mine facilities are expected to affect 1Q22 production rates.

Lower-than-forecast monthly liquids output throughout 4Q21 has necessitated a slight downward revision of 3 tb/d to Canadian liquids supply for **2021**. Growth is now estimated at 0.3 mb/d for a yearly average of 5.46 mb/d.

For **2022**, Canada's liquids production is forecast to increase at a slower pace compared with 2021, rising by 0.16 mb/d to average 5.65 mb/d, showing a downward revision of 21 tb/d from last month's report. Lower production in 1Q22 is projected to be compensated by the end of the year on the back of higher investment in oil sands basins. However, production in 2Q22 is expected to decline amid maintenance in the major oil sand plays.

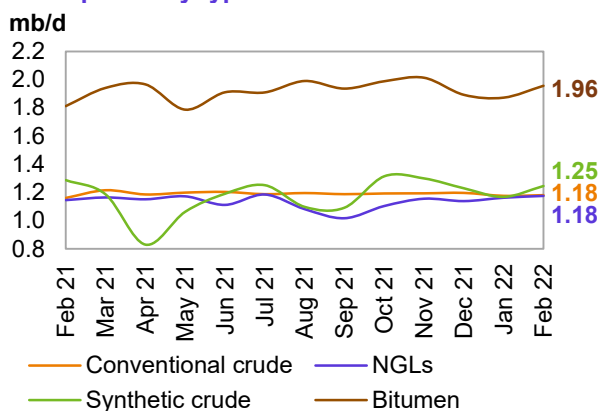
Mexico

Mexico's crude output declined slightly in **February** by 21 tb/d to average 1.68 mb/d. NGLs output decreased by 14 tb/d. Therefore, Mexico's total liquids output in February decreased by 35 tb/d m-o-m, to average 1.93 mb/d. Unfavourable weather disrupted vessel loadings early in the month and likely caused the drop in production.

For **2021**, liquids production in Mexico is estimated to have grown by 0.01 mb/d to average 1.93 mb/d, unchanged from the previous assessment.

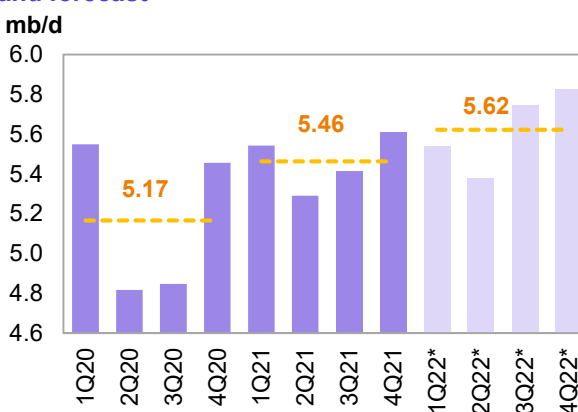
For **2022**, growth is forecast at 0.03 mb/d to average 1.96 mb/d. Pemex's total crude production in mature fields continues to decline, while the foreign-operated field output is expected to rise. Two new small fields started production in January, Pemex's Esah and Suuk fields, and averaged 8,000 b/d together. They are in Pemex's group of fields designated earlier for priority development.

Graph 5 - 14: Canada's monthly liquids production development by type



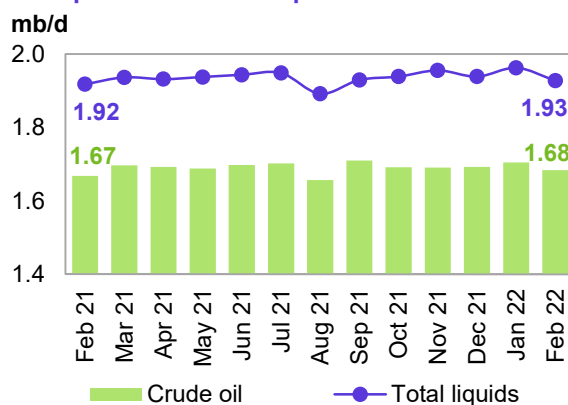
Sources: National Energy Board and OPEC.

Graph 5 - 15: Canada's quarterly liquids production and forecast



Note: * 1Q22-4Q22 = Forecast. Source: OPEC.

Graph 5 - 16: Mexico's monthly liquids and crude production development



Sources: PEMEX and OPEC.

OECD Europe

Norway

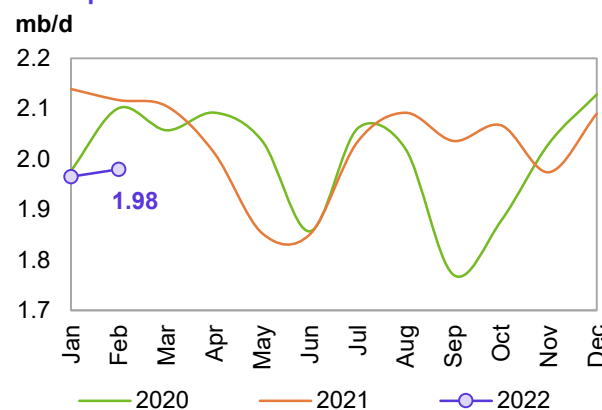
Norwegian liquids production in February rose by 15 tb/d m-o-m to average 1.98 mb/d.

Following an 11-year high in December 2021 and a significant drop of 113 tb/d in January, Norway's crude production increased by 27 tb/d m-o-m in **February** to average 1.76 mb/d, down by 42 tb/d y-o-y. Oil production in February is 3.7% lower than the Norwegian Petroleum Directorate's (NPD) forecast. Production of NGLs and condensates marginally declined by 12 tb/d m-o-m to average 0.22 mb/d, according to NPD data.

For **2021**, Norway's liquids supply growth is estimated to have expanded by 31 tb/d to average 2.03 mb/d.

For **2022**, Norway's liquids production is expected to grow by 0.1 mb/d to average 2.13 mb/d, revised down slightly by 3 tb/d from last month's assessment. This downward revision was mainly because of lower-than-expected production in 1Q22. However, following the end of maintenance season curtailment in 2Q22, the main boost is to be in 4Q22 when the second phase of the Johan Sverdrup field development starts up production.

Graph 5 - 17: Norway's monthly liquids production development



Sources: NPD and OPEC.

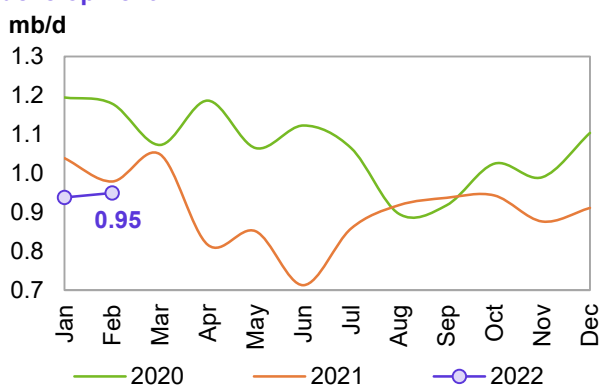
UK

UK liquids production increased in **February** by 11 tb/d m-o-m to average 0.95 mb/d. Crude oil output increased marginally by 3 tb/d m-o-m to average 0.81 mb/d, according to official data, but was down by 44 tb/d y-o-y. NGLs output also rose marginally m-o-m by 8 tb/d in February to average 101 tb/d.

For **2021**, UK liquids production is estimated to have contracted by 0.16 mb/d to average 0.91 mb/d.

For **2022**, UK liquids production is forecast to grow by a minor 0.02 mb/d to average 0.93 mb/d, following two consecutive years of heavy declines. Lower investment levels and poor mature reservoir performance have been the cause of this weak growth. However, liquids production in 2022 is expected to be supported by multiple new developments.

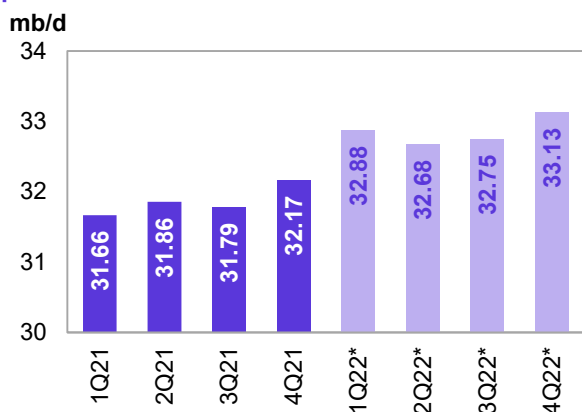
Graph 5 - 18: UK monthly liquids production development



Sources: Department of Energy & Climate Change and OPEC.

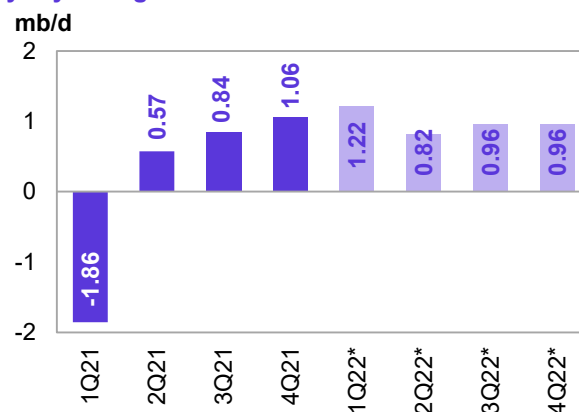
Non-OECD

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



Note: * 1Q22-4Q22 = Forecast. Source: OPEC.

Graph 5 - 20: Non-OECD quarterly liquids supply, y-o-y changes

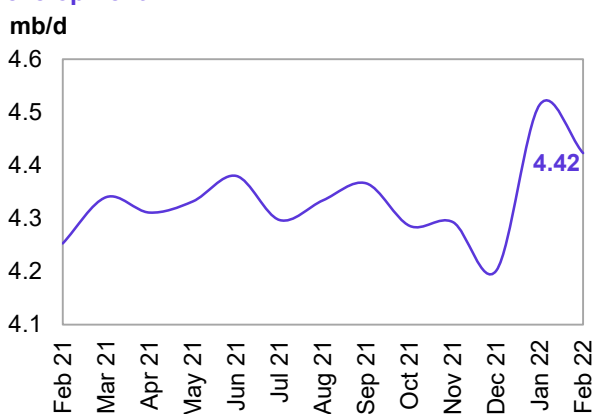


Note: * 1Q22-4Q22 = Forecast. Source: OPEC.

China

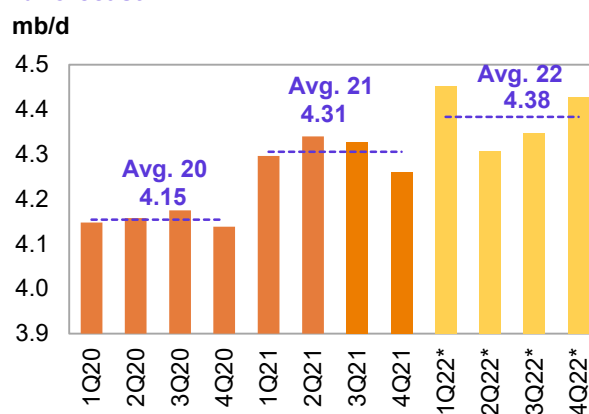
China's liquids production declined by 91 tb/d m-o-m in **February** to average 4.4 mb/d, which was up by 170 tb/d y-o-y, according to official data. Crude oil output in February decreased by 92 tb/d to average 4.09 mb/d, higher by 153 tb/d y-o-y.

Graph 5 - 21: China's monthly liquids production development



Sources: CNPC and OPEC.

Graph 5 - 22: China's quarterly liquids production and forecast



Note: * 1Q22-4Q22 = Forecast. Sources: CNPC and OPEC.

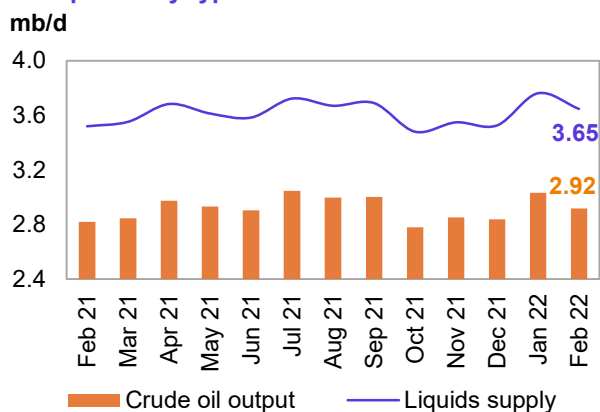
For **2021**, China's liquids supply is estimated to have grown by 0.15 mb/d y-o-y, to average 4.31 mb/d. For **2022**, growth of 0.08 mb/d is forecast for an average of 4.38 mb/d, revised up by 20 tb/d on the upward revision to January production data.

Natural decline rates are expected to be offset by Chinese companies' investments in new project start-ups, additional in-fill wells and EOR projects. China National Offshore Oil Company (CNOOC) announced \$13 bn worth of deals to boost oil and gas supply, as the country aims to avoid a repeat of last year's energy crunch, Bloomberg reported.

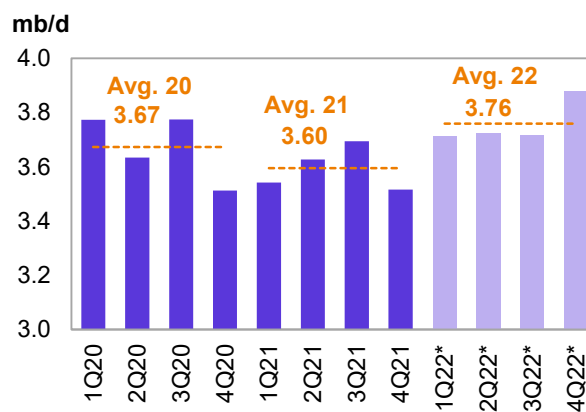
Latin America

Brazil

Brazil's crude output in **February** decreased by 115 tb/d m-o-m to average 2.92 mb/d. NGLs production remained broadly unchanged at an average of 98 tb/d and is expected to remain flat in March. Biofuel output (mainly ethanol) remained unchanged in February to average 632 tb/d, with preliminary data showing a flat trend in March as well. Therefore, in February, total liquids production decreased by 115 tb/d to average 3.65 mb/d, higher by 0.1 mb/d y-o-y.

Graph 5 - 23: Brazil's monthly liquids production development by type

Sources: ANP, Petrobras and OPEC.

Graph 5 - 24: Brazil's quarterly liquids production

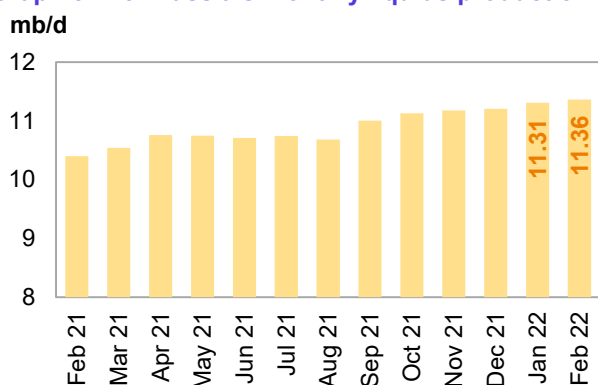
Note: * 1Q22-4Q22 = Forecast. Sources: ANP and OPEC.

Liquids supply for **2021** is estimated to have averaged 3.60 m/d, a decline of 0.08 mb/d y-o-y, unchanged from the previous month's assessment.

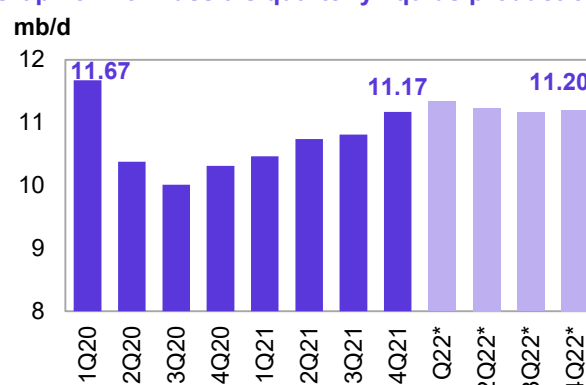
For **2022**, Brazil's liquids supply, including biofuels, is forecast to increase by 0.16 mb/d y-o-y to average 3.76 mb/d, revised down by a minor 11 tb/d, mainly due to an expected decline after extended offshore maintenance in the Tupi and Buzios fields. Petrobras stated that it would need to scale back production at the Atapua field owing to gas flaring issues, which could affect production in the coming months. Equinor also announced that it would restart production at the Peregrino oil field, which has been down since early 2020 because of a riser issue, after the beginning of summer. The main growth in 2022 will be driven by the continued ramp-up of the Sepia field which came online in August 2021, along with two start-ups of Mero 1 and Peregrino Phase 2. The Mero-1 (FPSO Guanabara) was planned for processing capacity of 180,000 b/d of oil and 12 MMcm/d of gas.

Russia

Russia's liquids production in February rose m-o-m by 54 tb/d to average 11.36 mb/d. This includes 10.06 mb/d of crude oil and condensate and 1.03 mb/d of NGLs. A preliminary estimate for Russia's crude and condensate production in March 2022 based on the Ministry of Energy's production data shows an expected decrease of 37 tb/d m-o-m for crude and condensate to average 10.03 mb/d, while NGLs remain flat.

Graph 5 - 25: Russia's monthly liquids production

Sources: Nefte Compass, The Ministry of Energy of the Russian Federation and OPEC.

Graph 5 - 26: Russia's quarterly liquids production

Note: * 1Q22-4Q22 = Forecast. Sources: Nefte Compass and OPEC.

Annual liquids production in **2021** is estimated to have increased by 0.2 mb/d y-o-y to average 10.80 mb/d.

For **2022**, Russian liquids output is expected to increase by 0.43 mb/d to average 11.23 mb/d, revised down by 0.53 mb/d, compared to the previous assessment. However, it should be noted that this forecast is subject to very high uncertainty, given the current geopolitical developments. The 1Q22 forecast was reduced by 116 tb/d, due to lower-than-expected actual crude and condensate production in this period.

Caspian

Kazakhstan & Azerbaijan

Liquids output in Kazakhstan increased slightly by 3 tb/d to average 1.99 mb/d in **February**. Crude production rose by 31 tb/d m-o-m to average 1.63 mb/d, the highest output since April 2020. Production of NGLs declined by 28 tb/d m-o-m in February to average 0.36 mb/d.

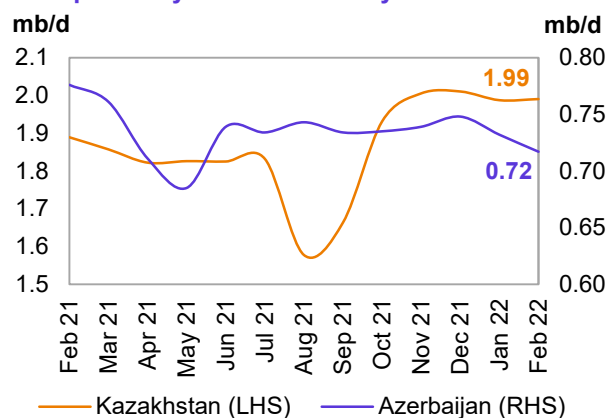
Kazakhstan's liquids supply forecast for **2021** is estimated to have averaged 1.84 mb/d, higher by 0.01 mb/d y-o-y. For **2022**, liquids supply is forecast to grow by 0.13 mb/d to average 1.96 mb/d, revised down by 29 tb/d. The downward revision was necessitated by the disruption in the Caspian Pipeline Consortium (CPC) terminal in the Black Sea as of 21 March. The Kazakh Energy Ministry said it may have to cut crude and condensate production by about 320,000 b/d until the end of April, while repairs are being carried out at the terminal.

Azerbaijan's liquids production in February dropped slightly m-o-m by 15 tb/d to average 0.72 mb/d, down by 59 tb/d y-o-y. Crude production declined by 15 tb/d m-o-m to average 566 tb/d. NGLs output held steady at 150 tb/d, according to official sources. Most of the decline in the ACG crude is expected to be partially offset by Shah Deniz Phase 2 condensate output, which came online in July 2021.

Azerbaijan's liquids production is expected to increase in March 2022 to average 0.8 mb/d.

For **2021**, liquids supply is estimated to have grown by 0.01 mb/d y-o-y to average 0.74 mb/d, while for **2022**, y-o-y growth of 0.07 mb/d is forecast for an average of 0.81 mb/d, revised down by 10 tb/d on lower-than-expected production in 1Q22.

Graph 5 - 27: Caspian monthly liquids production development by selected country



Sources: Nefte Compass and OPEC.

OPEC NGLs and non-conventional oils

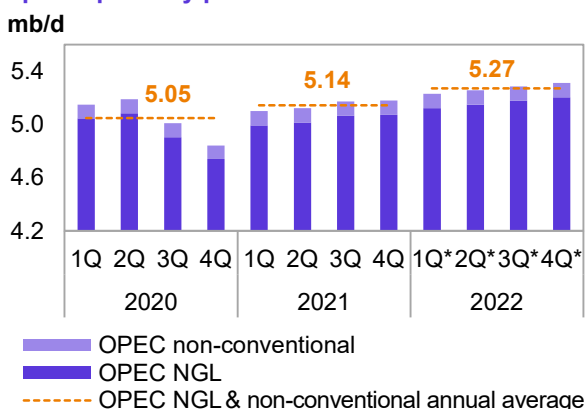
OPEC NGLs and non-conventional liquids in 2021 are estimated to have grown by 0.1 mb/d, to average 5.14 mb/d.

Production of OPEC NGLs and non-conventional oils has declined from 5.35 mb/d in 2Q18. In 2021, output increased from 5.1 mb/d in 1Q21 to 5.18 mb/d in 4Q21.

Preliminary output of NGLs in 1Q22 is estimated to have averaged 5.12 mb/d, while OPEC non-conventionals remained steady at 0.11 mb/d.

For **2022**, OPEC NGLs and non-conventional liquids production is forecast to grow by 0.13 mb/d to average 5.27 mb/d.

Graph 5 - 28: OPEC NGLs and non-conventional liquids quarterly production and forecast



Note: * 1Q22-4Q22 = Forecast. Source: OPEC.

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

OPEC NGL and non-conventional oils	Change		Change							Change
	2020	20/19	2021	21/20	1Q22	2Q22	3Q22	4Q22	2022	22/21
OPEC NGL	4.94	-0.18	5.04	0.09	5.12	5.15	5.18	5.20	5.16	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	5.14	0.10	5.23	5.26	5.29	5.31	5.27	0.13

Note: 2021 = Estimation and 2022 = Forecast. Source: OPEC.

OPEC crude oil production

According to secondary sources, total **OPEC-13 crude oil production** averaged 28.56 mb/d in March 2022, higher by 57 tb/d m-o-m. Crude oil output increased mainly in Saudi Arabia, Kuwait and the UAE, while production in Libya, Nigeria and Congo declined.

Table 5 - 7: OPEC crude oil production based on *secondary sources*, tb/d ¹

Secondary sources	2020	2021	3Q21	4Q21	1Q22	Jan 22	Feb 22	Mar 22	Change Mar/Feb
Algeria	904	913	926	958	983	975	979	993	14
Angola	1,247	1,117	1,108	1,124	1,155	1,146	1,164	1,156	-8
Congo	294	271	266	269	265	262	275	260	-15
Equatorial Guinea	114	100	99	91	92	96	88	92	4
Gabon	194	186	184	188	192	191	195	192	-4
IR Iran	1,991	2,392	2,472	2,472	2,528	2,499	2,539	2,546	7
Iraq	4,076	4,049	4,078	4,240	4,286	4,253	4,298	4,309	11
Kuwait	2,439	2,419	2,448	2,532	2,612	2,584	2,614	2,639	25
Libya	367	1,143	1,146	1,111	1,062	1,006	1,111	1,074	-37
Nigeria	1,575	1,372	1,335	1,321	1,382	1,413	1,378	1,354	-24
Saudi Arabia	9,204	9,111	9,554	9,879	10,176	10,060	10,208	10,262	54
UAE	2,804	2,727	2,770	2,861	2,958	2,932	2,960	2,983	23
Venezuela	512	555	540	662	682	662	689	697	8
Total OPEC	25,722	26,355	26,925	27,708	28,375	28,079	28,500	28,557	57

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	2020	2021	3Q21	4Q21	1Q22	Jan 22	Feb 22	Mar 22	Change Mar/Feb
Algeria	899	911	924	958	984	977	978	996	18
Angola	1,271	1,124	1,114	1,122	1,161	1,193	1,158	1,133	-25
Congo	300	267	266	260	267	275	260	264	4
Equatorial Guinea	114	94	94	79	95	96	95	95	0
Gabon	207	181	180	183	197	199	195	198	3
IR Iran	..	..	..	..	..	..	..	..	..
Iraq	3,997	3,971	3,979	4,167	4,188	4,162	4,260	4,148	-112
Kuwait	2,438	2,415	2,447	2,528	2,612	2,584	2,612	2,639	27
Libya	389	1,207	1,220	1,182	..	1,075	1,220	..	..
Nigeria	1,493	1,312	1,270	1,233	1,299	1,399	1,258	1,238	-20
Saudi Arabia	9,213	9,125	9,565	9,905	10,224	10,145	10,225	10,300	75
UAE	2,779	2,718	2,758	2,854	2,949	2,924	2,954	2,970	16
Venezuela	569	636	635	817	756	755	788	728	-61
Total OPEC	..	..	..	..	..	..	..	..	..

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

¹ It should be noted that the figures shown in Table 5 - 7 have changed since the March 2022 MOMR issue, as the composition of the set of secondary sources has changed.

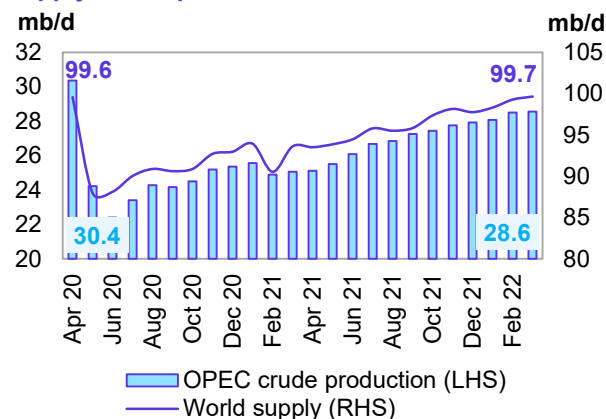
World oil supply

Preliminary data indicates that **global liquids production in March** increased by 0.37 mb/d to average 99.66 mb/d compared with the previous month.

Non-OPEC liquids production (including OPEC NGLs) is estimated to have increased in March by 0.32 mb/d m-o-m to average 71.10 mb/d, higher by 2.54 mb/d y-o-y. Preliminary estimated increases in production during March were mainly driven from the US and Norway by 0.26 mb/d, due to the ending of outages, improved weather conditions, and shale oil production increases.

The **share of OPEC crude oil in total global production** decreased by 0.1 pp to 28.7% in March 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 - 29: OPEC crude production and world oil supply development



Source: OPEC.

Product Markets and Refinery Operations

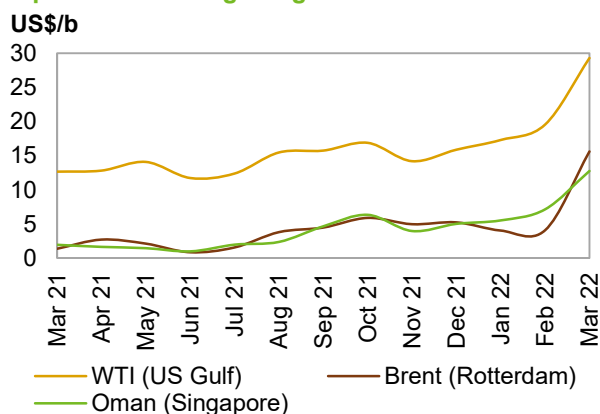
In March, refinery margins in all main trading hubs jumped to new post-pandemic highs with soaring product prices in response to a growing product supply-demand imbalance. A decline in total product output levels amid the onset of a heavy turnaround season pushed product netbacks to a notable and disproportional rise relative to crude prices. Moreover, in contrast to what was observed in other regions, US refinery runs trended higher over the month with gasoline availability still in contraction, although it showed mild signs of recovery at the end of the month. Furthermore, middle distillate balances continued to contract beyond the already alarmingly tight environment. This resulted in massive upward pressure in product prices and a stout performance of middle distillate markets to the greatest extent in Europe.

In the immediate near term, refinery intakes are expected to decline further, which could further exacerbate the global product shortage and add to the upward pressure on product prices.

Refinery margins

US Gulf Coast (USGC) refining margins against WTI soared, posting gains for the fourth consecutive month. Positive market performances were observed in products across the barrel, particularly in the middle section, with the exception of naphtha. The atypical jump in refining economics was largely impacted by a rise in product exports amid concerns over tightening product availability with regards to sanctions on Russian crude and products, which incentivized some European countries to seek alternative suppliers, mainly for diesel. The bullish market sentiment has apparently widened the arbitrage window and provided a boost in US diesel exports to Europe.

Graph 6 - 1: Refining margins



Sources: Argus and OPEC.

Jet fuel markets strengthened as refiners likely maximized gasoil yields in partial detriment to those of jet fuel, given the already tight balance that resulted from weather-related outages witnessed in the previous month amid the onset of heavy turnarounds. This led to a sharp rise in product prices, with US gasoline prices in particular reaching record-breaking highs in March. US gasoline average prices were reported to have reached as high as \$4.33/gal for regular unleaded on 11 March, while, in California, they reached \$5.92/gal on 29 March. While gasoline markets in other regions remained nearly flat, in the US, they showed solid improvement backed by exports.

According to preliminary estimates, US refinery intakes showed a counter-seasonal rise of nearly 540 tb/d in March. This upward move is attributable to a possible postponement of some refinery maintenance interventions and a quick return of refineries that underwent turnarounds to capitalize on the robust refining margins and product tightness in Europe and South America. However, US refinery intakes are expected to decline in the coming month in line with a rise in planned maintenance schedules and historic refinery outage trends that could lead to continued upside potential in refining economics in the near term. USGC margins against WTI averaged \$29.29/b in March, up by \$9.73 m-o-m and by \$16.61/b y-o-y.

Refinery margins in **Rotterdam against Brent** rose sharply, as robust performances seen at the middle of the barrel boosted margins to a new multi-year high. Concerns over purchases of Russian crude and product supplies triggered further concerns of a product shortage in the region, particularly that of diesel, as European refiners sought alternative sources of crude and products. As a result, the already tight global product balances contracted further over the month while product prices skyrocketed to reach record-breaking highs as all key products with the exception of fuel oil settled above the \$100/b mark in March and surpassed price levels for the same products observed in the USGC and in Singapore. On the other hand, poor performances at the top and bottom of the barrel likely limited the upturn in European refining economics as ample fuel availability and weaker regional gasoline consumption levels weighed on markets for the same products despite the supportive supply side signals.

Product Markets and Refinery Operations

European refinery run rates in March declined slightly by 150 tb/d m-o-m, according to preliminary data, while strong diesel crack spreads continued to encourage a push for higher diesel yields to increase profits. Refinery margins against Brent in Europe averaged \$15.63/b in March, up by \$11.54 compared with a month earlier and up by \$14.25 y-o-y.

Singapore refining margins against Oman showed solid gains as seen in other regions, solely supported by robust performances at the middle section of the barrel, as inventories in East of Suez for the corresponding product came under pressure. Moreover, the onset of heavy maintenance season in Asia contributed to the decline in product availability within the region, although Indian refinery runs were reported to have remained high during the month.

Gasoline consumption levels in Southeast Asia showed signs of recovery as COVID-19 restrictions were lifted in India, Thailand, Indonesia and the Philippines. However, gasoline crack spreads came under pressure due to the latest COVID-19 outbreaks in China and South Korea, while China continued to strictly enforce its lockdowns and mobility restriction measures in line with its zero-COVID policy.

The overall change in Asian refinery intakes was estimated to be 350 tb/d lower in March relative to the previous month. Going forward, following the pressures witnessed in March due to COVID-19-related restrictions, fuel consumption levels are expected to show positive growth in the coming months. Moreover, the shift in product trade flows in Eastern Europe, as a result of the geopolitical tensions, is projected to further incentivize Asian, particularly Indian, refiners to increase processing rates to supply more products to Europe. Refinery margins against Oman in Asia gained \$5.61 m-o-m to average \$12.75/b in March, higher by \$10.80 y-o-y.

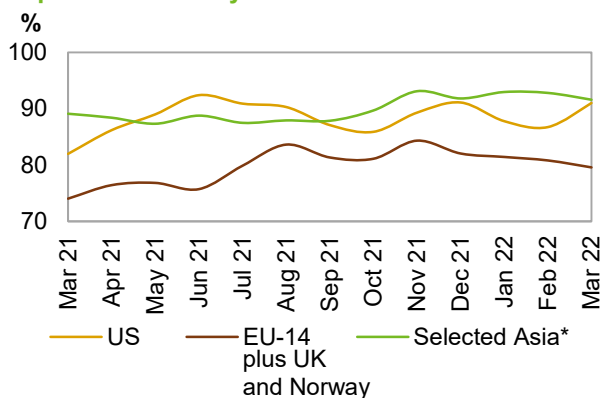
Refinery operations

US refinery utilization rates increased in March to average 91.01%, which corresponds to a throughput of 16.27 mb/d. This represented a rise of 4.3 pp and 540 tb/d, respectively, compared with the previous month. Y-o-y, the March refinery utilization rate was up by 9.0 pp, with throughput showing a rise of 1.4 mb/d.

European refinery utilization averaged 79.6%, corresponding to a throughput of 9.37 mb/d. This is a m-o-m decline of 1.2 pp or 150 tb/d. On a y-o-y basis, utilization rates increased by 5.5 pp, while throughput was up by 566 tb/d.

In **selected Asia** – comprising Japan, China, India, Singapore and South Korea – refinery utilization rates declined to average 91.59% in March, corresponding to a throughput of 26.42 mb/d. Compared with the previous month, utilization rates were down by 1.2 pp, while throughput was down by 350 tb/d. Meanwhile, utilization rates were higher by 2.5 pp y-o-y, and throughput was up by 693 tb/d.

Graph 6 - 2: Refinery utilization rates



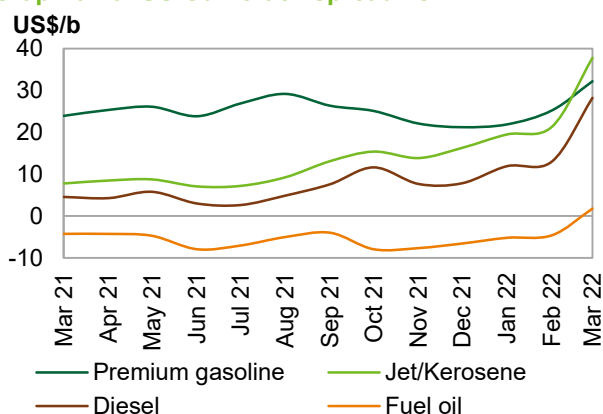
Note: * China, India, Japan, Singapore and South Korea.
Sources: Argus, EIA, Euroilstock, PAJ and OPEC.

Product markets

US market

USGC gasoline crack spreads rose further for the third consecutive month, supported mainly by demand-side dynamics, as a strong recovery in fuel requirements outpaced product supplies in the country. US gasoline inventory levels declined further over of the month despite a slight build-up in the last week of March. The improvement in US gasoline markets was largely attributed to strong gasoline exports to South America. Moreover, gasoline prices averaged \$140.78/b, a new multi-year record in March, which was higher by \$23.80 m-o-m, and by \$54.45 y-o-y, as deliveries of domestic and foreign supplies failed to keep pace with demand. The onset of peak refinery maintenance season and a pick-up in domestic consumption over the summer months should lead to continued downward pressure on US gasoline inventories in the coming months. The USGC gasoline crack spread gained \$6.98 m-o-m to average \$32.26/b in March, and was up by \$8.28 y-o-y.

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



Sources: Argus and OPEC.

USGC **jet/kerosene** crack spreads skyrocketed to become the main margin contributor across the barrel, as jet fuel requirements for air passenger travel were supportive. Jet fuel markets strengthened as refiners maximized gasoil yields in partial detriment of those of jet fuel given the already tight balance that resulted from the weather-related outages witnessed in the previous month amid the onset of heavy turnarounds. This led to a sharp rise in jet fuel prices, which averaged \$146.30/b in March, and was up by 109% y-o-y, as jet fuel was priced at a premium versus gasoline, which is typically the highest priced product across the barrel. Going forward, and leading up to the summer season, jet fuel markets are expected to respond positively to upside potential in air travel activity, which should add support to middle distillate crack spreads in the coming months. The US jet/kerosene crack spread against WTI averaged \$37.78/b, up by \$16.46 m-o-m and higher by \$30.00 y-o-y.

The USGC **gasoil** crack spread against WTI exhibited notable gains, as diesel prices rose further, adding \$9.65 m-o-m. This change was more subdued relative to the massive \$15.38 m-o-m price rise witnessed in the previous month. US gasoil prices averaged \$136.73/b in March compared to \$104.70/b in February and \$66.89/b at the same time a year ago, reaching the highest level in more than five years. Compared to the previous month, diesel versus gasoline price differentials contracted significantly, signalling softer diesel discounts relative to gasoline, while diesel paper values seemed to have inched closer to that of gasoline. Strong exports to Europe amid positive global manufacturing and industrial activities and worsening global diesel balance tightness provided further support to the US gasoil market. The US gasoil crack spread against WTI averaged \$28.21/b, up by \$15.21 m-o-m and \$23.67 y-o-y.

USGC **fuel oil** crack spreads against WTI rose and entered positive territory in March following 22 consecutive months in negative territory, supported by demand-side factors. Inventory drawdowns around mid-March, strong interest for fuel oil destruction to alleviate the severe gasoil tightness and rising fuel oil demand for feedstock blending amid high crude prices contributed to the positive performances. However, firm imports led to relatively healthy fuel oil availability in the country, which ultimately resulted in a rise in fuel oil inventories around the month of March. This likely limited further strengthening in US fuel oil markets. Going forward, fuel oil markets are expected to benefit from the prevailing need for fuel oil conversion to gasoil to replenish gasoil stock levels. In March, the US fuel oil crack spread against WTI averaged \$1.81/b, higher by \$6.38/b m-o-m, and by \$6.04 y-o-y.

European market

Gasoline crack spreads saw an extension of the poor performance seen in the two previous months and remained nearly flat in March, showing only moderate signs of recovery. Reductions in gasoline output in line with the rise in maintenance volumes led to lower availability within the region. In addition, firm gasoline exports to Africa further backed gasoline markets in Europe, however suppressed regional consumption levels likely overshadowed the gasoline supply- and export- related support and kept crack spreads for the same product nearly unchanged. Expectations of higher mobility activities going forward point to continued downward pressure on gasoline stock levels in the near term, which should be supportive to European gasoline markets in the coming months. The gasoline crack spread against Brent averaged \$16.20/b in March, up by 9¢ m-o-m, and by \$4.93 y-o-y.

In March, **jet/kerosene** soared, shadowing the outstanding performances in gasoil crack spreads, on supply-side restrictions in light of reduced refinery output. The Rotterdam jet/kerosene crack spread against Brent averaged \$33.58/b, up by \$20.99 m-o-m and by \$30.48 y-o-y.

Gasoil 10 ppm crack spreads skyrocketed as the already tight European diesel balance contracted further due to some European countries halting purchases of Russian diesel for reputational concerns over sanctions. This led to a worsening of the regional diesel supply-demand imbalance, which was further exacerbated by a reduction in refinery output amid the onset of the heavy refinery maintenance season, while gasoil requirements from the manufacturing and industrial sectors remained well sustained. Gasoil prices rose to \$156.48/b compared with \$112.77/b (+39%) in the previous month and \$69.94/b (+124%) at the same time last year, reaching a new multi-year high. The gasoil crack spread against Brent averaged \$37.73/b, which was higher by \$22.97 m-o-m and by \$33.36 y-o-y.

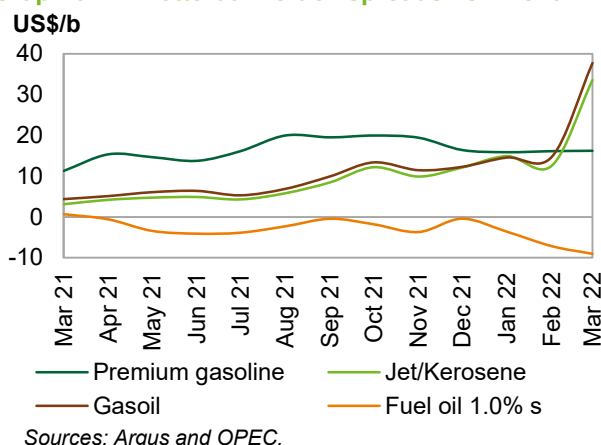
At the bottom of the barrel, **fuel oil 1.0% crack spreads** declined for the third consecutive month and headed deeper into negative territory. Maintenance works at secondary and conversion units likely weighed on fuel oil processing rates, and led to relatively higher volume availability of the residual fuel. However, prices for the same product rose considerably in response to higher crude prices, although high sulphur fuel oil was the only product across the European barrel priced below the \$100/b mark in March. In Europe, fuel oil cracks averaged minus \$9.05/b in March, having lost \$1.87 m-o-m and \$9.71 y-o-y.

Asian market

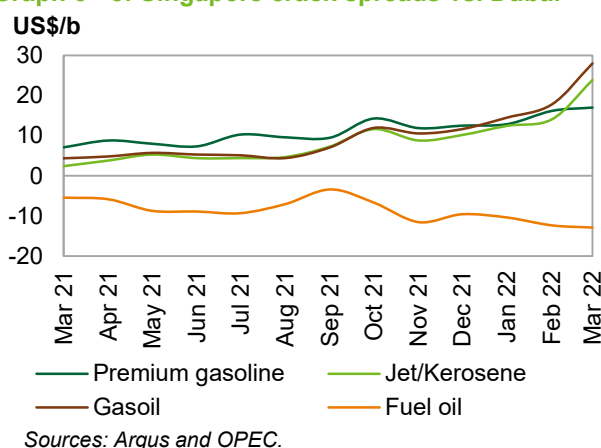
The **Asian gasoline 92 crack spread** remained nearly unchanged as the lifting of COVID-19 lockdown and mobility restrictions led to an improvement in gasoline demand in Southeast Asia. However, the most recent COVID-19 outbreak in China and South Korea partially offset the strength of the fuels markets in the region. The Singapore gasoline crack spread against Oman in March averaged \$16.98/b, up by 83¢ m-o-m and up by \$9.91 y-o-y.

Asian **naphtha crack spreads** reversed trends again and exhibited losses affected by ample supply availability amid weaker petrochemical feedstock requirements over the month due to high volumes of steam cracker maintenance. The Singapore naphtha crack spread against Oman averaged 93¢/b, having decreased by \$2.71 m-o-m while increasing by 30¢ y-o-y.

Graph 6 - 4: Rotterdam crack spreads vs. Brent



Graph 6 - 5: Singapore crack spreads vs. Dubai



In the middle of the barrel, **jet/kerosene** crack spreads trended upwards as some countries eased virus restrictions, while refinery outputs declined. Moreover, a contraction of jet fuel balances in the other regions gave way to stronger import requirements, particularly from the US as they sought to replenish suppressed stockpiles. At the same time, Singapore's regraded swap, the jet fuel differential to diesel, narrowed sharply since early March, as it turned into a deep discount after the geopolitical tension in Eastern Europe further contracted an already tight diesel market, which will likely continue to incentivize refiners to maximize diesel yields over that of jet fuel. The Singapore jet/kerosene crack spread against Oman averaged \$23.83/b, up by \$9.77 m-o-m and by \$21.41 y-o-y.

The Singapore **gasoil crack spread** soared to a new record-breaking high reflective of strong regional demand, firm industrial and manufacturing activity as well as a contraction in gasoil availability in the region amid expectations for an even tighter market going forward. The Singapore gasoil crack spread against Oman averaged \$28.02/b, up by \$10.22 m-o-m and up by \$23.67 y-o-y.

The Singapore **fuel oil 3.5%** crack spread saw an extension of its downturn trajectory pressured by weaker fundamentals as strong high sulphur fuel oil availability in the region amid seasonally lower demand weighed on HSFO markets. Going forward, an upside potential in fuel oil markets could be expected once the peak maintenance season reaches an end, and with a possible revived focus on fuel oil as feedstock in the utilities sector in the near term. Singapore fuel oil cracks against Oman averaged minus \$12.88/b, down by 55¢ m-o-m and lower by \$7.45 y-o-y.

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

Event	Time frame	Asia	Europe	US	Observations
Shifts in product trade flows in Europe	Apr 22	↑ Impact on product markets	↑ Impact on product markets	↑ Impact on product markets	The loss in product supplies in the immediate near term could support: 1. Refinery intakes within and outside the region 2. Fuel oil requirements for feedstock blending 3. Upward pressure on product prices
End of heavy turnaround season	May 22 – Jul 22	↓ Negative impact on product markets	↓ Negative impact on product markets	↓ Negative impact on product markets	The expected rise in product output after peak turnarounds should lead to recovery in global product inventory levels, and relief fuel prices.
Summer season	May 22 – Sep 22	↑ Positive impact on product markets	↑ Positive impact on product markets	↑ Positive impact on product markets	Mobility is expected to increase further, which should boost trans fuel recovery, which consequently points to product tightness over the summer months.

Source: OPEC.

Product Markets and Refinery Operations

Table 6 - 2: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				Refinery utilization, %			
	Jan 22	Feb 22	Mar 22	Change Mar/Feb	Jan 22	Feb 22	Mar 22	Change Mar/Feb
US	15.92	15.72	16.27	0.54	87.79	86.74	91.01	4.3 pp
Euro-14, plus UK and Norway	9.59	9.52	9.37	-0.15	81.43	80.81	79.58	-1.2 pp
France	0.78	0.78	0.77	-0.01	67.51	67.95	66.84	-1.1 pp
Germany	1.85	1.79	1.73	-0.05	90.37	87.06	84.48	-2.6 pp
Italy	1.13	1.16	1.15	-0.01	59.53	61.05	60.40	-0.7 pp
UK	1.05	0.94	0.93	-0.01	89.09	80.05	79.32	-0.7 pp
Selected Asia*	26.52	26.77	26.42	-0.35	92.95	92.79	91.59	-1.2 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	2019	2020	2021	1Q21	2Q21	3Q21	4Q21	1Q22
OECD Americas	19.04	16.59	17.78	16.33	18.20	18.42	18.19	18.17
of which US	16.99	14.72	15.65	14.20	16.17	16.22	16.02	15.97
OECD Europe	12.13	10.65	10.91	10.17	10.65	11.35	11.48	11.39
of which:								
France	1.00	0.67	0.69	0.58	0.65	0.79	0.76	0.78
Germany	1.78	1.72	1.72	1.58	1.66	1.75	1.90	1.79
Italy	1.35	1.11	1.23	1.06	1.24	1.27	1.34	1.15
UK	1.08	0.92	0.92	0.75	0.94	0.99	0.99	0.97
OECD Asia Pacific	6.79	5.89	5.78	5.82	5.49	5.78	6.01	6.16
of which Japan	3.02	2.48	2.49	2.56	2.22	2.51	2.69	2.92
Total OECD	37.96	33.14	34.47	32.32	34.33	35.55	35.68	35.72
Latin America	3.83	3.12	3.25	3.25	3.11	3.27	3.37	3.33
Middle East	6.97	6.09	6.73	6.48	6.48	6.75	7.23	7.12
Africa	1.97	1.79	1.97	1.93	2.00	1.96	1.99	1.99
India	5.04	4.42	4.73	4.93	4.55	4.40	5.02	5.16
China	13.02	13.48	14.07	14.12	14.38	13.76	14.03	13.97
Other Asia	5.13	4.74	4.80	4.60	4.85	4.84	4.91	5.05
Russia	5.70	5.39	5.61	5.55	5.52	5.63	5.75	5.61
Other Eurasia	1.21	1.03	1.19	1.06	1.16	1.30	1.23	1.25
Other Europe	0.55	0.43	0.41	0.42	0.48	0.43	0.33	0.39
Total Non-OECD	43.40	40.49	42.76	42.33	42.52	42.34	43.87	43.86
Total world	81.36	73.63	77.24	74.65	76.86	77.88	79.55	79.58

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

	Feb 22	Mar 22	Change Mar/Feb	Annual avg. 2021	Year-to-date 2022
US Gulf (Cargoes FOB)					
Naphtha*	95.73	110.75	15.02	70.70	97.63
Premium gasoline (unleaded 93)	116.98	140.78	23.80	91.41	120.95
Regular gasoline (unleaded 87)	112.81	134.74	21.93	86.72	116.23
Jet/Kerosene	113.02	146.30	33.28	78.32	120.66
Gasoil (0.2% S)	104.70	136.73	32.03	73.94	112.16
Fuel oil (3.0% S)	80.02	93.44	13.42	59.84	82.79
Rotterdam (Barges FoB)					
Naphtha	95.37	111.98	16.61	70.15	97.75
Premium gasoline (unleaded 98)	114.12	134.95	20.83	85.89	117.18
Jet/Kerosene	110.60	152.33	41.73	77.17	121.48
Gasoil/Diesel (10 ppm)	112.77	156.48	43.71	78.31	123.48
Fuel oil (1.0% S)	90.83	109.70	18.87	69.12	94.50
Fuel oil (3.5% S)	80.56	100.67	20.11	61.38	85.17
Mediterranean (Cargoes FOB)					
Naphtha	93.90	110.29	16.39	69.40	96.36
Premium gasoline**	108.02	128.56	20.54	80.46	111.09
Jet/Kerosene	108.03	148.12	40.09	75.06	118.45
Diesel	110.21	153.08	42.87	77.73	121.01
Fuel oil (1.0% S)	92.31	114.69	22.38	70.51	97.53
Fuel oil (3.5% S)	77.06	93.45	16.39	58.98	80.87
Singapore (Cargoes FOB)					
Naphtha	95.75	111.42	15.67	70.83	97.24
Premium gasoline (unleaded 95)	110.72	131.07	20.35	80.28	113.28
Regular gasoline (unleaded 92)	108.26	127.47	19.21	78.28	110.64
Jet/Kerosene	106.17	134.32	28.15	75.10	112.09
Gasoil/Diesel (50 ppm)	110.33	142.08	31.75	77.36	117.13
Fuel oil (180 cst)	109.24	136.25	27.01	75.71	114.31
Fuel oil (380 cst 3.5% S)	79.78	97.61	17.83	62.07	83.45

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

Sources: Argus and OPEC.

Tanker Market

Tanker markets are being broadly impacted by uncertainties related to geopolitical developments. Aframax and Suezmax freight rates, the main vessels used to transport Black Sea flows, have been particularly affected. In monthly terms, Aframax spot freight rates around the Mediterranean are up by more than 70% in March from January levels, while spot Suezmax rates in the Atlantic basin are some 50% higher over the same period. The strength filtered up to VLCCs, improving overall sentiment. A host of spillover effects from events in Eastern Europe have resulted in trade dislocations. Clean rates have also seen strong support on all monitored routes, particularly on the Mideast-to-East route.

An expected shift in longstanding trading patterns, implying increased demand for longer-haul routes, is likely to support the tanker market, with the US, Asia and Mideast sending more crude to Europe, and Russia sending more of its crude to eastward. However, downside risks remain, particularly from weaker import demand from China due to COVID-19 lockdowns.

Spot fixtures

The latest estimates show **global spot fixtures** declined in March, averaging of 13.8 mb/d. Fixtures fell 1.3 mb/d, or around 9% m-o-m. Compared with the previous year, spot fixtures were down 2.3 mb/d, or 14%.

Table 7 - 1: Spot fixtures, mb/d

Spot fixtures	Jan 22	Feb 22	Mar 22	Change Mar 22/Feb 22
All areas	15.06	15.09	13.81	-1.28
OPEC	10.13	9.37	9.42	0.05
Middle East/East	6.67	5.30	5.52	0.22
Middle East/West	1.01	1.14	0.99	-0.15
Outside Middle East	2.45	2.93	2.91	-0.02

Sources: Oil Movements and OPEC.

In contrast, **OPEC spot fixtures** saw a slight increase m-o-m in March, averaging 9.4 mb/d, representing an increase of less than 1%. Compared with the same month in 2021, they were about 1.0 mb/d, or 10%, lower.

Middle East-to-East fixtures increased 0.2 mb/d or 4%, to average 5.5 mb/d. Compared with the same month last year, eastward flows were 0.5 mb/d, or about 8%, higher.

Spot fixtures from the **Middle East-to-West** declined by about 0.2 mb/d or 13% m-o-m in March, to average just under 1 mb/d. Y-o-y, rates were 0.3 mb/d or 41% higher.

Outside the Middle East, fixtures averaged 2.9 mb/d in March. This represents a marginal decline m-o-m and a more substantial 0.8 mb/d or 22% decline y-o-y.

Sailings and arrivals

OPEC sailings declined by 1.1 mb/d or about 5% m-o-m in March to average 22.2 mb/d. OPEC sailings were 0.8 mb/d, or around 4%, higher compared with the same month of the previous year.

Middle East sailings declined by almost 0.5 mb/d or around 3% m-o-m in March to average 17.1 mb/d. Y-o-y, sailings from the region rose 1.6 mb/d, or around 11%, compared with March 2021.

Crude arrivals were saw gains across most regions in March, with just Europe seeing a marginal decline. Arrivals in the Far East increased 1.2 mb/d, or around 9%, m-o-m to average around 15.0 mb/d. Y-o-y, arrivals were 3 mb/d, or about 27%, higher. In West Asia, arrivals increased 1.3 mb/d, or 15%, m-o-m in March to average 9.7 mb/d, representing a y-o-y increase of 3.5 mb/d, or 56%.

Arrivals in North America increased 0.4 mb/d, or over 4%, to average 9.0 mb/d, representing a y-o-y rise of almost 1 mb/d or 12%. Arrivals in Europe edged down slightly to average 12.9 mb/d. However, this was almost 1 mb/d, or about 8%, higher than in the same month last year.

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

Sailings				Change
	Jan 22	Feb 22	Mar 22	Mar 22/Feb 22
OPEC	21.79	23.29	22.16	-1.13
Middle East	16.09	17.54	17.08	-0.46
Arrivals				
North America	8.98	8.65	9.03	0.38
Europe	12.86	12.92	12.87	-0.05
Far East	14.61	13.78	15.02	1.24
West Asia	8.53	8.45	9.70	1.25

Sources: Oil Movements and OPEC.

Dirty tanker freight rates

Very large crude carriers (VLCCs)

After many stagnant months, **VLCC** spot rates finally registered a noticeable increase in March, gaining 28% on average m-o-m, with rates moving higher across all reported routes compared to the previous month. Gains were supported by improving sentiment amid an expected increase in demand for long haul routes, as well as a need to quickly shift toward alternate supply. Rising bunker fuel prices also pressured rates higher.

On the **Middle East-to-East** route, rates rose 26% m-o-m to average WS44 points and were 47% higher y-o-y. Rates on the **Middle East-to-West** route also increased, up 35% m-o-m to average WS23 points. This represented a y-o-y gain of 10%.

West Africa-to-East spot rates rose 22% m-o-m to average WS44 in March. Compared with the same month last year, rates were 26% higher.

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

VLCC	Size				Change
	1,000 DWT	Jan 22	Feb 22	Mar 22	Mar 22/Feb 22
Middle East/East	230-280	36	35	44	9
Middle East/West	270-285	18	17	23	6
West Africa/East	260	37	36	44	8

Sources: Argus and OPEC.

Suezmax

Suezmax rates saw a second month of gains in March, rising 23% m-o-m. Y-o-y, rates were 32% higher. The increase was driven by strength in the Atlantic basin, amid increased flows to Europe.

Rates on the **West Africa-to-US Gulf Coast (USGC)** route increased by 28% m-o-m in March to average WS82. Compared with the same month last year, rates were 32% higher.

Spot freight rates on the **USGC-to-Europe** route rose 20% over the previous month to average WS77 points. Y-o-y, rates were 31% higher.

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

Suezmax	Size				Change
	1,000 DWT	Jan 22	Feb 22	Mar 22	Mar 22/Feb 22
West Africa/US Gulf Coast	130-135	53	64	82	18
US Gulf Coast/ Europe	150	51	64	77	13

Sources: Argus and OPEC.

Aframax

Aframax spot freight rates showed a continued strong performance in March. On average, spot Aframax rates were 38% higher m-o-m. Compared with the same month last year, rates were 30% higher. Disruptions in the Black Sea contributed to the increase in spot freight rates. Global traders are reportedly avoiding chartering vessels from Russia's top shipping company Sovcomflot, which has one of the largest Aframax fleets in the world. This effectively reduced availability, thus supporting prices.

Tanker Market

Rates on the **Indonesia-to-East** route increased 46% in March compared to the same month last year, averaging WS134. However, m-o-m, rates on the route rose 51%.

Spot rates on the **Caribbean-to-US East Coast (USEC)** route increased 23% m-o-m to average WS167. Y-o-y, rates were also 23% higher.

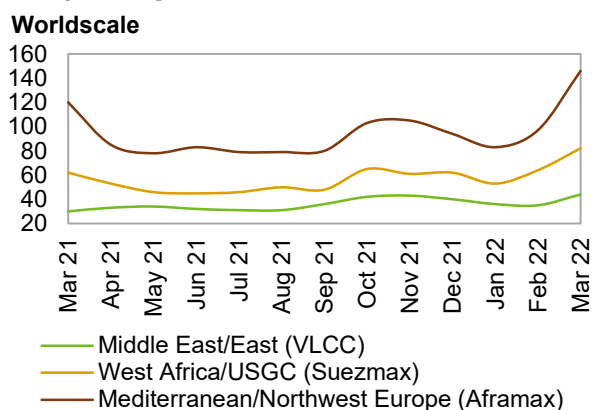
Table 7 - 5: Dirty Aframax spot tanker freight rates, WS

Aframax	Size 1,000 DWT	Jan 22	Feb 22	Mar 22	Change
		Jan 22	Feb 22	Mar 22	Mar 22/Feb 22
Indonesia/East	80-85	95	92	134	42
Caribbean/US East Coast	80-85	97	136	167	31
Mediterranean/Mediterranean	80-85	94	116	161	45
Mediterranean/Northwest Europe	80-85	83	97	146	49

Sources: Argus and OPEC.

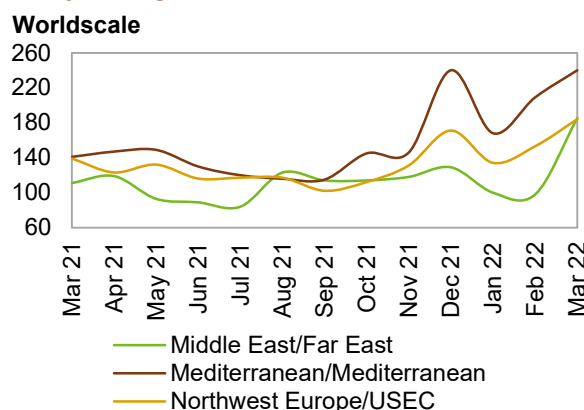
Cross-Med spot freight rates showed further strong gains in March, increasing by around 39% m-o-m to average WS161. Y-o-y, rates were 30% higher. On the **Mediterranean-to-NWE** route, rates surged by 51% m-o-m to average WS146. Compared with the same month of the previous year, rates were 22% higher.

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

Clean spot freight rates showed gains across all monitored routes. On average, rates increased 32% m-o-m in March and were up by 55% compared with the levels seen in the same month last year. Gains were driven by improvements in both East of Suez and West of Suez rates, which increased 73% and 16% m-o-m, respectively.

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

East of Suez	Size 1,000 DWT	Jan 22	Feb 22	Mar 22	Change
		Jan 22	Feb 22	Mar 22	Mar 22/Feb 22
Middle East/East	30-35	100	98	185	87
Singapore/East	30-35	129	128	208	80
West of Suez					
Northwest Europe/US East Coast	33-37	134	153	184	31
Mediterranean/Mediterranean	30-35	168	209	240	31
Mediterranean/Northwest Europe	30-35	177	218	248	30

Sources: Argus and OPEC.

Rates on the **Middle East-to-East** route surged by 89% m-o-m in March to average WS185. Y-o-y, rates increased 67%. Freight rates on the **Singapore-to-East** route gained 63% m-o-m averaging WS208 and were 42% higher compared with the same month last year.

In the West of Suez market, rates on the **Northwest Europe (NWE)-to-USEC** route rose 20% m-o-m to average WS184 points. They were 32% higher y-o-y. Rates in the **Cross-Med** and **Med-to-NWE** saw gains of around 15% to average WS240 and WS248 points, respectively. Compared with the same month last year, rates were 70% higher Cross-Med and up 65% on the Med-to-NWE route.

Crude and Refined Products Trade

Preliminary data shows US crude imports increased 3% m-o-m in March to average 6.4 mb/d, while crude exports gained 8% m-o-m from the low levels seen in the previous month to average 3.1 mb/d in March. Product exports surged 22% m-o-m in March, up from a weak performance the month before.

China's crude imports averaged 9.5 mb/d in February, coming down from the strong performance seen the month before as the Lunar New Year holidays and Winter Olympics reduced refinery runs. Product exports declined, amid lower fuel oil outflows and negligible gasoil exports, averaging 0.9 mb/d. In contrast, jet and gasoline outflows were stronger.

India's crude imports recovered some of the previous month's losses, averaging 4.6 mb/d in February, as domestic demand continued to accelerate following the tapering off of the third wave of COVID-19 infections. Product exports averaged 1.4 mb/d in February, up 8%, with gains driven primarily by gasoline and gasoil to a lesser extent.

Japan's crude imports rose 3% in February to average 2.8 mb/d, supported by winter heating demand and higher product exports. Product outflows continued to edge higher in February, averaging 540 tb/d, with gains in gasoline and fuel oil driving losses.

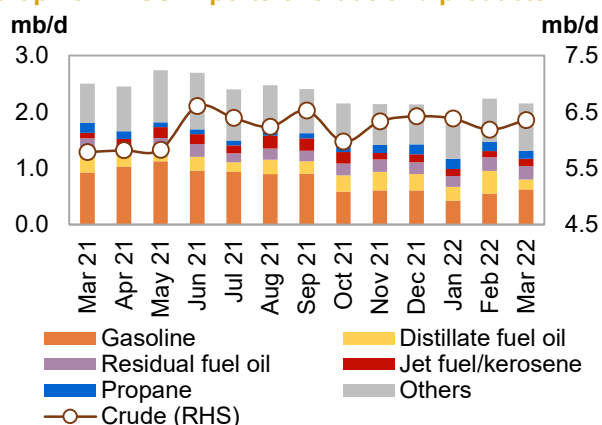
The latest data for OECD Europe shows crude imports continued to decline in December down from the high seen in October, averaging 8.3 mb/d. Crude exports slipped below 0.4 mb/d, also down from higher levels in October, averaging 460 tb/d.

US

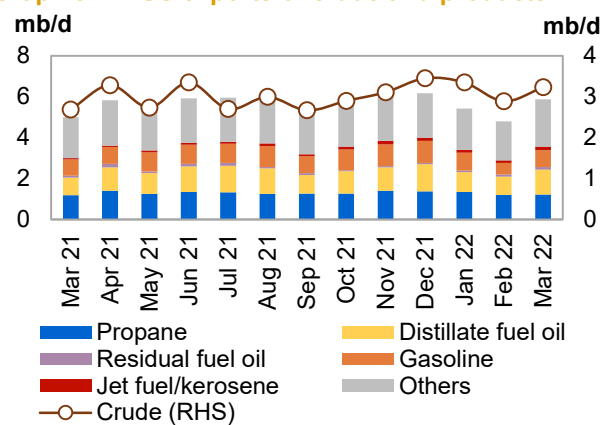
Preliminary data shows **US crude imports** increased 3% m-o-m in March to average 6.4 mb/d, after a dip in February. Compared with the same month of 2021, crude imports were around 0.6 mb/d, or almost 10% higher.

US crude exports increased from the low levels seen in the previous month to average 3.2 mb/d in March, rising 12% m-o-m. Exports rose 0.6 mb/d, or over 20%, compared with the same month last year.

Graph 8 - 1: US imports of crude and products



Graph 8 - 2: US exports of crude and products



The **top three suppliers of crude** to the US remained unchanged in January, according to the latest monthly EIA data. Canada remained at the top spot with a share of 62%, despite declining 154 tb/d m-o-m. Mexico was second with a share of almost 10%, supported by an increase of 130 tb/d. Saudi Arabia was third with a share of close to 8%, following a minor increase in volumes.

India was the top **destination for US crude exports** in January, with a share of 16%. South Korea and Singapore were tied for second place with 11% each.

Based on weekly data, **US net crude imports** averaged 3.1 mb/d in **March**, compared with 3.3 mb/d the month before and 3.1 mb/d in the same month last year.

Crude and Refined Products Trade

On the **products** side, **imports declined 4% m-o-m** to average 2.2 mb/d, although still at good levels relative to the last six months. Distillates led losses. Compared with the same month last year, product imports declined 14%, or about 0.4 mb/d.

Product exports surged 23% m-o-m in March, to average 5.9 mb/d, up from a weak performance the month before. Gains were seen across all major products. Compared with March 2021, product exports were 0.9 mb/d, or 18%, higher.

As a result, preliminary data shows **US net product exports** averaged 3.7 mb/d in March, compared with 2.6 mb/d in the previous month and 2.4 mb/d in the same month of 2021.

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

US	Jan 22	Feb 22	Mar 22	Change Mar 22/Feb 22
Crude oil	3.04	3.30	3.12	-0.17
Total products	-3.64	-2.56	-3.73	-1.16
Total crude and products	-0.60	0.73	-0.60	-1.34

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

Sources: EIA and OPEC.

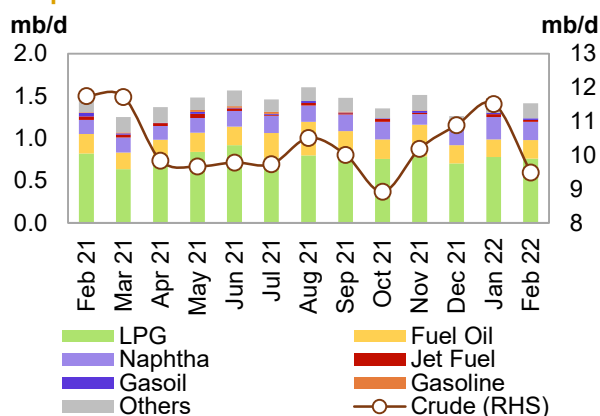
Preliminary data indicates that **US net crude and product exports** averaged 0.6 mb/d in February. This compares with net imports of 0.7 mb/d the month before and 0.6 mb/d in March 2021.

Looking ahead, US crude and product exports are likely to be supported by flows to Europe, amid market dislocations. The announced release from the Strategic Petroleum Reserve (SPR) could also boost US crude exports, particularly to Asia, while continued strong Latin American demand would further underpin product exports.

China

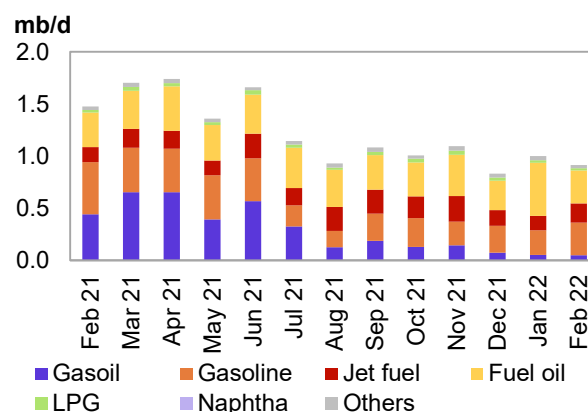
China's crude imports averaged 9.5 mb/d in **February**, coming down from the strong performance seen in the previous month. M-o-m, China's crude inflows declined 2.0 mb/d or 18%, in a month that saw both the Lunar New Year holidays and the Beijing Winter Olympics, which limited refinery operations. Compared with the same month last year, crude imports were 2.0 mb/d or 18% lower.

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.

According to preliminary estimates, **product imports** edged lower, averaging 1.4 mb/d, as naphtha inflows dipped, although LPG imports remained strong. M-o-m, product inflows were 60 tb/d or around 4% lower. Compared with the same month last year, product imports declined 4% or less than 0.1 mb/d.

Product exports declined around 9% or 86 tb/d m-o-m, amid lower fuel oil outflows and negligible gasoil exports, to average 0.9 mb/d. In contrast, jet and gasoline outflows were stronger. China has sharply curtailed export quotas for gasoline, gasoil and jet so far this year, resulting in gasoil exports falling to a nine-year low in February. However, gasoline outflows still managed an increase m-o-m, due to healthy export demand. Y-o-y, product outflows were 0.6 mb/d, or 38%, lower.

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

China	Dec 21	Jan 22	Feb 22	Change Feb 22/Jan 22
Crude oil	10.77	11.52	9.45	-2.07
Total products	0.43	0.47	0.50	0.03
Total crude and products	11.20	12.00	9.95	-2.04

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

Sources: China, Oil and Gas Petrochemicals and OPEC.

As a result, China's **net product imports** averaged 501 tb/d in February, compared with net imports of 475 tb/d the month before and net product exports of 38 tb/d in the same month of 2021.

Looking ahead, maritime estimates indicate that crude imports increased in March after a pause in activities in February due to the Lunar New Year holidays and Olympics. However, renewed lockdown measures to combat the spread of COVID-19, particularly around Shanghai, has dampened crude import demand for May and June loadings. Chinese refiners have also been cautious about increasing purchases of Russian crude, at a time when refining margins are weak.

Meanwhile, product imports were seen flat but exports are expected to show gains, as lockdown measures have crimped domestic product demand, making volumes available for export.

India

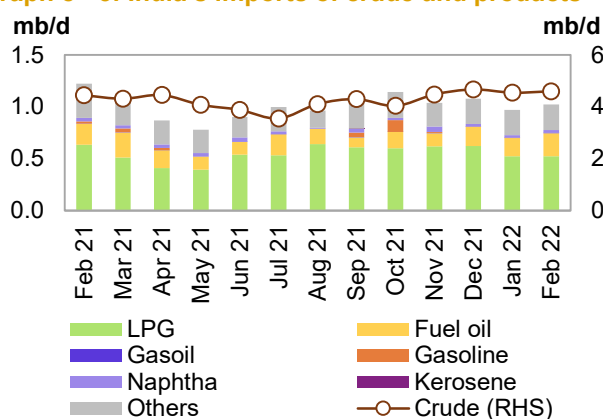
India's crude imports recovered some of the previous month's losses, averaging 4.6 mb/d in February, as domestic demand continued to pick up following the tapering off of the third wave of COVID-19 infections. Imports were about 1% higher m-o-m. Compared with the same month last year, crude imports increased by about 0.2 mb/d, or over 3%, y-o-y.

In terms of **crude imports by source**, the latest data for January shows Saudi Arabia moving up to the top position, with a share of almost 30%. Iraq was second with around 26%, followed by the Oman with a little over 6%. The US remained in fourth place with just under 6%.

Regarding **products, imports** edged up about 6% m-o-m, to average 1.0 mb/d, gains seen across all major products. Compared with the same month in 2021, inflows were just under 0.2 mb/d or about 16% lower.

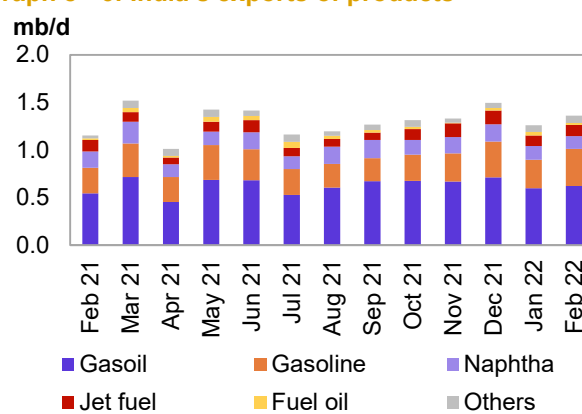
Product exports averaged 1.4 mb/d in February, up 8% m-o-m. Gains were driven primarily by gasoline and gasoil to a lesser extent. Compared with the same month last year, product outflows were 0.2 mb/d, or 18%, higher.

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 337 tb/d in February, compared with 290 tb/d the month before and net exports of 68 tb/d in the same month of 2021.

Looking ahead, crude imports are expected rise in March, as economic activities gain momentum and refiners boost runs. Indian refiners have reportedly been sharply increasing purchases of Russia crude, which is currently selling at steep discounts. Vortexa data shows that some 16 mb of Urals since 24 February, more than the country purchased for all of last year. These volumes are not likely to arrive before May or even June.

Crude and Refined Products Trade

Product imports were seen moving higher in March, with support from dirty products. Product exports are expected to increase in March as restricted Chinese flows provided an opportunity for Indian refineries, particularly given the strength in the gasoil market.

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

India	Dec 21	Jan 22	Feb 22	Change Feb 22/Jan 22
Crude oil	4.67	4.55	4.60	0.05
Total products	-0.42	-0.29	-0.34	-0.05
Total crude and products	4.26	4.26	4.26	0.01

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.

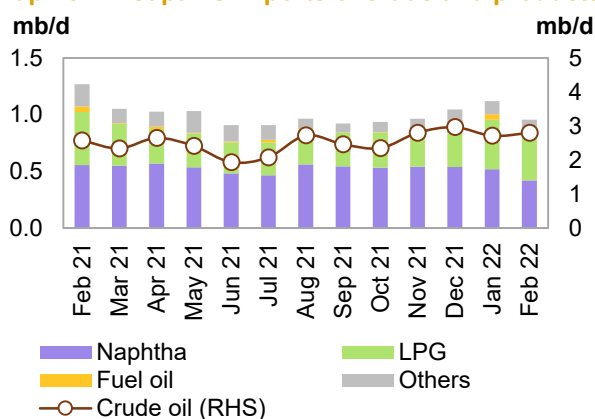
Japan

Japan's crude imports have been relatively volatile since as far back as March of last year, averaging 2.8 mb/d in February 2021 amid healthy heating and power demand. M-o-m, crude inflows were 84 tb/d or 3% higher. Increased inflows of crude oil for direct power generation also supported gains. Y-o-y, crude imports were 220 tb/d, or almost 9% higher.

In terms of **crude imports by source**, Saudi Arabia remained in the top spot in February with a share of close to 40%. The UAE was second, with 31%, followed by Qatar with around 9%. Russia supplied 104 tb/d, or around 4%, of Japan's crude imports in February.

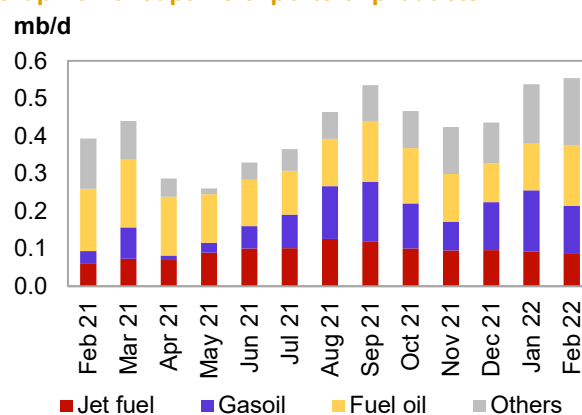
Product imports, including LPG, were down from the relatively strong level seen in the previous month, averaging just under 1.0 mb/d, with losses seen across all major products. M-o-m, product inflows declined 161 tb/d or almost 15%. Y-o-y, imports fell 312 tb/d or 25%. This was due high volumes imported in February 2021 in response to stronger than expected demand for heating fuels.

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.

Product exports continued to edge higher in February, averaging 554 tb/d, with gains in gasoline and fuel oil. Product outflows were 160 tb/d, or around 41%, higher compared to the same month of 2021.

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

Japan	Dec 21	Jan 22	Feb 22	Change Feb 22/Jan 22
Crude oil	2.97	2.72	2.80	0.08
Total products	0.61	0.58	0.40	-0.18
Total crude and products	3.58	3.30	3.20	-0.09

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

Sources: METI and OPEC.

As a consequence, Japan's **net product imports** averaged 403 tb/d in February. This was down from 580 tb/d the month before and 876 tb/d in February 2021.

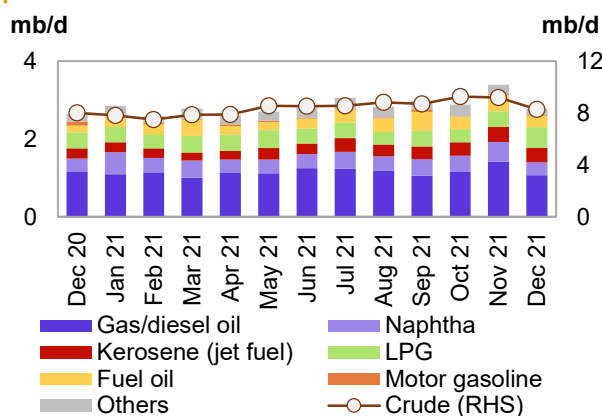
Looking ahead, crude imports are seen to increase in March, according to tanker tracking data from Kpler, despite a 14 March earthquake that disrupted refinery operations. Product imports are seen lower in March, amid lower inflows of naphtha, while product exports were seen to be stable.

OECD Europe

The latest data for **OECD Europe** crude imports continued to decline from the high seen in October, dropping to average 8.3 mb/d in December. M-o-m, crude inflows were 0.9 mb/d or 10% lower. Y-o-y, imports increased by 0.3 mb/d, or more than 3%.

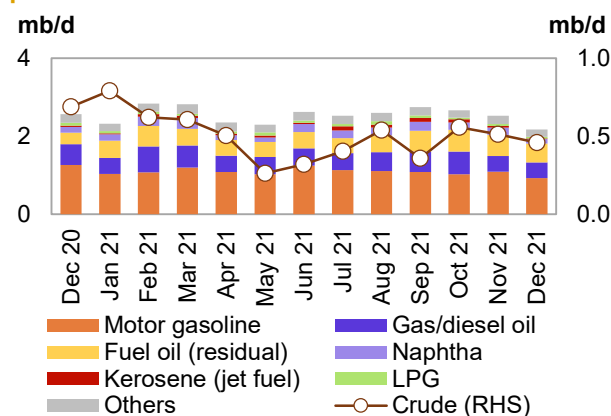
In terms of **import sources** from outside the region, Russia retained the top spot in December with 2.3 mb/d, followed by the US, which supplied 1.1 mb/d, and then Kazakhstan with 0.8 mb/d.

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.

Crude exports slipped below 0.5 mb/d, also down from higher levels in October, averaging 460 tb/d in December. This represented a decline of 53 tb/d or 10% m-o-m. Compared with the same month in 2020, crude exports were 230 tb/d, or 33%, lower.

In terms of **destination**, China remained the top buyer of OECD Europe crude exports outside the region, purchasing 383 tb/d in December.

Net crude imports averaged 7.8 mb/d in December, compared with 8.7 mb/d the month before and 7.3 mb/d in December 2020.

On the **product** side, **product imports** fell back from a surge in November, to average 2.8 mb/d. Declines were led by diesel, naphtha and fuel oil. Product imports fell 0.6 mb/d m-o-m, or 18% m-o-m, but were up 0.1 mb/d, or 5%, compared with December 2020 levels.

Product exports declined for the third consecutive month, averaging 2.2 mb/d, as losses in diesel offset gains in motor fuels. Compared with the previous month, product outflows declined 0.4 mb/d or 14%. Y-o-y, outflows were 0.4 mb/d, or 15%, lower than in the same month of 2020.

Net product imports averaged 602 tb/d in December, compared with 862 tb/d in the previous month and 71 tb/d in December 2020.

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

OECD Europe	Oct 21	Nov 21	Dec 21	Change Dec 21/Nov 21
Crude oil	8.72	8.67	7.81	-0.86
Total products	0.21	0.86	0.60	-0.26
Total crude and products	8.93	9.53	8.41	-1.12

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

Sources: IEA and OPEC.

Combined, **net crude and product imports** averaged 8.4 mb/d in December. This compares with 9.5 mb/d in November 2021, and 7.4 mb/d in December 2020.

Looking ahead, events in Eastern Europe have added considerable uncertainty to crude and product trade flows to Europe. While flows were seen to be largely stable in March, impacts are expected to be seen beginning in the latter part of April.

Eurasia

Total crude oil exports from Russia and Central Asia declined in **February**, averaging 6.4 mb/d. M-o-m, crude exports from the region edged down 13 tb/d, or less than 1%. Compared with the same month of 2021, total crude exports from the region were about 158 tb/d, or 3%, higher.

Crude exports through the **Transneft system** declined on all pipelines except the Druzhba in February. On the whole, outflows declined 108 tb/d, or around 3%, to average 3.8 mb/d. Compared with the same month the previous year, exports were 450 tb/d, or 14%, higher.

On the eastward side of the system, **Baltic Sea** exports declined 155 tb/d m-o-m, or about 11%, to average 1.2 mb/d. This was the result of shipments from Primorsk declining 86 tb/d, or 10%, to 763 tb/d, while outflows from Ust-Luga slipped 68 tb/d m-o-m, or about 12%, to average 484 tb/d. Shipments via the **Druzhba** pipeline rose 78 tb/d m-o-m to average 827 tb/d. In contrast, total shipments from the **Black Sea** increased by 77 tb/d m-o-m, or 24%, to average 405 tb/d. In terms of flows to Asia, **Kozmino** shipments declined 62 tb/d m-o-m, or around 8%, to average 687 tb/d. Exports to China via the **ESPO pipeline** were declined 46 tb/d m-o-m averaging 587 tb/d in February.

In the **Lukoil system**, exports via the Barents Sea remained halted in February, while those from the Baltic Sea dipped slightly.

On other routes, **Russia's Far East** exports declined 66 tb/d m-o-m, or 19%, to average 281 tb/d in February. This was 26% lower compared with the same month of 2021.

Central Asian exports averaged around 219 tb/d in February, representing a decline of 20 tb/d, or about 9%, compared with the month before and an increase of 5 tb/d, or 2%, y-o-y.

Black Sea total exports from the CPC terminal increased in February, 179 tb/d m-o-m, or 13%, although still down 9 tb/d, or 1%, over the same month of 2021. Exports via the Supsa terminal rose by almost 11% to average 91 tb/d. Exports via the **Baku-Tbilisi-Ceyhan (BTC) pipeline** declined 10 tb/d, or about 2%, to 485 tb/d, representing a decline of 9% y-o-y.

Total product exports from Russia and Central Asia declined 1% m-o-m to average 3.2 mb/d in February. M-o-m, gasoline, naphtha, jet and VGO saw declines, while fuel oil and gasoil increased. Y-o-y, total product exports were 4% lower in January, with only gasoil and fuel oil seeing gains.

Commercial Stock Movements

Preliminary February data sees total OECD commercial oil stocks down m-o-m by 22.8 mb. At 2,599 mb, they were 372 mb less than the same time one year ago, 334 mb lower than the latest five-year average and 321 mb below the 2015-2019 average. Within the components, crude stocks rose m-o-m by 0.7 mb, while products stocks fell m-o-m by 23.5 mb.

At 1,254 mb, OECD crude stocks were 185 mb lower than the latest five-year average and 194 mb below the 2015-2019 average. OECD product stocks stood at 1,345 mb, representing a deficit of 148 mb compared with the latest five-year average and 128 mb below the 2015-2019 average.

In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.6 days in February to stand at 57.3 days. This is 11.0 days below February 2021 levels, 8.6 days less than the latest five-year average and 5.2 days lower than the 2015-2019 average.

Preliminary data for March showed that total US commercial oil stocks fell m-o-m by 11.4 mb to stand at 1,144 mb. This is 157.9 mb lower than the same month in 2021 and 137.4 mb below the latest five-year average. Crude and product stocks fell m-o-m by 1.1 mb and 10.3 mb, respectively.

OECD

Preliminary February data sees **total OECD commercial oil stocks** down m-o-m by 22.8 mb. At 2,599 mb, they were 372 mb less than the same time one year ago, 334 mb lower than the latest five-year average and 321 mb below the 2015-2019 average.

Within the components, crude stocks rose m-o-m by 0.7 mb, while products stocks fell m-o-m by 23.5 mb. Total commercial oil stocks in February declined in all OECD regions.

OECD **commercial crude stocks** stood at 1,254 mb in February. This is 194 mb lower than the same time a year ago and 185 mb below the latest five-year average. Compared with the previous month, OECD

Americas saw a stock draw of 0.8 mb, while OECD Asia Pacific and OECD Europe rose by 0.1 and 1.5 mb respectively.

Total product inventories stood at 1,345 mb in February. This is 179 mb less than the same time a year ago, and 148 mb lower than the latest five-year average. Product stocks in OECD Americas and OECD Asia Pacific fell m-o-m by 13.7 mb and 5 mb respectively, meanwhile product stocks fell m-o-m by 4.8 mb in OECD Europe.

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

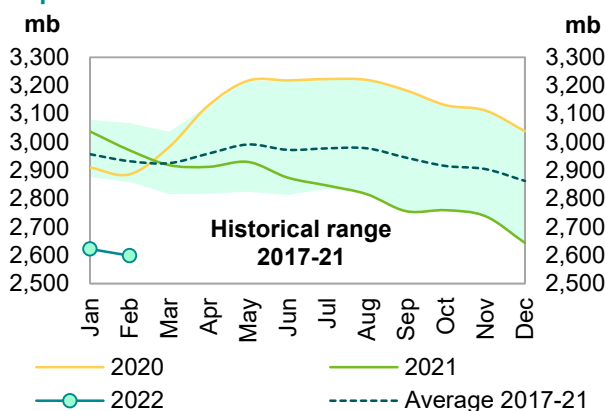
OECD stocks	Feb 21	Dec 21	Jan 22	Feb 22	Change Feb 22/Jan 22
Crude oil	1,447	1,270	1,253	1,254	0.7
Products	1,524	1,373	1,368	1,345	-23.5
Total	2,971	2,643	2,621	2,599	-22.8
Days of forward cover	68.4	59.1	58.0	57.3	-0.6

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 0.6 days in February to stand at 57.3 days. This is 11.0 days below February 2021 levels, 8.6 days less than the latest five-year average and 5.2 days lower than the 2015-2019 average. All three OECD regions were below the latest five-year average: the Americas by 7.3 days at 57.3 days, Asia Pacific by 8.0 days at 43.7 days and Europe by 11.8 days at 64.9 days.

Graph 9 - 1: OECD commercial oil stocks



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

OECD Americas

OECD Americas total commercial stocks fell by 14.5 mb m-o-m in February to settle at 1,430 mb. This is 132 mb less than the same month in 2021 and 107 mb lower than the latest five-year average.

Commercial crude oil stocks in OECD Americas fell m-o-m by 0.8 mb in February to stand at 736 mb, which is 81 mb lower than in February 2021 and 52 mb less than the latest five-year average. The stock draw came on the back of lower February crude imports in the US.

Total product stocks in OECD Americas also fell m-o-m by 13.7 mb in February to stand at 693 mb. This was 51 mb lower than in the same month of 2021 and 55 mb below the latest five-year average. Higher total consumption in the region was behind the stock draw.

OECD Europe

OECD Europe total commercial stocks fell m-o-m by 3.3 mb in February to settle at 852 mb. This is 177 mb less than the same month in 2021 and 153 mb below the latest five-year average.

OECD Europe's **commercial crude stocks** in February rose m-o-m by 1.5 mb to end the month at 362 mb, which is 64 mb lower than one year ago and 68 mb below the latest five-year average. The build in crude oil inventories came on the back of lower m-o-m refinery throughputs in the EU-14, plus the UK and Norway, which declined by 0.07 mb/d m-o-m to stand at 9.52 mb/d.

By contrast, Europe's **commercial product stocks** fell m-o-m by 4.8 mb to end February at 489 mb. This is 113 mb lower than a year ago and 86 mb below the latest five-year average.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks fell m-o-m by 5.0 mb in February to stand at 317 mb. This is 64 mb lower than a year ago and 73 mb below the latest five-year average.

OECD Asia Pacific's **crude inventories** rose by 0.1 mb m-o-m to end February at 155 mb, which is 49 mb lower than one year ago and 66 mb below the latest five-year average.

OECD Asia Pacific's **total product inventories** fell m-o-m by 5.0 mb to end February at 162 mb. This is 15 mb lower than the same time a year ago and 8.0mb below the latest five-year average.

US

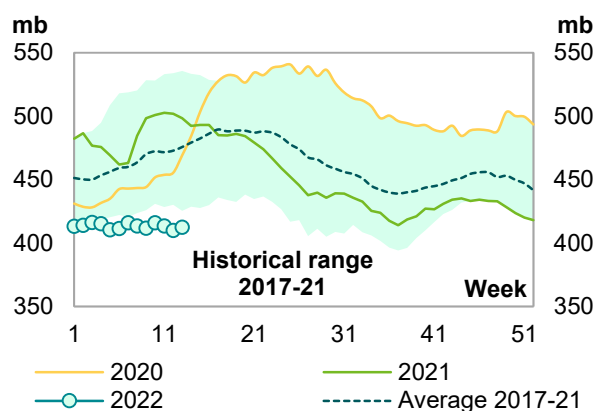
Preliminary data for March showed that **total US commercial oil stocks** fell m-o-m by 11.4 mb to stand at 1,144 mb. This is 157.9 mb, or 12.1%, lower than the same month in 2021 and 137.4 mb, or 10.7%, below the latest five-year average. Crude and product stocks fell m-o-m by 1.1 mb and 10.3 mb, respectively.

US commercial crude stocks in March stood at 412.4 mb. This is 89.5 mb, or 17.8%, lower than the same month of the previous year, and 69.2 mb, or 14.4%, below the latest five-year average. The stock draw came on the back of higher crude exports.

Total product stocks in March stood at 731.5 mb. This is 68.4 mb, or 8.5%, below March 2021 levels, and 68.2 mb, or 8.5%, lower than the latest five-year average. The stock draw was mainly driven by higher US consumption.

Gasoline stocks in March fell m-o-m by 9.2 mb to settle at 236.8.0 mb. This is 0.9 mb, or 0.4%, lower than in the same month in 2021, and 6.3 mb, or 2.6%, lower than the latest five-year average. The monthly stock draw came mainly on the back of higher gasoline consumption.

Graph 9 - 2: US weekly commercial crude oil inventories



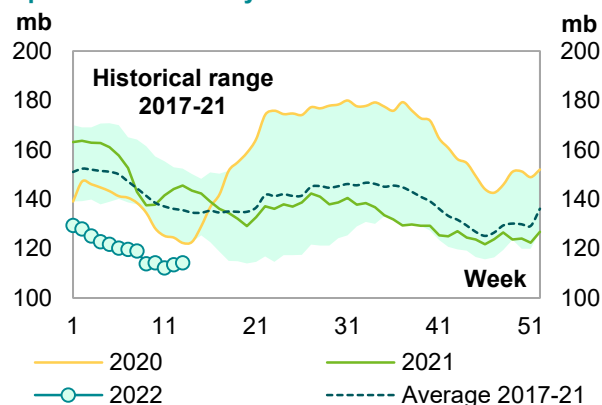
Sources: EIA and OPEC.

Distillate stocks fell m-o-m in March by 4.8 mb to stand at 114.3 mb. This is 31.2 mb, or 21.4%, lower than the same month of the previous year, and 23.1 mb, or 16.8%, below the latest five-year average.

Jet fuel stocks fell m-o-m by 2.8 mb, ending March at 35.4 mb. This is 3.6 mb, or 9.2%, lower than the same month of 2021, and 5.3 mb, or 12.9 %, below the latest five-year average.

By contrast, **residual fuel oil stocks** rose by 2.4 mb m-o-m in March. At 28.8 mb, this was 2.1 mb, or 6.8 %, lower than a year earlier, and 4.7 mb, or 14.0 %, below the latest five-year average.

Graph 9 - 3: US weekly distillate inventories



Sources: EIA and OPEC.

Table 9 - 2: US commercial petroleum stocks, mb

US stocks					Change
	Mar 21	Jan 22	Feb 22	Mar 22	Mar 22/Feb 22
Crude oil	501.9	414.3	413.4	412.4	-1.1
Gasoline	237.6	251.8	246.0	236.8	-9.2
Distillate fuel	145.5	125.0	119.1	114.3	-4.8
Residual fuel oil	30.9	26.7	26.4	28.8	2.4
Jet fuel	39.0	38.6	38.2	35.4	-2.8
Total products	799.8	775.7	741.8	731.5	-10.3
Total	1,301.7	1,190.0	1,155.2	1,143.8	-11.4
SPR	637.8	588.3	580.0	564.6	-15.4

Sources: EIA and OPEC.

Japan

In **Japan**, **total commercial oil stocks** in February fell m-o-m by 5.0 mb to settle at 109.6 mb. This is 13.5 mb, or 11.0%, lower than the same month in 2021, and 20.5 mb, or 15.7%, below the latest five-year average. Crude stocks rose by 0.1 mb, while product stocks fell by 5.0 mb.

Japanese **commercial crude oil stocks** rose slightly in February to stand at 56.0 mb. This is 7.3 mb, or 11.5%, below the same month of the previous year, and 18.1 mb, or 24.4%, lower than the latest five-year average. The build came on the back of higher crude imports.

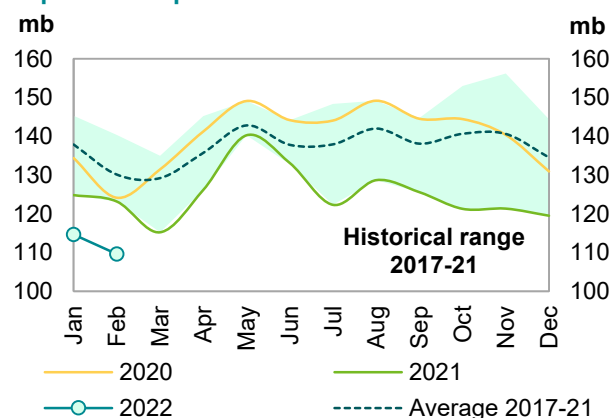
By contrast, Japan's **total product inventories** fell m-o-m by 5.0 mb to end February at 53.6 mb. This is 6.2 mb, or 10.4%, lower than the same month in 2021, and 2.4 mb, or 4.2%, below the latest five-year average.

Gasoline stocks fell m-o-m by 0.4 mb to stand at 11.1 mb. This was 2.0 mb, or 15.6%, lower than a year earlier, and 0.2 mb, or 1.7%, lower than the latest five-year average. Lower production, which fell by 10.6%, was behind the gasoline stock draw.

Distillate stocks also fell m-o-m by 3.9 mb to end February at 22.4 mb. This is 3.4 mb, or 13.0%, lower than the same month in 2021, and 1.2 mb, or 5.0%, below the latest five-year average. Within the distillate components, **jet fuel, kerosene and gasoil stocks** fell m-o-m by 11.2%, 14.4% and 5.0% respectively.

Total residual fuel oil stocks fell m-o-m by 0.7 mb to end February at 11.2 mb. This is 0.6 mb, or 5.3%, lower than in the same month of the previous year, and 1.2 mb, or 9.7%, below the latest five-year average. Within the components, fuel oil A and fuel oil B.C stocks fell by 4.0% and 6.9%, respectively.

Graph 9 - 4: Japan's commercial oil stocks



Sources: METI and OPEC.

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

Japan's stocks	Feb 21	Dec 21	Jan 22	Feb 22	Change Feb 22/Jan 22
Crude oil	63.3	60.3	55.9	56.0	0.1
Gasoline	13.1	10.5	11.4	11.1	-0.4
Naphtha	9.2	8.1	9.1	9.0	-0.1
Middle distillates	25.7	28.3	26.3	22.4	-3.9
Residual fuel oil	11.9	12.4	11.9	11.2	-0.7
Total products	59.9	59.2	58.7	53.6	-5.0
Total**	123.2	119.5	114.6	109.6	-5.0

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 February showed that **total European commercial oil stocks** fell m-o-m by 3.3 mb to stand at 996.7 mb. At this level, they were 150.8 mb, or 13.1%, below the same month a year earlier, and 130.8 mb, or 11.6%, lower than the latest five-year average. Crude stocks rose by 1.5 mb, while product stocks fell m-o-m by 4.8 mb.

European **crude inventories** rose in February to stand at 419.2 mb. This is 47.2 mb, or 10.1% lower than the same month in 2021, and 56.5 mb, or 11.9%, below the latest five-year average. The build in crude oil inventories came on the back of lower m-o-m refinery throughputs in the EU-14, plus UK and Norway.

By contrast, **total European product stocks** fell m-o-m by 4.8 mb to end February at 577.5 mb. This is 103.7 mb, or 15.2%, lower than the same month of the previous year, and 74.3 mb, or 11.4%, below the latest five-year average.

Gasoline stocks declined m-o-m by 4.8 mb in February to stand at 108.5 mb. At this level, they were 15.2 mb, or 12.3%, lower than the same time a year earlier, and 16.0 mb/d, or 12.9%, less than the latest five-year average.

Residual fuel stocks also fell m-o-m by 1.8 mb in February to stand at 58.4 mb. This is 6.7 mb, or 10.3%, lower than the same month in 2021, and 9.2 mb, or 13.6%, below the latest five-year average.

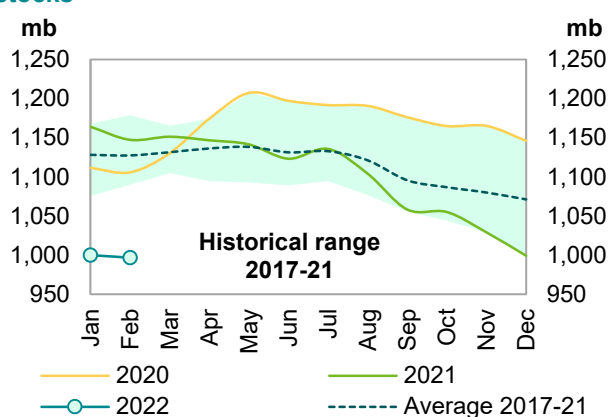
In contrast, **distillate stocks** rose m-o-m by 1.4 mb in February to stand at 386.1 mb. This is 74.6 mb, or 16.2%, below the same month in 2021, and 43.7 mb, or 10.2%, less than the latest five-year average.

Naphtha stocks also rose slightly by 0.4 mb in February, ending the month at 24.5 mb. This is 7.1 mb, or 122.6%, below February 2021 levels, and 5.4 mb, or 18.0%, below the latest five-year average.

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

EU stocks	Feb 21	Dec 21	Jan 22	Feb 22	Change Feb 22/Jan 22
Crude oil	466.4	417.9	417.7	419.2	1.5
Gasoline	123.7	105.7	113.2	108.5	-4.8
Naphtha	31.6	24.2	24.1	24.5	0.4
Middle distillates	460.7	391.4	384.7	386.1	1.4
Fuel oils	65.2	60.1	60.3	58.4	-1.8
Total products	681.1	581.4	582.3	577.5	-4.8
Total	1,147.5	999.4	1,000.0	996.7	-3.3

Sources: Argus, Euroilstock and OPEC.

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


Sources: Argus, Euroilstock and OPEC.

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

Singapore

In February, **total product stocks in Singapore** fell m-o-m by 3.7 mb to 43.3 mb. This is 8.6 mb, or 16.5%, lower than the same month in 2021.

Light distillate stocks fell m-o-m by 1.7 mb in February to stand at 14.0 mb. This is 1.7 mb, or 11.1%, lower than the same month of the previous year.

Middle distillate stocks also fell m-o-m by 0.5 mb in January to stand at 7.7 mb. This is 7.2 mb, or 48.3%, lower than a year earlier.

Residual fuel oil stocks fell m-o-m by 1.5 mb, ending February at 21.6 mb. This is 0.4 mb, or 1.7%, lower than in February 2021.

ARA

Total product stocks in ARA fell m-o-m in February by 0.8 mb reversing the build of last month. At 37.7 mb, they are 14 mb, or 27.2%, lower than the same month in 2021.

Gasoline stocks in February fell m-o-m by 0.3 mb to stand at 10.2 mb, which is 0.8 mb, or 7.4%, lower than the same month of the previous year.

Fuel oil stocks also fell m-o-m by 1.1 mb in February to stand at 6.6 mb, which is 4.1 mb, or 38.1%, lower than in February 2021.

By contrast, gasoil stocks rose by 0.2 mb to end February at 12.2 mb. This is 7.0 mb, or 36.6%, lower than the level seen in February 2021.

Jet oil stocks also rose m-o-m by 0.1 mb to end February at 6.7 mb. This is 1.0 mb, or 13.2%, below the level registered one year earlier.

Fujairah

During the week ending 28 March 2022, **total oil product stocks in Fujairah** fell w-o-w by 0.3 mb to stand at 17.89 mb, according to data from Fed Com and S&P Global Platts. At this level, total oil stocks were 1.39 mb lower than the same time a year ago.

Light distillate stocks fell by 0.36 mb w-o-w to stand at 5.92 mb in the week to 28 March 2022, which is 1.61 mb lower than the same period a year ago. **By contrast, heavy distillate stocks** rose by 0.06 mb to stand at 10.19 mb, which is 1.95 mb higher than a year ago. **Middle distillate stocks** remain unchanged w-o-w to stand at 1.79 mb, which is 1.74 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 28.1 mb/d, which is around 5.0 mb/d higher than in 2020.

According to secondary sources, OPEC crude production averaged 25.2 mb/d in 1Q21, which is 1.2 mb/d lower than demand for OPEC crude in the same period. In 2Q21, OPEC crude production averaged 25.6 mb/d, which is 1.6 mb/d lower than demand for OPEC crude. In 3Q21, OPEC crude oil production averaged 26.9 mb/d, which is 1.9 mb/d lower than demand for OPEC crude. In 4Q21, OPEC crude oil production averaged 27.7 mb/d, which is 2.4 mb/d lower than demand for OPEC crude.

For 2021, OPEC crude production averaged 26.4 mb/d, which was 1.8 mb/d below the demand for OPEC crude.

Demand for OPEC crude in 2022 was revised down by 0.1 mb/d from the previous month to stand at 29.0 mb/d, which is around 0.8 mb/d higher than in 2021. According to secondary sources, OPEC crude production averaged 28.4 mb/d in 1Q22, which is 0.1 mb/d higher than demand for OPEC crude during the same period.

Balance of supply and demand in 2021

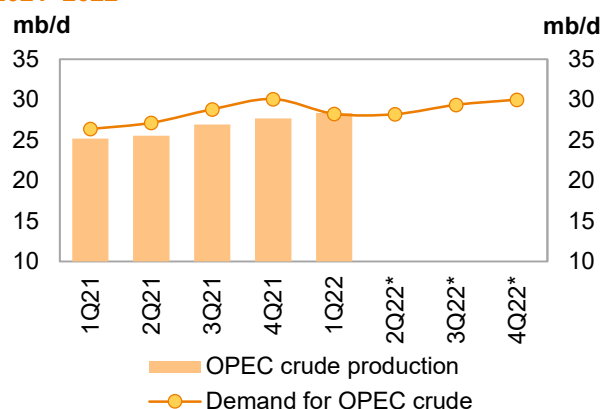
Demand for OPEC crude in 2021 was revised up by 0.1 mb/d from the previous MOMR to stand at 28.1 mb/d, which is around 5.0 mb/d higher than in 2020. Compared with the previous assessment, all quarters were revised up by 0.1 mb/d.

When compared with the same quarters in 2020, demand for OPEC crude in 1Q21 and 2Q21 was higher by 3.8 mb/d and 9.5 mb/d, respectively. 3Q21 and 4Q21 are estimated to show y-o-y increases of 3.8 mb/d and 2.8 mb/d, respectively.

According to secondary sources, OPEC crude production averaged 25.2 mb/d in 1Q21, which is 1.2 mb/d lower than demand for OPEC crude in the same period. In 2Q21, OPEC crude production averaged 25.6 mb/d, which is 1.6 mb/d lower than demand for OPEC crude. In 3Q21, OPEC crude oil production averaged 26.9 mb/d, which is 1.9 mb/d lower than demand for OPEC crude. In 4Q21, OPEC crude oil production averaged 27.7 mb/d, which is 2.4 mb/d lower than demand for OPEC crude.

For 2021, OPEC crude production averaged 26.4 mb/d, which was 1.8 mb/d below the demand for OPEC crude.

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



Note: * 2Q22-4Q22 = 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	91.13	93.98	95.53	97.59	100.12	96.82	5.70
Non-OPEC liquids production	62.97	62.50	63.26	63.60	64.87	63.56	0.59
OPEC NGL and non-conventionals	5.05	5.10	5.12	5.17	5.18	5.14	0.10
(b) Total non-OPEC liquids production and OPEC NGLs	68.02	67.60	68.39	68.77	70.05	68.71	0.69
Difference (a-b)	23.11	26.38	27.15	28.81	30.07	28.12	5.01
OPEC crude oil production	25.72	25.19	25.57	26.93	27.71	26.36	0.63
Balance	2.61	-1.20	-1.58	-1.89	-2.36	-1.76	-4.37

Note: * 2021 = Estimation. 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 revised down by 0.1 mb/d from the previous month to stand at 29.0 mb/d, which was around 0.8 mb/d higher than in 2021.

Compared with the previous assessment, 2Q22 and 4Q22 were revised down by around 0.2 mb/d each, while 3Q22 remained unchanged from the previous assessment and 1Q22 was revised up by around 0.1 mb/d.

Compared with the same quarters in 2021, demand for OPEC crude in 1Q22, 2Q22 and 3Q22 is forecast to be higher by 1.9 mb/d, 1.1 mb/d and 0.5 mb/d, respectively, while 4Q22 is forecast to be lower by 0.1 mb/d. According to secondary sources, OPEC crude production averaged 28.4 mb/d in 1Q22, which is 0.1 mb/d higher than demand for OPEC crude in the same time.

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

	2021	1Q22	2Q22	3Q22	4Q22	2022	Change 2022/21
(a) World oil demand	96.82	98.95	99.12	101.06	102.81	100.50	3.67
Non-OPEC liquids production	63.56	65.47	65.65	66.42	67.50	66.26	2.70
OPEC NGL and non-conventionals	5.14	5.23	5.26	5.29	5.31	5.27	0.13
(b) Total non-OPEC liquids production and OPEC NGLs	68.71	70.70	70.91	71.71	72.81	71.54	2.83
Difference (a-b)	28.12	28.25	28.21	29.36	30.00	28.96	0.84
OPEC crude oil production	26.36	28.37					
Balance	-1.76	0.12					

Note: * 2021 = Estimation and 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	25.41	25.53	22.56	22.82	24.38	24.83	25.01	24.27	24.38	25.43	25.82	25.78	25.36
of which US	20.60	20.58	18.35	18.60	20.17	20.35	20.56	19.93	19.70	21.01	21.30	21.26	20.82
Europe	14.31	14.31	12.43	11.91	12.64	13.85	13.88	13.08	12.83	13.17	14.40	14.24	13.66
Asia Pacific	8.01	7.93	7.14	7.67	7.04	7.11	7.82	7.41	7.96	7.22	7.25	7.93	7.59
Total OECD	47.73	47.78	42.13	42.40	44.05	45.79	46.70	44.75	45.16	45.82	47.47	47.95	46.61
China	13.16	13.71	13.56	13.85	14.61	14.57	15.21	14.56	14.34	15.10	15.06	15.65	15.04
India	4.93	4.99	4.51	4.94	4.50	4.59	5.02	4.76	5.28	4.82	4.97	5.35	5.10
Other Asia	8.91	9.06	8.13	8.56	8.98	8.34	8.62	8.63	9.20	9.59	8.93	8.95	9.16
Latin America	6.53	6.59	6.01	6.25	6.16	6.46	6.34	6.30	6.43	6.33	6.61	6.50	6.47
Middle East	8.13	8.20	7.55	7.95	7.77	8.24	7.97	7.98	8.28	8.01	8.49	8.20	8.25
Africa	4.33	4.35	4.08	4.37	4.08	4.15	4.43	4.26	4.52	4.21	4.27	4.56	4.39
Russia	3.55	3.57	3.39	3.65	3.42	3.63	3.76	3.61	3.70	3.33	3.50	3.59	3.53
Other Eurasia	1.21	1.19	1.07	1.23	1.24	1.09	1.28	1.21	1.24	1.19	1.04	1.28	1.19
Other Europe	0.74	0.76	0.70	0.78	0.72	0.73	0.79	0.75	0.80	0.71	0.73	0.80	0.76
Total Non-OECD	51.48	52.43	49.00	51.58	51.48	51.80	53.42	52.07	53.79	53.29	53.60	54.86	53.89
(a) Total world demand	99.21	100.21	91.13	93.98	95.53	97.59	100.12	96.82	98.95	99.12	101.06	102.81	100.50
Y-o-y change	1.34	1.00	-9.09	-0.70	11.74	6.02	5.70	5.70	4.97	3.58	3.48	2.68	3.67
Non-OPEC liquids production													
Americas	24.03	25.81	24.70	24.10	25.17	25.20	26.13	25.15	25.92	26.30	26.95	27.32	26.63
of which US	16.66	18.47	17.61	16.63	17.93	17.85	18.58	17.75	18.42	18.95	19.23	19.54	19.04
Europe	3.84	3.70	3.89	3.95	3.51	3.81	3.78	3.76	3.77	3.74	3.80	4.12	3.86
Asia Pacific	0.41	0.52	0.52	0.50	0.45	0.53	0.51	0.50	0.50	0.54	0.53	0.53	0.52
Total Non-OECD	28.27	30.03	29.11	28.55	29.13	29.53	30.42	29.41	30.19	30.58	31.28	31.97	31.01
China	3.98	4.05	4.15	4.30	4.34	4.33	4.26	4.31	4.45	4.31	4.35	4.43	4.38
India	0.86	0.82	0.78	0.78	0.77	0.77	0.77	0.77	0.77	0.78	0.80	0.83	0.79
Other Asia	2.76	2.72	2.51	2.51	2.45	2.33	2.35	2.41	2.41	2.39	2.37	2.36	2.38
Latin America	5.79	6.08	6.03	5.94	5.97	6.09	5.83	5.96	6.15	6.21	6.17	6.40	6.23
Middle East	3.19	3.19	3.19	3.22	3.23	3.24	3.27	3.24	3.30	3.35	3.37	3.37	3.35
Africa	1.49	1.51	1.41	1.37	1.35	1.32	1.32	1.34	1.31	1.27	1.25	1.23	1.27
Russia	11.52	11.61	10.59	10.47	10.74	10.81	11.17	10.80	11.33	11.23	11.16	11.20	11.23
Other Eurasia	3.08	3.07	2.92	2.96	2.89	2.79	3.08	2.93	3.05	3.03	3.17	3.22	3.12
Other Europe	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.10	0.10
Total Non-OECD	32.80	33.18	31.71	31.66	31.86	31.79	32.17	31.87	32.88	32.68	32.75	33.13	32.86
Total Non-OPEC production	61.07	63.22	60.82	60.22	60.98	61.32	62.59	61.28	63.08	63.26	64.03	65.10	63.87
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	63.41	65.58	62.97	62.50	63.26	63.60	64.87	63.56	65.47	65.65	66.42	67.50	66.26
OPEC NGL + non-conventional oils	5.29	5.21	5.05	5.10	5.12	5.17	5.18	5.14	5.23	5.26	5.29	5.31	5.27
(b) Total non-OPEC liquids production and OPEC NGLs	68.70	70.79	68.02	67.60	68.39	68.77	70.05	68.71	70.70	70.91	71.71	72.81	71.54
Y-o-y change	3.08	2.09	-2.78	-4.55	2.19	2.20	2.87	0.69	3.10	2.52	2.93	2.76	2.83
OPEC crude oil production (secondary sources)	31.34	29.37	25.72	25.19	25.57	26.93	27.71	26.36	28.37				
Total liquids production	100.05	100.16	93.74	92.78	93.95	95.70	97.76	95.06	99.08				
Balance (stock change and miscellaneous)	0.83	-0.05	2.61	-1.20	-1.58	-1.89	-2.36	-1.76	0.12				
OECD closing stock levels, mb													
Commercial	2,873	2,894	3,038	2,919	2,874	2,755	2,643	2,643					
SPR	1,552	1,535	1,541	1,546	1,524	1,513	1,484	1,484					
Total	4,425	4,429	4,579	4,464	4,398	4,268	4,127	4,127					
Oil-on-water	1,058	1,033	1,148	1,138	1,131	1,169	1,202	1,202					
Days of forward consumption in OECD, days													
Commercial onland stocks	60	69	68	66	63	59	59	57					
SPR	32	36	34	35	33	32	33	32					
Total	93	105	102	101	96	91	91	89					
Memo items													
(a) - (b)	30.51	29.42	23.11	26.38	27.15	28.81	30.07	28.12	28.25	28.21	29.36	30.00	28.96

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

Source: OPEC.

Appendix

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	-	0.12	0.11	0.14	0.08	0.09	-0.02	0.07	0.19	0.05	0.06	-0.05	0.06
of which US	-	-	-	-	-	-	-	-	0.05	-0.02	-0.02	-0.02	-0.01
Europe	-	-	-	-	-	-	0.01	-	0.20	-0.05	-0.09	-0.15	-0.03
Asia Pacific	-	-	-	-	-	-	0.03	0.01	-	-	-	0.03	0.01
Total OECD	-	0.12	0.11	0.14	0.08	0.09	0.02	0.07	0.39	-	-0.03	-0.17	0.04
China	-	-	-	-	-	-	-	-	-0.20	-0.40	-	-	-0.15
India	-	-	-	-	-	-	-	-	-0.20	-	-	-	-0.05
Other Asia	-	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	-	-	-	-	-	-	-	-	-0.03	-	-	-	-0.01
Middle East	-	-	-	-	-	-	-	-	-0.02	-	-	-	-0.01
Africa	-	-	-	-	-	-	-	-	-0.02	-	-	-	-0.01
Russia	-	-	-	-	-	-	-	-	-0.05	-0.14	-0.18	-0.22	-0.15
Other Eurasia	-	-	-	-	-	-	-	-	-0.06	-0.10	-0.08	-0.04	-0.07
Other Europe	-	-	-	-	-	-	-	-	-	-0.02	-0.02	-0.01	-0.01
Total Non-OECD	-	-	-	-	-	-	-	-	-0.58	-0.66	-0.27	-0.27	-0.45
(a) Total world demand	-	0.12	0.11	0.14	0.08	0.09	0.02	0.07	-0.19	-0.66	-0.30	-0.44	-0.41
Y-o-y change	-	0.12	-0.01	0.05	-0.06	0.03	-0.14	-0.04	-0.33	-0.74	-0.39	-0.46	-0.48
Non-OPEC liquids production													
Americas	-	-	-	-	-	-	-0.02	-0.01	-0.12	0.20	0.41	0.44	0.23
of which US	-	-	-	-	-	-	-0.01	-	-0.05	0.27	0.41	0.41	0.26
Europe	-	-0.01	-0.01	-0.01	-0.01	-0.01	-0.03	-0.02	-	-0.01	-0.01	-0.01	-0.01
Asia Pacific	-	-	-	-	-	-	-	-	-0.02	-	-	-	-0.01
Total OECD	-	-0.01	-0.01	-0.01	-0.01	-0.01	-0.06	-0.02	-0.15	0.19	0.40	0.44	0.22
China	0.01	0.01	-0.01	-	-	-	0.01	-	0.09	-	-	-	0.02
India	-	-	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Other Asia	0.03	0.03	0.01	-	-	-	-0.02	-0.01	-0.03	-0.02	-0.02	-0.02	-0.02
Latin America	-	-	-0.01	-0.01	-0.01	-	-	-	-0.04	-	-	-	-0.01
Middle East	-	-	-	-	-	-	-	-	-0.02	0.01	0.01	0.01	-
Africa	-	-	-	-	-	-	-	-	0.03	-	-	-	0.01
Russia	-	-	-	-	-	-	-	-	-0.12	-0.60	-0.72	-0.68	-0.53
Other Eurasia	-	-	-	-	-	-	-	-	-0.07	-0.09	-	-	-0.04
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	0.05	0.04	0.01	0.02	0.01	0.01	0.01	0.01	-0.13	-0.68	-0.71	-0.67	-0.55
Total Non-OPEC production	0.04	0.03	-	0.01	-	0.01	-0.05	-0.01	-0.28	-0.49	-0.31	-0.23	-0.33
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC liquids production	0.04	0.03	-	0.01	-	0.01	-0.05	-0.01	-0.28	-0.49	-0.31	-0.23	-0.33
OPEC NGL + non-conventional oils	-	-	-	-	-	-	-	-	-	-	-	-	-
(b) Total non-OPEC liquids production and OPEC NGLs	0.04	0.03	-	0.01	-	0.01	-0.05	-0.01	-0.28	-0.49	-0.31	-0.23	-0.33
Y-o-y change	0.04	-0.01	-0.03	0.01	0.01	0.01	-0.04	-0.01	-0.29	-0.49	-0.32	-0.19	-0.32
OPEC crude oil production (secondary sources)	-0.01	-	0.08	0.04	0.05	0.05	0.04	0.05					
Total liquids production	0.03	0.03	0.08	0.04	0.06	0.06	-	0.04					
Balance (stock change and miscellaneous)	0.03	-0.09	-0.03	-0.10	-0.02	-0.04	-0.03	-0.03					
mb													
Commercial	-	-3	3	-3	-5	-4	-37	-37					
SPR	-	-	-	-	-	-	-1	-1					
Total	-	-3	3	-3	-5	-4	-37	-37					
Oil-on-water	-	-	-	-	-	-	-	-					
Days of forward consumption in OECD, days													
Commercial onland stocks	-	-	-	-	-	-	-1	-1					
SPR	-	-	-	-	-	-	-	-					
Total	-	-	-	-	-	-	-2	-1					
Memo items													
(a) - (b)	-0.04	0.09	0.11	0.13	0.07	0.09	0.07	0.08	0.09	-0.17	0.01	-0.20	-0.08

Note: * This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the March 2022 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	2019	2020	2021	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21
Closing stock levels, mb												
OECD onland commercial	2,894	3,038	2,643	2,894	2,982	3,217	3,182	3,038	2,919	2,874	2,755	2,643
Americas	1,522	1,615	1,464	1,522	1,583	1,719	1,691	1,615	1,570	1,543	1,508	1,464
Europe	978	1,043	855	978	1,033	1,099	1,079	1,043	1,002	973	892	855
Asia Pacific	394	380	324	394	366	400	411	380	346	358	355	324
OECD SPR	1,535	1,541	1,484	1,535	1,537	1,561	1,551	1,541	1,546	1,524	1,513	1,484
Americas	637	640	596	637	637	658	644	640	640	623	620	596
Europe	482	488	479	482	484	487	490	488	493	487	485	479
Asia Pacific	416	414	409	416	416	416	417	414	413	413	408	409
OECD total	4,429	4,579	4,127	4,429	4,519	4,779	4,733	4,579	4,464	4,398	4,268	4,127
Oil-on-water	1,033	1,148	1,202	1,033	1,187	1,329	1,174	1,148	1,138	1,131	1,169	1,202
Days of forward consumption in OECD, days												
OECD onland commercial	69	68	57	63	79	76	74	72	66	63	59	59
Americas	67	67	58	62	79	76	73	71	64	62	60	60
Europe	79	80	62	73	94	85	86	88	79	70	64	68
Asia Pacific	55	51	43	50	55	59	56	50	49	50	45	41
OECD SPR	37	35	34	34	41	37	36	36	35	33	32	33
Americas	28	26	23	26	32	29	28	28	26	25	25	24
Europe	39	37	35	36	44	38	39	41	39	35	35	38
Asia Pacific	58	56	54	53	63	62	57	54	59	58	52	51
OECD total	107	104	91	97	120	113	110	108	101	96	91	92

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	Change												Change
	2018	2019	2020	3Q21	4Q21	2021	21/20	1Q22	2Q22	3Q22	4Q22	2022		22/21
US	16.7	18.5	17.6	17.8	18.6	17.8	0.1	18.4	18.9	19.2	19.5	19.0	1.3
Canada	5.3	5.4	5.2	5.4	5.6	5.5	0.3	5.5	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	25.2	26.1	25.2	0.5	25.9	26.3	27.0	27.3	26.6	1.5
Norway	1.9	1.7	2.0	2.1	2.0	2.0	0.0	2.0	2.1	2.1	2.3	2.1	0.1
UK	1.1	1.1	1.1	0.9	0.9	0.9	-0.2	0.9	0.9	0.9	1.0	0.9	0.0
Denmark	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Other OECD Europe	0.7	0.7	0.7	0.8	0.7	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.0
OECD Europe	3.8	3.7	3.9	3.8	3.8	3.8	-0.1	3.8	3.7	3.8	4.1	3.9	0.1
Australia	0.3	0.4	0.5	0.5	0.4	0.4	0.0	0.4	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	29.5	30.4	29.4	0.3	30.2	30.6	31.3	32.0	31.0	1.6
China	4.0	4.1	4.2	4.3	4.3	4.3	0.2	4.5	4.3	4.3	4.4	4.4	0.1
India	0.9	0.8	0.8	0.8	0.8	0.8	0.0	0.8	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	0.9	0.0	0.8	0.8	0.8	0.8	0.8	0.0
Malaysia	0.7	0.7	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.7	0.6	0.1
Thailand	0.5	0.5	0.5	0.4	0.4	0.4	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	2.8	2.7	2.5	2.3	2.4	2.4	-0.1	2.4	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	3.5	3.6	-0.1	3.7	3.7	3.7	3.9	3.8	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	0.7	0.0
Ecuador	0.5	0.5	0.5	0.5	0.4	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	0.1	0.2	0.2	0.3	0.2	0.1
Latin America others	0.4	0.4	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.0
Latin America	5.8	6.1	6.0	6.1	5.8	6.0	-0.1	6.2	6.2	6.2	6.4	6.2	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	3.2	0.0	3.3	3.4	3.4	3.4	3.3	0.1
Cameroon	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.0
Chad	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Egypt	0.7	0.7	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.5	0.5	0.6	0.0
Ghana	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.1	0.1	0.1	0.1	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	1.3	1.2	1.3	-0.1
Russia	11.5	11.6	10.6	10.8	11.2	10.8	0.2	11.3	11.2	11.2	11.2	11.2	0.4
Kazakhstan	1.9	1.9	1.8	1.7	2.0	1.8	0.0	1.9	1.9	2.0	2.0	2.0	0.1
Azerbaijan	0.8	0.8	0.7	0.7	0.7	0.7	0.0	0.7	0.8	0.8	0.8	0.8	0.1
Eurasia others	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.3	0.3	0.3	0.3	0.0
Other Eurasia	3.1	3.1	2.9	2.8	3.1	2.9	0.0	3.1	3.0	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	33.2	31.7	31.8	32.2	31.9	0.2	32.9	32.7	32.7	33.1	32.9	1.0
Non-OPEC production	61.1	63.2	60.8	61.3	62.6	61.3	0.5	63.1	63.3	64.0	65.1	63.9	2.6
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	63.6	64.9	63.6	0.6	65.5	65.6	66.4	67.5	66.3	2.7
OPEC NGL	5.2	5.1	4.9	5.1	5.1	5.0	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	5.1	0.1	5.2	5.3	5.3	5.3	5.3	0.1
Non-OPEC & OPEC (NGL+NCF)	68.7	70.8	68.0	68.8	70.1	68.7	0.7	70.7	70.9	71.7	72.8	71.5	2.8

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

Table 11 - 5: World rig count, units

World rig count	2019	2020	Change		2Q21	3Q21	4Q21	1Q22	Feb 22	Mar 22	Change
			2021	2021/20							Mar/Feb
US	944	436	475	39	452	498	559	634	636	664	28
Canada	134	90	133	43	73	151	161	195	221	173	-48
Mexico	37	41	45	4	42	43	48	44	44	44	0
OECD Americas	1,116	567	654	87	568	694	770	874	902	883	-19
Norway	17	16	17	1	18	17	18	16	16	16	0
UK	15	6	8	2	8	9	8	7	7	7	0
OECD Europe	74	59	58	-1	59	59	61	58	57	57	0
OECD Asia Pacific	29	22	23	1	21	28	25	22	22	21	-1
Total OECD	1,219	648	735	87	648	781	856	954	981	961	-20
Other Asia*	221	187	174	-13	170	181	182	185	184	183	-1
Latin America	128	58	91	33	89	93	105	111	108	114	6
Middle East	68	57	57	0	56	57	59	60	59	62	3
Africa	55	43	42	-1	39	47	49	57	58	57	-1
Other Europe	14	12	9	-3	7	9	9	9	10	8	-2
Total Non-OECD	486	357	373	16	362	385	404	422	419	424	5
Non-OPEC rig count	1,705	1,005	1,108	103	1,010	1,166	1,260	1,376	1,400	1,385	-15
Algeria	45	31	26	-5	27	24	31	30	26	30	4
Angola	4	3	4	1	4	4	5	6	6	6	0
Congo	3	1	0	-1	0	0	1	1	1	1	0
Equatorial Guinea**	1	0	0	0	0	0	1	1	1	1	0
Gabon	7	3	2	-1	1	3	4	2	2	2	0
Iran**	117	117	117	0	117	117	117	117	117	117	0
Iraq	74	47	39	-8	36	42	45	46	46	47	1
Kuwait	46	45	25	-20	23	25	23	27	28	27	-1
Libya	14	12	13	1	12	14	14	15	15	15	0
Nigeria	16	11	7	-4	5	10	7	8	8	10	2
Saudi Arabia	115	93	62	-31	62	59	64	70	67	74	7
UAE	62	54	42	-12	44	39	42	38	34	41	7
Venezuela	25	24	25	1	25	25	25	25	25	26	1
OPEC rig count	529	441	362	-79	356	361	380	386	376	397	21
World rig count***	2,234	1,446	1,470	24	1,366	1,527	1,640	1,762	1,776	1,782	6
<i>of which:</i>											
Oil	1,788	1,125	1,162	37	1,076	1,212	1,316	1,405	1,415	1,414	-1
Gas	415	275	275	0	257	281	293	329	334	338	4
Others	31	46	33	-13	33	34	31	28	27	30	3

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

Glossary of Terms

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 19.53 in March

March 2022	113.48
February 2022	93.95
Year-to-date	98.11

March OPEC crude production

mb/d, according to secondary sources



up 0.06 in March

March 2022	28.56
February 2022	28.50

Economic growth rate

per cent

	World	OECD	US	Euro-zone	Japan	China	India
2021	5.8	5.4	5.7	5.3	1.7	8.1	8.1
2022	3.9	3.4	3.8	3.5	1.9	5.3	7.2

Supply and demand

mb/d

2021	21/20		2022	22/21	
World demand	96.8	5.7	World demand	100.5	3.7
Non-OPEC liquids production	63.6	0.6	Non-OPEC liquids production	66.3	2.7
OPEC NGLs	5.1	0.1	OPEC NGLs	5.3	0.1
Difference	28.1	5.0	Difference	29.0	0.8

OECD commercial stocks

mb

	Feb 21	Dec 21	Jan 22	Feb 22	Feb 22/Jan 22
Crude oil	1,447	1,270	1,253	1,254	0.7
Products	1,524	1,373	1,368	1,345	-23.5
Total	2,971	2,643	2,621	2,599	-22.8
Days of forward cover	68.4	59.1	58.0	57.3	-0.6

Next report to be issued on 12 May 2022.