Organization of the Petroleum Exporting Countries

OPEC Monthly Oil Market Report

13 September 2022

Feature article:
Assessment of the global economy

Organization of the Petroleum Exporting Countries

Helferstorferstrasse 17, A-1010 Vienna, Austria

E-mail: prid(at)opec.org

Website: www.opec.org

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Dr. Ayed S. Al-Qahtani — Director, Research Division — *email: aalqahtani(at)opec.org*

Editor

Behrooz Baikalizadeh — Head, Petroleum Studies Department — *email: bbaikalizadeh(at)opec.org*

Contributors

Crude Oil Price Movements
Yacine Sariahmed — Senior Oil Price Analyst, PSD — *email: ysariahmed(at)opec.org*

Commodity Markets
Angel Edjang Memba — Financial Analyst, PSD — *email: aedjangmemba(at)opec.org*

World Economy
Dr. Asmaa Yaseen — Senior Modelling & Forecasting Analyst, PSD — *email: ayaseen(at)opec.org*
Dr. Joerg Spitzy — Senior Research Analyst, PSD — *email: jspitzy(at)opec.org*

World Oil Demand
Dr. Sulaiman Saad — Oil Demand Analyst, PSD — *email: ssaad(at)opec.org*

World Oil Supply
Dr. Ali Akbar Dehghan — Oil Supply Analyst, PSD — *email: adehghan(at)opec.org*

Product Markets and Refinery Operations
Tona Ndamba — Chief Refinery & Products Analyst, PSD — *email: tndamba(at)opec.org*

Tanker Markets
Douglas Linton — Senior Research Specialist, PSD — *email: dlinton(at)opec.org*

Crude and Refined Products Trade
Douglas Linton — Senior Research Specialist, PSD — *email: dlinton(at)opec.org*

Stock Movements
Dr. Aziz Yahyai — Senior Research Analyst, PSD — *email: ayahyai(at)opec.org*

Technical Team
Nadir Guerer — Senior Research Analyst, DRDO — *email: nguerer(at)opec.org*
Dr. Aziz Yahyai — Senior Research Analyst, PSD — *email: ayahyai(at)opec.org*
Douglas Linton — Senior Research Specialist, PSD — *email: dlinton(at)opec.org*
Viveca Hameder — Research Specialist, PSD — *email: vhameder(at)opec.org*
Masudbek Narzibekov — Senior Research Analyst, DRDO — *email: mnarzibekov(at)opec.org*

Statistical Services

Mhammed Mouraia, Statistical Systems Coordinator, In-Charge of Data Services Department; Pantelis Christodoulides (World Oil Demand, Stock Movements); Klaus Stoeger (World Oil Supply); Mohammad Sattar (Crude Oil Price Movements, Commodity Markets, Crude and Refined Products Trade); Mihni Mihnev (Product Markets and Refinery Operations); Justinas Pelenis (World Economy); Mansi Ghodsi (Tanker Market)

Editing and Design

Hasan AlHamadi, Head, Administration and IT Services Department, In-Charge of PR & Information Department; James Griffin; Maureen MacNeill; Scott Laury; Matthew Quinn; Timothy Spence; Carola Bayer; Andrea Birnbach; Hataichanok Leimlehner; Liane-Sophie Hamamciyan

Oil Market Highlights

Crude Oil Price Movements

Crude oil spot prices fell for the second-consecutive month in August. The North Sea Dated benchmark declined by $13/b month-on-month (m-o-m), while Dubai fell by almost $7/b. The OPEC Reference Basket fell by $6.65, or 6.1%, to settle at $101.90/b. The ICE Brent front-month declined by $7.38, or 7.0%, to average $97.74/b. NYMEX WTI fell by $7.90, or 7.9%, to average $91.48/b. Consequently, the Brent-WTI futures spread widened by 52¢ to an average of $6.26/b. The market structure of all three major crude benchmarks – ICE Brent, NYMEX WTI and DME Oman – remained in backwardation but flattened significantly in August. Hedge funds and other money managers further cut net long positions in the two major futures contracts. The paper and physical markets have become increasingly more disconnected. In a way, the market is in a state of schizophrenia, and this is creating a type of yo-yo market and sending erroneous signals at times when greater visibility and clarity and well-functioning markets are needed more than ever to allow market participants to efficiently hedge and manage the huge risks and uncertainties they face.

World Economy

The global economic growth forecast remained similar to last month's assessment at 3.1% for both 2022 and 2023, although some minor adjustments have been applied. For the US, economic growth remained unchanged for both 2022 and 2023 at 1.8% and 1.7%, respectively. Euro-zone economic growth for 2022 was revised down to 3.1%, but remained at 1.7% for 2023. Japan's economic growth forecast remained unchanged at 1.4% for 2022, followed by growth of 1.6% in 2023. China's 2022 growth forecast was revised down to 4.2 %, while the 2023 forecast remained unchanged at 5.0%. The forecast for India remained the same at 7.1% in 2022 and 6.0% in 2023. Brazil's economic growth forecasts were revised up slightly for both 2022 and 2023, to stand at 1.5% and 1.6%, respectively. The 2022 forecast for Russia was unchanged, showing a contraction of 6.0%. This will be followed by growth of 1.2% in 2023. The global growth level has been well supported by consumption, which has shown a solid trend especially in advanced economies. However, some downside risks remain, stemming from ongoing geopolitical tensions, the pandemic, supply chain issues, rising inflation, high sovereign debt levels in many regions, and expected monetary tightening by US, EU and UK central banks.

World Oil Demand

World oil demand growth in 2022 remained unchanged from the previous month's assessment at a healthy level of 3.1 mb/d. This includes the recently observed trend for additional oil demand growth due to fuel switching in power generation. Oil demand in the OECD is estimated to grow by 1.6 mb/d in 2022, while non-OECD growth is expected at 1.5 mb/d. The second quarter of 2022 is revised higher amid better-than-anticipated oil demand in the main OECD consuming countries, while the 3Q22 and 4Q22 have seen offsetting revisions. For 2023, the forecast for world oil demand growth also remained unchanged from the previous month's assessment to 2.7 mb/d. The OECD is expected to grow by 0.6 mb/d and the non-OECD by 2.1 mb/d. Oil demand in 2023 is expected to be supported by a still-solid economic performance in major consuming countries, as well as potential improvements in COVID-19 restrictions and reduced geopolitical uncertainties.

World Oil Supply

Non-OPEC liquids supply growth in 2022 remained broadly unchanged from last month's assessment at 2.1 mb/d. A downward revision in Other Eurasia and OECD Americas was offset by an upward revision in Latin America and Other Asia. The main drivers of liquids supply growth for 2022 are expected to be the US, Canada, China, Brazil and Guyana, while the main production declines are expected in Indonesia and Norway. In 2023, the forecast for non-OPEC liquids production growth remained unchanged from last month's assessment of 1.7 mb/d. The main drivers for 2023 growth are expected to be the US, Norway, Brazil, Canada and Guyana, whereas oil production declines are projected mainly in Russia and Azerbaijan. However, geopolitical concerns and uncertainties around the operational side as well as financial aspects of US production remain high. OPEC NGLs and non-conventional liquids are forecast to grow by 0.1 mb/d in 2022 to average 5.4 mb/d, and by 50 tb/d in 2023. In August, OPEC-13 crude oil production increased by 618 tb/d m-o-m to average 29.65 mb/d, according to available secondary sources.

Product Markets and Refining Operations

Refinery margins showed diverging trends in August. In the US Gulf Coast (USGC), margins declined moderately, with weakness mainly at the top of the barrel. This was on the back of weaker gasoline domestic consumption which exhibited signs of a slowdown amid concerns over high inflation, economic growth and the approaching end of the driving season. In contrast, refinery margins in Europe and Asia reversed trend, following the steep losses witnessed in July. This was mainly reflective of a continued decline in diesel availability, as high operational costs for European refiners due to strong natural gas prices weighed on diesel production. In Asia, strong diesel consumption in India and China, and open arbitrage for diesel flows from Asia to Europe, led to significant regional market support that resulted in higher refining gains. Over the month, global refinery runs slightly extended the upward trend, in line with expected seasonality, despite significant unplanned US refinery outages.

Tanker Market

Dirty tanker spot freight rates continued to pick up in August. They now stand at the top of the five-year range. VLCC rates rose a further 16% m-o-m on average, with all monitored routes seeing gains. Spot VLCCs rates on the Middle East to East route rose 17%. Aframax rates edged up 5% on average, with rates on the Caribbean to US East Coast route up 21%, offsetting declines on Mediterranean routes. Suezmax rates rose 4% on average. Clean rates fell for the second-month in a row, with rates on the NWE to the US East Coast down 6%.

Crude and Refined Products Trade

Preliminary data shows US crude imports fell in August after reaching a three-year high in July, while US crude exports set a new record high of just under 4.0 mb/d. Japan's crude imports recovered from an 11-month low to average 2.6 mb/d in July, representing a strong y-o-y increase. Preliminary estimates show OECD Europe crude imports moved to higher levels in May, while crude exports remained at low levels as more locally produced supply remained in the region. Preliminary data shows China's crude imports averaging 9.5 mb/d in August, representing a y-o-y decline of around 10%. China's product exports remained soft August as increased outflows of gasoline, fuel oil and gasoil outpaced declines in jet fuel and naphtha. India's crude imports edged 3% higher to average a robust 4.8 mb/d in July, with secondary sources showing Russian flows remaining above 1.0 mb/d. India's product exports dropped a seasonal 18%, with losses in naphtha and gasoil.

Commercial Stock Movements

Preliminary July data sees total OECD commercial oil stocks up m-o-m by 18.1 mb. At 2,699 mb, they were 148 mb less than the same time a year ago, 279 mb lower than the latest five-year average and 271 mb below the 2015-2019 average. Within the components, crude and product stocks rose m-o-m by 6.4 mb and 11.7 mb, respectively. At 1,318 mb, OECD crude stocks were 45 mb lower than the same time a year ago, 128 mb below the latest five-year average and 144 mb lower than the 2015-2019 average. OECD product stocks stood at 1,380 mb, representing a deficit of 103 mb compared to the same time a year ago, 151 mb lower than the latest five-year average and 127 mb below the 2015-2019 average. In terms of days of forward cover, OECD commercial stocks rose by 0.3 days m-o-m in July to stand at 59.1 days. This is 2.7 days below July 2021 levels, 5.3 days less than the latest five-year average and 3.4 days lower than the 2015-2019 average.

Balance of Supply and Demand

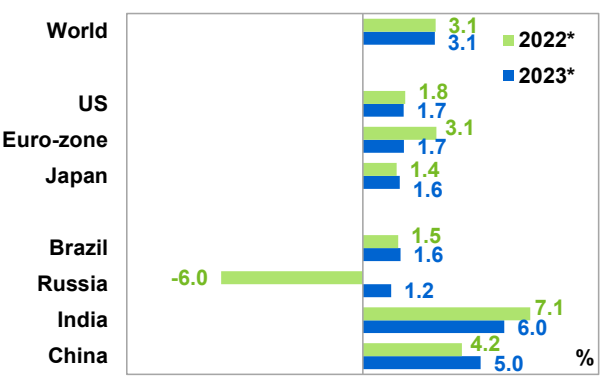
Demand for OPEC crude in 2022 remains unchanged from the previous month's assessment to stand at 28.9 mb/d. This is around 0.9 mb/d higher than in 2021. Demand for OPEC crude in 2023 was also unchanged from the previous assessment at 29.8 mb/d. This is around 0.9 mb/d higher than in 2022.

Feature Article

Assessment of the global economy

Economic growth is forecast to remain robust at 3.1% in 2022. Consumer spending in value terms has performed well in recent months — better than indicated by underlying sentiment, particularly in Western economies. Positively, this weakening sentiment seems to have been offset so far by a combination of ongoing social welfare measures in advanced economies, rising wages and salaries, increasing debt-financed consumption, particularly in the US, as well as consumers tapping into their savings. In terms of economic sectors, support has come from a recovery in the contact-intensive services sector, as can be seen from the rebound in global tourism activity. Moreover, strong growth in commodity-exporting economies and rising global trade contributed to this trend. Finally, some strong economic growth trends in 1H22 should be highlighted, which provides a more granular perspective when reviewing global economic developments. Economies like India and the Euro-zone showed a strong growth dynamic in 1H22, compensating very well for the relatively — and likely temporary — weaker performance of the US and China.

Graph 1: GDP growth forecast for 2022-23



*Note: * 2022-2023 = Forecast. Source: OPEC.*

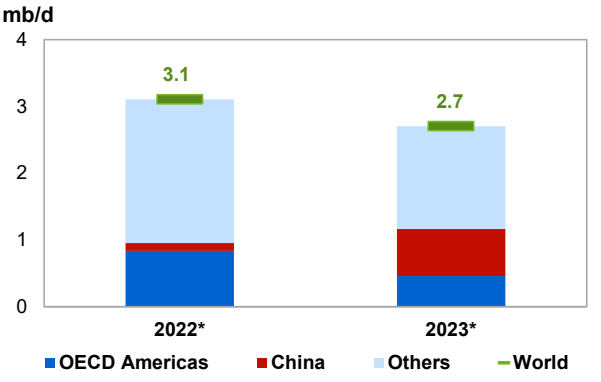
Looking forward to the coming year, global economic growth in 2023 is again expected to be strong at 3.1%. This matches the average pre-pandemic growth level of around 3.1% between 2009 and 2019. Despite the obvious downside risks, there is also upside potential to the global economic growth forecast. Fiscal measures in the EU and China support growth towards the end of the year and lead to the potential continuation of a stable dynamic in 2023. This fiscal support may at least counter-balance the anticipated downward momentum that some market observers forecast. Moreover, any resolution to developments in Eastern Europe could have a positive impact on the inflationary dynamic, allowing for less hawkish monetary policy, which in turn could uplift consumer and business sentiment, in addition to triggering a wide range of other positive impacts. However, downward risks still exist.

Another important aspect is the strong rise of the US dollar, which is an outcome of considerable monetary tightening efforts by the US Federal Reserve, in combination with uncertainty in the global economy. The strengthening of the US dollar led to rising import costs in non US-dollar denominated economies in 1H22, including major economies like Japan and India. However, the expectation of a less accentuated rise in the US dollar exchange rate in 2H22 could provide some relief to affected economies in the near term.

Oil demand is forecast to remain driven by ongoing global economic growth, especially by the recovery in travel and transportation, which is projected to lead to robust overall growth in oil demand of 3.1 mb/d in 2022 and 2.7 mb/d in 2023, surpassing the pre-COVID-19 levels, to stand at 102.7 mb/d (***Graph 2***).

Given the ongoing high level of uncertainty and increased volatility observed in the markets, OPEC and non-OPEC countries participating in the Declaration of Cooperation (DoC) will continue to monitor market developments and address challenges as well as ensure sustainable market stability.

Graph 2: World oil demand growth in 2022-23



*Note: * 2022-2023 = Forecast. Source: OPEC.*

Table of Contents

Crude Oil Price Movements

Crude oil spot prices trended lower in August, extending the previous month's losses. The decline was preliminarily driven by heavy selloffs in futures markets elevating market volatility. Easing concerns about a tightening market and an oil supply shortage, specifically in Northwest Europe and the Mediterranean, contributed to reducing the risk premium for the Brent complex benchmark. The North Sea Dated benchmark registered the largest decline, dropping by about $13/b in August m-o-m.

The ORB value declined m-o-m in August for the second consecutive month, falling by $6.65, or 6.1%, as all ORB component values declined alongside their respective crude oil benchmarks to stand at $101.90/b.

Crude oil futures prices extended their decline in August, falling to about six-month lows, amid elevated volatility and lower market liquidity, which was reflected in a further decline in total open interests in the two major futures contracts, ICE Brent and MYMEX WTI. Market sentiment was dominated by concerns related to slowing global economic and oil demand growth and the impact of tightening monetary policies. However, oil market fundamentals remained relatively robust with no major changes compared to the previous month, amid prospects for robust global oil demand growth in 2022 and 2023, as forecasted by major agencies.

The ICE Brent front-month declined by $7.38 in August, or 7.0%, to average $97.74/b, and NYMEX WTI fell by $7.90, or 7.9%, to average $91.48/b. DME Oman crude oil futures prices fell m-o-m in August by $5.66, or 5.5%, to settle at $97.24/b.

Hedge funds and other money managers continued to close net long positions in August after the previous month's heavy selloff as speculators appeared to anticipate declining prices amid a market narrative of worsening economic and oil demand outlook. Other factors, including declining oil prices, elevated price volatility and the reinstatement of lockdown measures in China in light of the resurgence of COVID-19, also played a role in prompting money managers to close part of their long positions. Money managers reduced total futures and options net-long positions in ICE Brent and NYMEX WTI by 27% and were net sellers of about 104 mb in the week of 16 August compared to the week of 26 July.

The market structure of all three major oil benchmarks – ICE Brent, NYMEX WTI and DME Oman – remained in backwardation in August. However, the futures forward curves flattened significantly, specifically in the nearest time-spreads, compared to June and July, as worries about short-term oil supply shortages eased and traders shifted their focus to uncertainty about the short-term oil demand outlook. Moreover, OECD commercial stocks continued to increase for the fourth consecutive month in July.

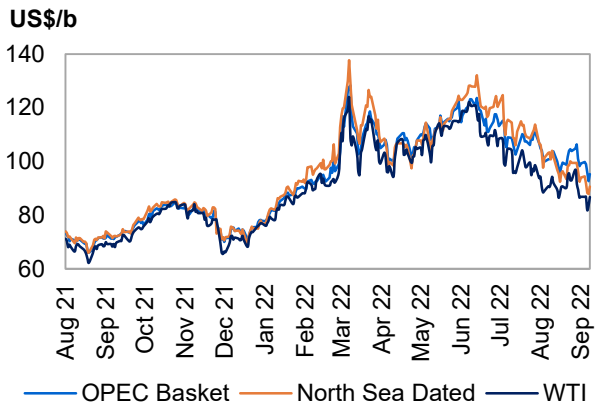
The spread between light sweet and medium/heavy sour crudes narrowed in all major markets for the second consecutive month, mainly due to the lower price of light sweet crude, specifically North Sea Dated, amid easing supply tightness of sweet crude and lower light distillate product margins, including gasoline.

Crude spot prices

Crude oil spot prices trended lower in August, extending the previous month's losses. Sharp selloffs in futures contracts along with elevated volatility and softening crude buying interest in the spot market compared to the previous month, resulted in a price decline. Easing concerns about a tightening market and oil supply tightness, specifically in Northwest Europe and the Mediterranean, contributed to reducing the risk premium for the Brent complex benchmark.

Spot prices came under pressure in August due to a slowdown in buying interest, including from European and Chinese refiners ahead of the refinery maintenance season expected to peak in October and November.

Graph 1 - 1: Crude oil price movement



Sources: Argus, OPEC and Platts.

Availability of unsold cargo volumes for September and early October loading put downward pressure on spot prices and crude differentials, which declined sharply compared to the previous month's level. Softening gross refining margins, specifically for light distillates like gasoline and naphtha, and weakening petrochemical margins also weighed on spot prices last month. Refinery throughputs in the US and Europe remained little changed.

The supply outlook improved due to several factors, including the return of Libya's oil production, the expected higher North Sea crude supply for October loading and sustained supply from the US Strategic Petroleum Reserves (SPR). The supply improvement has alleviated upward pressure on oil prices. The supply of Brent, Forties, Oseberg, Ekofisk and Troll crudes (BFOET) ─the crude basket of North Sea Dated benchmarks ─ is expected to rise to about 0.8 mb/d in October 2022, compared to 0.6 mb/d in the previous month.

Spot prices declined more than futures prices in a sign that the crude market was better supplied than previously anticipated. This was reflected in the narrowing of the North Sea Dated-ICE Brent spread, which flipped to a discount in the second half of August. On a monthly average, the North Sea Dated-ICE Brent spread fell by a hefty $5.63 in August, which settled at a premium of $1.88/b, compared to a premium of $7.51/b in July.

In August, North Sea Dated fell the most m-o-m, by $13.01, or 11.6%, to an average of $99.62/b, while WTI and Dubai's first month declined respectively m-o-m by $8.68 and $6.54, or 8.7% and 6.4%, to settle at $91.57/b and $96.33/b.

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

			Change		Year-to-date	
OPEC Reference Basket (ORB)	Jul 22	Aug 22	Aug 22/Jul 22	%	2021	2022
ORB	**108.55**	**101.90**	**-6.65**	**-6.1**	**65.93**	**105.29**
Arab Light	108.98	104.89	-4.09	-3.8	66.64	106.23
Basrah Medium	105.36	97.66	-7.70	-7.3	65.01	103.17
Bonny Light	117.58	106.08	-11.50	-9.8	66.87	109.87
Djeno	105.18	92.17	-13.01	-12.4	59.52	99.88
Es Sider	114.03	101.17	-12.86	-11.3	65.17	107.74
Girassol	119.15	105.99	-13.16	-11.0	67.32	110.54
Iran Heavy	107.63	102.24	-5.39	-5.0	65.70	105.06
Kuwait Export	109.19	103.82	-5.37	-4.9	66.40	106.24
Merey	84.72	80.03	-4.69	-5.5	47.90	81.61
Murban	105.97	98.04	-7.93	-7.5	65.97	103.68
Rabi Light	112.17	99.16	-13.01	-11.6	66.51	106.87
Sahara Blend	115.83	104.22	-11.61	-10.0	66.91	110.72
Zafiro	116.60	103.50	-13.10	-11.2	67.23	109.71
Other Crudes						
North Sea Dated	112.63	99.62	-13.01	-11.6	66.97	107.33
Dubai	102.87	96.33	-6.54	-6.4	65.56	101.30
Isthmus	100.47	89.09	-11.38	-11.3	62.88	98.78
LLS	102.53	94.21	-8.32	-8.1	65.88	102.36
Mars	96.89	89.93	-6.96	-7.2	63.84	97.70
Minas	103.01	95.39	-7.62	-7.4	64.84	101.85
Urals	85.32	77.34	-7.98	-9.4	65.63	85.25
WTI	100.25	91.57	-8.68	-8.7	64.22	100.33
Differentials						
North Sea Dated/WTI	12.38	8.05	-4.33	-	2.76	7.01
North Sea Dated/LLS	10.10	5.41	-4.69	-	1.09	4.97
North Sea Dated/Dubai	9.76	3.29	-6.47	-	1.41	6.03

Sources: Argus, Direct Communication, OPEC and Platts.

Crude oil differentials remained robust in August, although they declined in all major regions, including the North Sea, the Mediterranean, West Africa and some East of Suez crude markets. This is mainly due to sufficient crude supply availability coupled with lower buying interest and the expectation of lower refinery intakes in the coming months due to the refinery maintenance season.

Forties crude differentials against North Sea Dated declined to their lowest level since April 2022 on lower demand for the grade for September loading and higher availability of similar crude in other regions. Forties and Ekofisk crude differentials fell on a monthly average in August by $3.13 and $2.08, respectively, to settle at a premium of $1.86/b and a premium of $5.66/b. Similarly, West African and Mediterranean crude oil differentials weakened in August due to soft crude demand from European refiners compared to the previous month, the availability of prompt unsold cargoes and the steady flow of light sweet crude from the US to Europe. The value of light sweet crudes with a high naphtha yield also weakened on low naphtha refining margins in August. Bonny Light, Forcados and Qua Iboe crude differentials declined in August against North Sea Dated, falling by a monthly average of $3.43, $3.85 and $3.41, respectively, to stand at a premium of $3.99/b, $5.72b and $5.79/b. The crude differential of medium-heavy sweet Cabinda declined marginally m-o-m by 17¢ in August to settle at a premium of $4.83/b. Saharan Blend crude differentials averaged lower, dropping by $1.36 m-o-m to stand at a premium of $1.92/b. However, the Caspian CPC Blend differential rose slightly m-o-m, increasing by 78¢ to average at a discount of $2.22/b to North Sea Dated.

In the Middle East, crude differentials to Dubai in August weakened on decreasing demand in the spot market compared to the previous month amid open west-to-east arbitrage and the prospect of an increasing supply of medium sour crude in September. The value of the Oman crude differential fell by $3.98 m-o-m in August to a premium of $5.46/b. In the USGC, crude differentials of Light Louisiana Sweet (LLS) strengthened on a wider spread between the Brent and WTI futures and strong demand for exports. US crude exports rose by 5 mb/d in the week to 12 August. LLS crude differentials rose by 32¢ in August to stand at about $2.64/b, while Mars sour crude differentials increased by $1.69 to an average discount of $1.64/b.

OPEC Reference Basket (ORB)

The **ORB value** declined m-o-m in August for the second consecutive month, falling by $6.65, or 6.1%, as all ORB component values declined significantly alongside their respective crude oil benchmarks, specifically North Sea Dated, which declined by about $13/b. On a monthly basis, the ORB value fell to $101.90/b in August. Nonetheless, higher official selling prices of almost all grades and in all regions limited the ORB value decline. Compared to the previous year, the ORB was up $39.37, or 59.7%, from $65.93/b in 2021 to an average of $105.29/b so far this year. All ORB component values decreased 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 – fell by $12.61 m-o-m in August, or 11.0% on average, to $101.76/b. The multiple regions' destination grades – Arab Light, Basrah Light, Iran Heavy and Kuwait Export – decreased by $5.64 m-o-m, or 5.2% on average, to settle at $102.15/b. Murban crude fell by $7.93 m-o-m, or 7.5% on average, to settle at $98.04/b, while the Merey crude component decreased by $4.69 m-o-m, or 5.5% on average, to settle at $80.03/b.

The oil futures market

Although **oil market fundamentals** remained relatively healthy with the prospect of robust global oil demand growth for 2022 and 2023 by major forecasting agencies, crude oil futures prices extended their declines in August. The prices fell to about six-month lows, primarily driven by a heavy selloff in futures markets amid rising market volatility and lower market liquidity that was reflected in a further decline in total open interests in the two major futures contracts ICE Brent and MYMEX WTI. Market sentiment was dominated by worries related to slowing global economic and oil demand growth while tightening monetary policies added downward pressure.

Sentiment deteriorated further following the release of additional lacklustre economic data. Official data from China showed weaker-than-expected retail sales and industrial production in July, and China's central bank announced a surprise cut in key interest rates in response to weak economic data. Moreover, slower-than-anticipated manufacturing activity in China added to the mixed economic data in the US and Europe, which weighed on the oil demand outlook.

Furthermore, the rising value of the US dollar against a basket of other major currencies and the expectations for higher interest rates from the US Federal Reserve (Fed) and the European Central Bank (ECB) added downward pressure on oil prices. Higher interest rates are interpreted as less supportive for demand as they could restrain economic growth.

Moreover, China's refinery crude runs fell in July to the lowest level in over two years amid a lack of export quotas for products and surging COVID-19 cases, while China's crude oil imports from the international market remained low in July. According to data from the General Administration of Customs, China's crude oil imports rose modestly by about 1% in July to around 8.8 mb/d from the 47-month low in June. Investors also eyed declining gasoline refining margins along with weak seasonal implied gasoline demand in the US as the summer

driving season comes to an end. According to EIA weekly data, implied US gasoline demand averaged 8.84 mb/d during August 2022, compared with an average of about 9.48 mb/d in August 2021.

Moreover, refining margins softened in the first half of August, specifically margins of light products like gasoline and naphtha, and spot crude differentials weakened in almost all markets in a sign of easing physical supply tightness, including in the Atlantic Basin. Market sources reported that in August, Asian refiners received a large volume of offers for light sweet crude from the Atlantic Basin. However, refining margins remained strong, supported by high middle distillate margins, and crude differentials remained at premiums against their respective benchmarks in almost all major markets.

From the supply side, worries about a tight supply outlook eased after the return of Libya's crude production and sustained crude supply from the SPR, while traders in futures markets were anticipating higher crude production in some regions. This was reflected in flattening futures forward curves of major crude benchmarks.

However, the prospect of healthy global oil demand growth in 2022 and the upward revisions of global oil demand growth for 2022 from several forecasting agencies contributed to easing concerns about the market perception of weakening global oil demand. Forecasters bet on higher use of oil in power generation, industrial usage and refineries amid soaring gas and electricity prices, specifically in Europe. Moreover, the EIA weekly report showed a larger drop in commercial US crude oil stocks in the week of 12 August, which was driven primarily by a surge in US crude exports, which hit a record of 5 mb/d. This also helped to offset concerns about the weakening demand outlook and limited price declines.

The **ICE Brent** front-month declined by $7.38 in August, or 7.0%, to average $97.74/b, and the NYMEX WTI fell by $7.90, or 7.9%, to average $91.48/b. Y-t-d, ICE Brent was $36.92, or 55.0%, higher at $104.00/b, while NYMEX WTI was higher by $35.83, or 55.8%, at $100.06/b, compared with the same period, a year earlier. DME Oman crude oil futures prices fell m-o-m in August by $5.66, or 5.5%, to settle at $97.24/b. Y-t-d, DME Oman was higher by $35.76, or 54.4%, at $101.47/b.

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

			Change		Year-to-date	
Crude oil futures	Jul 22	Aug 22	Aug 22/Jul 22	%	2021	2022
NYMEX WTI	99.38	91.48	-7.90	-7.9	64.23	100.06
ICE Brent	105.12	97.74	-7.38	-7.0	67.08	104.00
DME Oman	102.90	97.24	-5.66	-5.5	65.71	101.47
Spread						
ICE Brent-NYMEX WTI	5.74	6.26	0.52	9.1	2.85	3.94

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

The **front-month ICE Brent/NYMEX WTI spread** widened further in August, adding to the sharp rise in July, as the value of WTI futures fell more than ICE Brent, which remained more supported by the outlook of the supply/demand balance in Northwest Europe compared to the Cushing trading hub, in addition to a geopolitical risk premium compared to NYMEX WTI. NYMEX WTI came under pressure from growing concerns about the US economic outlook and soft US gasoline demand, while, in the meantime, US crude supply from SPRs remained sustained. Moreover, US crude stocks at Cushing were increasing for several weeks to August, returning to about 25 mb, which also contributed to alleviating concerns about tightening supply on the delivery point of the WTI futures contract. The ICE Brent/NYMEX WTI spread widened m-o-m by an average of 52¢ in August to settle at $6.26/b.

However, the **North Sea Dated premium to WTI Houston** narrowed in August, falling by $4.76 on a monthly average to stand at a premium of $6.01/b, as North Sea crudes in Northwest Europe weakened compared to the previous month on easing demand in Northwest Europe and sufficient supply availability for September loadings. Forties crude differentials to the North Sea Dated dropped in August to their lowest level since April 2022 amid signs of softening demand. Meanwhile, US crude exports in August surged to record-high levels on a weekly basis, which contributed to narrowing the North Sea Dated-WTI Houston spread, even though higher freight rates of Aframax and Suezmax limited WTI export arbitrage and limited price gains.

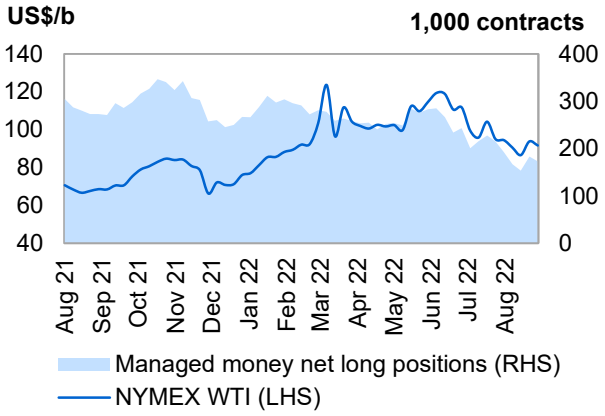
Hedge funds and other money managers continued to further close net long positions in August after the previous month's heavy selloff, as speculators appeared to anticipate declining prices amid a market narrative of worsening economic and oil demand outlook. Other factors, including declining oil prices, elevated price volatility and the resurgence of COVID-19 in China, prompting the reinstatement of lockdown measures, which added to concerns about demand outlook, also played a role in prompting money managers to close part of their long positions. Money managers reduced total futures and options net-long positions in ICE Brent and NYMEX WTI by 27% and were net sellers of about 104 mb in the week of 16 August compared to the week of

26 July. Nonetheless, speculators recovered part of the liquidated contracts in the week of 23 and 30 August amid concerns about the prospects of demand outlook.

The selloff was more concentrated in the NYMEX WTI futures and options contracts, with net long positions declining by 19,723, or 10.2%, between the weeks of 2 August and 30 August, according to the US Commodity Futures Trading Commission (CFTC). During the same period, gross short positions rose by 5,599 lots, or 15.6%, to 41,378 contracts, while gross long positions declined by 14,124 lots, or 6.2%, to 214,090 contracts.

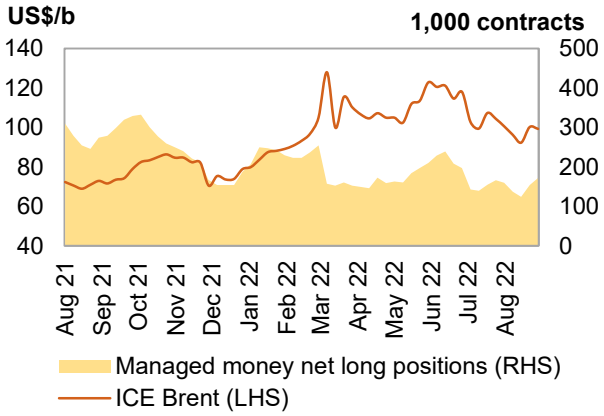
Regarding the ICE Brent contract, **money managers** significantly reduced their net long positions amid declining prices in the first half of August. Combined futures and options net long positions dropped by about 22% between the weeks of 2 August and 16 August to stand at 124,454 lots, the lowest since November 2020, according to ICE Exchange. However, combined futures and options net long positions rose by 11,641 lots, or 7.3%, to stand at 171,819 contracts in the week of 30 August, compared to the week of 2 August. During the same period, gross short positions rose by 771 lots, or 1.4%, to 56,495 contracts, while gross long positions increased by 12,412 lots, or 5.7%, to 228,314 contracts.

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.

The **long-to-short ratio of speculative positions** in the ICE Brent contract remained unchanged m-o-m in August, standing at about 4:1 in the week of 30 August. However, the NYMEX WTI long-to-short ratio fell to about 5:1 in the week of 30 August, compared to 7:1 in the week of 26 July.

Total futures and options open interest volumes on the two exchanges continued to decline in August for several months, dropping to their lowest levels since December 2014. Total open interest dropped by 3.1%, or 140,158 lots, to stand at 4.4 million contracts in the week ending 30 August.

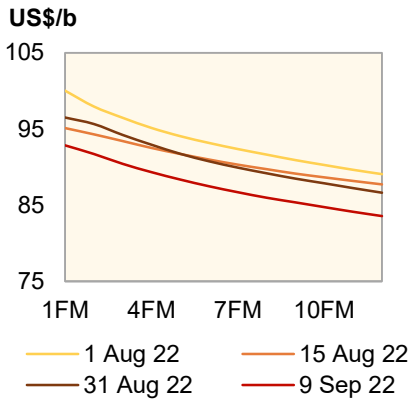
The futures market structure

The **market structure** of all three major oil benchmarks – ICE Brent, NYMEX WTI and DME Oman – remained in backwardation in August. However, the futures forward curves flattened significantly, specifically in the nearest time-spreads, compared to June and July, as worries about short-term oil supply shortages eased and traders shifted their focus to uncertainty about the short-term oil demand outlook amid a resurgence of COVID-19 lockdowns in China. Weakening demand in the physical market ahead of the refinery maintenance season also added downward pressure on front-month contracts. Oil supply from SPRs also contributed to flattening the futures forward curves. Moreover, OECD commercial stocks continued to increase for four consecutive months to July 2022.

The backwardation structure of **Brent** futures softened in August as the supply risk premium that supported front-month prices for several months lessened amid a change in market sentiment and signs of a well-supplied crude market, including in Northwest Europe, which resulted in flattening the forward curve, particularly for the nearest time-spreads. Concerns about economic outlooks, soft demand amid the planned autumn refinery maintenance season, and the availability of unsold cargoes weighed more on the first-month price compared to forward months prices. The ICE Brent first-month premium to the third month narrowed m-o-m by $4.50 to a backwardation of $2.46/b. Similarly, the ICE Brent's M1/M6 backwardation declined last month by $6.74 to settle at $5.47 on average, compared to a backwardation of $12.22 in July.

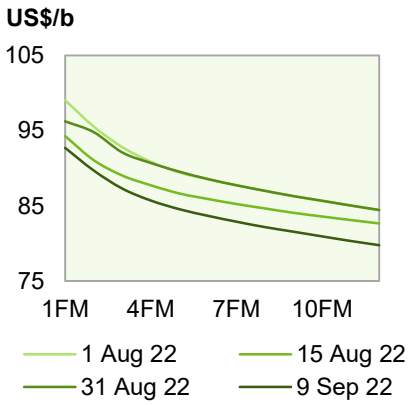
The forward structure of **DME Oman and Dubai** remained in steep backwardation as prompt prices were supported by healthy Asian demand and strong product cracks, particularly middle distillate cracks, and higher fuel oil cracks compared to the previous month. The DME Oman first-month premium to the third month narrowed m-o-m by $3.22 to a backwardation of $4.98/b.

Graph 1 - 4: ICE Brent forward curves



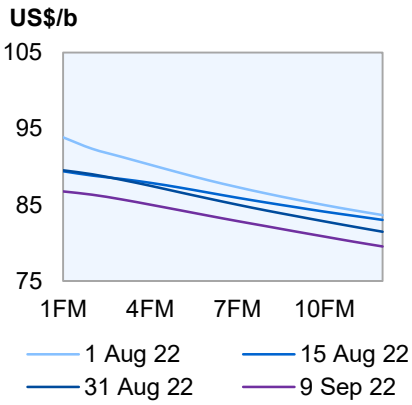
Sources: ICE and OPEC.

Graph 1 - 5: DME Oman forward curves



Sources: DME and OPEC.

Graph 1 - 6: NYMEX WTI forward curves



Sources: CME and OPEC.

The **NYMEX WTI** forward curve also flattened in August amid higher supply coming from the US SPR and rising crude stocks at Cushing, the delivery point of the WTI futures contract. Signs of declining gasoline demand as the driving season comes to an end also put additional pressure on the value of the NYMEX WTI first-month contract compared to forward-month contracts. The NYMEX WTI M1/M3 month spread narrowed by $3.87 to a backwardation of $1.34/b on average in August, compared with a backwardation of $5.21/b in July.

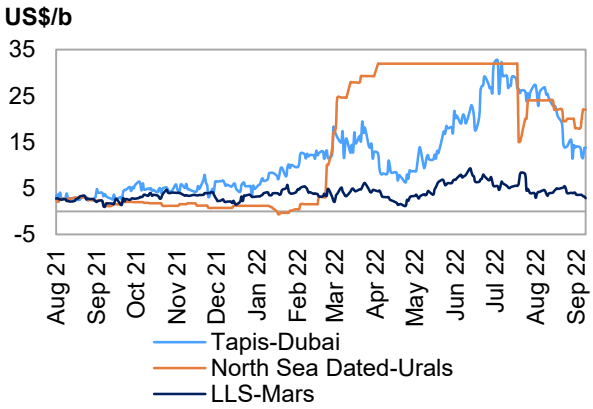
Regarding the **M1/M3 structure**, the North Sea Brent M1/M3 differential narrowed by $5.71/b in August to stand at a backwardation of $3.03/b. Similarly, in the US, the WTI M1/M3 backwardation narrowed in August by $4.08 to stand at $1.34/b, compared to a backwardation of $5.42/b in July. The Dubai M1/M3 backwardation also narrowed on average in August by $4.17 to a backwardation of $4.84/b.

Crude spreads

The **spread between light sweet and medium/heavy sour crudes** narrowed further in all major markets for the second consecutive month in August. This was mainly due to the lower price of light sweet crude, specifically North Sea Dated, amid easing supply tightness of sweet crude and lower light distillate product margins, including gasoline and low naphtha cracks. Meanwhile, middle distillate margins remained strong, supporting medium crude quality with high middle distillate yields.

In **Europe**, the North Sea Dated-Urals spread in August narrowed by $5.02 m-o-m to an average of $22.28/b, mainly due to a sharp decline in the North Sea Dated benchmark along with lower crude differentials of light sweet North Sea grade crudes in the Atlantic Basin. Meanwhile, the discount of Urals crude differentials narrowed in August in Northwest Europe and the Mediterranean, averaging respectively $25.00/b and $22.39/b, an increase of $4.57 and $4.92 m-o-m. The expectation of higher North Sea crude loading programmes in October, the return of Libya production and sustained crude imports of WTI crude into Northwest Europe weighed on the value of light sweet crude. Moreover, the crack of gasoline declined during August in Europe by nearly $8/b, while naphtha cracks remained low at a discount of about $27/b.

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



Sources: Argus, OPEC and Platts.

In **Asia**, the Tapis/Dubai spread fell in August as the Brent/Dubai spread narrowed significantly, making the west-to-east arbitrage more favourable for Brent-linked crude, which sharply reduced the premium of local sweet crude in the East of Suez market such as Tapis. The Brent/Dubai Exchange of Futures for Swaps (EFS) spread fell from about $11/b in late July to about $5/b in mid-August. On a monthly average, the Brent/Dubai EFS spread narrowed by $5.21 in August m-o-m to stand at $11.33/b. Meanwhile, the medium sour Middle East crudes remained supported by robust demand in the spot market from Asia. However, the Tapis/Dubai spread remained significantly wide amid persistent high desulfurization costs due to high gas prices and strong margins of middle distillate products. The light sweet Tapis premium over medium sour Dubai declined by $6.54 to stand at a hefty $21.02/b.

In the **USGC**, the Light Louisiana Sweet (LLS) premium over medium sour Mars remained relatively wide in August; however, it also narrowed to $4.28/b, contracting by $1.36 compared to July. This is due to lower light distillate products in the USGC, including gasoline, and strengthening values of sour crude. Meanwhile, most USGC grade differentials strengthened in August amid strong demand for exports and as the Brent/WTI spread remained wide at about $6/b.

Commodity Markets

Selected commodity price indices rose, m-o-m, across the board, partially recovering from the previous month's decline. The energy price index recovered all losses from the previous month, but movement within index components remained mixed. Meanwhile, the non-energy index rose marginally, while the base and precious metals indices advanced strongly.

Open interest and net length positions declined for the fifth consecutive month in the financial market. Admittedly, money managers increased the number of short positions held across selected commodities m-o-m, a sign that they remain wary about the price outlook albeit the recent increases.

China initiated another wave of monetary and fiscal stimulus in order to incentivize economic activity. However, just like the earlier announced stimulus, the impact may be limited given ongoing COVID-19 lockdowns, exacerbated by property and construction challenges. Outside of China, persistently high energy prices continued to weigh on economic activity, particularly in the European Union (EU), amid ongoing geopolitical developments in Eastern Europe. Thus, although prices have recovered m-o-m, downside risks remain and continue to cloud the demand outlook for commodities.

Trends in selected commodity markets

The **energy price index** increased by 1.3% m-o-m. Movement within the index was mixed for the fifth consecutive month; however, during the period, the recovery was led by a rally of natural gas prices in both the US and Europe, up for a second consecutive month. Declines in average crude oil and coal prices partially offset the rally in natural gas prices. Y-o-y, the index is up by 78.8%, though this is the second consecutive month in which the index showed a y-o-y decline.

The **non-energy index** turned around after three consecutive months of decline, rising by 0.2% m-o-m. This marginal increase was supported by concerns over the crop outlook in the US amid ongoing drought in some producing areas. Nonetheless, the resumption of some agricultural exports from Ukraine via Black Sea ports and an increase in agricultural exports from Indonesia helped offset some m-o-m increases in agricultural prices. The index was up by 4.0% y-o-y, a lower rate for the second consecutive month.

Table 2 - 1: Commodity prices

Commodity	Unit	*Monthly averages*			*% Change*	*Year-to-date*	
		Jun 22	Jul 22	Aug 22	Aug 22/Jul 22	2021	2022
Energy*	Index	**170.7**	**168.8**	**171.0**	**1.3**	**85.8**	**155.0**
Coal, Australia	US$/mt	371.2	383.7	380.4	-0.8	114.9	316.7
Crude oil, average	US$/b	116.8	105.1	96.0	-8.7	65.2	102.7
Natural gas, US	US$/mbtu	7.7	7.3	8.8	21.1	3.4	6.5
Natural gas, Europe	US$/mbtu	33.6	51.3	70.0	36.5	9.2	39.3
Non-energy*	Index	**128.1**	**116.6**	**116.9**	**0.2**	**110.0**	**128.3**
Base metal*	Index	**121.8**	**106.1**	**110.6**	**4.2**	**113.5**	**129.6**
Precious metals*	Index	**138.9**	**129.8**	**132.5**	**2.1**	**141.4**	**140.0**

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

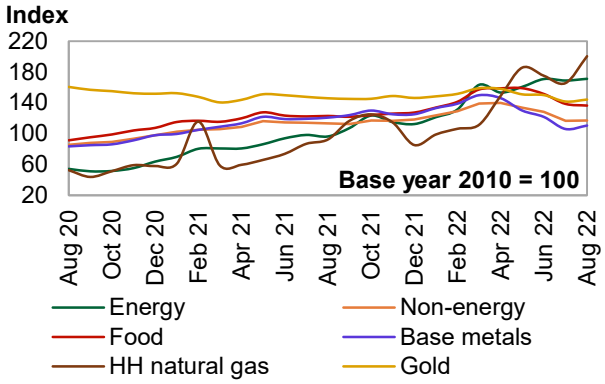
Average crude oil prices declined for the second consecutive month, falling by 8.7% m-o-m. The decline has been accompanied by a drop in product prices, including US gasoline. Growing uncertainty around the global economy and the demand outlook weighed on prices. Y-o-y, prices are up by 39.4%, a lower amount than in the previous month.

Henry Hub natural gas prices rose after two consecutive months of decline, increasing by 21.1% m-o-m. Prices rose sharply during the month of August to above $10/mbtu, a level not seen since 2008. High temperatures across the US also boosted electricity demand, lending support to prices. Additionally, competition for US LNG intensified between Asian and European gas markets ahead of the winter season, while US export capacity remained constrained by the closure of the LNG Freeport terminal in Texas due to safety concerns. Y-o-y, prices jumped by 117.0%, a considerably higher amount compared with the previous month, underscoring the growing upside risk to prices.

Natural gas prices in Europe rose sharply for the third consecutive month amid ongoing disruptions at Nord Stream 1. The **average Title Transfer Facility (TTF) price** went from $51.3/mmbtu in July to $70.0/mmbtu in August, a 36.5% increase m-o-m. On the othe side, the latest data from Gas Infrastructure Europe shows EU gas storage at 81.5% of capacity — above the EU target of 80% — two months ahead of schedule. However, prices were unresposive to this downside risk factor, reflecting a disconnect from market fundaments exacerbated by regional geopolitical developments. Y-o-y, prices are up by 354.0%, a higher trend than last month.

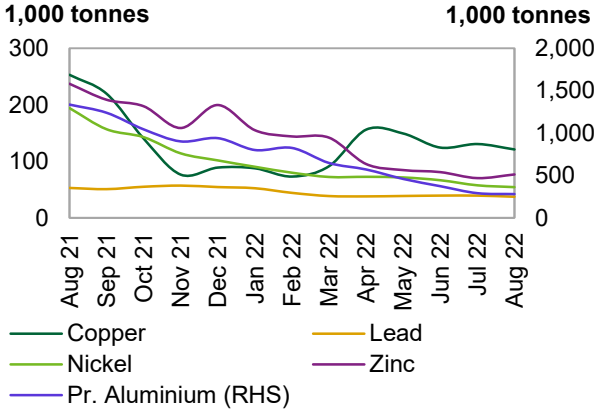
Australian thermal coal prices receded after advancing for three consecutive months. Prices declined by 0.8% m-o-m, but this is more related to a timing of data than market fundamentals. All indicators point to rising demand for coal, particularly in China, as the country is trying to avoid the massive power outages seen last year. The latest trade data from China's General Administration of Customs showed a 25.3% increase m-o-m in coal imports from China in August. Additionally, competition for coal from the Asia Pacific region remains elevated amid the EU's ban on Russian coal imports. The increased competition, exacerbated by the rising demand for power generation in China, is sustaining upward pressure on coal prices. Prices are up by 124.3% y-o-y, underscoring ongoing upside risks.

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 metals index** rose by 4.2% m-o-m after four consecutive months of decline. Manufacturing data from China and Europe continued to be weak (with the Purchasing Managers' Index for Manufacturing below 50). However, prices for all index components rose across the board, supported by a new wave of monetary and fiscal support by the Government of China and increasing trade volumes. Y-o-y, the index is down by 8.5%.

Aluminium prices rose by 5.8% m-o-m, reversing a trend of four consecutive months of decline. According to data from the London Metal Exchange (LME), aluminium inventories fell by 3.6% m-o-m. However, prices have been disconnected from the LME market since April, so this increase is more reflective of China's economic stimulus. Y-o-y, prices are down by 6.6%.

Average monthly **copper prices** also turned around from four consecutive months of losses. Prices rose by 5.8% m-o-m on news that China is preparing to invest massively in its electrical infrastructure to reduce power outages. In addition, China's copper exports rose by 19.5% m-o-m, while inventories declined by 7.3% m-o-m at the LME, underscoring the impact of high-energy costs on industrial production outside of China. Prices are down by 14.8% y-o-y.

Lead prices also received support from China's economic stimulus, increasing by 4.4% m-o-m after three consecutive months of decline. As with the previous two metals, LME data also shows inventory declining by 5.0% m-o-m. Prices were down by 14.2% y-o-y.

Prices for both **nickel and zinc** also rose after three consecutive months of decline. **Nickel** prices rose by 2.7% m-o-m while **zinc** by 15.5% in the same period. Prices for both metals are heavily intertwined with economic activity in China, where iron prices have declined amid weak industrial activity. Outside of China, a mixed movement was seen at the LME in terms of inventory: nickel declined by 5.6% m-o-m while zinc rose by 9.2% in the same period. Despite this mixed movement, prices were more reactive to China's economic news. Y-o-y, nickel and zinc are up by 15.2% and 20.1%, respectively.

The **precious metals index** also recovered from the decline of previous months, increasing by 2.1% m-o-m. Despite a stronger US dollar and the US Federal Reserve reiterating its commitment to the current monetary tightening cycle, precious metals held up relatively well during August, supported by China's economic stimulus programme, as China is the biggest consumer of gold. Meanwhile, silver and platinum benefited from stimulus

to the industrial sector. **Gold prices** rose by 1.8% m-o-m, while **silver** and **platinum** rose by 3.4% and 4.5%, respectively, in the same period. Y-o-y, the index is down by 4.0%. All of the index components are also down y-o-y: Gold is down by 1.2%, silver by 17.8% and platinum by 9.9%.

Investment flows into commodities

Total money managers' net length positions continued their downward trajectory for the fifth consecutive month, declining by 1.2% m-o-m. The net length decline was driven by copper and crude oil, which were partially offset by net length increases in natural gas and gold. Total open interest (OI) declined for the sixth consecutive month, falling by 3.8% m-o-m. Gold led the decline in OI, followed by crude oil and copper, which were partially offset by an increase in natural gas.

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

Selected commodity	*Open interest*		*Net length*			
	Jul 22	Aug 22	Jul 22	%OI	Aug 22	%OI
Crude oil	2,280	2,176	215	9	174	8
Natural gas	988	997	-57	-6	-57	-6
Gold	659	601	2	0	36	6
Copper	197	195	-20	-10	-13	-7

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

Sources: CFTC and OPEC.

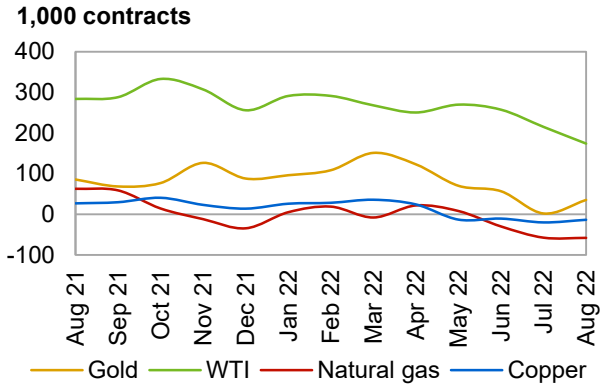
The **total crude oil (WTI) OI** fell for the sixth consecutive month, decreasing m-o-m by 4.6%; money managers' net length also declined by 19.1% over the same period. Despite elevated prices, weak macroeconomic indicators exacerbated by high trading costs weighed on money managers' sentiment towards crude oil.

Total Henry Hub natural gas's OI rose after three consecutive months of decline, increasing by 0.9% m-o-m. The increase in OI was driven by money managers' net length, which also rose by about 0.9% m-o-m. A recent price rally supported money managers' bullishness. However, sentiment remained dampened amid a higher ratio of short positions.

Gold's OI declined by 8.8% m-o-m. Sentiment towards gold remains subdued by a stronger US dollar and expectations of rising interest despite m-o-m price increases. Money managers' net length rose significantly from 2,000 lots to over 35,000 contracts/lots m-o-m. However, this exponential rise in net length was the result of money managers closing out a significant amount of short positions to minimize losses amid rising prices, as actual long positions only grew by 4.5% m-o-m, while short positions declined by 28.3% over the same period.

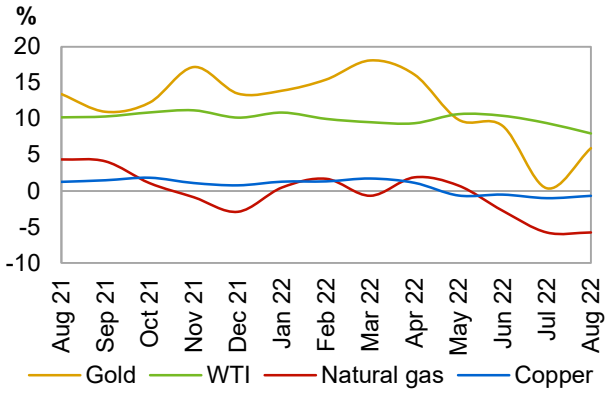
Copper's OI declined for the second consecutive month, falling by 0.8% m-o-m; money managers' net length fell by 32.8% over the same period. Weak manufacturing data weighed on money managers' sentiment towards copper.

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



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

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



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

World Economy

The global economic growth forecast for both 2022 and 2023 remained unchanged at 3.1%. While consumer sentiment indices have retracted in the US and the Euro-zone, which account for around a third of the global economy, retail spending in these economic regions – and especially in the US – has held up very well and increased even more than the inflationary effect would justify. A combination of ongoing social welfare measures in advanced economies, rising wages and salaries, increasing debt-financed consumption, particularly in the US, as well as consumers tapping into their savings have all supported consumer spending in the recent months.

While the US and China especially were facing challenges in 1H22, their economies are very likely to recover in 2H22. The Euro-zone enjoyed an unexpectedly strong 1H22 despite weak sentiment and inflationary trends. Despite the Euro-zone's expected slowdown in 2H22, the latest fiscal support measures that were announced by key Euro-zone member countries could lead to a surprise to the upside in 2H22 growth. Also India – accounting for more than 7% of the global economy on a purchasing power parity basis – has seen a sound recovery in 1H22, and may continue to expand at a stronger than currently expected pace, considering the current sound lead indicators such as the purchasing manager indices. Moreover, inflationary dynamics have started to slow in some major economies, especially in the US.

Upside potential to the global economic growth forecast may come from a variety of sources. Fiscal measures in the EU and China could support growth towards the end of the year and lead to the potential continuation of a stable dynamic in 2023. This fiscal support may at least counterbalance the anticipated downward momentum that some market observers forecast, namely a further slowdown in 2H22 and beyond, including a potential recession in some key economies. Moreover, any resolution to developments in Eastern Europe could have a positive impact on inflation, allowing for less hawkish monetary policies, which in turn could lift consumer and business sentiment as well as trigger a wide range of other positive effects. These factors could potentially, albeit with limited capacity, lift global economic growth beyond the current base case.

Many developments in underlying spending have been better than expected so far this year. Nonetheless, downside risks exist.

Table 3 - 1: Economic growth rate and revision, 2022–2023*, %

	World	OECD	US	Euro-zone	UK	Japan	China	India	Brazil	Russia
2022	**3.1**	**2.5**	**1.8**	**3.1**	**3.4**	**1.4**	**4.2**	**7.1**	**1.5**	**-6.0**
Change from previous month	0.0	0.0	0.0	-0.1	-0.1	0.0	-0.3	0.0	0.3	0.0
2023	**3.1**	**1.8**	**1.7**	**1.7**	**1.2**	**1.6**	**5.0**	**6.0**	**1.6**	**1.2**
Change from previous month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0

*Note: * 2022 and 2023 = Forecast. The GDP numbers have been adjusted to reflect 2017 ppp.*

Source: OPEC.

Update on the latest global developments

So far **underlying global economic growth has remained robust** in general, while it has become more diverse in 1H22. 1H22 GDP growth declined in the US and China was facing a considerable slow-down. The euro-zone enjoyed an unexpected strong 1H22 GDP growth trend, contrary to sentiment and inflationary trends. Also India has seen a sound recovery in 1H22. While inflation has become and still is an issue that is impacting the global economy, the trend in some key-economies seems to gradually turn, importantly, including the US. While price rises in the US have been obviously at a high level still in July, the latest available monthly data-point, US inflation has retracted as it stood at 8.5% y-o-y, compared to the June level of 9% y-o-y, showing a significant slow-down. Moreover, wages and salary increase have continued in the recent months - standing at more than 5% y-o-y in the US and at more than 3% y-o-y in the Euro-zone - so that in combination with ongoing fiscal support, tapping into savings and an increase in consumer debt, consumption in western economies has turned out to be better-than-expected.

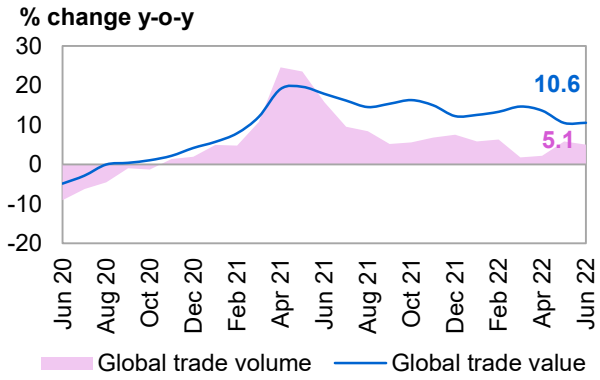
In consideration of the rising inflation **central banks have continued their monetary tightening** efforts and as the Fed has indicated to continue doing so, the ECB has also increased its key interest rate by 75 basis-points and has pointed at further monetary policy actions in the coming meetings. In addition to the G4 central bank monetary actions, also in the emerging market economies, monetary tightening has continued. India's central bank, the Reserve Bank of India, has lifted interest rates in August, along with the central bank of Brazil.

Some further relief to the inflationary trend may come from declining commodity prices. The Standard & Poor's Goldman Sachs Commodity Index (S&P GSCI) declined almost a quarter since its peak at the beginning of June. Uncertainties about the global economy continued, especially regarding geopolitical tension in Eastern Europe and its impact on economic activity. Furthermore, the pandemic may continue to impact lives and consumer spending habits. It has also been an important reason behind growing global labour market tightness, especially in the US and the Euro-zone. The pandemic and associated lockdowns in China, amid the country's zero-COVID-19 policy, remain an issue as well and this policy may, as it seems, have impacted 3Q22 growth dynamic.

World trade shows a good trend. **Trade in value terms** increased by 10.6% y-o-y in June, compared with 10.5% y-o-y in May and 13.6% y-o-y in April, based on the CPB World Trade Monitor Index provided by the CPB Netherlands Bureau for Economic Policy Analysis.

Trade in volume terms rose by 5.1% y-o-y in June, compared with 5.8% y-o-y in May and 2.2% y-o-y in April.

Graph 3 - 1: Global trade



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

Near-term global expectations

After some diverting trends among major economies' growth patterns in 1H22, the growth trend is forecast to remain different in 2H22, but to well support global economic growth towards the end of the year. Given the significantly loosening of COVID-19 restrictions in most economies, ongoing consumer spending that is still well-cushioned by savings from earlier pandemic-related stimulus measures, rising wages and salaries and a consequent increase in consumer credit, **global economic growth is forecast to pick up further in 2H22**, especially in the services sector. While the US and China are forecast to rebound from their poor performance in 1H22, the Euro-zone is forecast to show a somewhat contrary growth pattern as it is forecast to decelerate in 2H22, especially considering the further likely consequences of the geopolitical situation in Eastern Europe and its potential consequences on energy prices. Downside risks remain, given the ongoing high levels of inflation across some key economies in the world. Moreover, geopolitical situations and the possibility that the pandemic may re-emerge again towards the northern-hemisphere winter season are factors that may dampen growth in 2H22. Momentum in 3Q22 is anticipated to be driven by pent-up demand, especially in the contact-intensive services sector, in particular the sectors of travel and transportation, leisure and hospitality. The still-solid disposable income situation, in combination with sufficient savings, should provide a base for robust dynamics in most key economies. Moreover, fiscal measures in the EU used to compensate for inflationary effects and strengthen household incomes, as well as the latest spending bill that was approved by the US

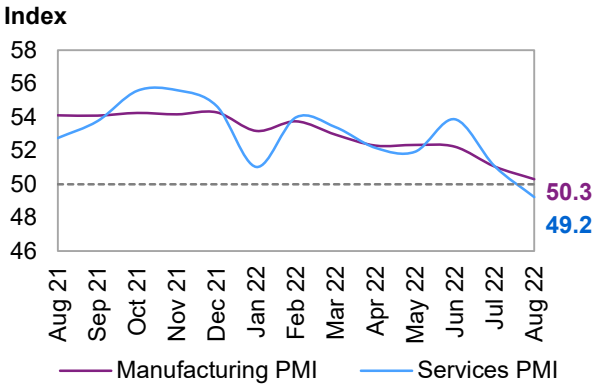
Senate – The Inflation Reduction Act – in combination with governmental-led stimulus measures in China, all support the 2H22 growth dynamic.

Quarterly global GDP growth is estimated at 0.6% q-o-q in 1Q22. Given the lacklustre growth in major economies and the decline in 2022 US global GDP growth, it is estimated to have fallen to -0.1% q-o-q in 2Q22. In 3Q22, growth is forecast to pick up considerably and see its peak for this year at a quarterly level of 0.8% q-o-q. In 4Q22, some slowdown may be encountered if seasonal rise in COVID-19 infections emerge. Moreover, high energy prices – especially in the EU, with major price rises in electricity already announced or implemented in most economies – are forecast to limit growth in 4Q22. The Euro-zone is forecast to show no growth in 4Q22. Hence, the global GDP 4Q22 growth is forecast at 0.7% q-o-q.

Importantly, the **forecast considers** that the geopolitical situation in Eastern Europe will not escalate further in 2H22. Another important assumption is that any changes in fossil fuel exports from Russia to Europe will not cause material energy shortages for the Euro-zone in 2H22, but this remains to be seen. One of the most important outcomes of this current conflict is rising inflation, which is impacting the global economy through strong yearly increases in commodity prices, in addition to ongoing supply-chain bottlenecks and COVID-19-related logistical logjams in China and elsewhere. Ongoing food inflation, in particular, will likely create an existential challenge for low-income and less-developed economies, especially in 2H22. Moreover, increasingly tight labour markets in major advanced economies are expected to further fuel wage and salary increases, feeding into an extended inflationary trend, while positively at the same time compensating the prices rise to some extent. The price pressures have guided central banks across the world to rein in inflation, with both the ECB and the Fed to accelerate their monetary-tightening efforts. In 2023, the Fed is currently expected to hold its key-interest rate level steady, while the ECB is forecast to continue appreciating interest rates.

Global purchasing managers' indices (PMIs) reflect the latest slowdown in major economies. The global manufacturing PMI retracted, standing at 50.3 in August, compared with 51.1 in July and 52.2 in June. The global services sector PMI fell to 49.2 in August, compared with 51.1 in July and 53.9 in June.

Graph 3 - 2: Global PMI



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

Growth in 2022 is forecast at 3.1%, unchanged from the previous month. Assuming there is no extraordinary dampening effect resulting from financial tightening, the pandemic and the geopolitical situation in Eastern Europe, global growth is also forecast at 3.1% **in the coming year**, similarly unchanged from the previous month. This trend also reflects normalisation in growth levels in economies across the world, after large stimulus packages were rolled out during the pandemic. Hence, global economic growth should again mean-revert towards growth potential, which currently stands at around the current forecast level.

Table 3 - 2: World economic growth rate and revision, 2022–2023*, %

	World
2022	**3.1**
Change from previous month	0.0
2023	**3.1**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

OECD

OECD Americas

US

Update on the latest developments

The latest US 2Q22 GDP growth numbers confirmed consecutive quarterly declines in US GDP growth. After a 1Q22 decline of 1.6% q-o-q SAAR, 2Q22 GDP growth was reported at a negative 0.6% q-o-q SAAR, according to the US Bureau of Economic Analysis (BEA).

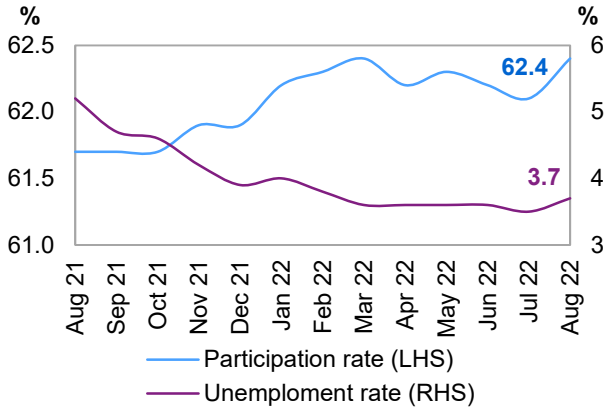
Personal consumption rose by 1.5% q-o-q SAAR in 2Q22, retracting slightly from a rise of 1.8% in 1Q22. Moreover, 1Q22 growth was adversely impacted by high import prices and, consequently, a negative trade balance. 2Q22 GDP growth saw strong dampening effects from a drop off in investments, including a considerable drawdown from inventories. Positively, recent months have witnessed a positive consumption trend in terms of retail sales, which picked up by 10.3% y-o-y in July, surpassing the inflationary trend, after 8.5% y-o-y in June.

The Fed increased its monetary tightening efforts and lifted its key policy rate by 75 basis points in July, pushing it up to 2.5%. The indication is that this trend is likely to continue. Inflation, based on the consumer price index, retracted in July to stand at 8.5%, after it reached 9% y-o-y in June. In line with the uptick in retail sales and the expectation of an ongoing economic rebound, consumer confidence rose in August. The index provided by the Conference Board rose to 103.2 after dropping to 95.3 in July. It stood at 98.4 in June.

The **unemployment rate** rose slightly in August to stand at 3.7%, compared to 3.5% in July, but it remains at a very low level. Moreover, the rise seems related to an increase in the participation rate. The **participation rate** rose to 62.4% in August, compared with 62.1% in July.

Non-farm payrolls continued to rise firmly, with an increase of 315,000 jobs in July. This compares to an addition of 526,000 in June. Ongoing labour market tightness and corresponding wage developments need to be closely monitored, as these could materially lift inflation. Hourly wage growth remained strong, up by 5.2% in August. With this trend, wage growth remains substantially above annual pre-COVID-19 growth levels of between 2% and 3%.

Graph 3 - 3: US monthly labour market



Sources: Bureau of Labor Statistics and Haver Analytics.

Near-term expectations

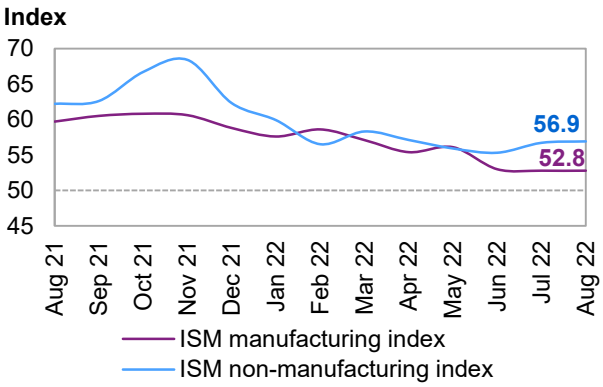
With **expectations of a continuation of solid consumption growth**, a partial 2H22 recovery in investments and inventory replenishing, 2H22 GDP growth is forecast to rebound. The services sector is predicted to recover further in 3Q22 and beyond, particularly the travel and tourism sector with an expected recovery in leisure and hospitality. This is also indicated in the latest sectorial lead-indicators.

However, some uncertainties remain. Among the most pressing is inflation, in combination with rising interest rates, an outcome of monetary tightening. Positively, the rise in inflation slowed in August and it is expected to continue to do so in the coming months, with the rising commodity price trend expected to drop off and the temporary inflationary impacts of COVID-19 fading. Guided by inflation, the Fed's monetary policy actions will remain an influential factor for economic growth. Some moderation in inflation is forecast towards the end of the year, leading to an expected full-year inflation level of more than 8%. It is forecast that the Fed will lift interest rates further, by 75 bp in September and by a further 50 bp in 4Q22.

In terms of **quarterly growth** developments, as already noted, a GDP decline of 1.6% q-o-q in 1Q22 is reported to be followed by a decline of 0.6% q-o-q SAAR in 2Q22. In 2H22, growth is forecast to rebound, reaching 2% q-o-q SAAR in 3Q22 and 1.8% q-o-q SAAR in 4Q22.

August **PMI** levels, as provided by the Institute for Supply Management (ISM), point to an ongoing positive dynamic in the manufacturing sector. The August manufacturing PMI was at 52.8 for a second consecutive month, following 53.0 in June. This is despite the latest inflationary developments, continuing labour market tightness and persistent supply chain bottlenecks. The index level for the services sector, representing around 70% of the US economy, rose slightly to stand at 56.9 in August. This compares with 56.7 in July and 55.3 in June.

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



Sources: Institute for Supply Management and Haver Analytics.

Taking into consideration the decline in 1H22 growth, alongside the solid rebound expected for the remainder of the year, **2022 US GDP growth** remains unchanged at 1.8%. This is expected to be followed by **2023 GDP growth** of 1.7%, also unchanged from last month.

Table 3 - 3: US economic growth rate and revision, 2022–2023*, %

	US
2022	**1.8**
Change from previous month	0.0
2023	**1.7**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

OECD Europe

Euro-zone

Update on the latest developments

Growth in 1H22 was unexpectedly strong in the Euro-zone, defying the expectation of a strong slowdown amid COVID-19 restrictions, rising inflation and the geopolitical tensions in Eastern Europe. Contrary to the general expectations in 1H22, the support factors of ongoing accommodative monetary policies by the European Central Bank (ECB); significant fiscal support following the outbreak of Eastern European conflict at the end of February; rising wages and salaries; tapping into the still-solid savings; and an increase in consumer credit helped counterbalance a negative trend in consumer sentiment. After strong 1Q22 GDP growth of 2.7% q-o-q SAAR, 2Q22 growth accelerated to stand at 3.1% q-o-q SAAR. While consumption was low in 1Q22, standing at 0.2% q-o-q SAAR and only a small contributor to GDP growth given the widespread lockdown measures in Europe, spending rose by 4.4% q-o-q SAAR in 2Q22. Much of the support came from the services sector's reopening after the 1Q22 Omicron wave. The rotation towards services was supported by the spending pattern that was reported for the category of "wholesale and retail trade, transport, accommodation and food", which was up by 6.5% q-o-q SAAR. The category of "Arts, entertainment and recreation and other service activities" was up 18.6% q-o-q SAAR. However, manufacturing activity rose stood by only 1.8% q-o-q SAAR and construction declined by 2.8% q-o-q SAAR.

Investment activity, in the form of gross capital formation, rose significantly in 2Q22, standing at 2.8% q-o-q SAAR, after a decline in 1Q22 of 0.5% q-o-q SAAR. Exports performed very well, rising by 4.8% q-o-q SAAR in 1Q22 and by 5.4% q-o-q SAAR in 2Q22, likely benefitting from a weak Euro. On a per-country-base, GDP growth was also very strong in those economies that benefited relatively more from services sector spending. Italy and Spain expanded by 4.6% q-o-q SAAR in 2Q22, with relatively large support coming from tourism. In France, 2Q22 GDP growth was also significant at 2.2% q-o-q SAAR, while Germany's growth was limited and stood at only 0.6% q-o-q SAAR.

Inflation continued to rise strongly in August on a yearly basis, to stand at 9% y-o-y, compared with 8.8% y-o-y in July and 8.6% y-o-y in June. When excluding volatile items such as food and energy, inflation stood at 5.4% y-o-y in August, after a rise of 5% y-o-y in July and 4.6% y-o-y in June. The ECB's still relatively accommodative monetary policy led to a continued expansion of debt-related financing. Lending to the private sector by financial institutions continued to expand significantly in July, rising by 6.1% y-o-y, comparing with

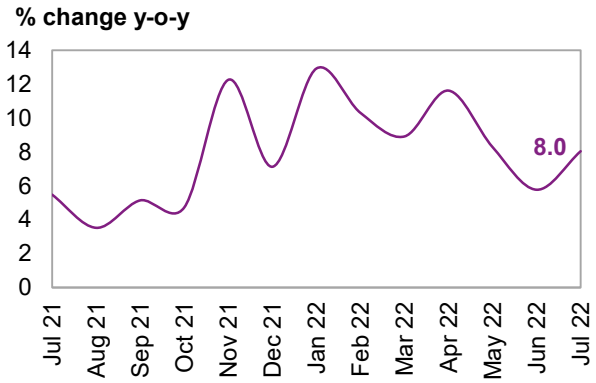
5.9% y-o-y in June and an already high increase of 5.3% y-o-y in May. This strong rise, however, may reverse course towards the end of the year as the ECB shifts towards monetary tapering and higher interest rates. After the ECB lifted interest rates by 50 bp in July, it hiked its key policy rate by 75 bp in September, more than most market observers expected only a few weeks ago.

The **labour market** maintained its positive trajectory. According to the latest numbers from Eurostat, the unemployment rate stood at 6.6% in June compared with 6.7% in June.

Retail sales increased considerably and recovered to a level of 8.1% y-o-y in July, following growth of 5.8% y-o-y in June. While these levels certainly supported strong price rises, especially in the commodity sector, consumers were not scaling back their spending.

Industrial production expanded further in June, rising by 2.6% y-o-y in June and 1.6% y-o-y in May. This comes after declines in April and March. The yearly rise translates into a monthly increase of 0.7% m-o-m in June and a rise of 2.1% m-o-m in May.

Graph 3 - 5: Euro-zone retail sales



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

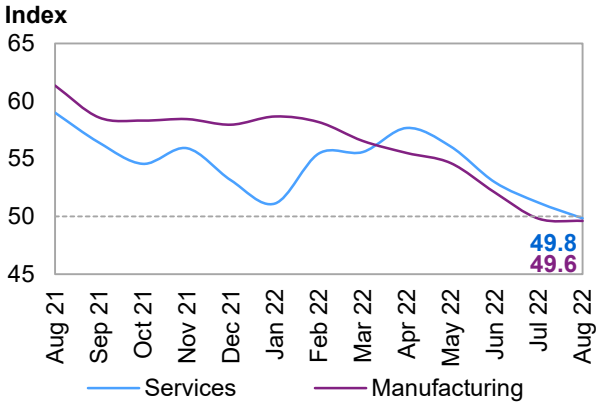
Near-term expectations

After the Euro-zone's significantly better-than-expected GDP growth in 1H22, **growth in 2H22** may to slow amid the numerous challenges the region is facing. However, this remains to be seen as 3Q22 activity points at a likely continuation of healthy consumer spending, particularly in the services sector. With numerous fiscal measures in place in key economies, like Germany and France, and energy subsidies in most economies, activity could be better than currently expected. Ongoing uncertainties remain, especially for 4Q22, and the growth trend will very much depend on geopolitical developments and their potential spill-over effect on the Euro-zone economy. The energy supply issue, as well as energy price developments, will need to be carefully monitored, given the implementation of a partial embargo on Russian oil imports and the decline in gas imports. In addition, COVID-19 case numbers have risen in some parts of the Euro-zone again. Moreover, as the ECB has started to gradually tighten its quantitative easing measures and is forecast to lift its key policy rate further this year, while strong lending activity is forecast to slow in 4Q22. Positively, the ECB's tightening measures are forecast to have a positive impact on the Euro-exchange rate and import prices; hence, it may also have a dampening effect on inflation.

The Euro-zone's July PMI pointed to a continued slowdown in the manufacturing and services sectors. The **PMI for services**, the largest sector in the Euro-zone, is showing a clear downward trend. It fell below the growth-indicating level of 50 to stand at 49.8 in August, compared with 51.2 in July and 53 in June.

The **manufacturing PMI** retracted further as well and remained into contractionary territory to stand at 49.6 in August compared with 49.8 in July and 52.1 in June.

Graph 3 - 6: Euro-zone PMIs



Sources: IHS Markit and Haver Analytics.

The **GDP growth forecast for 2022** was revised down slightly to stand at 3.1%. This forecast assumes that after the very strong growth from 1H22 a slowdown will materialize in 2H22. This forecast is followed by a further anticipated slowdown into 2023. The **2023** GDP growth remains at 1.7%, unchanged from the previous month.

Table 3 - 4: Euro-zone economic growth rate and revision, 2022–2023*, %

	Euro-zone
2022	**3.1**
Change from previous month	-0.1
2023	**1.7**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

OECD Asia Pacific

Japan

Update on latest developments

Japan's 2Q22 GDP growth stood at a strong level of 3.5% q-o-q SAAR, as reported by the Cabinet office. This comes after reported growth of 0.2% q-o-q SAAR in 1Q22.

The GDP dynamic in 1Q22 was again negatively impacted by a severe rise in COVID-19 infections, with the associated voluntary and government implemented social distancing measures. In addition, a rise in import prices adversely affected GDP growth in 1Q22. A third impact came from a trade slowdown with Japan's two major trading partners, the US and China, with both witnessing slowing growth momentum in 1Q22.

The strong momentum in 2Q22 has been supported by pent-up demand after 1Q22 lockdown measures. However, it should be noted that Japan saw a renewed rise in COVID-19 infections in 3Q22 that led to a drop off in mobility and may have dampened activity in the services sector. Positively, however, July real consumption showed only a slight retraction.

The ongoing weakness in the yen, in combination with still high energy import prices, are further areas of concern. As a consequence of rising energy prices, Japan's government proposed to restart up to nine nuclear reactors to address an anticipated electricity shortage over the winter period. Currently, four nuclear plants are operating in the country, adding a further nine would see 13 nuclear reactors on line. However, this would still only be a fraction of the 54 that were operating before the Fukushima nuclear accident in 2011, when Japan sourced around 30% of its electricity from nuclear. The government also announced that it will extend subsides for retail gasoline and kerosene up to December.

Consumer **inflation** stood at 2.6% y-o-y in July, after a rise of 2.3% y-o-y in June and 2.4% in May. The Bank of Japan (BoJ) has maintained its accommodative **monetary policy** as inflation remains relatively low. This limited monetary policy tightening has led to a continuous weakening of the yen, especially compared to the US dollar. There exchange rate is now more than 140 yen against one US dollar, reflecting the rising gap in interest rate levels and associated growth differentials between the US and Japanese economies.

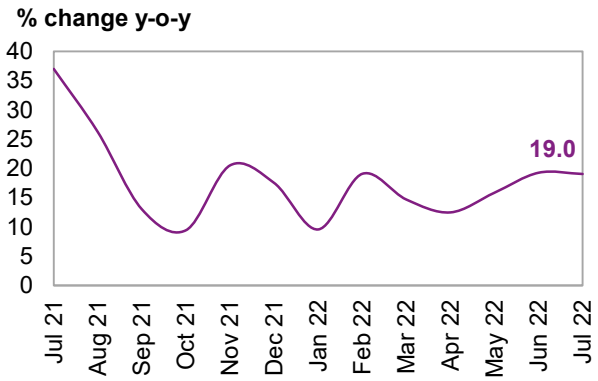
Industrial production (IP) declined again in July compared to June, albeit at a lower rate, falling by 0.8% y-o-y, compared with declines of 2.2% y-o-y in June and 4.2% y-o-y in May.

On a positive note, and after a weak 1Q22 dynamic, **export growth** accelerated again strongly in July, rising by 19% y-o-y, almost unchanged from June's level of 19.3% y-o-y. It rose by 15.8% y-o-y in May.

Retail sales rose by 2.4% y-o-y in July, compared with 1.5% y-o-y in June and 3.7% y-o-y in May.

Consumer confidence has picked up slightly too. It stood at 31.9 in August, compared with 30.0 in July, albeit slightly lower than the 32.2 in June.

Graph 3 - 7: Japan's exports



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

Near-term expectations

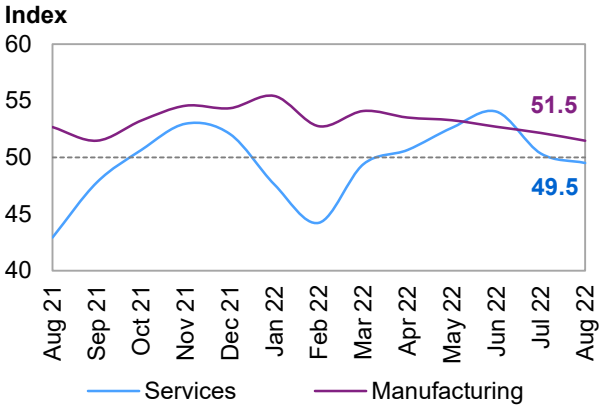
After low growth in 1Q22 and a strong appreciation in 2Q22, it is anticipated that a further positive GDP growth dynamic is witnessed in 2H22, albeit at a lower level than in 2Q22. The 2022growth trend is forecast to primarily be supported by domestic demand. External trade also remains an important aspect of the growth dynamic, especially with an expectation of a 2H22 rebound in both the US and China.

Some downside risk to the 2H22 recovery may come from the recent rise in COVID-19 infection rates and the increase in energy import prices at a time of weakness for the Japanese yen. Though inflation has risen considerably, it is forecast to remain under control, but a further rise in salaries could see inflation increase further. Constituting a forward-looking indicator for inflation, cash earnings have risen by 1.8% y-o-y in July, compared with 2% y-o-y in June. For the time being, however, the BoJ is expected to keep its monetary policies relatively accommodative compared with other G4 central banks. Therefore, the yen's current weakness may persist for some time. While this is positive for exports, it may have a net-negative impact on import prices, which have risen significantly.

On a quarterly basis, as already noted, 1Q22 GDP growth was reported to have expanded by 0.2% q-o-q SAAR and by 3.5% q-o-q SAAR in 2Q22. This 2Q22 trend is forecast to moderate somewhat in 3Q22 with expected growth of 1% q-o-q SAAR. At the end of the year, growth is forecast to slow slightly again and reach 0.5% q-o-q SAAR in 4Q22.

July PMI numbers point to an ongoing gradual slow-down in both the manufacturing and services sector. Rising COVID-19 infections are dampening the recovery in the contact-intensive services sector. The services sector PMI, which constitutes around two-thirds of the Japanese economy, retracted to an index level of 49.5 in August from 50.3 in July. It has been at a level of 54.0 in June. This could point to a slightly weakening 3Q22 dynamic. The manufacturing PMI fell slightly to 51.5 in August, compared with 52.1 in July and 52.7 in June.

Graph 3 - 8: Japan's PMIs



Sources: IHS Markit, Nikkei and Haver Analytics.

GDP growth for 2022 is unchanged at 1.4%. After strong growth in 1H22, the forecast considers some slowdown as guided by lead-indicators, in combination with the challenges of increasing COVID-19 infection rates, rising energy import prices and a continued weak Japanese yen.

GDP growth in **2023** is forecast at 1.6%, also unchanged from the previous month.

Table 3 - 5: Japan's economic growth rate and revision, 2022–2023*, %

	Japan
2022	**1.4**
Change from previous month	0.0
2023	**1.6**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

Non-OECD

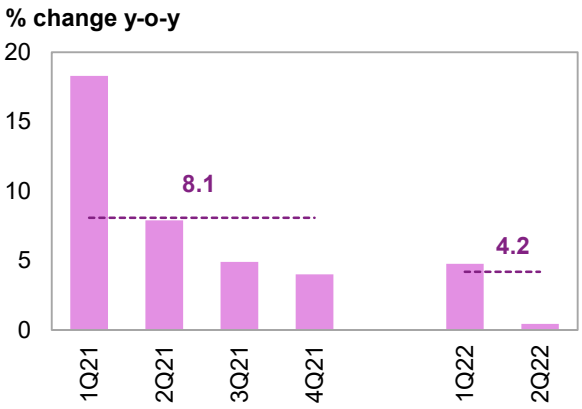
China

Update on the latest developments

Macroeconomic indicators for July suggest that China's recovery may have weakened during the month. The slowing recovery trend might continue considering the recent COVID-19 outbreak and resultant lockdowns in some major cities such as Chengdu, which has a population of 21.2 million.

Industrial value added was largely unchanged in July at 3.8% y-o-y following 3.9% y-o-y in June, reflecting the fact that manufacturing activities continue to be impacted by COVID-19 restrictions. Significantly, nominal fixed asset investment growth slowed down to 3.5% y-o-y in July from 5.8% y-o-y in June, following a slowdown in real estate investment. Indeed, real estate developer defaults might burden the recovery as, according to various reports, developers' cash flow might not be sufficient to continue with projects, and homebuyer confidence regarding housing completions is low.

Graph 3 - 9: China's GDP growth



Sources: National Bureau of Statistics and Haver Analytics.

Retail sales growth eased to 2.7% y-o-y in July from 3.1% y-o-y in June. However, this was the second month of expansion in retail sales, which indicates that there has been a positive response to the easing of China's zero-COVID policy. Nevertheless, over the first seven months of 2022, retail sales contracted by 0.2% y-o-y, reflecting the impact of tough mobility restrictions in several major cities from March to May.

The latest external demand data indicate that the trade surplus declined to $79.4 billion in August 2022 following a record surplus of $101.3 billion in July 2022 (compared to $59.3 billion in August 2021). The combination of COVID-19 disruptions in manufacturing, historic heatwaves and easing foreign demand in many countries caused China's export growth to ease to 7.1% y-o-y following growth of 18% y-o-y in July. Meanwhile, imports expanded by only 0.3% y-o-y, reflecting weak domestic demand. The trade surplus with the US narrowed to $36.8 billion compared to July's surplus of $41.5 billion. Nevertheless, considering the January to August period, the trade surplus stood at $560.52 billion with exports rising by 13.5% y-o-y, while imports grew by 4.6% y-o-y.

The annual inflation rate dropped to 2.5% in August from 2.7% y-o-y in July. The cost of food rose by 6.1% y-o-y, easing from growth of 6.3% in July. Moreover, non-food inflation eased to 1.7% y-o-y from 1.9% y-o-y in July, driven by slowdowns in transport and communication. The People's Bank of China (PBoC) has set a CPI target of around 3% for 2022, the same as in 2021.

On the policy side, in August of 2022, PBoC lowered the loan prime rate (LPR), which is used for corporate and household loans, by 5 bps to a record low of 3.65%, while the five-year LPR, which influences the pricing of home mortgages, was slashed for the second time this year by 15 bps to 4.30%. On the fiscal policy side, China's State Council rolled out a $146 billion stimulus package to support economic growth amid COVID-19 lockdowns and a deep property slump. The stimulus measures target infrastructure, property and private businesses. Yet the measures might not fully materialize unclear in the short term, which reflects a continued loss of momentum in the recovery trend.

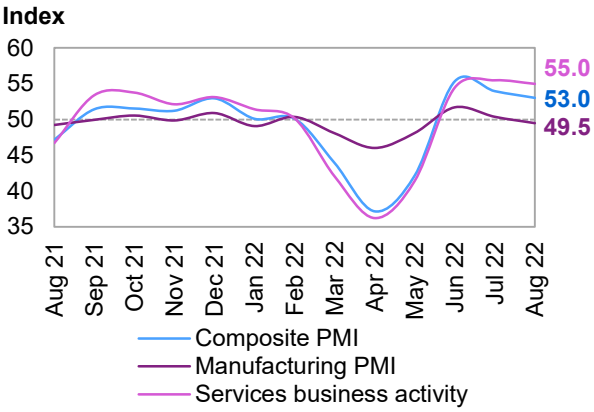
Near-term expectations

The recent lockdowns in major cities in China continue to challenge the short-term economic outlook. However, the new lockdowns might be less disruptive compared to the Shanghai lockdowns witnessed during 2Q22 considering the government's adoption of the "societal zero-COVID". Recent monetary and fiscal measures might aid the economic recovery. However, this recovery is still restricted by low business and consumer confidence as well as external economic conditions. More downside risks may also emanate from persistent pressure on the property sector, which may lead to financial repercussions as well as concerns about new virus outbreaks and relatively subdued customer demand.

However, China's economy is most likely to bounce back in 2H22, boosted by infrastructure investments, as well as a normalization of economic activity. Nevertheless, as long as the zero-COVID stance persists, the recovery might be uneven amid a strong government sector but weak private sector associated with weak real estate growth.

The August PMI readings for both manufacturing and services activities dropped slightly, reflecting the impacts of the COVID-19 lockdowns and electricity shortages. The manufacturing **PMI** declined to 49.5 from 50.4 in July. While the **services PMI** dropped to 55.0 from 55.5 in July 2022.

Graph 3 - 10: China's PMI



Sources: Caixin, IHS Markit and Haver Analytics.

Considering the recent developments associated with the new wave of COVID-19 lockdowns and the major macroeconomic indicators, China's 2022 **GDP forecast** was revised down to 4.2% from 4.5% in the last MOMR. The current forecast takes into account governmental support as well as the slightly changing COVID-19 policies.

Table 3 - 6: China's economic growth rate and revision, 2022–2023*, %

	China
2022	**4.2**
Change from previous month	-0.3
2023	**5.0**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

Meanwhile, the economic growth forecast for 2023 is unchanged at 5.0%. More downside pressure may emerge, including potential risks of new COVID-19 variants in the winter that could hinder the economic recovery in 4Q22 and 1Q23, while growth potential might be boosted by further government fiscal measures, higher domestic demand, increasing external demand as well as easing COVID-19 impacts.

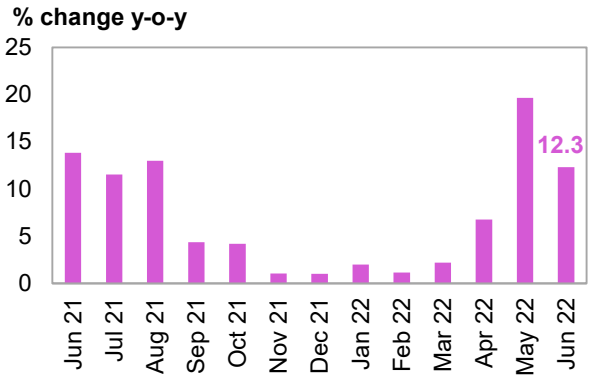
Other Asia

India

Update on the latest developments

India's real GDP expanded by 13.5% y-o-y in the 2Q22 reflecting an upturn recovery momentum that most likely to continue in the short-term. Agriculture, forestry and fishing saw a gross value added of 4.5% y-o-y, compared with a growth of 4.1% y-o-y in 1Q22. Similarly, electricity, gas, water and other utility services expanded by 14.7% y-o-y in 2Q22, compared with a much lower 4.5% y-o-y in 1Q22. Manufacturing activities grew 4.8% y-o-y, following a contraction of 0.2% y-o-y 1Q22. While construction activities surged 16.7% y-o-y in 2Q22 from a growth of only 2.0% y-o-y in 1Q22. The services sector expanded by 17.7% y-o-y in 2Q22, following growth of 5.5% y-o-y in 1Q22. On the flip side, a slowdown was seen for mining and quarrying with growth slightly easing to 6.5% y-o-y from 6.8% y-o-y in 1Q22.

Graph 3 - 11: India's industrial production



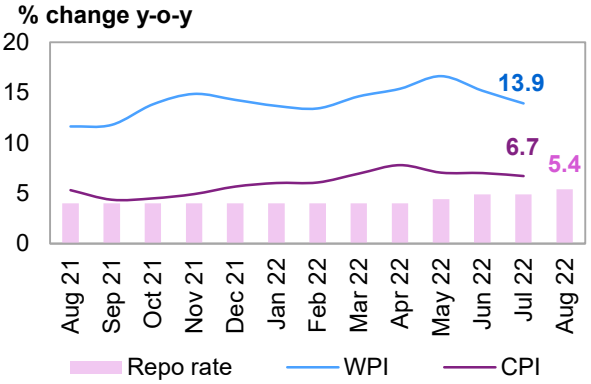
Sources: Ministry of Statistics and Program Implementation of India and Haver Analytics.

On the demand side, private consumption accelerated 25.9% y-o-y in 2Q22, following growth of almost 2.0% y-o-y in 1Q22. Gross fixed capital formation expanded to 20.1% y-o-y, following 5.2% y-o-y growth in 1Q22. Public consumption growth eased to 1.3% y-o-y, following 4.8% y-o-y in 1Q22. Net foreign demand contributed negatively to 2Q22 growth, as exports rose 14.7% y-o-y while imports advanced at a faster y-o-y pace of 37.2%.

Recent data suggests that industrial output expansion eased to 12.3% y-o-y in June 2022, from almost 20% y-o-y in May 2022. This was on the back of challenges for the manufacturing sector due to supply-chain disruptions as a result of China's lockdowns. However, the pick-up in capital, infrastructure and consumer durables output continued.

Positively, July's **annual inflation rate** dropped to 6.7% from 7.0% in June. Moreover, food inflation saw a significant slowdown to 6.7% in July, from 7.6% in June. On a monthly basis, compared to June consumer prices went up 0.5%. It is important to note that the current inflation rate may have peaked at 7.8% in April 2022, with consumer price (CPI) growth having moderated for three consecutive months. Nonetheless, inflation continued to exceed the Reserve Bank of India's (RBI) medium-term inflation target band of 2-6%. To help shift the inflation rate towards the central bank's short- and medium-term target, the RBI hiked the repo rate for the third time this year during its August meeting. It increased the level by 50 bps to 5.4%. The decision followed a 50 bps hike in June, bringing the rate to a level not seen since September 2019. The RBI kept its inflation forecast for FY 2023 at 6.7% and its economic growth forecast at 7.2%.

Graph 3 - 12: Repo rate and inflation in India



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

India's August **trade balance** posted a deficit of more than $28.7 billion. Imports jumped by more than 31% y-o-y, while exports dropped 0.8% y-o-y, affected by weaker global growth prospects that weighed on demand.

Graph 3 - 13: India's trade balance

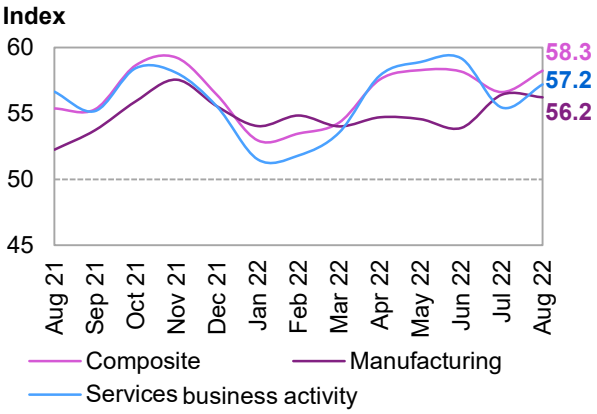
Sources: Ministry of Commerce and Industry and Haver Analytics.

Near-term expectations

India's economy may emerge as the strongest Asia economy in both the short- and medium-term. Its upward recovery momentum is expected to continue to see support from growth in both private consumption and investment. Import inflation is expected to moderate in 2H22 as commodity prices might stabilize. In addition, the monsoon season might moderate food prices. The pace of the recovery, however, could moderate given several risk factors. These include high inflation, less accommodative monetary conditions and a deteriorating external environment. Downside inflation risks might appear, for example, through a depreciation of the local currency. The recent interest rates hikes may also weaken the country's growth prospects since they could prompt the deferral of investment plans in sectors without adequate capacity utilization. However, the current repo rate remains low by historical standards.

Elsewhere, signs of slight manufacturing output growth are reflected in the August S&P Global **Manufacturing PMI**. While it edged slightly lower to 56.2, from a July reading of 56.4, it was still the second-strongest monthly expansion in the sector since last November. Moreover, manufacturing business sentiment picked up slightly following the easing of imported input costs and stable growth in new orders. The **Services PMI** surged to 57.2 in August, from 55.5 in July, the 13th month of expansion in the sector.

Graph 3 - 14: India's PMIs



Sources: IHS Markit and Haver Analytics.

India's **GDP growth** has, and could continue to benefit from slight improvements in domestic demand due to receding concerns over COVID-19.

As the official 2Q22 GDP growth data aligned with previous MOMR assessments, for this month India's 2022 and 2023 **GDP growth** forecasts have been kept unchanged at 7.1% and 6.0%, respectively.

For 2023, growth potential might come in the form of more fiscal support, while downward pressures could arise from COVID-19 or a further elevation in inflation rates.

Table 3 - 7: India's economic growth rate and revision, 2022–2023*, %

	India
2022	**7.1**
Change from previous month	0.0
2023	**6.0**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

Latin America

Brazil

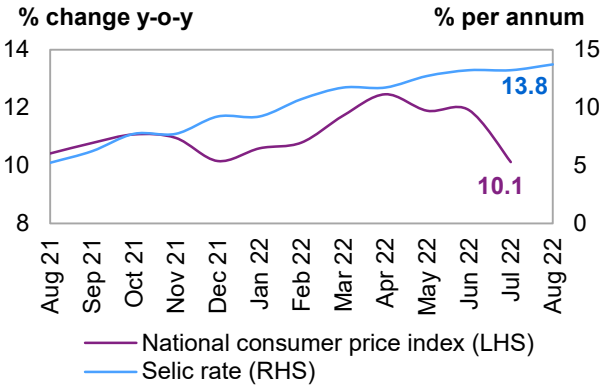
Update on latest developments

Brazil's economy grew 3.2% y-o-y in 2Q22, advancing from 1.7% y-o-y growth in 1Q22. This was the sixth consecutive quarter of economic expansion, driven by a 5.3% y-o-y increase in private demand due to the strong growth in real income and higher credit for Brazilian companies. Gross fixed capital formation expanded by 1.5% y-o-y, supported by construction and software development. Public spending expanded by 0.7%. However, net trade contributed negatively to 2Q22 growth, as exports fell by 4.8% y-o-y while imports fell by a slower 1.1% y-o-y. On a seasonally adjusted quarterly basis, the GDP grew 1.2% compared with 1% growth in the previous quarter.

Leading indicators suggest that the economy remains strong, with a significant drop in the three-month moving average unemployment rate from 9.3% in June to 9.1% in July. Moreover, business and consumer confidence indicators improved in August for the sixth and third consecutive months, respectively, reflecting the impact of the government's stimulus measures.

The latest available data suggested that Brazil's inflation rate eased to 10.1% in July from 11.9% in June, marking the lowest reading since last December, mainly due to a decline in transport prices. On a monthly basis, consumer prices fell by 0.68%, the most since available records began in 1980 amid recent fuel and electricity price cuts.

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



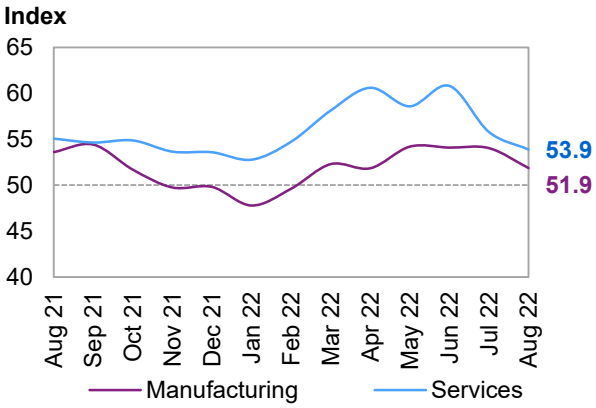
Sources: Banco Central do Brasil, Instituto Brasileiro de Geografia e Estatística and Haver Analytics.

In early August, the Banco Central do Brasil (BCB) maintained its policy tightening and delivered its 12th straight rate hike, raising the Selic rate by 50 bps to 13.75% to take borrowing costs to their highest level since January 2017. The BCB has left the door open for a possible smaller adjustment in September.

Near-term expectations

The Brazilian economy is most likely to continue its sturdy recovery in the coming months, supported by fiscal stimulus as well as individual savings. Yet weak credit conditions, loose fiscal policy, excessive monetary tightening, as well as political uncertainty may hinder Brazil's growth. Indeed, services sector activity could be hindered by the depreciation of the Brazilian real and an increase in input costs. In fact, the forward-looking August **services PMI** reading dropped to 53.9 from 55.8 in the previous month. Similarly, the **manufacturing PMI fell to 51.9 in August from 54.0 in July**. However Brazilian manufacturers remained strongly confident of a rise in output over the course of the coming months, boosted by purchasing activities.

Graph 3 - 16: Brazil's PMIs



Sources: IHS Markit and Haver Analytics.

Considering the 2Q22 official GDP data as well as the recent recovery trend and the easing of inflationary pressures, Brazil's GDP growth for 2022 and 2023 is revised up to 1.5% and 1.6%, respectively, from last month's assessment of 1.2% and 1.5%.

Still uncertainty is high in the near term, though confidence regarding the resilience of household demand may increase business and investor confidence. Inflations remains the biggest challenge.

Table 3 - 8: Brazil's economic growth rate and revision, 2022–2023*, %

	Brazil
2022	**1.5**
Change from previous month	0.3
2023	**1.6**
Change from previous month	0.1

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

Africa

South Africa

Update on the latest developments

South Africa's real GDP expanded by just 0.2% y-o-y in 2Q22, following downwardly revised 2.7% growth in 1Q22. The 2Q22 growth rate was the weakest since 1Q21. Recent macroeconomic data points to a slowdown as well, especially on the consumer side. Retail trade dropped 2.5% y-o-y in June 2022 following growth of 0.1% y-o-y in May. Yet consumer confidence picked up by 5 points to -20 in 3Q22, although the confidence levels of high and middle-income households remained low amid the impact of rising interest rates to combat higher inflation.

Consumer prices grew by 7.8% in July from 7.4% in June, exceeding the upper limit of the South African Reserve Bank's (SARB's) target range of 3-6%. On a monthly basis, consumer prices inched up by 1.5%, after increasing 1.1% in June and above market forecasts of a 1.4% rise. On the policy front, efforts by the SARB to contain surging domestic inflation led to a rise in the repo rate by 75 bps to 5.5%, further signalling that inflationary risks exist to the upside. Meanwhile, the bank's GDP growth projections were raised to 2% in 2022 (vs 1.7% in June), but fell to 1.3% in 2023 (vs 1.9% in June) and 1.5% in 2024 (vs 1.9% in June).

On the labour market front, August's Quarterly Labour Force Survey (QLFS) showed the unemployment rate retreated to 33.9% in 2Q22, the lowest level for more than a year. However, the improvement might be hard to sustain given a deterioration in key growth indicators such as manufacturing activity.

On a bright note, industrial production surged by 3.7% y-o-y in July, following three consecutive months of contraction. Yet on a seasonally adjusted monthly basis, the manufacturing sector edged down by 0.2% in July, after an upwardly revised 2% slump in June, compared with market forecasts of a 0.7% fall. The RMB/BER business confidence index (BCI) fell to 39 in 3Q22 from 42 in 2Q22, reaching its lowest point since

1Q21. This was due to deteriorating sentiment, mostly among construction firms, resulting from shortages of some materials, power load-shedding and planning delays.

The country's trade improved, but higher international energy costs might push up the import bill. The trade surplus rose slightly to ZAR 24.76 billion in July of 2022 from ZAR 24.23 billion in the previous month.

Near-term expectations

Despite slight growth in 2Q22, the overall deterioration in GDP growth points to a probable contraction in 3Q22 as the economic outlook remains gloomy amid the impact of natural disaster shocks such as the flooding in the year. Meanwhile, the government faces a tight deadline to rectify serious flaws in its approach to combatting money laundering and forestall being grey-listed by the Financial Action Task Force (FATF). Yet considering the FATF's flexibility and the government's willingness to act, a favourable outcome – such as the extension of the deadline – may be possible

The seasonally adjusted Absa Purchasing Managers' Index rose to 52.1 points in August from 47.6 in July following the easing in the intensity of load-shedding and as power cuts eased while fuel prices declined.

As the official 2Q22 GDP growth data is in line with our assessment, South Africa's real GDP forecasts for 2022 and 2023 remain unchanged from the previous month at 2.2% and 1.5%, respectively. Downside risks are highly depended on domestic and global economic developments in 2H22.

Table 3 - 9: South Africa's economic growth rate and revision, 2022–2023*, %

	South Africa
2022	**2.2**
Change from previous month	0.0
2023	**1.5**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

Russia and Central Asia

Russia

Update on the latest developments

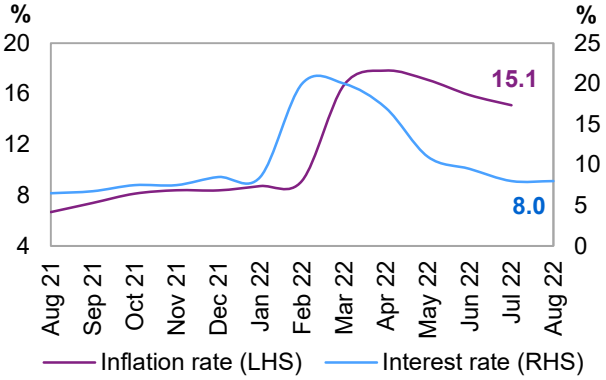
According to preliminary estimates, Russia's economy shrank by 4% y-o-y in 2Q22, amid the ongoing geopolitical tension with Ukraine and associated international sanctions. This contraction was in line with the Secretariat's 2022 assessment and less deep than most expectations as high energy prices, successful monetary and fiscal interventions as well as effective energy trade diverting cushioned the economy. Indeed, Russia's real GDP shrank by only 0.4% in 1H22.

Recent data suggested that retail trade continued to slow but on at a slower pace, dropping by 8.8% y-o-y in July compared to almost 10% in the previous month. Moreover, on a m-o-m basis retail sales increased 1.1% in June 2022 from 0.5% in May 2022. Similarly, the contraction in industrial production eased to 0.5% y-o-y in July from a 2.4% y-o-y drop in June 2022. Industrial output rose by 1.8% on a seasonally and calendar adjusted monthly basis.

Consumer inflationary pressures eased, as the **CPI** fell to 15.1% y-o-y in July from its peak of 17.8% in April. The moderation in price pressures partly reflects the recent strength of the rouble, which has been supported by central bank foreign exchange interventions. Similarly, producer price growth eased to 11.3% y-o-y in June from 19.3% y-o-y in May.

Russia's jobless rate stood at only 3.9% in July 2022, unchanged from June and May. The number of unemployed decreased by 51,000 from a month earlier to 2.9 million, while the employment rate rose to 59.9% in July from 59.8% in June.

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



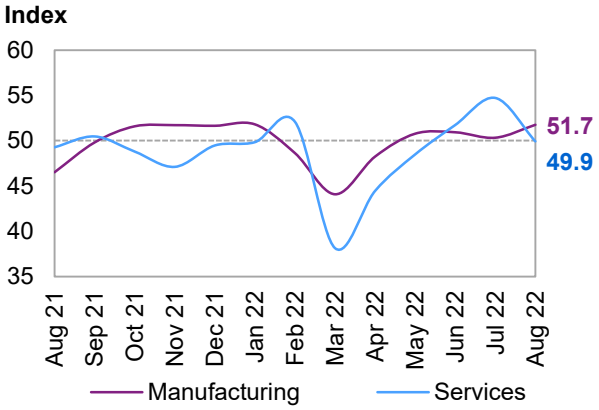
Sources: Federal State Statistics Service, Central Bank of Russia and Haver Analytics.

Near-term expectations

Russia's economy continues to face significant uncertainty in light of sanctions to be implemented in 4Q22 as well as the cut of the Nord Stream 1 gas flow. Nevertheless, the Russian economy has shown resilience to sanctions, supported by the large domestic market and production as well as strong energy export revenue. Government measurements along with strong commodity prices might turn the contraction to growth in the coming year, assuming that geopolitical tensions do not worsen in 2H22. However, the contraction that started in 2Q22 might carry over to 3Q22, especially in consumption and investment activities.

PMI indices reflected the recent trend in both the manufacturing and services sectors. August's S&P Global Manufacturing PMI increased to 51.7 from 50.3 in July, marking the fourth straight month of expansion in factory activity, as new orders returned to growth, boosted by higher domestic demand. The services PMI fell to 49.9 in August from July's reading of 54.7. Pointed to the first contraction in the sector since May, amid the reduced purchasing power at some customers and the impact of sanctions.

Graph 3 - 18: Russia's PMI



Sources: IHS Markit and Haver Analytics.

Taking into consideration the recent official 2Q22 **GDP growth** preliminary data, Russia's real economic growth remained unchanged at a contraction of 6.0% in 2022 and growth of 1.2% in 2023. It is important to monitor the high level of uncertainty based on the current geopolitical tensions, any COVID-19-related developments as well as the path of the global economic recovery.

Table 3 - 10: Russia's economic growth rate and revision, 2022–2023*, %

	Russia
2022	**-6.0**
Change from previous month	0.0
2023	**1.2**
Change from previous month	0.0

*Note: * 2022 and 2023 = Forecast.*

Source: OPEC.

OPEC Member Countries

Saudi Arabia

Saudi Arabia's economic performance maintained its upward trend, boosted by large-scale investment in the energy and non-energy sectors as well as energy export revenue. Moreover, the Kingdom's economic fundamentals have been moving in the right direction this year with improvements in the public budget, declining public debt as well as contained inflation.

These trends are reflected in the recent PMI indices of non-oil economic activity. According to August's PMI reading, non-oil private economic activity rose to 57.7 from July's reading of 56.3. Over 2022, the Kingdom's economic recovery will probably remain one of the strongest since the pandemic began. Indeed, it is likely that the Kingdom will be the fastest growing of the world's largest economies in 2022. Furthermore, with the reform process and positive follow of finance driven by the growth of strategic projects and non-oil sector growth, this economic growth momentum could carry into the coming year and beyond.

Nigeria

Nigeria's real GDP expanded by 3.5% y-o-y in 2Q22, following growth of 3.1% in 1Q22. The expansion was mainly driven by the non-oil sector, which grew by 4.8% y-o-y. On a quarterly basis, the GDP shrank by 0.37% following a 14.66% contraction in the previous quarter. Nevertheless, the annual inflation rate surged to the highest since September 2005, climbing to 19.6% y-o-y in July from 18.6% in June. This was a result of the weakening naira due to continued high imported input costs as well as soaring fuel prices. Moreover, food inflation increased to 22% y-o-y, the highest since May 2021. Reflecting these pressures, August's Stanbic IBTC Bank Nigeria PMI dropped to 52.3 from 53.2 in July amid slower growth in non-oil output as well as the

slowdown in purchasing activity, while employment rose at a quicker pace. Looking ahead, Nigeria's economy might keep be impacted by the high level of employment associated with elevated prices levels.

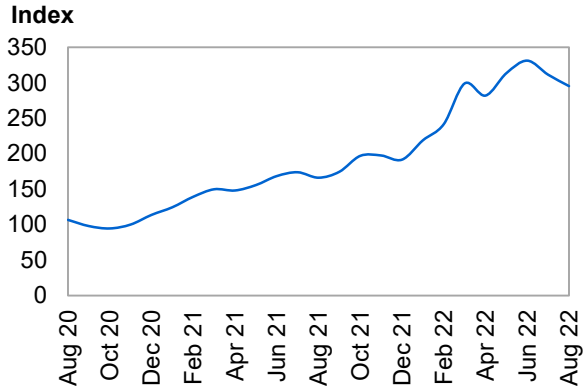
The United Arab Emirates (UAE)

UAE non-oil economic activity has been on the rise supported by higher energy prices as well as supportive economic policies. On the downside, elevated inflation and monetary tightening could affect household demand. Nevertheless, the recent S&P Global private sector PMI rose to 56.7 in August from 55.4 in July, a rise linked to improved individual demand. Overall, the short-term outlook is positive. However, this outlook is counterbalanced by uncertainty associated with the COVID-19 development, the global economy as well as global geopolitical tension.

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

The **US dollar (USD) index** rose for the eighth consecutive month, increasing by 0.2% m-o-m, a marginal increase compared to previous months. Weak macroeconomic indicators and hawkish monetary policies by other major central banks continued to put pressure on the USD, but the index managed to edge up m-o-m once again. Against developed market (DM) currencies, the USD advanced against the euro by 0.4% m-o-m as the ECB ramped up its fight against inflation. Meanwhile, the USD fell against the yen after six consecutive monthly gains, declining by 1.1% m-o-m. Against the sterling, the USD fell by a marginal 0.1% in the same period after six consecutive monthly gains. In terms of emerging market (EM) currencies, the USD rose against the yuan by 1.0% m-o-m and declined against the rupee and the real by 0.1% and 4.2%, respectively, in the same period.

Graph 3 - 19: The Modified Geneva I + US$ Basket (base June 2017 = 100)



Sources: IMF and OPEC.

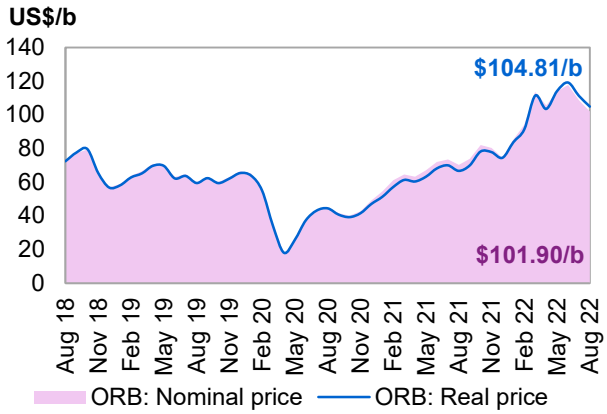
The weakening of the USD compounded by the m-o-m decline in crude oil prices weighed on both the ORB real and nominal prices.

Inflation (nominal price minus real price) went from $2.63/b in July 2022 to $2.91/b in August 2022, a 10.6% increase m-o-m. Nonetheless, the strengthening of the USD continued to support ORB real prices.

In **nominal terms**, accounting for inflation, the ORB price declined for the second consecutive month, going from $108.55/b in July 2022 to $101.90/b in August 2022, a 6.1% decline m-o-m.

In **real terms** (excluding inflation), the ORB rose from $111.18/b in July 2022 to $104.81/b in August 2022, a 5.7% increase m-o-m, and a slower rate compared with the previous month.

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



Source: OPEC.

World Oil Demand

World oil demand for 2022 is expected to rise by 3.1 mb/d, y-o-y unchanged from last month's report. Gas-to-oil substitution for power generation and for industrial uses in OECD Europe and Asia represents an important component of the demand outlook for the year.

Total oil demand is projected to average 100.0 mb/d in 2022. In the OECD region, oil demand is anticipated to rise by 1.6 mb/d to 46.4 mb/d y-o-y. OECD Americas demand is expected to rise the most in 2022, led by the US on the back of recovering gasoline and diesel demand. Light distillates are also projected to support demand growth this year.

In the non-OECD region, total oil demand for the year is anticipated to rise by 1.5 mb/d to 53.7 mb/d. A steady increase in industrial and transportation fuel demand, supported by a recovery in economic activity and an easing of COVID-19 restrictions in China, are projected to boost demand in 2022.

In 2023, expectations for healthy global economic growth, combined with anticipated improvements in the containment of COVID-19 in China, are expected to boost oil consumption. The demand outlook for 2023 remains at 2.7 mb/d, unchanged from the last MOMR, and reach 102.73 mb/d.

In the OECD, oil demand is anticipated to rise by 0.6 mb/d, as OECD Americas is expected to climb firmly, with US oil demand above 2019 levels mainly due to the recovery in transportation fuels and light distillate demand. OECD Europe and the Asia Pacific will also rise above 2019 consumption levels.

In the non-OECD, oil demand is projected to rise by 2.1 mb/d, with the largest growth seen in China and India, supported by a recovery in transportation fuels and firm industrial fuel demand, including petrochemical feedstock. Other regions such as Other Asia, Latin America and the Middle East are also expected to see decent gains, supported by a positive economic outlook. In terms of fuels, gasoline and diesel are assumed to lead oil demand growth next year.

Table 4 - 1: World oil demand in 2022*, mb/d

							Change 2022/21	
World oil demand	**2021**	**1Q22**	**2Q22**	**3Q22**	**4Q22**	**2022**	**Growth**	**%**
Americas	24.22	24.79	24.88	25.16	25.40	25.06	0.83	3.45
of which US	*19.93*	*20.38*	*20.31*	*20.54*	*20.91*	*20.53*	*0.61*	*3.05*
Europe	13.13	13.15	13.52	14.24	14.35	13.82	0.69	5.23
Asia Pacific	7.38	7.85	6.98	7.19	7.94	7.49	0.11	1.45
Total OECD	**44.74**	**45.79**	**45.38**	**46.59**	**47.70**	**46.37**	**1.63**	**3.64**
China	14.97	14.74	14.76	15.09	15.74	15.08	0.12	0.78
India	4.77	5.18	5.16	4.89	5.35	5.14	0.37	7.79
Other Asia	8.63	9.09	9.27	8.73	8.90	8.99	0.37	4.26
Latin America	6.23	6.32	6.36	6.55	6.40	6.41	0.18	2.92
Middle East	7.79	8.06	8.13	8.40	8.22	8.20	0.41	5.26
Africa	4.22	4.51	4.25	4.22	4.53	4.38	0.16	3.68
Russia	3.61	3.67	3.42	3.45	3.59	3.53	-0.08	-2.32
Other Eurasia	1.21	1.22	1.16	1.03	1.21	1.15	-0.06	-4.61
Other Europe	0.75	0.79	0.75	0.73	0.80	0.77	0.01	1.63
Total Non-OECD	**52.18**	**53.58**	**53.25**	**53.07**	**54.73**	**53.66**	**1.47**	**2.83**
Total World	**96.92**	**99.36**	**98.63**	**99.67**	**102.42**	**100.03**	**3.10**	**3.20**
Previous Estimate	96.92	99.36	98.56	99.93	102.22	100.03	3.10	3.20
Revision	0.00	0.00	0.07	-0.26	0.20	0.00	0.00	0.00

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

Table 4 - 2: World oil demand in 2023*, mb/d

World oil demand	2022	1Q23	2Q23	3Q23	4Q23	2023	Change 2023/22 Growth	Change 2023/22 %
Americas	25.06	25.13	25.35	25.71	25.88	25.52	0.46	1.84
of which US	*20.53*	*20.42*	*20.50*	*20.79*	*21.06*	*20.69*	*0.16*	*0.78*
Europe	13.82	13.19	13.59	14.38	14.46	13.91	0.09	0.62
Asia Pacific	7.49	7.88	7.03	7.23	7.96	7.53	0.04	0.48
Total OECD	**46.37**	**46.20**	**45.97**	**47.32**	**48.30**	**46.95**	**0.58**	**1.26**
China	15.08	15.35	15.74	15.78	16.27	15.79	0.70	4.67
India	5.14	5.41	5.44	5.15	5.59	5.40	0.25	4.95
Other Asia	8.99	9.49	9.61	9.09	9.25	9.36	0.36	4.04
Latin America	6.41	6.48	6.48	6.71	6.54	6.55	0.15	2.29
Middle East	8.20	8.45	8.46	8.73	8.51	8.54	0.33	4.06
Africa	4.38	4.71	4.44	4.41	4.72	4.57	0.19	4.34
Russia	3.53	3.69	3.44	3.62	3.77	3.63	0.10	2.84
Other Eurasia	1.15	1.22	1.16	1.04	1.22	1.16	0.01	0.72
Other Europe	0.77	0.80	0.76	0.75	0.82	0.78	0.02	2.32
Total Non-OECD	**53.66**	**55.60**	**55.53**	**55.28**	**56.69**	**55.78**	**2.12**	**3.95**
Total World	**100.03**	**101.80**	**101.50**	**102.60**	**104.99**	**102.73**	**2.70**	**2.70**
Previous Estimate	100.03	101.75	101.34	102.92	104.85	102.72	2.70	2.70
Revision	0.00	0.05	0.15	-0.32	0.14	0.00	0.00	0.00

*Note: * 2022 and 2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

OECD

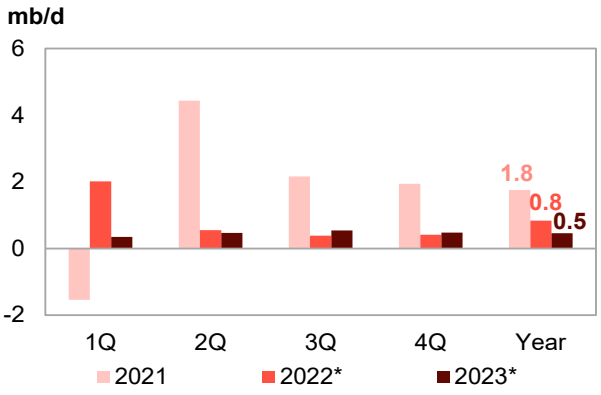
OECD Americas

Update on the latest developments

Against some expectations, **oil demand in the US** has shown signs of recovery. Despite soaring inflation in June, oil demand rebounded from an annual contraction of 20 tb/d in May to modest growth of 0.2 mb/d annually in June. As US domestic air traffic remained mostly healthy, jet/kerosene led the demand improvement to grow by 0.3 mb/d y-o-y in June, essentially at the same rate compared to the previous month.

Gasoline consumption in June slumped by 0.2 mb/d y-o-y compared with the 30 tb/d annual decline recorded in May. Gasoline demand was promising at the beginning of the summer driving season, but the sudden rise in inflation and high prices had an adverse impact on gasoline consumption.

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



*Note: * 2022-2023 = Forecast. Source: OPEC.*

Diesel recovered from its 30 tb/d y-o-y decline in May, with demand rising by 50 tb/d in June. **Other fuels** improved, with annual growth of 0.1 mb/d y-o-y following a decline of the same rate in May. **LPG** slowed to 0.1 mb/d y-o-y in June from 0.3 mb/d y-o-y growth in May. Demand for **naphtha** contracted by 80 tb/d in June following a 70 tb/d annual decline in the previous month, and **residual fuels** slumped by 60 tb/d annually in June from an 80 tb/d annual increment in May.

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

By product	Jun 21	Jun 22	Change Growth	Jun 22/Jun 21 %
LPG	3.37	3.49	0.13	3.7
Naphtha	0.21	0.13	-0.08	-37.1
Gasoline	9.36	9.13	-0.23	-2.5
Jet/kerosene	1.43	1.71	0.28	19.8
Diesel	3.95	3.99	0.05	1.2
Fuel oil	0.35	0.29	-0.06	-17.1
Other products	2.23	2.33	0.10	4.5
Total	**20.88**	**21.06**	**0.19**	**0.9**

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

Near-term expectations

In 2H22, US oil demand is expected to improve and reach 0.4 mb/d in 3Q22 and remain at that rate in 4Q22. Gasoline demand is due for a rebound following a steady drop in retail prices, which supported demand during the summer driving season, while 3Q22 appears to be promising in terms of travel activity. However, the beginning of cold weather in 4Q22 will slightly reduce mobility activity and affect gasoline demand. Nevertheless, there is the possibility of upside for year-end seasonal demand for diesel.

In 2023, US oil demand is forecast to increase by around 0.2 mb/d y-o-y. The 2023 outlook is subject to many uncertainties, including the possibility of economic activity being less robust. High inflation and rising interest rates could also affect consumer confidence. In addition, industrial output is on decline. On the positive side, oil demand next year is to be supported by petrochemical and transportation sector requirements for oil products. Gasoline demand will be backed by improved mobility. Expansion in the petrochemical industry and consequently healthy petrochemical margins will provide support to light distillates in 2023. Furthermore, improvements in aviation sector activity will support the demand for jet/kerosene.

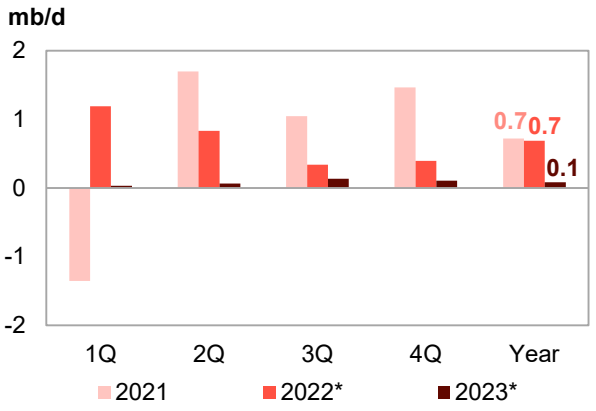
In 1Q23, oil demand will grow marginally by 40 tb/d y-o-y. The low growth can be attributed to the high baseline comparison with strong growth of 1.8 mb/d in 1Q22. During the quarter, mobility activity is expected to slow due to winter weather and this, combined with forecasted slower economic growth, will weigh on transportation fuels. However, by 2Q23, economic activity is expected to improve and support the industrial sector and mobility, which will help oil demand to grow by 0.2 mb/d y-o-y.

OECD Europe

Update on the latest developments

Oil demand in OECD Europe has fallen from 1 mb/d y-o-y in May to 0.4 mb/d in June as inflation and the impact of geopolitical tensions continue to weigh on the region. The Euro-zone's annual inflation rate in June reached a new record high of 8.6%, compared to 2.2% a year earlier. However, the index of industrial output rose from 104.7 in May to 108 in June. A sharper deceleration in business activity, including trucking, and high costs slowed down the consumption of diesel in the region. Diesel consumption slumped from 0.2 mb/d y-o-y in May to a decline of 0.2 mb/d y-o-y in June.

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



*Note: * 2022-2023 = Forecast. Source: OPEC.*

The consumption of gasoline in the region also weakened in June, despite seasonal norms and expectations. Gasoline demand fell to 0.2 mb/d y-o-y in May compared with 40 tb/d y-o-y in June. As road mobility weakened in the region, air travel remained healthy, according to the International Air Transport Association (IATA) Air Passenger Market Analysis for June. European carriers' June traffic rose 234.4% versus June 2021. Capacity rose 134.5%, and load factor climbed 25.8 pp to 86.3%. International traffic within Europe is above pre-pandemic levels in seasonally adjusted terms.

On the back of this development, jet/kerosene demand grew by 0.1 mb/d y-o-y. The demand for naphtha improved from 30 tb/d annually in May to 80 tb/d y-o-y in June. However, LPG is still sluggish, recording a decline by 70 tb/d y-o-y in June, although this is an improvement compared with the decline of 90 tb/d annually in previous month.

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

By product	Jun 21	Jun 22	Change Growth	Jun 22/Jun 21 %
LPG	0.43	0.39	-0.04	-9.4
Naphtha	0.44	0.46	0.03	6.0
Gasoline	1.22	1.26	0.04	3.1
Jet/kerosene	0.41	0.72	0.31	74.4
Diesel	3.29	3.02	-0.26	-8.0
Fuel oil	0.16	0.21	0.05	32.9
Other products	0.52	0.51	-0.01	-1.5
Total	**6.46**	**6.56**	**0.11**	**1.7**

*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

Economic momentum in OECD Europe is slowing, with GDP growth revised down from 3.2% to 3.1%. Similarly, the region's annual inflation rate reached a new record high of 8.9% in July 2022, compared to 8.6% in June and 2.2% a year earlier.

Despite the likely economic challenges, there is expectation for higher oil demand as the EU is set to lead global gas-to-oil switching due to soaring prices of natural gas and supply uncertainties during the winter. The gas-to-oil switching is expected to boost oil consumption in the region by about 200,000 b/d. In addition, dry conditions in parts of Europe have led to a significant downturn in hydropower generation, and this is likely to add pressure to electricity producers during winter and may lead to additional switching to oil in 4Q22. The oil-to-gas switching is expected to make oil products more attractive, particularly for industries that can fire their boilers with liquid fuels. Fuel oil and LPG are going to be major beneficiaries among the oil products. Similarly, residual fuel oil will account for a substantial portion of the incremental global shift to oil from natural gas. Finally, air travel improvements will enhance the demand for jet/kerosene in the region.

The outlook for European oil demand in 2023 is still with somewhat uncertain. The region's GDP growth is projected to slowdown, from 3.1% in 2022 to 1.7% in 2023. Furthermore, the geopolitical crisis and supply chain bottlenecks are likely to continue weighing on oil demand prospects in 1H23. Due to such factors, oil demand may not grow spectacularly in 1H23, rising by 30 tb/d y-o-y growth in 1Q23 and marginally improving to 70 tb/d in 2Q23.

Nevertheless, as prices of natural gas continue rising, gas-to-oil switching is going to aid oil products, including fuel oil, LPG and residual oil in the region's industrial sector. Finally, demand for air travel will remain stable and promote jet/kerosene consumption in the region.

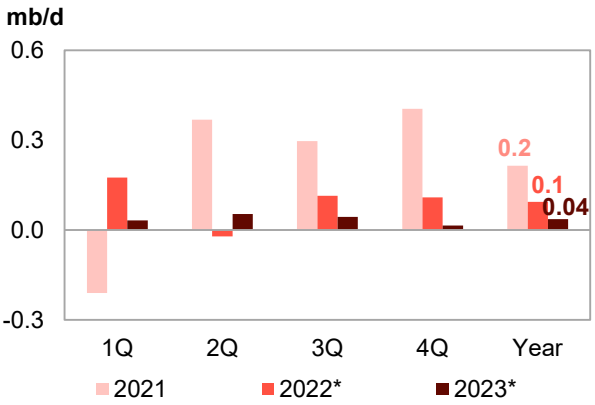
OECD Asia Pacific

Update on the latest developments

Oil demand in OECD Asia Pacific sharply undershot expectations and nosedived by 0.2 mb/d y-o-y in June after posting annual growth of 0.1 mb/d in May. Although the COVID-19 situation in the region's major consuming countries is easing gradually, economic and social activity are yet to fully return to pre-pandemic levels. Jet/kerosene is one of the products that remained on a positive trajectory in June. According to the IATA Air Passenger Market Analysis, airlines based in the Asia Pacific recorded the strongest y-o-y growth rates for international revenue passenger kilometres (RPKs) in June, at 492%. This sharp uptake reflects the recent policy decisions in countries including Japan to re-open travel markets. Behind this healthy development, **jet/kerosene** annual demand is seen rising by 40 tb/d, unchanged from last month. Residual and other fuels posted marginal growth of 10 tb/d y-o-y each in June.

Rising inflation has affected domestic activity, including mobility. Accordingly, gasoline demand slumped by 60 tb/d from 70 tb/d annual growth last month. Diesel demand also eased, falling by 40 tb/d y-o-y growth in June, compared to growth of 70 tb/d y-o-y in May Furthermore, the supply chain bottlenecks related to China's zero-COVID-19 policy have negatively affected the demand for naphtha in the region. Asia Pacific's naphtha-fed steam cracker operations remain low and the region's naphtha market is feeling the pinch of China's weak economic and industrial growth, with the product posting a decline of 60 tb/d annually in June.

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



*Note: * 2022-2023 = Forecast. Source: OPEC.*

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

By product	Jul 21	Jul 22	Change Growth	Jul 22/Jul 21 %
LPG	0.36	0.22	-0.13	-37.2
Naphtha	0.61	0.62	0.01	1.7
Gasoline	0.75	0.76	0.01	0.8
Jet/kerosene	0.21	0.23	0.02	9.5
Diesel	0.70	0.71	0.01	2.1
Fuel oil	0.25	0.26	0.01	4.0
Other products	0.24	0.38	0.14	57.2
Total	**3.11**	**3.18**	**0.07**	**2.2**

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

Near-term expectations

Most countries in the region are now learning to co-exist with COVID-19. However, a slower economic recovery – with annual growth of 2.1% – will affect both manufacturing activity and mobility.

Nevertheless, the gradual reopening of South Korea's economy is expected to support consumer confidence and the mobility recovery in the region, which along with improvements in the region's aviation operations, could boost gasoline and jet/kerosene demand. In Japan, pent-up demand is expected to rise further, boosted by substantial policy support which will in turn help support oil demand in 2022. On average, oil demand in the OECD Asia Pacific is expected to remain at 0.1 mb/d, y-o-y growth in 2H22.

In 2023, the outlook for the region is clouded by the expected slow pace of the economic recovery. GDP growth has been scaled down from 2.1% in 2022 to 1.8% in 2023. Furthermore, geopolitical tensions have contributed to supply bottlenecks and COVID-19 restrictions add additional challenges that are a posing threat to the economy of the region and will weigh on oil demand in 2023. On average, oil demand is expected to remain at about 30 tb/d in 1Q23.

Nevertheless, many governments in the region are under pressure to increase spending to provide relief from rising inflation; this will boost consumers' purchasing power. Additionally, the South Korean government's subsidy rate hike and current Japanese subsidies on gasoline will bring succour to oil demand in the region in the short term. These factors will help oil demand improve by 20 tb/d and reach growth of 50 tb/d, y-o-y in 2Q23.

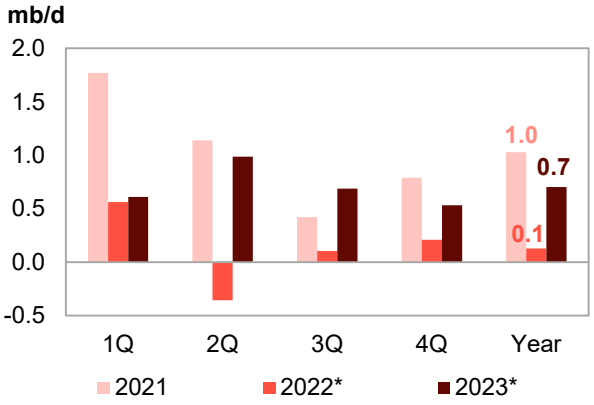
Non-OECD

China

Update on the latest developments

Oil demand has yet to recover as **China** has extended regionalized COVID-19 restrictions. Domestic oil demand weakened further by 0.2 mb/d y-o-y in July, from 30 tb/d annually in June. Nevertheless, distillates demand has improved from annual growth of 40 tb/d in June to 0.3 mb/d y-o-y in July. Industrial activity boosted the demand for diesel. S&P Global/Haver Analytics reported that China's PMI remained on a positive trajectory, despite the zero-COVID-19 policy, the PMI in July was 52.2%. LPG demand remained on a positive trajectory, and although weak in July as compared to June, it posted annual growth 90 tb/d (4%) y-o-y compared to 0.2 mb/d y-o-y growth in June. Naphtha also eased from 90 tb/d y-o-y growth in June to 50 tb/d y-o-y growth in July.

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



*Note: * 2022-2023 = Forecast. Source: OPEC.*

Naphtha has been under pressure due to a decline petrochemical feedstock requirements caused by falling demand for plastic fittings from house builders due to the zero-COVID-19 policy, which has hampered construction activity.

Gasoline demand fell again to an annual decline of 0.4 mb/d in July from a decline of 0.3 mb/d y-o-y in the previous month, even though sales of motor vehicles in China increased 23% in July compared to the same period in 2021. The demand for air travel continued to slow due pandemic restrictions, with air transport turnover falling by 21% in July according to statistics from key performance indicators for China's aviation industry. This affected the demand for jet/kerosene, which fell by 0.2 mb/d y-o-y in July. Meanwhile, the demand for other products has also softened with annual growth of 90 tb/d.

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

By product	Jul 21	Jul 22	Change Jul 22/Jul 21 Growth	%
LPG	2.36	2.46	0.09	4.0
Naphtha	1.96	2.01	0.05	2.6
Gasoline	3.01	2.65	-0.36	-11.9
Jet/kerosene	0.49	0.29	-0.20	-40.5
Diesel	2.86	3.14	0.28	9.7
Fuel oil	0.86	0.85	-0.02	-1.8
Other products	1.52	1.43	-0.09	-6.2
Total	**13.06**	**12.82**	**-0.24**	**-1.9**

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

Near-term expectations

Remaining economic and social challenges induced by the zero-COVID-19 policy restrictions are likely to undermine oil demand prospects in China during 2H22. China's GDP was revised down to 4.2% compared to 4.5% in the last MOMR. In addition, the lockdown has already created more bottlenecks and industrial closures in some provinces. These factors will dampen the demand for distillates from the industrial sector. Similarly, extended lockdowns will dampen mobility and air travel demand. The combination of these factors will weigh on oil demand in 3Q22. In the third quarter we expect Chinese oil demand to grow by 0.1 mb/d, y-o-y, mostly supported by petrochemical and household demand for LPG and naphtha.

In 4Q22, China's economy is expected to improve amid the relaxation of restrictions and high demand for exports to other parts of the world during the Christmas festivities. The combination of these factors will support the industrial sector and will enhance the demand for distillates. Furthermore, as air travel continues to recover amidst improvements in the COVID-19 situation, jet fuel will also continue to recover while the petrochemical industry's demand for light distillates will continue to support the demand for LPG and naphtha. In the 4Q22,

Chinese oil demand is forecast to reach 0.2 mb/d annual growth. In October, China's gasoline demand is expected to recover as virus flare-ups affect only a few cities, while leisure and business travel recover to more normal levels. Public holidays will aid gasoline demand. Diesel consumption will be supported by the harvest season as well as mining and industrial activity amid government stimulus. Already the People's Bank of China cut its interest rates by 10 bps, which should stimulate economic activity, particularly in the manufacturing and construction sectors and lift the demand for distillates.

In first half of 2023, the Chinese economy is expected to continue to improve from 4% GDP growth in 4Q22 to 5% in 1Q23 as COVID-19 wanes. This will lead to an improvement in mobility and aid the demand for gasoline and transportation diesel. Furthermore, supply chain bottlenecks are expected to ease and construction and industrial activity will pick up. Hence, construction companies and industries will continue to place orders for oil products to meet their demand for energy, raw materials and plastic fittings; these factor will support demand for diesel and bitumen and naphtha. Air travel, both domestic and international, is expected to continue its recovery. These factors are expected to support oil demand growth in 1H23. In 1Q23, oil demand is forecast to grow by 0.6 mb/d y-o-y. In this quarter, the demand will be driven largely by gasoline and diesel, followed by petrochemical feedstock requirements for LPG and naphtha.

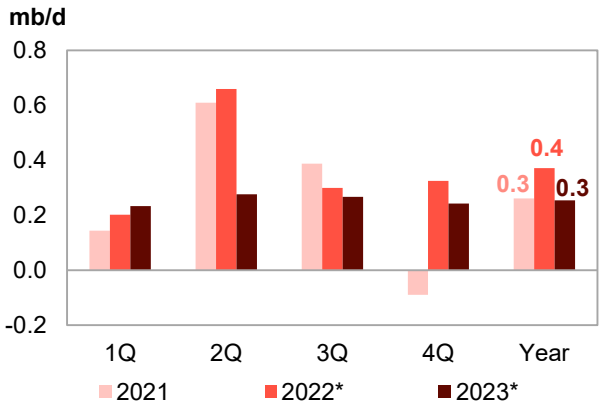
In 2Q23, oil demand in China is forecast to continue on its growth trajectory and reach 1.0 mb/d annually, to be led by transportation fuels and supported by petrochemical feedstock demand. As the aviation sector improves, the jet/kerosene demand will improve farther. However, the prospects for demand largely depend on the COVID-19 situation and the extent of government's restrictions and the response of the Chinese economy to the situation.

India

Update on the latest developments

India's oil demand softened in July amid the arrival of intense monsoon rains that weighed heavily on the economy and resulted in a slowdown in mobility, construction and agricultural activity. The slowdown in sectoral activity chipped away at the consumption of oil products. In July, total annual growth of oil demand was about 0.3 mb/d, y-o-y or growth about 0.4 mb/d lower than consumption in June. However, consumption is still very strong at about 4.4 mb/d, suggesting that the oil outlook is improving. Transportation fuels remained the main drivers of oil demand in July. Amid the decline in construction and agricultural activity, diesel grew by 0.1 mb/d y-o-y compared with 0.4 mb/d annual growth in previous month.

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



*Note: * 2022-2023 = Forecast. Source: OPEC.*

Despite the lower growth in July diesel demand, there is a glimpse of hope as the Global India Manufacturing Purchasing Managers' Index (PMI) jumped to 56.4 in July from 53.9 in June. Gasoline also posted growth of 50 tb/d y-o-y compared to 0.2 mb/d in June. Gasoline consumption was also affected by strong rains which hampered mobility in July. LPG demand from residential requirements for cooking and the petrochemical sector has improved immensely from sluggish growth of 10 tb/d y-o-y in June to 20 tb/d y-o-y growth in July.

India's domestic jet fuel consumption slipped by 40 tb/d y-o-y compared to 60 tb/d annually in June. Jet/kerosene demand was impacted by cyclicality in passenger travel, mainly arising from the lean period during the monsoon season. Nevertheless, the demand remained high as international travel surpassed pre-COVID-19 levels. Demand for naphtha improved from a decline of 40 tb/d in June to decline of 20 tb/d y-o-y in July. Demand for other fuels grew by a marginal 30 tb/d y-o-y and consumption of other products, including bitumen, was affected by the monsoon-induced construction slowdown. The consumption of other products slipped to 30 tb/d y-o-y in July from 0.2 mb/d y-o-y in June.

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

By product	Jul 21	Jul 22	Change Jul 22/Jul 21 Growth	%
LPG	0.83	0.85	0.02	1.8
Naphtha	0.31	0.29	-0.02	-6.6
Gasoline	0.71	0.76	0.05	6.8
Jet/kerosene	0.12	0.16	0.04	34.1
Diesel	1.62	1.73	0.11	7.0
Fuel oil	0.27	0.29	0.02	7.2
Other products	0.28	0.31	0.03	10.8
Total	**4.14**	**4.39**	**0.25**	**5.9**

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

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

Near-term expectations

India's oil demand outlook is poised to improve as economic growth is to remain firm at 7.1% in 2022, thus supporting mobility and industrial activity. Oil demand is expected to grow by 0.3 mb/d in 2H22 as COVID-19 cases decline substantially and economic and social activity recover after the monsoon season. Growth is also expected to be supported by a positive PMI. Distillates are expected to be supported by post-monsoon cultivation and harvesting activity in October. Additionally, the annual festivals in 4Q22 will support mobility and boost gasoline demand amid improvements in air travel, which will aid jet/kerosene demand.

In 2023, India's oil demand is expected to grow on average at 0.2 mb/d y-o-y in 1Q23, on the back of vigorous GDP growth at 6%. Oil demand is projected to improve from 0.2 mb/d annual growth in 1Q23 to 0.3 mb/d annually in 2Q23. In 2Q23, the improvement in demand growth will be aided by healthy GDP growth, which will support mobility and steady demand for distillates in the manufacturing sector.

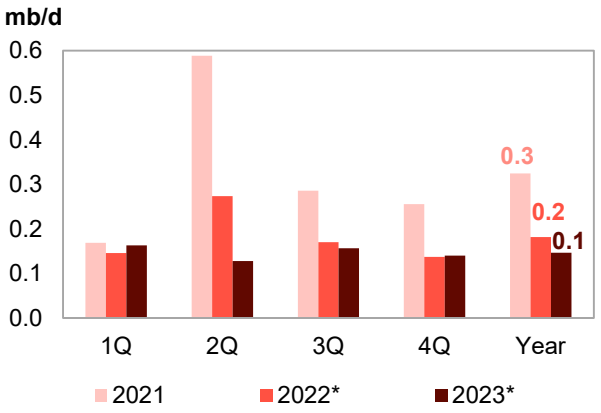
Furthermore, the relaxation of stringent COVID-19-related travel restrictions should boost domestic and international air travel demand and thus support jet/kerosene demand in 1H23. Finally, the Indian government announced subsidies of Rs.200 per 14.2 kg of domestic LPG cylinders up to 12 refills per year for 2022 and 23. This will boost the demand for LPG from residences and smaller industries in India during the period.

Latin America

Update on the latest developments

Oil demand in Latin America slackened slightly from annual growth of 0.3 mb/d in May to 0.1 mb/d y-o-y in June. Although COVID-19 has remained contained in the region, global trade-related bottlenecks continue to disrupt regional manufacturing activity leading to high production costs and surging inflation. Inflation in the region's major economies, Argentina and Brazil, has risen far above central bank targets, squeezing household incomes and feeding into domestic demand for oil products. Surging input costs weighed on diesel demand, which fell from 0.1 mb/d annual growth in May to 30 tb/d y-o-y growth.

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



*Note: * 2022-2023 = Forecast. Source: OPEC.*

On the back of healthy airline activity, Latin American carriers recorded y-o-y growth in international RPKs of 136.6% in June, helping jet/kerosene demand to remain on a positive trajectory at 60 tb/d y-o-y, although this was the same level as in May. Gasoline demand slowed from 90 tb/d annually in May to grow by 40 tb/d y-o-y in June. Other products marginally improved by 40 tb/d annual growth in June from 30 tb/d in May. However, demand for LPG declined from the levels in May due to increasing prices and a faster return to offices, which decreased residential cooking in some Brazilian households. LPG posted negative growth of 10 tb/d y-o-y in June from annual growth of 10 tb/d in May.

Near-term expectations

Oil demand in the region is expected to remain relatively healthy in 2H22 amid projected economic growth of 3.9%. The acceleration in vaccination efforts and improved manufacturing PMI in the region's big consuming countries will support oil demand recovery. Accordingly, oil demand growth in the region is expected to increase by 0.2 mb/d in 3Q22 but will soften to 0.1 mb/d annually in 4Q22 as the authorities tighten monetary policies aimed at combating inflation and withdraw pandemic-related fiscal support.

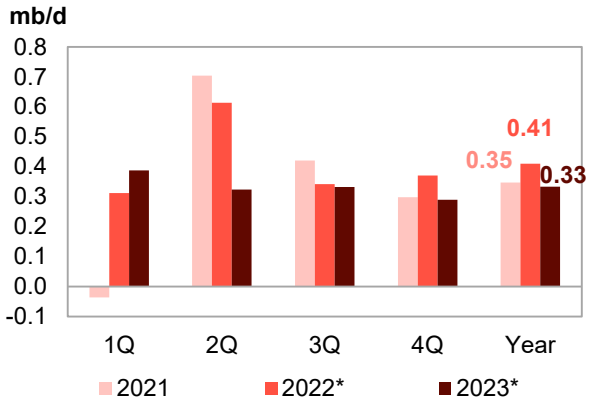
In 2023, oil demand growth is forecast to remain at 0.2 mb/d in 1Q23, amid annual GDP growth of 3.1% combined with expected improvements in the COVID-19 situation in the region as vaccination programmes accelerate. However, in 2Q23, oil demand is projected to ease to 0.1 mb/d annually. The oil demand prospects for Latin America still largely hinge on the region's economic recovery and containment of the pandemic as well as spill-over effects from the slowdown in the global economy.

Middle East

Update on the latest developments

The **Middle East** posted robust oil demand growth in June. Demand doubled from 0.5 mb/d y-o-y in May to a strong growth of 1 mb/d y-o-y growth in June. The June oil demand was driven by power generation requirements for residual fuels in Saudi Arabia due to hot weather and similar requirements for fuel oil in Iraq. Residual fuels posted very strong growth of 0.3 mb/d y-o-y compared to a decline by 70 tb/d May 2022. Similarly, Iraq's requirement for fuel oil helped monthly demand to grow by 0.3 mb/d y-o-y in the region in June 2022.

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



*Note: * 2022-2023 = Forecast. Source: OPEC.*

Furthermore, mobility in the region remained impressive and supported gasoline demand to grow at 0.1 mb/d, y-o-y in June, as gas diesel remained on a positive trajectory at 70 tb/d annual growth in June. IATA's Air Passenger Market Analysis in June shows that the strong recovery in Middle East airline activity continues, with volumes up 246.5% y-o-y in June, helping jet/kerosene to improve from 60 tb/d y-o-y in May to 70 tb/d y-o-y in June. LPG has also grew from 20 tb/d y-o-y growth in May to 30 tb/d y-o-y growth in June. However, naphtha recorded a decline of 10 tb/d y-o-y in May compared with an decline of 20 tb/d,y-o-y in June.

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

By product	Jul 21	Jul 22	Change Jul 22/Jul 21 Growth	%
LPG	0.04	0.05	0.00	11.4
Gasoline	0.47	0.49	0.01	3.1
Jet/kerosene	0.04	0.07	0.03	59.8
Diesel	0.49	0.60	0.11	21.6
Fuel oil	0.54	0.65	0.11	20.5
Other products	0.77	0.75	-0.02	-3.1
Total	**2.36**	**2.60**	**0.24**	**10.0**

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

Sources: JODI and OPEC.

Near-term expectations

Strong economic activity in the region will continue to support oil demand in the near future. Saudi Arabia's economy expanded 9% in the second quarter, maintaining the fastest pace of growth since 2011. Non-oil gross domestic product gained 5.4%. Similarly, the United Arab Emirates (UAE) is optimistic its economy will grow robustly this year as it continues to recover from the pandemic. The expected strong economic growth in region should boost consumer confidence as well as accelerate mobility and industrial activity.

In addition, the hot season is expected to boost electricity demand due to requirements for air conditioning. Hence, demand for residual and fuel oil will continue to accelerate in 2H22. Similarly, the continued strong recovery in international traffic continues should boost jet/kerosene demand and support oil demand growth in the region.

In 1Q23, oil demand is projected to grow by 0.4mb/d y-o-y. Economic growth in the region is expected to be stable and support consumer confidence, which will increase regional demand for social services and consumer goods. Gasoline, transportation diesel and jet kerosene are expected to lead oil demand growth. Gasoil/diesel and fuel oil demand for power generation are also expected to play a significant role in demand growth. By 2Q23, economic growth in the region is projected remain firm, but the momentum is expected to subside and this will affect oil demand growth, which will soften to 0.3 mb/d y-o-y in 2Q23.

World Oil Supply

Non-OPEC liquids supply growth in 2022 (including processing gains) is forecast at 2.1 mb/d for an average of 65.8 mb/d, which is broadly unchanged from the previous assessment. Upward revisions to oil production in Latin America, Other Asia and the Middle East offset downward revisions to the Other Eurasia, OECD America and OECD Europe. However, significant uncertainty regarding Russia's liquids production in the forecast period remains. In the US, solid increases in oil and gas rig counts, as well high fracking activity, are expected to support production going forward. However, completions are lagging behind drilling in the main basins, expanding the number of drilled but uncompleted wells, and the price of materials and services is steadily soaring, due to labour and supply chain issues, as well as cost inflation, which is expected to limit growth. Moreover, despite a quiet August, the forecast for hurricane season sees above-normal activity in the Atlantic region. Lower-than-expected production in 2Q22, as well as an upward revision to historical NGLs output, necessitated a downward revision to the US liquids supply growth forecast for 2022 by 41 tb/d, with output now forecast to grow by 1.1 mb/d y-o-y. The production forecast for Other Eurasia was also revised down due to lower-than-expected output in Azerbaijan and field maintenance along with export disruptions in Kazakhstan. The main drivers of liquids supply growth for the year are expected to be the US, Canada, China, Brazil and Guyana, while production is expected to decline mainly in Thailand and Norway.

Non-OPEC liquids production growth in 2023 also remained broadly unchanged and is expected to rise by 1.7 mb/d to average 67.5 mb/d. The liquids supply in OECD countries is forecast to grow by 1.6 mb/d, while in the non-OECD region it is expected to grow by 0.1 mb/d. The main drivers for liquids supply growth are expected to be the US, Norway, Brazil, Canada and Guyana, whereas oil production is forecast to decline mainly in Russia and Azerbaijan. Nevertheless, uncertainty about the geopolitical situation in Eastern Europe and US shale liquids production growth remains high.

OPEC NGLs and non-conventional liquids production in 2022 is forecast to grow by 0.1 mb/d to average 5.4 mb/d. For 2023, it is forecast to grow by 50 tb/d to average 5.4 mb/d. OPEC-13 crude oil production in August increased by 618 tb/d m-o-m to average 29.65 mb/d, according to available secondary sources.

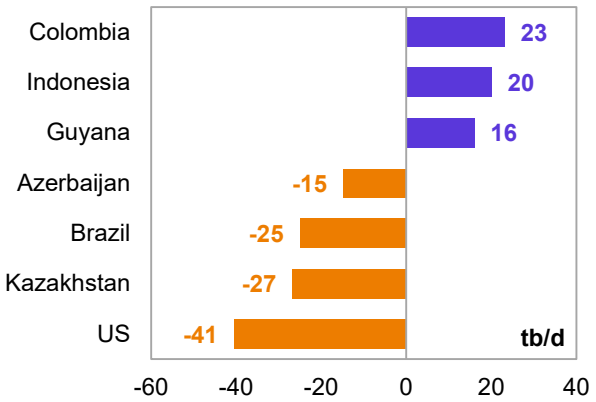
Preliminary non-OPEC liquids production in August, including OPEC NGLs, is estimated to have increased by 0.7 mb/d m-o-m to average 71.6 mb/d, up by 2.8 mb/d y-o-y. As a result, preliminary data indicates that global oil supply in August increased by 1.3 mb/d m-o-m to average 101.3 mb/d, up by 5.6 mb/d y-o-y.

The non-OPEC liquids supply forecast for **2022** mostly remained the same, to average 65.8 mb/d. Y-o-y growth averaged 2.1 mb/d, which is broadly unchanged from the previous month.

The **OECD** supply growth forecast for 2022 was revised down by 36 tb/d. The US and OECD Europe saw downward revisions to their growth forecasts, while that for OECD Asia Pacific remained quite unchanged from the previous month's assessment.

The **non-OECD** supply forecast for 2022 remained unchanged, while downward revisions in Other Eurasia offset upward changes in Latin America, Other Asia and the Middle East.

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



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

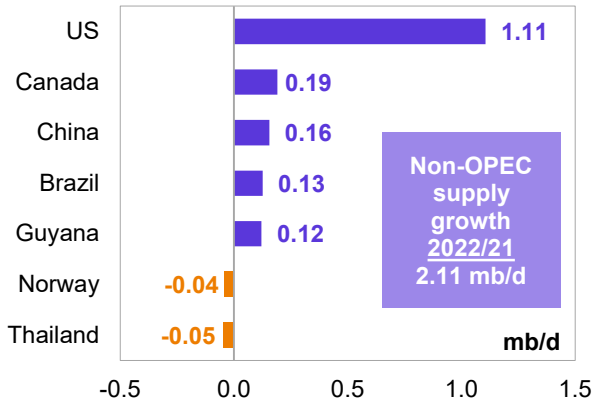
Non-OPEC liquids production growth in **2023** remained broadly unchanged compared with the previous month's assessment.

There were some small upward and downward revisions, mainly in Other Eurasia, Latin America and OECD America, which offset each other.

Key drivers of growth and decline

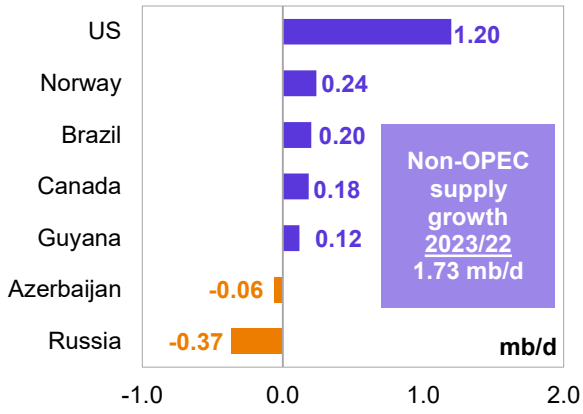
The **key drivers of non-OPEC liquids supply growth in 2022** are projected to be the US, Canada, China, Brazil and Guyana, while oil production is expected to decline mainly in Thailand and Norway.

Graph 5 - 2: Annual liquids production changes for selected countries in 2022*



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

Graph 5 - 3: Annual liquids production changes for selected countries in 2023*



*Note: * 2023 = Forecast. Source: OPEC.*

For **2023**, the key drivers of non-OPEC supply growth are forecast to be the US, Norway, Brazil, Canada and Guyana, while oil production is projected to decline mainly in Russia and Azerbaijan.

Non-OPEC liquids production in 2022 and 2023

Table 5 - 1: Non-OPEC liquids production in 2022*, mb/d

							Change 2022/21	
Non-OPEC liquids production	**2021**	**1Q22**	**2Q22**	**3Q22**	**4Q22**	**2022**	**Growth**	**%**
Americas	25.25	25.86	26.26	26.90	27.34	26.59	1.34	5.31
of which US	*17.85*	*18.27*	*18.83*	*19.19*	*19.52*	*18.95*	*1.11*	*6.20*
Europe	3.76	3.73	3.43	3.74	3.99	3.72	-0.03	-0.87
Asia Pacific	0.51	0.49	0.51	0.55	0.54	0.52	0.01	2.01
Total OECD	**29.52**	**30.08**	**30.20**	**31.19**	**31.86**	**30.84**	**1.32**	**4.47**
China	4.31	4.50	4.50	4.42	4.43	4.46	0.16	3.60
India	0.77	0.77	0.77	0.80	0.82	0.79	0.02	2.20
Other Asia	2.41	2.37	2.32	2.36	2.39	2.36	-0.04	-1.83
Latin America	5.95	6.11	6.15	6.32	6.49	6.27	0.31	5.29
Middle East	3.24	3.29	3.33	3.40	3.40	3.35	0.11	3.53
Africa	1.35	1.33	1.32	1.34	1.33	1.33	-0.02	-1.46
Russia	10.80	11.33	10.62	10.90	10.70	10.88	0.08	0.77
Other Eurasia	2.93	3.05	2.77	2.93	3.21	2.99	0.06	2.18
Other Europe	0.11	0.11	0.11	0.10	0.10	0.11	-0.01	-6.36
Total Non-OECD	**31.87**	**32.85**	**31.89**	**32.58**	**32.86**	**32.54**	**0.68**	**2.13**
Total Non-OPEC production	61.39	62.94	62.08	63.77	64.72	63.38	2.00	3.25
Processing gains	2.29	2.40	2.40	2.40	2.40	2.40	0.11	4.90
Total Non-OPEC liquids production	**63.67**	**65.33**	**64.48**	**66.17**	**67.12**	**65.78**	**2.11**	**3.31**
Previous estimate	63.65	65.37	64.55	66.26	67.00	65.80	2.14	3.37
Revision	0.02	-0.03	-0.06	-0.09	0.12	-0.02	-0.04	-0.06

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

Table 5 - 2: Non-OPEC liquids production in 2023*, mb/d

Non-OPEC liquids production	2022	1Q23	2Q23	3Q23	4Q23	2023	Change 2023/22 Growth	Change 2023/22 %
Americas	26.59	27.58	27.68	28.05	28.42	27.94	1.34	5.05
of which US	*18.95*	*19.77*	*20.07*	*20.26*	*20.49*	*20.15*	*1.20*	*6.33*
Europe	3.72	4.05	3.97	3.88	3.98	3.97	0.25	6.62
Asia Pacific	0.52	0.53	0.50	0.53	0.48	0.51	-0.01	-2.21
Total OECD	**30.84**	**32.17**	**32.16**	**32.46**	**32.88**	**32.42**	**1.58**	**5.12**
China	4.46	4.51	4.51	4.48	4.48	4.49	0.03	0.64
India	0.79	0.82	0.80	0.79	0.78	0.80	0.01	1.09
Other Asia	2.36	2.37	2.33	2.29	2.28	2.31	-0.05	-1.97
Latin America	6.27	6.44	6.61	6.70	6.76	6.63	0.36	5.73
Middle East	3.35	3.38	3.40	3.42	3.41	3.40	0.05	1.48
Africa	1.33	1.34	1.35	1.37	1.39	1.36	0.04	2.65
Russia	10.88	10.49	10.48	10.54	10.57	10.52	-0.37	-3.36
Other Eurasia	2.99	3.08	2.98	2.94	3.02	3.00	0.01	0.41
Other Europe	0.11	0.10	0.10	0.10	0.10	0.10	0.00	-2.83
Total Non-OECD	**32.54**	**32.52**	**32.56**	**32.63**	**32.78**	**32.62**	**0.08**	**0.24**
Total Non-OPEC production	63.38	64.69	64.72	65.08	65.65	65.04	1.66	2.61
Processing gains	2.40	2.47	2.47	2.47	2.47	2.47	0.07	2.96
Total Non-OPEC liquids production	**65.78**	**67.16**	**67.19**	**67.55**	**68.12**	**67.51**	**1.73**	**2.63**
Previous estimate	65.80	67.16	67.20	67.54	68.13	67.51	1.71	2.60
Revision	-0.02	0.00	-0.01	0.01	0.00	0.00	0.02	0.03

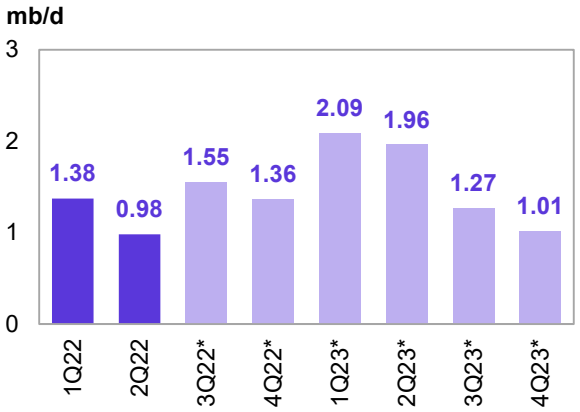
*Note: * 2022-2023 = Forecast. Totals may not add up due to independent rounding. Source: OPEC.*

OECD

OECD liquids production in 2022 is forecast to increase by 1.3 mb/d y-o-y to average 30.8 mb/d. This was revised down slightly by 36 tb/d, compared with a month earlier, on the back of downward revisions for the US and OECD Europe.

OECD Americas was revised down by 23 tb/d, compared with last month's assessment. Based on this revision, OECD Americas is forecast to grow by 1.3 mb/d to average 26.6 mb/d. Oil production in OECD Europe is anticipated to decline slightly y-o-y by 33 tb/d to average 3.7 mb/d, while OECD Asia Pacific is projected to grow y-o-y by a minor 10 tb/d to average 0.5 mb/d.

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



*Note: * 3Q22-4Q23 = Forecast. Source: OPEC.*

For **2023**, oil production in the OECD is likely to grow by 1.6 mb/d to average 32.4 mb/d, with growth of 1.3 mb/d from OECD Americas to average 27.9 mb/d. Yearly liquids production in OECD Europe is anticipated to grow by 0.2 mb/d to average 4.0 mb/d, while OECD Asia Pacific is expected to decline by 12 tb/d y-o-y to average 0.5 mb/d.

OECD Americas

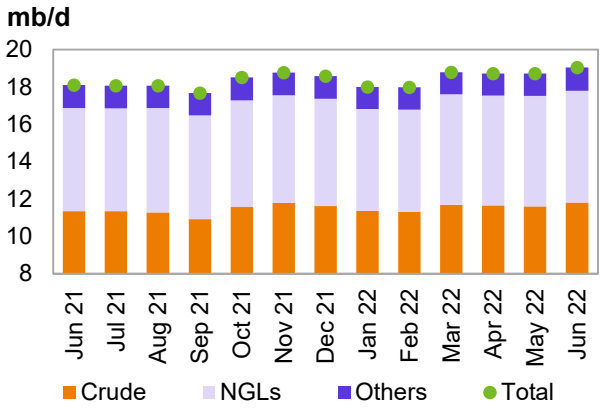
US

US liquids production jumped by 312 tb/d m-o-m in **June 2022** to average 19.0 mb/d, and was up by 0.9 mb/d compared with June 2021.

Crude oil and condensate production rose in **June 2022** by 201 tb/d m-o-m to average 11.8 mb/d, up by 0.5 mb/d y-o-y.

Regarding the **crude and condensate production breakdown by region (PADDs)**, production increased mainly on the US Gulf Coast (USGC), up by 206 tb/d to average 8.4 mb/d. The West Coast and East Coast showed slight decreases, while the Rocky Mountain region remained broadly unchanged. However, an increase of 26 tb/d was recorded in the Midwest, mainly in North Dakota. Production growth in the main regions was primarily due to higher drilling activities and a return to normal production in the GoM after completion of maintenance.

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



Source: OPEC.

NGLs production was up by 69 tb/d m-o-m to average 6.0 mb/d in June, higher by 0.5 mb/d y-o-y. Production of **non-conventional liquids** (mainly ethanol) increased by 42 tb/d m-o-m to average 1.2 mb/d in June, according to the US Department of Energy (DoE). Preliminary estimates see non-conventional liquids averaging 1.2 mb/d in July, down by 16 tb/d compared with the previous month.

Production in the Gulf of Mexico (GoM) rose m-o-m by 183 tb/d in June to average 1.8 mb/d, as maintenance wrapped up on Gulf Coast offshore platforms, allowing volumes to return to normal. In the **onshore lower 48**, June production increased m-o-m by 46 tb/d to average 9.6 mb/d.

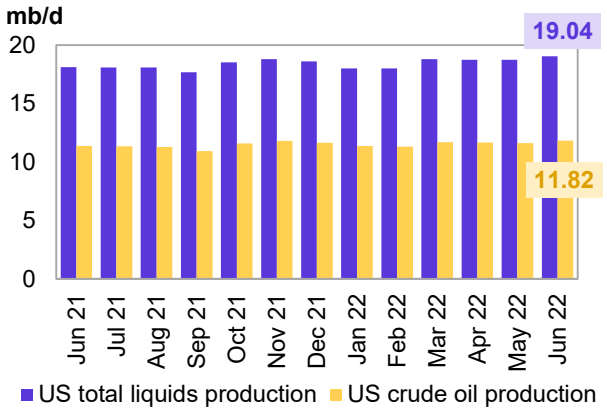
Looking at **individual states**, oil production in New Mexico increased by 30 tb/d m-o-m to average 1.5 mb/d, 285 tb/d higher than a year ago. Production in Texas was down by a minor 7 tb/d to average 5.0 mb/d, 177 tb/d higher than a year ago. In the Midwest, production in North Dakota increased by 36 tb/d m-o-m to average 1.1 mb/d, down by 36 tb/d y-o-y, while that in Oklahoma was down by 7 tb/d to average 0.4 mb/d. Oil output in Alaska and Colorado was also down by 28 tb/d and a minor 5 tb/d, m-o-m, respectively.

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

State	Jun 21	May 22	Jun 22	Change m-o-m	Change y-o-y
Texas	4,782	4,966	4,959	*-7*	*177*
Gulf of Mexico (GOM)	1,783	1,608	1,791	*183*	*8*
New Mexico	1,246	1,501	1,531	*30*	*285*
North Dakota	1,125	1,053	1,089	*36*	*-36*
Alaska	440	447	419	*-28*	*-21*
Colorado	408	434	429	*-5*	*21*
Oklahoma	391	424	417	*-7*	*26*
Total	**11,356**	**11,615**	**11,816**	***201***	***460***

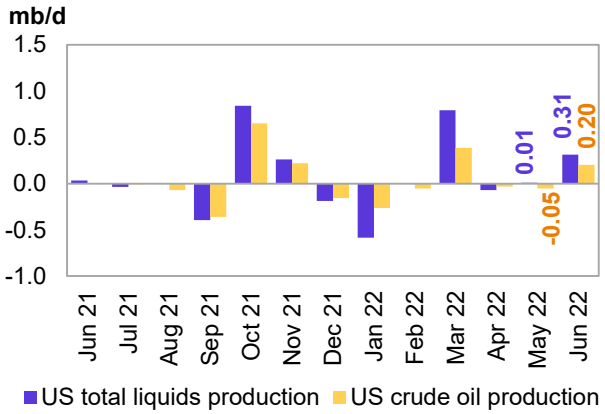
Sources: EIA and OPEC.

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



Sources: EIA and OPEC.

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



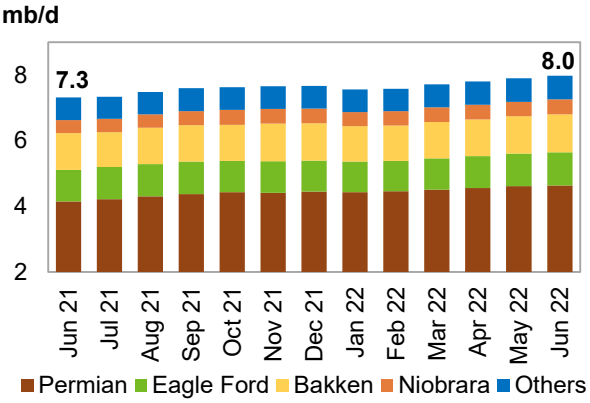
Sources: EIA and OPEC.

US tight crude output for **June** is estimated to have increased by 80 tb/d m-o-m to average 8.0 mb/d, which is 0.7 mb/d higher than the same month a year earlier.

The m-o-m increase from shale and tight formations through horizontal wells came partly from the Permian, which increased by 18 tb/d to average 4.6 mb/d. This is a rise of 0.5 mb/d y-o-y.

In the Williston Basin, production of Bakken shale increased marginally by 20 tb/d to average 1.2 mb/d, up by 38 tb/d y-o-y. Tight crude output at Eagle Ford in Texas rose by 24 tb/d to average 1.0 mb/d, up by 60 tb/d y-o-y, while production in Niobrara-Codell in Colorado and Wyoming was up by a minor 9 tb/d to average 0.45 mb/d.

Graph 5 - 8: US tight crude output breakdown



Sources: EIA, Rystad Energy and OPEC.

US liquids production in 2022, excluding processing gains, is forecast to grow y-o-y by 1.1 mb/d to average 19.0 mb/d, revised down by 41 tb/d compared with the previous assessment. The downward revision was due to lower-than-projected production in 2Q22 and historical revisions of NGLs production.

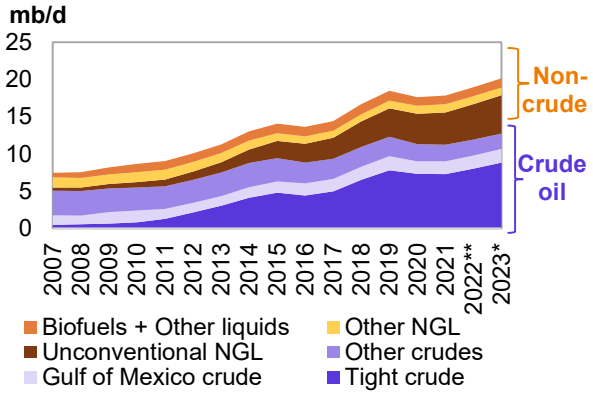
The 2022 gains are due primarily to expected tight crude production growth of 0.7 mb/d, to average 8.0 mb/d. In addition, NGLs, mainly from unconventional basins, are projected to grow by 0.4 mb/d, to average 5.8 mb/d, and production in the GoM is anticipated to increase by 50 tb/d to average 1.8 mb/d. Non-conventional liquids are projected to grow by 40 tb/d to average 1.2 mb/d. However, the expected growth will be partially offset by natural declines in onshore conventional fields of 0.1 mb/d y-o-y.

Given the current pace of drilling and well completions in oil fields, **production of crude oil and condensate** is forecast to grow by 0.7 mb/d y-o-y to average 11.9 mb/d in 2022. This forecast assumes ongoing capital discipline, current inflation rates, ongoing supply chain issues and oil field service section limitations (labour and equipment) in 2022. The hurricane season in the US Gulf Coast also brings uncertainty to the forecast.

US liquids production in 2023, excluding processing gains, is expected to grow by 1.2 mb/d y-o-y to average 20.2 mb/d, unchanged from the previous assessment. In addition, more drilling activity and fewer supply chain issues in the prolific Permian Basin, Eagle Ford and Bakken shale sites are assumed for 2023. Crude oil output is anticipated to jump by 0.8 mb/d y-o-y to average 12.7 mb/d.

At the same time, NGLs production and non-conventional liquids, particularly ethanol, are projected to increase by 0.35 mb/d and 40 tb/d y-o-y to average 6.2 mb/d and 1.3 mb/d, respectively. Average tight crude output in 2023 is expected at 8.8 mb/d, up by 0.8 mb/d.

Graph 5 - 9: US liquids supply developments by component



*Note: * 2022-2023 = Forecast.*
Source: OPEC.

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

US liquids	2021	Change 2021/20	2022*	Change 2022/21	2023*	Change 2023/22
Tight crude	7.29	-0.04	8.02	0.73	8.82	0.80
Gulf of Mexico crude	1.71	0.04	1.76	0.05	1.86	0.10
Conventional crude oil	2.25	-0.06	2.14	-0.11	2.05	-0.09
Total crude	**11.25**	**-0.06**	**11.91**	**0.66**	**12.73**	**0.81**
Unconventional NGLs	4.30	0.22	4.74	0.44	5.14	0.40
Conventional NGLs	1.12	0.03	1.10	-0.03	1.04	-0.05
Total NGLs	**5.42**	**0.25**	**5.84**	**0.41**	**6.18**	**0.35**
Biofuels + Other liquids	1.17	0.02	1.21	0.04	1.25	0.04
US total supply	**17.85**	**0.21**	**18.95**	**1.11**	**20.16**	**1.20**

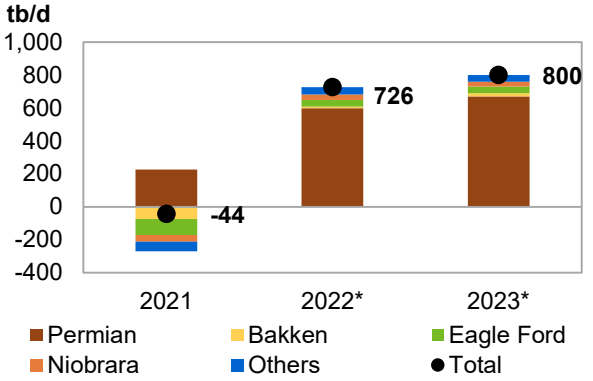
*Note: * 2022-2023 = Forecast. Sources: EIA, OPEC and Rystad Energy.*

US tight crude production in the **Permian** is estimated to have increased by 0.6 mb/d in 2022 to 4.7 mb/d and is forecast to grow by 0.7 mb/d y-o-y to average 5.4 mb/d in 2023.

The decline in **Bakken** shale production that occurred in 2020 and 2021 is expected to reverse to average 1.1 mb/d in 2022, which is still lower than the pre-pandemic average output of 1.4 mb/d. Tight crude production in the Bakken is forecast to grow by 11 tb/d in 2022, on the back of increased drilling activity in North Dakota and available DUC wells. In 2023, growth is forecast at 20 tb/d, to average 1.1 mb/d.

The **Eagle Ford** in Texas saw output of 1.2 mb/d in 2019. A decline then took place in 2020 and 2021, though output is forecast to grow in 2022 by 39 tb/d to average 1.0 mb/d. Growth of 40 tb/d is expected for 2023, to average 1.0 mb/d.

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



*Note: * 2022-2023 = Forecast.*
Sources: EIA, Rystad Energy and OPEC.

Production in the **Niobrara** is forecast to grow by 33 tb/d in 2022 and 30 tb/d in 2023 y-o-y, to average 446 tb/d and 476 tb/d, respectively. Other shale plays are expected to show marginal increases totalling 45 tb/d and 40 tb/d in 2022 and 2023, given current drilling and completion activities.

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

US tight oil	2021	Change 2021/20	2022*	Change 2022/21	2023*	Change 2023/22
Permian tight	4.15	0.23	4.74	0.60	5.41	0.67
Bakken shale	1.11	-0.07	1.12	0.01	1.14	0.02
Eagle Ford shale	0.96	-0.10	1.00	0.04	1.04	0.04
Niobrara shale	0.41	-0.04	0.45	0.03	0.48	0.03
Other tight plays	0.67	-0.06	0.72	0.05	0.76	0.04
Total	**7.29**	**-0.04**	**8.02**	**0.73**	**8.82**	**0.80**

*Note: * 2022-2023 = Forecast. Source: OPEC.*

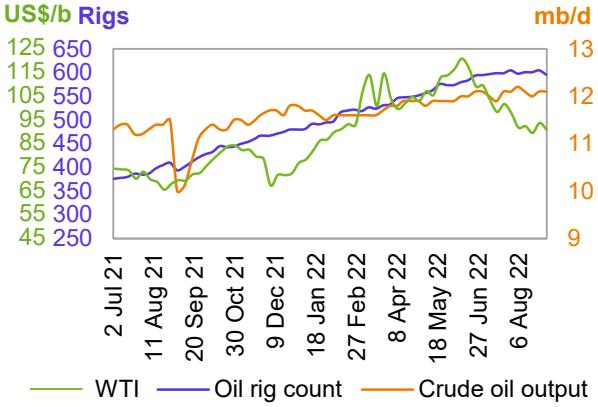
US rig count, spudded, completed, DUC wells and fracking activity

Total **US active drilling rigs** decreased by five units to 760 in the week ending 2 September, but were up by 263 rigs compared with a year ago. The number of active offshore rigs declined by two w-o-w to 16, 14 rigs more than the same month in 2021. At the same time, onshore oil and gas rigs reduced by three w-o-w to stand at 741, up by 246 rigs y-o-y, with three rigs in inland waters.

The **US horizontal rig count** rose by one w-o-w to 695, compared with 463 horizontal rigs a year ago. The number of drilling rigs for oil declined by nine to 596 w-o-w, while gas rigs increased by four to 162.

The rig count in the Permian declined by six w-o-w to 342. At the same time, the number of active rigs fell by one in Cana Woodford to 21. However, the rig count increased by two in Williston to 41 and by one in Eagle Ford to 71, w-o-w. The same number of rigs operated w-o-w in the DJ-Niobrara and Barnett basins, 17 and three, respectively.

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



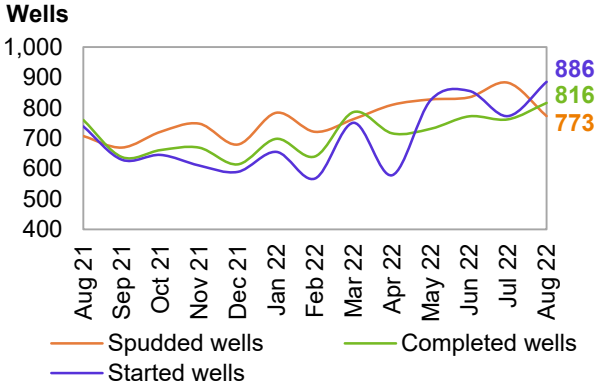
Sources: Baker Hughes, EIA and OPEC.

Drilling and completion (D&C) activities for spudded, completed and started wells in all US shale plays, based on US Energy Information Administration's Drilling Productivity Report (EIA-DPR) regions, saw 883 horizontal wells spudded in July 2022 (as per preliminary data), up by 48 m-o-m, and 30% higher than in July 2021.

July 2022 preliminary data indicate a lower number of completed wells at 762 m-o-m, though up by 12% y-o-y. Moreover, the number of started wells was estimated at 773, which is 25% higher than in July 2021.

Preliminary data for August estimates 773 spudded, 816 completed and 886 started wells, according to Rystad Energy.

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

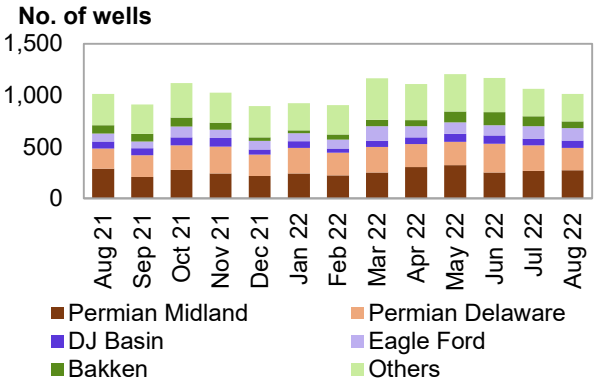


Note: Jul 22-Aug 22 = Preliminary data.
Sources: Rystad Energy and OPEC.

In terms of identified **US oil and gas fracking operations by region**, Rystad Energy reported that totally 1,167 wells were fracked in June, while July and August saw 1,064 and 1,014 wells starting to frack, respectively. These preliminary numbers are based on analysis of high-frequency satellite data.

Preliminary data on fracking in July shows that 267 and 249 wells were fracked in the Permian Midland and Permian Delaware, respectively. Compared with June, there was a jump of 16 wells fracked in the Midland and a decline of 31 wells in the Delaware, according to preliminary data. Data also indicate that 64 wells were fracked in the DJ Basin, 120 in Eagle Ford and 95 in Bakken during July.

Graph 5 - 13: Fracked wells count per month



Note: Jul 22-Aug 22 = Preliminary data.
Sources: Rystad Energy Shale Well Cube and OPEC.

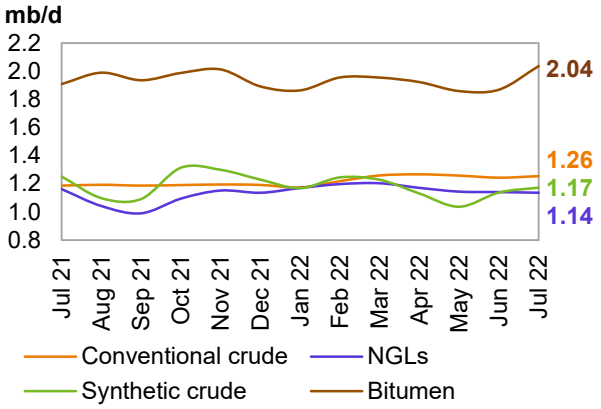
Canada

Canada's liquids production in July is estimated to have increased by 209 tb/d m-o-m to average 5.6 mb/d, due to a partial wrap-up of seasonal maintenance from 2Q22.

Crude bitumen production and synthetic crude output increased by 35 tb/d and 168 tb/d, m-o-m, in July, respectively. Taken together, crude bitumen and synthetic crude production rose by 203 tb/d to 3.3 mb/d. Production of conventional crude increased by a slight 11 tb/d m-o-m to average 1.3 mb/d, however NGLs output declined by a minor 5 tb/d m-o-m to average 1.1 mb/d.

Maintenance at the Suncor, Syncrude, Scotford and Horizon upgraders was completed in 1H22. However, it is still in progress at Cenovus's Foster Creek and Christina Lake, Suncor's Firebag, Suncor's Fort Hills, Imperial's Kearl Lake and Cold Lake sites, all of which feature non-upgraded oil sands production. However, project ramp-ups and optimization in oil sands output are expected to drive production in 4Q22.

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

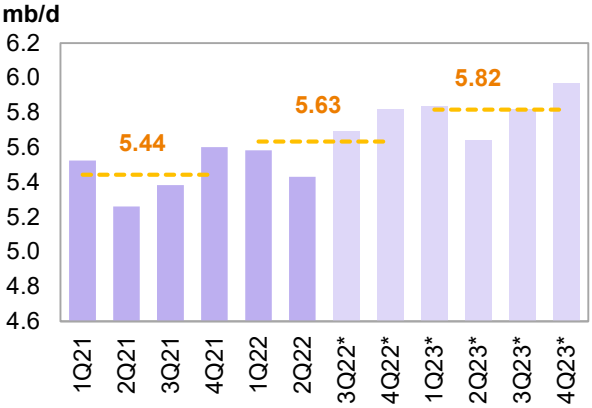


Sources: National Energy Board and OPEC.

The Canadian liquids supply in **2022** is forecast to grow by 0.2 mb/d to average 5.6 mb/d, broadly unchanged from the previous assessment. Output is expected to increase up to December due to oil sands project expansion/optimization and the return of upgraders from maintenance.

For **2023**, Canada's liquids production is forecast to increase gradually at a pace similar to that seen in 2022, rising by 0.2 mb/d to average 5.8 mb/d. Incremental production will come mainly from Alberta's oil sands, which saw average output of 3.1 mb/d in 1H22.

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



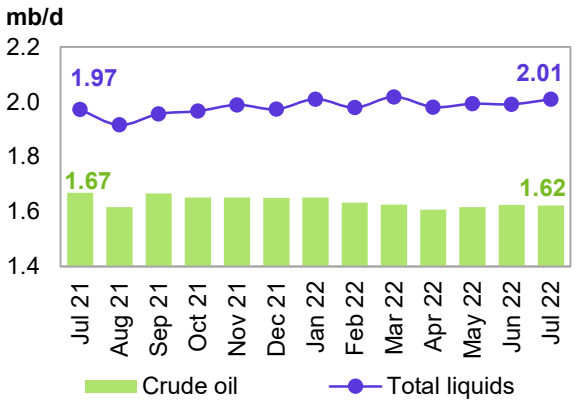
*Note: * 3Q22-4Q23 = Forecast. Source: OPEC.*

Mexico

Mexico's crude output remained largely unchanged in **July** to average 1.6 mb/d, while NGLs output increased by 20 tb/d due to an expected ramp-up of condensate fields. Thus, Mexico's total liquids output in July increased by 18 tb/d m-o-m to average 2.0 mb/d, according to national oil company Pemex.

For **2022**, liquids production in Mexico is forecast to grow by 40 tb/d to average 2.0 mb/d, revised up by 14 tb/d from the previous month. The 2H22 forecast was revised up due to recently modified development plans by Eni to boost activity at the Amoca and Mitzon fields (FPSO Miante). The 2022 increase is expected to be driven by foreign-operated fields, while minor growth is also expected at Pemex-operated fields.

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



Sources: PEMEX and OPEC.

For **2023**, liquids production is forecast to decline by 0.04 mb/d to average 1.96 mb/d, unchanged m-o-m. Pemex's total crude production decline in mature fields like Ku-Maloob-Zaap, Abkatun-Pol-Chuc and Integral Yaxche-Xanab is forecast to outweigh production ramp-ups in other fields.

OECD Europe

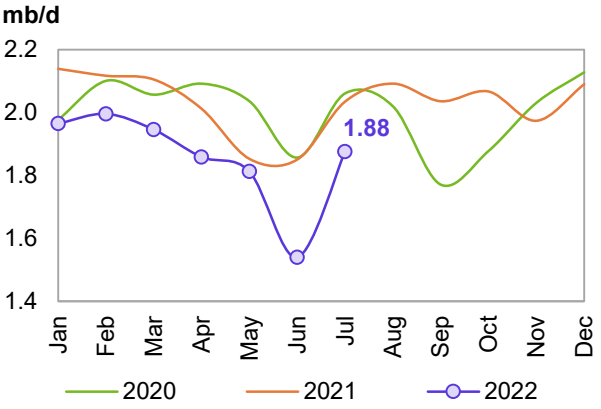
Norway

Norwegian liquids production in **July** rose by 0.34 mb/d m-o-m to average 1.9 mb/d. Some offshore fields rebounded from summer maintenance, pushing output to around April values.

Norway's crude production increased by 317 tb/d m-o-m in July to average 1.6 mb/d, down by 108 tb/d y-o-y. Oil production in July was 10.9% lower than the Norwegian Petroleum Directorate's (NPD) forecast.

At the same time, the production of NGLs and condensates increased by 19 tb/d m-o-m to average 0.2 mb/d, according to NPD data.

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



Sources: NPD and OPEC.

For **2022**, production growth is expected to decrease by 43 tb/d y-o-y to average 2.0 mb/d. Norwegian liquid output dropped by 12% in 2Q22 to 1.74 mb/d, mainly because of maintenance at offshore platforms. In addition to some small start-ups, growth is expected in 4Q22, following the return from maintenance and second-phase production start-up of the Johan Sverdrup field.

For **2023**, Norwegian liquids production is forecast to grow by 0.24 mb/d, unchanged from the previous month, to average 2.2 mb/d. Plenty of projects, from small to large, are scheduled to ramp up in 2023 in the Njord, Nova, Ringhorne, Alvheim, Oseberg and Snohvit fields. However, Johan Sverdrup is projected to be the main source of increased output for the year, making up roughly 35% of total Norway's crude and condensate output.

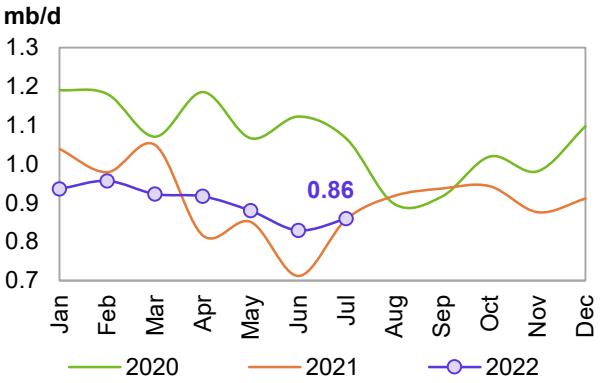
UK

UK liquids production increased in **July** by 31 tb/d m-o-m to average 0.9 mb/d. Crude oil output increased by 32 tb/d m-o-m to average 0.7 mb/d, according to official data, but was down by 21 tb/d y-o-y. NGLs output was broadly unchanged at 86 tb/d.

For **2022**, UK liquids production is forecast to grow by 13 tb/d to average 0.9 mb/d, revised down by a minor 10 tb/d from the previous assessment, mainly due to lower-than-expected production in 2Q22. Low investment levels, COVID-19-related delays and poor mature reservoir performance have impacted the growth forecast.

For **2023**, UK liquids production is forecast to stay steady for an average of 0.9 mb/d. Project sanctioning is essential for maintaining future oil and gas output at a time when the UK is already facing production declines due to a lack of new developments. Production ramp-ups are projected at the Penguins oil field (Redevelop), ETAP, Clair, the Schiehallion quad and some other small fields.

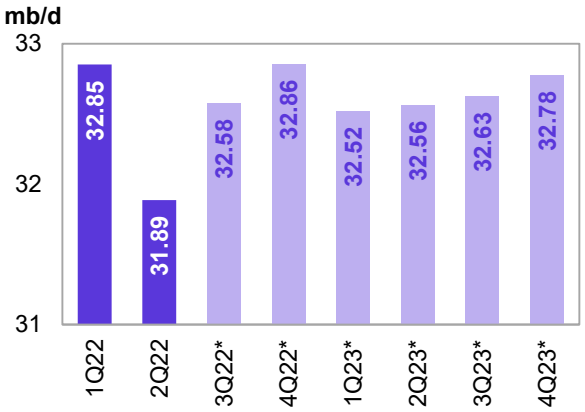
Graph 5 - 18: UK monthly liquids production development



Sources: Department of Energy & Climate Change and OPEC.

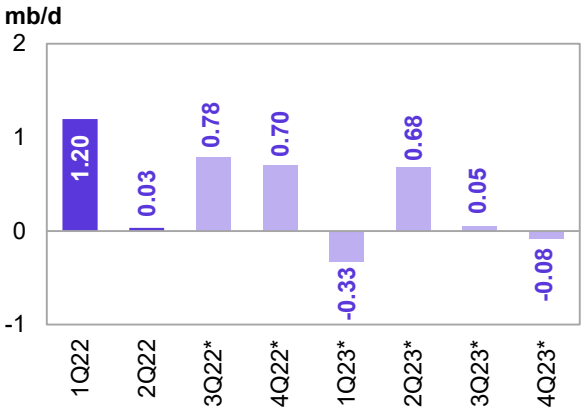
Non-OECD

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



*Note: * 3Q22-4Q23 = Forecast. Source: OPEC.*

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

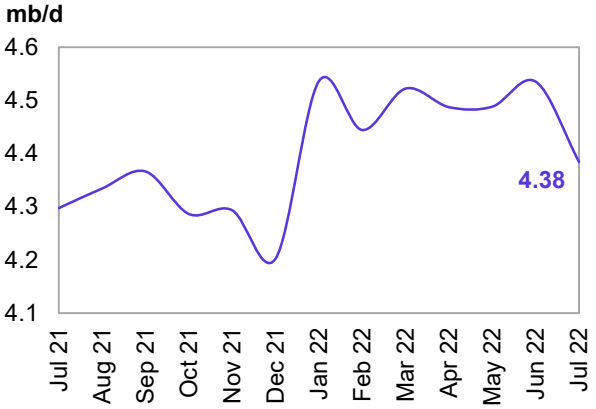


*Note: * 3Q22-4Q23 = Forecast. Source: OPEC.*

China

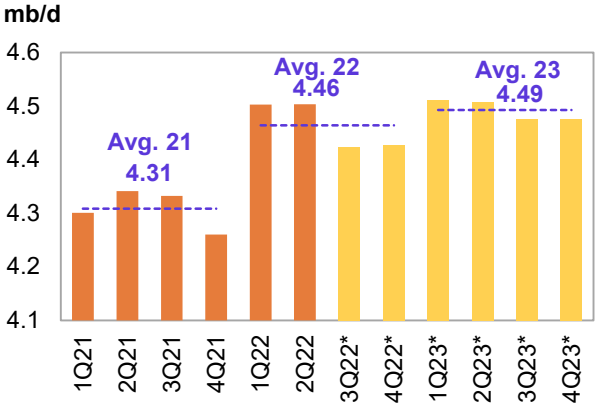
China's liquids production decreased m-o-m in **July** by 151 tb/d to average 4.4 mb/d, which is a rise of 87 tb/d y-o-y, according to official data. Crude oil output in July averaged 4.0 mb/d, down by 149 tb/d compared with the previous month, but higher by 61 tb/d y-o-y. Liquids production over the first seven months of the year averaged 4.5 mb/d, higher by 4% compared with the same period last year.

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



Sources: CNPC and OPEC.

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



*Note: * 3Q22-4Q23 = Forecast. Sources: CNPC and OPEC.*

Growth of 155 tb/d is forecast for **2022** to average 4.5 mb/d, broadly unchanged from the previous assessment. Natural decline rates are expected to be offset by the Chinese national oil company's considerable investments. Tianjin, Xinjiang, Heilongjiang, and Shaanxi were the main producing provinces in the first half of the year. Chinese companies expect additional growth through more in-fill wells and enhanced oil recovery (EOR) projects.

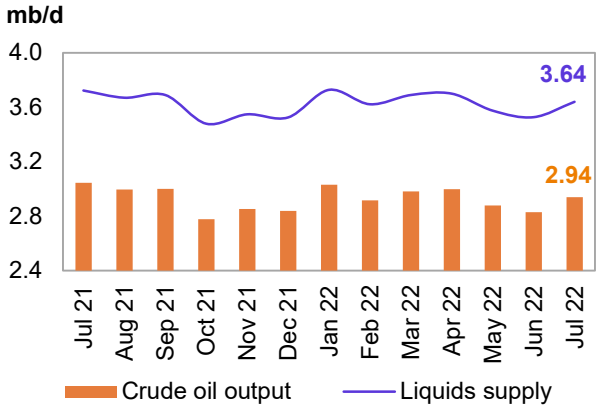
For **2023**, y-o-y growth of 30 tb/d is forecast for an average of 4.5 m/d, with Bozhong 29-6, Wushi 17-2 and Kenli 10-1N planned to come on stream under the China National Offshore Oil Corporation (CNOOC). At the same time, ramp-ups are expected from the Changqing, Jilin and Liaohe projects, which are managed by Petro China. The new projects will slightly offset declines from the mature onshore production base.

Latin America

Brazil

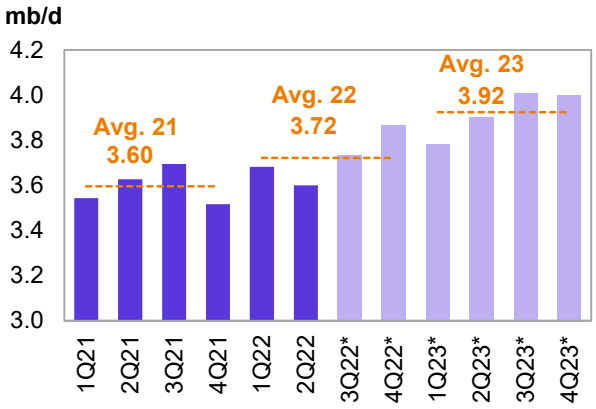
Brazil's crude output in **July** increased by 111 tb/d m-o-m to average 2.9 mb/d. NGLs production was largely unchanged, averaging 88 tb/d and is expected to remain flat in August. Biofuel output (mainly ethanol) remained unchanged in July to average 612 tb/d, with preliminary data showing a flat trend in August as well. Thus, total liquids production increased in July by 113 tb/d to average 3.6 mb/d, down by 83 tb/d y-o-y. Offshore maintenance eased slightly in July, allowing crude production to rise back above 2.9 mb/d for the first time since April.

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: * 3Q22-4Q23 = Forecast. Sources: ANP and OPEC.*

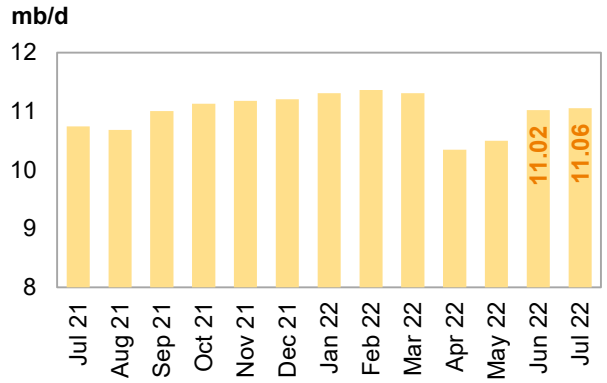
For **2022,** Brazil's liquids supply, including biofuels, is forecast to increase by 0.1 mb/d y-o-y to average 3.7 mb/d, revised down by 25 tb/d compared with the previous month's assessment, mainly due to a downward revision in biofuel output in 1H22 and lower-than-expected output in 3Q22. Growth in 2022 will be driven by the continued ramp-up of the Sepia field, along with the start-up of Mero 1 in the pre-salt Santos Basin and Peregrino (Phases 1 and 2).

For **2023**, Brazil's liquids supply, including biofuels, is forecast to increase by 0.2 mb/d y-o-y to average 3.9 mb/d. Crude oil output is expected to increase through production ramp-ups in the Mero (Libra NW), Buzios (Franco), Tupi (Lula), Peregrino, Sepia and Itapu (Florim) fields. However, offshore maintenance is expected to cause interruptions in major fields. The 150 tb/d Almirante Barroso floating production, storage and offloading (FPSO) unit departed China's Cosco shipyard and is on its way to Buzios, due to arrive in the fourth quarter, with first oil forecast for the middle of next year.

Russia

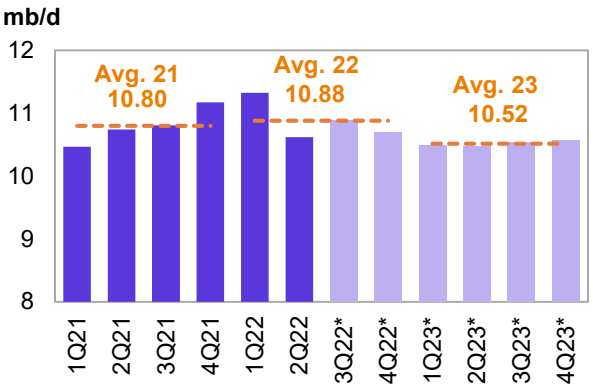
Russia's liquids production in July increased m-o-m by 36 tb/d to average 11.1 mb/d. This includes 9.8 mb/d of crude oil and condensate, and 1.2 mb/d of NGLs. A preliminary estimate for Russia's crude and condensate production in August shows a decrease of 71 tb/d m-o-m to average 9.8 mb/d, while a decline of around 119 tb/d is expected for NGLs.

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: * 3Q22-4Q23 = Forecast.*
Sources: Nefte Compass and OPEC.

Russia's liquids output for **2022** is forecast to increase by 80 tb/d y-o-y to average 10.9 mb/d, unchanged from the previous month's assessment.

For **2023**, Russian liquids production is forecast to decrease by 0.4 mb/d to average 10.5 mb/d. It should be noted that the Russian oil forecast is highly subject to uncertainty.

Caspian

Kazakhstan & Azerbaijan

Liquids output in Kazakhstan increased by 206 tb/d to average 1.7 mb/d in **July**. Crude production was up by 184 tb/d m-o-m to average 1.4 mb/d. Production of NGLs also increased by 22 tb/d m-o-m to average 0.3 mb/d. This was mainly due to the partial return of the Kashagan oil field from 2Q maintenance.

Kazakhstan's liquids supply for **2022** is now forecast to grow by 56 tb/d to average 1.9 mb/d, down by 27 tb/d compared with the previous month's assessment. This was due to planned maintenance at the Tengiz oil field and reduced oil loadings at the Caspian Pipeline Consortium (CPC) from two of three Single Mooring Points (SPM) at its Black Sea terminal. Output in Kashagan oil field is expected to recover somewhat.

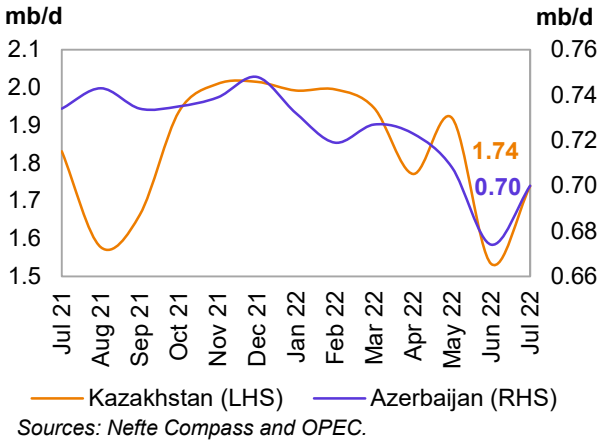
For **2023**, the liquids supply is forecast to increase by 78 tb/d to stand at 2 mb/d, due to production ramp-ups in the Kashagan oil field. Oil production in the Tengiz field and gas condensate output in the Karachaganak field are also expected to rise marginally.

Azerbaijan's liquids production in July rose by 26 tb/d m-o-m to average 0.7 mb/d, and was down by 34 tb/d y-o-y. Crude oil production decreased by 26 tb/d m-o-m to average 550 tb/d, while NGLs output averaged 150 tb/d, according to official sources.

No new projects are expected to come online in the country in 2022, though the main declines in legacy fields are expected to be offset by ramp-ups in other fields, such as Shah Deniz Phase 2 and Absheron.

For **2022**, liquids supply in Azerbaijan is forecast to grow by 24 tb/d y-o-y to average 0.8 mb/d, down by 15 tb/d, because of lower-than-expected production in major oil fields in July and a downward revision for 2Q22.

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



Sources: Nefte Compass and OPEC.

Azerbaijan's liquids supply for **2023** is forecast to decline by 60 tb/d to average 0.7 mb/d. The overall decline rate will be higher than planned ramp-ups in the three major producing fields.

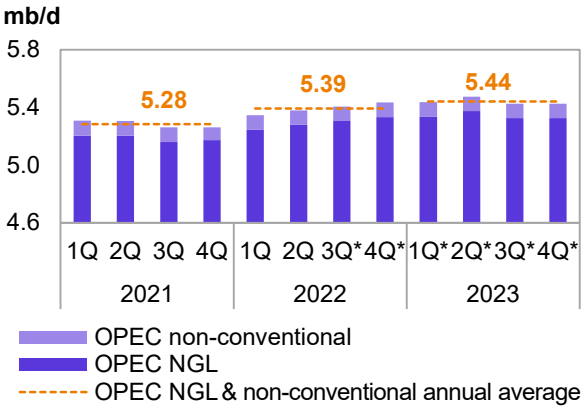
OPEC NGLs and non-conventional oils

OPEC NGLs and non-conventional liquids in 2022 are forecast to grow by 0.1 mb/d to average 5.4 mb/d, unchanged from the previous assessment.

Output of NGLs in 2Q22 is estimated to have averaged 5.3 mb/d, while OPEC non-conventional liquids remained steady at 0.1 mb/d.

The preliminary **2023** forecast indicates growth of 50 tb/d for an average of 5.4 mb/d. NGLs production is projected to grow by 50 tb/d to average 5.3 mb/d, while non-conventional liquids are projected to remain unchanged at 0.1 mb/d.

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



*Note: * 3Q22-4Q23 = Forecast. Source: OPEC.*

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

OPEC NGL and non-coventional oils	2021	Change 21/20	2022	Change 22/21	1Q23	2Q23	3Q23	4Q23	2023	Change 23/22
OPEC NGL	**5.18**	*0.12*	**5.29**	*0.11*	5.34	5.37	5.33	5.33	**5.34**	*0.05*
OPEC non-conventional	**0.10**	*0.00*	**0.10**	*0.00*	0.10	0.10	0.10	0.10	**0.10**	*0.00*
Total	**5.28**	***0.12***	**5.39**	***0.11***	**5.44**	**5.47**	**5.43**	**5.43**	**5.44**	***0.05***

Note: 2022-2023 = Forecast. Source: OPEC.

OPEC crude oil production

According to secondary sources, total **OPEC-13 crude oil production** averaged 29.65 mb/d in August 2022, higher by 618 tb/d m-o-m. Crude oil output increased mainly in Libya and Saudi Arabia, while production in Nigeria declined.

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

Secondary sources	2020	2021	4Q21	1Q22	2Q22	Jun 22	Jul 22	Aug 22	*Change* Aug/Jul
Algeria	904	913	959	984	1,014	1,024	1,028	1,036	*7*
Angola	1,247	1,117	1,124	1,152	1,171	1,184	1,173	1,187	*13*
Congo	289	265	266	264	268	270	263	262	*-1*
Equatorial Guinea	114	98	89	92	90	88	98	90	*-9*
Gabon	191	182	185	199	190	193	200	202	*2*
IR Iran	1,991	2,392	2,472	2,529	2,556	2,565	2,567	2,572	*5*
Iraq	4,076	4,049	4,240	4,286	4,438	4,465	4,523	4,525	*2*
Kuwait	2,439	2,419	2,532	2,614	2,692	2,724	2,773	2,810	*37*
Libya	367	1,143	1,111	1,063	750	632	697	1,123	*426*
Nigeria	1,578	1,372	1,321	1,376	1,210	1,190	1,164	1,100	*-65*
Saudi Arabia	9,204	9,114	9,880	10,164	10,451	10,559	10,744	10,904	*160*
UAE	2,804	2,727	2,861	2,954	3,045	3,082	3,131	3,164	*33*
Venezuela	512	555	662	684	714	710	672	678	*6*
Total OPEC	**25,716**	**26,347**	**27,701**	**28,360**	**28,588**	**28,685**	**29,033**	**29,651**	***618***

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	4Q21	1Q22	2Q22	Jun 22	Jul 22	Aug 22	*Change* Aug/Jul
Algeria	899	911	958	984	1,016	1,027	1,040	1,053	*13*
Angola	1,271	1,124	1,123	1,161	1,173	1,175	1,180	1,179	*-1*
Congo	300	267	260	267	258	251	250	262	*12*
Equatorial Guinea	114	93	79	95	91	91	89	85	*-4*
Gabon	207	181	183	197	184	194	191	212	*21*
IR Iran	..	..	..	..	..	..	..	..	..
Iraq	3,997	3,971	4,167	4,188	4,472	4,515	4,584	4,651	*67*
Kuwait	2,438	2,415	2,528	2,612	2,694	2,724	2,768	2,811	*43*
Libya	389	1,207	1,182	1,151	..	770	746	..	..
Nigeria	1,493	1,323	1,260	1,299	1,133	1,158	1,084	972	*-112*
Saudi Arabia	9,213	9,125	9,905	10,224	10,542	10,646	10,815	11,051	*236*
UAE	2,779	2,718	2,854	2,949	3,042	3,083	3,133	3,184	*51*
Venezuela	569	636	817	756	745	727	629	723	*94*
Total OPEC	..	..	..	..	..	..	..	..	..

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

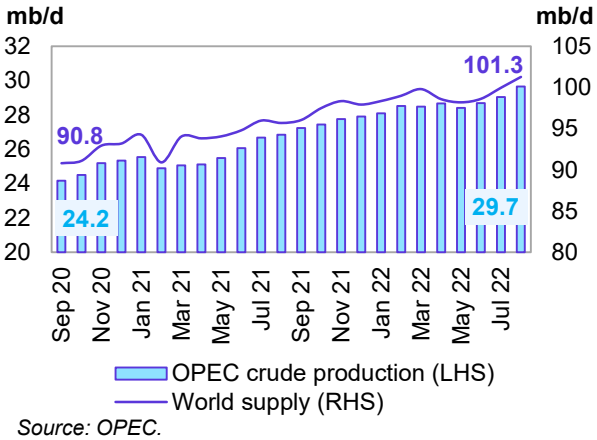
World oil supply

Preliminary data indicates that **global liquids production in August** increased by 1.3 mb/d to average 101.3 mb/d compared with the previous month.

Non-OPEC liquids production (including OPEC NGLs) is estimated to have increased in August by 0.7 mb/d m-o-m to average 71.6 mb/d, and was higher by 2.8 mb/d y-o-y. Preliminary estimated increases in production during August were mainly driven by OECD Americas, OECD Europe and Other Eurasia, which saw a rise by 0.5 mb/d, while production in Russia and some other countries declined.

The **share of OPEC crude oil in total global production** increased by 0.2 pp to 29.3% in August 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 August, refinery margins showed diverging trends. In the USGC, margins declined moderately with weakness mainly at the top section of the barrel. This was on the back of gasoline domestic consumption exhibiting signs of a slow-down amid concerns over inflation, economic growth and the approaching end of the driving season.

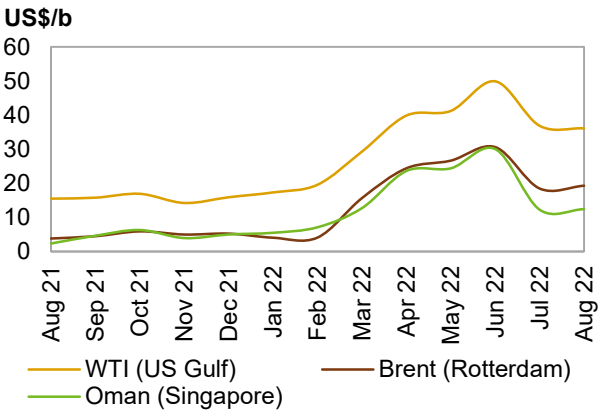
In contrast, refinery margins in Europe and Asia reversed trend, following the steep losses witnessed in July to show slight gains. This was mainly reflective of a continued decline in diesel availability, as high operational costs for refiners due to strong natural gas prices in Europe weighed on diesel production. In Asia, strong domestic diesel consumption in India and China, and open arbitrage for diesel flows from Asia to Europe, led to significant regional market support to for the product that resulted in higher refining gains.

Over the month, global refinery runs slightly extended their upward trend, in line with seasonality, despite significant unplanned US refinery outages. Going forward, refinery runs are anticipated to decline with the kick-off of the next heavy turnaround season in September.

Refinery margins

USGC refining margins against WTI lost some ground in August mainly affected by heavy pressure from the top of the barrel. This was attributed to gasoline consumption levels signalling a slowdown in demand as the summer season approaches an end. However, products in the middle and bottom sections of the barrel performed positively as their supply/demand balances remained relatively tight compared with the historical average. The shutdown of the 435 tb/d BP Plc crude distillation unit in Whiting, Indiana, spurred concerns over fuel availability, which likely limited the declines in USGC product prices. Nonetheless, this support was offset by the weakness associated with gasoline markets. In general, product prices declined in August impacted by the approaching end of the driving season amid expectations of seasonally softer fuel demand going forward, while y-o-y product output levels remained relatively strong over the month.

Graph 6 - 1: Refining margins



Sources: Argus and OPEC.

According to preliminary estimates, refinery intake in the US dropped by around 20 tb/d m-o-m to average 16.74 mb/d in August, in another counter-seasonal move. This development was attributable to unplanned refinery outages, including the shutdown of the country's fifth largest refinery, located in the Midwest, due to a fire. Going forward, US refinery intakes are expected to drop and total product inventories will most likely contract from their already low levels relative to the last five-year average. This could weigh heavily on product prices in the coming months. USGC margins against WTI averaged $36.11/b in August, down by 75¢ m-o-m, but up by $20.63 y-o-y.

Refinery margins in Rotterdam against Brent increased to show slight gains, supported by robust demand-side performance in the middle of the barrel, despite supply-side pressures from strong refinery product output levels. The high natural gas price environment exerted pressure on refinery operational costs, as a large proportion of European refiners rely on natural gas for power generation. European refinery processing rates in August increased m-o-m by a slight 20 tb/d, according to preliminary data. Refinery margins against Brent in Europe averaged $19.27/b in August, up by 82¢/b compared with a month earlier, but higher by $15.46 y-o-y.

Singapore refining margins against Oman gained some ground in August, with solid strength from middle distillates and fuel oil. Firm regional demand amid gas to fuel oil switching in India, Bangladesh and Pakistan contributed to enhance product markets in Asia. Regional refinery run rates remained high and increased a further 330 tb/d in August, relative to the previous month, to average 24.80 mb/d, according to preliminary data. Refinery margins against Oman in Asia gained 16¢/b m-o-m to average $10.45/b, higher by $10.08 y-o-y.

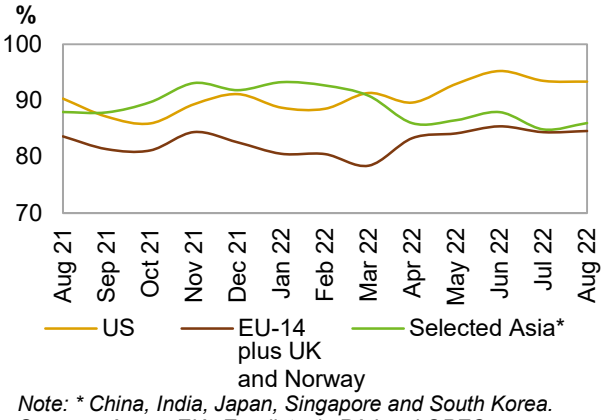
Refinery operations

US refinery utilization rates fell in August to average 93.32%, which corresponds to a throughput of 16.74 mb/d. This represented a drop of 1.0 pp and 20 tb/d, respectively, compared with July. Y-o-y, the August refinery utilization rate was up by 2.6 pp, with throughput showing a rise of 284 tb/d.

European refinery utilization averaged 84.58% in August, corresponding to a throughput of 9.96 mb/d. This is a m-o-m rise of 0.2 pp or 20 tb/d. On a y-o-y basis, utilization rates were up by 5.8 pp, while throughput was higher by 689 tb/d.

In **Selected Asia** – comprising Japan, China, India, Singapore and South Korea – refinery utilization rates increased to average 85.96% in August, corresponding to a throughput of 24.80 mb/d. Compared with the previous month, utilization rates were up by 1.1 pp, and throughput was higher by 330 tb/d. Utilization rates were higher by 2.9 pp y-o-y, and throughput was up by 991 tb/d.

Graph 6 - 2: Refinery utilization rates



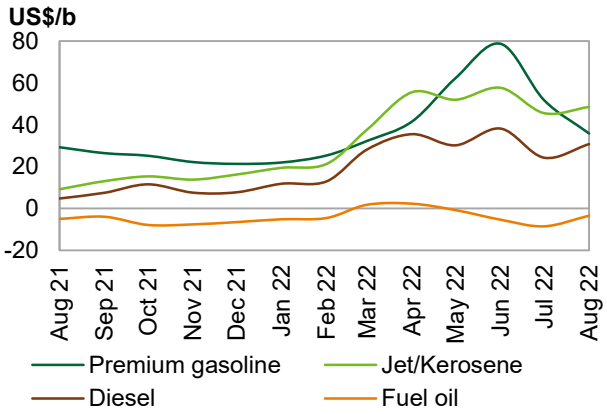
*Note: * China, India, Japan, Singapore and South Korea.*
Sources: Argus, EIA, Euroilstock, PAJ and OPEC.

Product markets

US market

USGC gasoline crack spreads extended their downward trend for the second consecutive month in August, as weaker domestic consumption weighed on gasoline markets. Nonetheless, US total gasoline inventory level fell over the month on firm exports and a small drop in refinery output. The supportive impact of this contraction in gasoline availability over the month, however, was outweighed by the weakening gasoline market sentiment linked to the end of the driving season. In August, wholesale gasoline 93 prices continued to trend downwards, shedding an additional $24.60 from July, the highest m-o-m price drop across the barrel in the USGC, to average $127.41/b. This was $30.45/b higher y-o-y. The USGC gasoline crack spread lost $15.92 m-o-m to average $35.84/b in August. This was up by $6.61 y-o-y.

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



Sources: Argus and OPEC.

USGC **jet/kerosene crack spreads** rebounded from the weak performance registered in July to become the strongest margin contributor in the USGC product market. This strength reflected healthy aviation sector requirements as air travel activities remained strong in the summer season. Jet fuel wholesale prices dropped $5.70/b over the month, to average $140.21/b. It was the highest priced product in the USGC market in August. The US jet/kerosene crack spread against WTI averaged $48.64/b, up by $2.98 m-o-m, but higher by $39.39 y-o-y.

The USGC **gasoil crack spread** gained ground following the previous month's losses despite a small uptick in gasoil stock levels over the month. US gasoil inventories remain well below the five-year average and were lower that the levels witnessed a year earlier. The gasoil tightness amid concerns over a pick-up in consumption levels from heating requirements, and the sanctions for product supplies from Russia, led to a strong market sentiment that is expected to continue to support gasoil markets in the near-term. Gasoil prices, averaged $122.34/b in August, which was down by $2.20 relative to July. The US gasoil crack spread against WTI averaged $30.77/b, up by $6.48 m-o-m and by $25.92 y-o-y.

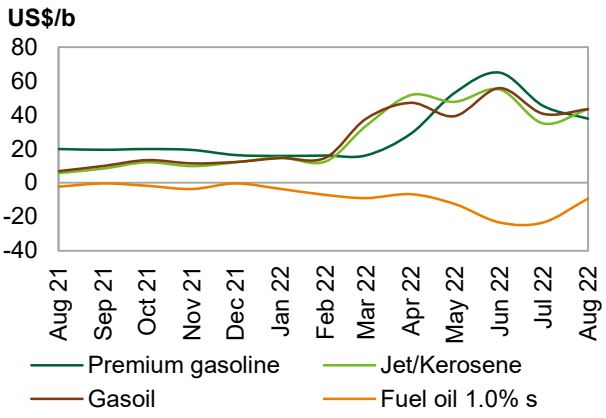
USGC **fuel oil crack spreads** against WTI reversed their trend, following three consecutive months of losses, as fuel oil availability contracted on the back of higher demand. In August, the US fuel oil crack spread against WTI averaged minus $3.45/b, higher by $5.11/b m-o-m, and by $1.54 y-o-y.

European market

Gasoline crack spreads lost notable ground pressured by stronger supplies and weak transatlantic exports. The rise in regional refinery processing rates, although limited in magnitude, amid expectations of easing demand as the summer season draws to a close, led to downward pressure on gasoline markets. The gasoline crack spread against Brent averaged $37.83/b in August, down by $7.57 m-o-m, but it was higher by $17.88 y-o-y.

In August, **jet/kerosene crack spreads** increased, in line with supportive demand-side dynamics linked to healthy demand from the aviation sector. The Rotterdam jet/kerosene crack spread against Brent averaged $43.42/b, up by $8.40 m-o-m and by $37.62 y-o-y.

Graph 6 - 4: Rotterdam crack spreads vs. Brent



Sources: Argus and OPEC.

Gasoil 10 ppm crack spreads gained some ground, while the European gasoil balance remained a matter of concern as it was on the low side compared with historical trends. The gasoil crack spread against Brent averaged $43.38/b, up by $2.71 m-o-m and by $36.50 y-o-y.

At the bottom of the barrel, **fuel oil 1.0% crack spreads** soared following a three-month decline and inched closer to positive territory. Ramped up operations at secondary and conversion units following the most recent heavy turnaround season, led to relatively lower volume availability of the residual fuel. In addition, gas-to-fuel oil switching due to high natural gas prices likely unlocked additional demand further supporting fuel exports, and ultimately crack spreads for the same product. In terms of prices, fuel oil 1.0% had the third lowest price across the barrel. It averaged $90.31/b, and was $1.05 higher relative to the previous month. In terms of margins, fuel oil 1.0% showed the second largest monthly rise in Rotterdam's' product crack spreads across the barrel, following high sulphur fuel oil. In Europe, fuel oil cracks averaged minus $9.31/b in August, having gained $14.05 m-o-m, but it was down by $6.99 y-o-y.

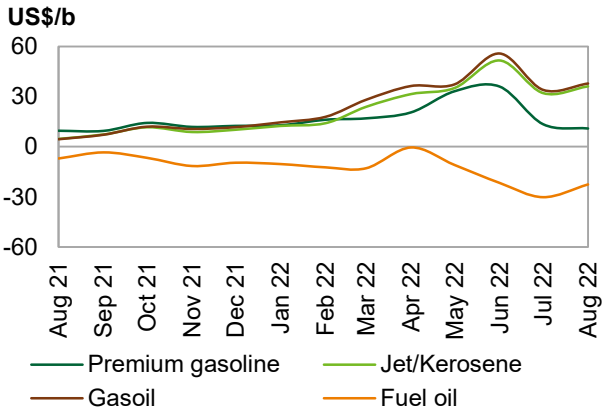
Asian market

The **Asian gasoline 92 crack spread** fell mainly impacted by supply-side dynamics and growing gasoline availability in the region.

The Singapore **gasoline crack spread** against Oman in August averaged $10.92/b, down by $2.56 m-o-m, but up by $1.35 y-o-y.

Asian **naphtha crack spreads** exhibited negative performance in August, pressured by high availability, as regional refinery output levels were strong. The Singapore naphtha crack spread against Oman averaged minus $23.69/b. It fell by $3.52 m-o-m and was down by $25.33 y-o-y.

Graph 6 - 5: Singapore crack spreads vs. Dubai



Sources: Argus and OPEC.

In the middle of the barrel, **jet/kerosene** crack spreads trended upwards backed by strong regional demand, as well as healthy export to other regions, despite the rise in refinery output level amid stronger runs. The Singapore jet/kerosene crack spread against Oman averaged $36.06/b, up by $4.03 m-o-m and by $31.38 y-o-y.

The Singapore **gasoil** crack spread rose, partially recovering the losses registered in July. This was reflective of an improvement in regional consumption levels. The Singapore gasoil crack spread against Oman averaged $37.76/b, up by $3.81 m-o-m and by $33.36 y-o-y.

The Singapore **fuel oil 3.5%** crack spread reversed trend and moved higher. It was supported by an improvement in fundamentals as fuel oil consumption increased amid a heatwave in parts of Asia that boosted cooling demand. In addition, stronger requirements from the power generation sector given high natural gas prices led to gas to fuel oil switching, mainly in India, Pakistan and Bangladesh, which lent further support to fuel oil margins in the region. Singapore fuel oil cracks against Oman averaged minus $22.55/b, up by $7.63 m-o-m, but lower by $15.51 y-o-y.

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

Event	Time frame	Asia	Europe	US	Observations
Autumn heavy refinery turnaround season	Sep 22 – Nov 22	↑ Upward pressure on product prices	↑ Upward pressure on product prices	↑ Upward pressure on product prices	The decline in product supplies could lead to renewed product tightness in the near term, more pronouncedly of diesel. This will likely exert upward pressure on prices and crack spreads.
Winter season	Nov 22 – Apr 23	↓ Negative impact on product markets	↓ Negative impact on product markets	↓ Negative impact on product markets	Transport fuels, particularly gasoline markets, are expected to come under pressure as the summer season approaches the end.

Source: OPEC.

Table 6 - 2: Refinery operations in selected OECD countries

	Refinery throughput, mb/d				*Refinery utilization, %*			
	Jun 22	Jul 22	Aug 22	*Change* Aug/Jul	Jun 22	Jul 22	Aug 22	*Change* Aug/Jul
US	**17.08**	**16.77**	**16.74**	**-0.02**	**95.20**	**93.46**	**93.32**	**-0.1 pp**
Euro-14, plus UK and Norway	**10.06**	**9.94**	**9.96**	**0.02**	**85.41**	**84.37**	**84.58**	**0.2 pp**
France	0.85	0.82	0.81	-0.01	73.42	71.60	70.56	1.0 pp
Germany	1.92	1.84	1.84	0.01	93.35	89.54	89.88	0.3 pp
Italy	1.46	1.33	1.32	-0.01	76.58	70.16	69.67	-0.5 pp
UK	0.99	1.02	1.03	0.01	84.57	87.30	88.04	0.7 pp
Selected Asia*	**25.36**	**24.47**	**24.80**	**0.33**	**87.90**	**84.82**	**85.96**	**1.1 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	3Q21	4Q21	1Q22	2Q22	3Q22
OECD Americas	**19.04**	**16.59**	**17.79**	**18.42**	**18.20**	**18.37**	**18.75**	**18.79**
of which US	*16.99*	*14.72*	*15.65*	*16.22*	*16.02*	*16.06*	*16.61*	*16.57*
OECD Europe	**12.13**	**10.65**	**10.91**	**11.35**	**11.50**	**11.07**	**11.50**	**11.63**
of which:								
France	*1.00*	*0.67*	*0.69*	*0.79*	*0.76*	*0.79*	*0.84*	*0.82*
Germany	*1.78*	*1.72*	*1.72*	*1.75*	*1.90*	*1.75*	*1.87*	*1.84*
Italy	*1.35*	*1.11*	*1.23*	*1.27*	*1.34*	*1.16*	*1.42*	*1.43*
UK	*1.08*	*0.92*	*0.92*	*0.99*	*0.99*	*1.04*	*1.06*	*1.03*
OECD Asia Pacific	**6.79**	**5.87**	**5.76**	**5.77**	**6.00**	**6.21**	**5.87**	**6.01**
of which Japan	*3.02*	*2.48*	*2.49*	*2.51*	*2.69*	*2.80*	*2.60*	*2.63*
Total OECD	**37.96**	**33.12**	**34.46**	**35.53**	**35.70**	**35.65**	**36.12**	**36.43**
Latin America	**3.83**	**3.12**	**3.41**	**3.44**	**3.51**	**3.29**	**3.34**	**3.30**
Middle East	**6.97**	**6.09**	**6.78**	**6.80**	**7.27**	**7.23**	**7.36**	**7.67**
Africa	**1.97**	**1.79**	**1.97**	**1.99**	**1.98**	**1.98**	**1.98**	**2.03**
India	**5.04**	**4.42**	**4.73**	**4.40**	**5.02**	**5.18**	**5.22**	**5.05**
China	**13.02**	**13.48**	**14.07**	**13.76**	**14.03**	**13.96**	**12.89**	**12.92**
Other Asia	**5.13**	**4.74**	**4.80**	**4.84**	**4.90**	**5.06**	**5.16**	**5.18**
Russia	**5.70**	**5.39**	**5.61**	**5.63**	**5.75**	**5.71**	**5.04**	**5.42**
Other Eurasia	**1.21**	**1.03**	**1.18**	**1.28**	**1.20**	**1.22**	**1.10**	**1.18**
Other Europe	**0.55**	**0.43**	**0.41**	**0.43**	**0.33**	**0.42**	**0.47**	**0.56**
Total Non-OECD	**43.40**	**40.49**	**42.96**	**42.57**	**44.01**	**44.06**	**42.57**	**43.30**
Total world	**81.36**	**73.61**	**77.42**	**78.10**	**79.71**	**79.70**	**78.69**	**79.73**

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

		Jul 22	Aug 22	Change Aug/Jul	Annual avg. 2021	Year-to-date 2022-to-date
US Gulf (Cargoes FOB)						
Naphtha*		87.30	84.82	-2.48	70.70	96.62
Premium gasoline	(unleaded 93)	152.01	127.41	-24.60	91.41	143.84
Regular gasoline	(unleaded 87)	135.30	116.02	-19.28	86.72	132.78
Jet/Kerosene		145.91	140.21	-5.70	78.32	142.45
Gasoil	(0.2% S)	124.54	122.34	-2.20	73.94	126.64
Fuel oil	(3.0% S)	84.87	81.74	-3.13	59.84	86.74
Rotterdam (Barges FoB)						
Naphtha		84.65	72.98	-11.67	70.15	92.27
Premium gasoline	(unleaded 98)	158.02	137.45	-20.57	85.89	141.89
Jet/Kerosene		147.64	143.04	-4.60	77.17	143.82
Gasoil/Diesel	(10 ppm)	153.29	143.00	-10.29	78.31	143.73
Fuel oil	(1.0% S)	89.26	90.31	1.05	69.12	95.20
Fuel oil	(3.5% S)	74.93	78.87	3.94	61.38	87.64
Mediterranean (Cargoes FOB)						
Naphtha		82.14	70.39	-11.75	69.40	89.74
Premium gasoline**		139.48	112.59	-26.89	80.46	128.74
Jet/Kerosene		143.72	138.83	-4.89	75.06	139.60
Diesel		142.46	133.39	-9.07	77.73	138.56
Fuel oil	(1.0% S)	95.58	96.88	1.30	70.51	100.40
Fuel oil	(3.5% S)	70.58	71.03	0.45	58.98	81.13
Singapore (Cargoes FOB)						
Naphtha		82.70	72.64	-10.06	70.83	90.79
Premium gasoline	(unleaded 95)	121.56	110.57	-10.99	80.28	125.08
Regular gasoline	(unleaded 92)	116.35	107.25	-9.10	78.28	121.10
Jet/Kerosene		134.90	132.39	-2.51	75.10	130.65
Gasoil/Diesel	(50 ppm)	144.76	139.23	-5.53	77.36	139.16
Fuel oil	(180 cst)	136.22	133.62	-2.60	75.71	132.81
Fuel oil	(380 cst 3.5% S)	72.69	73.78	1.09	62.07	85.93

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

Sources: Argus and OPEC.

Tanker Market

Dirty tanker spot freight rates continued to pick up in August and now stand at the top of the five-year range. VLCC rates rose a further 16% m-o-m on average, with all reported routes seeing gains.

Spot VLCC rates on the Middle East to East route rose 17%. Aframax rates edged up 5% on average, with rates on the Caribbean to US East Coast route up 21%, offsetting declines on Mediterranean routes. Suezmax rates rose 4% on average.

Clean rates fell for the second month in a row, with rates on the NW Europe to US East Coast down 6%.

Spot fixtures

The latest estimates show **global spot fixtures** declined in August to average 14.6 mb/d. Fixtures fell 1.6 mb/d, or almost 10% m-o-m. Compared with the previous year, spot fixtures were negligibly higher, increasing by less than 1%.

Table 7 - 1: Spot fixtures, mb/d

Spot fixtures	Jun 22	Jul 22	Aug 22	*Change* Aug 22/Jul 22
All areas	13.20	16.22	14.61	-1.61
OPEC	9.10	11.59	10.11	-1.48
Middle East/East	5.01	7.00	5.99	-1.01
Middle East/West	1.43	2.28	1.48	-0.80
Outside Middle East	2.66	2.31	2.64	0.33

Sources: Oil Movements and OPEC.

OPEC spot fixtures fell in August, averaging 10.1 mb/d. This represents a decline of 13%, or 1.5 mb/d. In comparison with the same month in 2021, fixtures were about 0.2 mb/d, or over 2%, higher.

Middle East-to-East fixtures dropped 1.0 mb/d, or 14%, to average just under 6.0 mb/d. Compared with the same month last year, eastward flows were about 2% higher.

Spot fixtures from the **Middle East-to-West** declined in August by around 0.8 mb/d, or 35%, over the previous month, to average 1.5 mb/d. Y-o-y, rates were 0.6 mb/d, or about 68% higher.

By contrast, **outside the Middle East,** fixtures rose in August to average 2.6 mb/d. This represents a gain of 14%, or about 0.3 mb/d, m-o-m but a decline of 0.5 mb/d, or 15%, y-o-y.

Sailings and arrivals

OPEC sailings increased by 0.1 mb/d, or less than 1%, m-o-m in August to average 22.5 mb/d, and were 1.8 mb/d, or about 9%, higher compared with the same month a year ago.

Middle East sailings increased by about 0.3 mb/d in August to average 17.5 mb/d. Y-o-y, sailings from the region rose by 1.9 mb/d, or around 12%, compared with August 2021.

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

Sailings	Jun 22	Jul 22	Aug 22	*Change* Aug 22/Jul 22
OPEC	22.11	22.31	22.45	0.14
Middle East	17.14	17.26	17.51	0.25
Arrivals				
North America	9.02	8.65	8.97	0.32
Europe	13.71	13.42	13.94	0.52
Far East	14.00	13.31	14.46	1.15
West Asia	8.21	8.03	8.19	0.16

Sources: Oil Movements and OPEC.

Crude arrivals in August saw m-o-m gains across all regions. The Far East led gains, up by 1.2 mb/d, or almost 9%, to average 14.5 mb/d. Y-o-y, arrivals in the region were 0.3 mb/d, or about 2%, higher. Arrivals in the West Asia were 0.2 mb/d or 2% higher at 8.2 mb/d, while y-o-y, they were 1.0 mb/d, or 14%, higher.

In North America, arrivals were 0.3 mb/d or about 4% higher m-o-m, averaging just under 9.0 mb/d, but were marginally lower y-o-y. Arrivals in Europe rose by 0.5 mb/d, or about 4%, to average 13.9 mb/d. This was 1.2 mb/d, or about 10%, higher than in the same month last year.

Dirty tanker freight rates

Very large crude carriers (VLCCs)

VLCC spot rates continued to pick up in August, rising 16% on average m-o-m. The sector saw support from a return of US crude flows to Asia. Y-o-y, VLCC rates were up 111% on average.

On the **Middle East-to-East** route, rates gained 17% m-o-m to average WS68 points and were 119% higher y-o-y. Rates on the **Middle East-to-West** route rose 17% m-o-m to average WS41 points. Y-o-y, rates on the route increased 95%.

West Africa-to-East spot rates gained 17% m-o-m to average WS70 points in August. Compared with the same month last year, rates were 112% higher.

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

VLCC	Size *1,000 DWT*	Jun 22	Jul 22	Aug 22	*Change* Aug 22/Jul 22
Middle East/East	230-280	46	58	68	10
Middle East/West	270-285	27	35	41	6
West Africa/East	260	48	60	70	10

Sources: Argus and OPEC.

Suezmax

Suezmax rates edged higher in August, increasing 4% m-o-m, to remain well above last year's lacklustre performance. Rates were supported by ongoing trade dislocations, which boosted demand for longer-haul voyages in the Suezmax class.

Rates on the **West Africa-to-US Gulf Coast (USGC)** route remained at the previous month's healthy level in August, averaging WS124 points. Compared with the same month last year, rates were 148% higher.

Spot freight rates on the **USGC-to-Europe** route rose 9% over the previous month to average WS122 points. Y-o-y, rates were 221% higher.

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

Suezmax	Size *1,000 DWT*	Jun 22	Jul 22	Aug 22	*Change* Aug 22/Jul 22
West Africa/US Gulf Coast	130-135	102	124	124	0
US Gulf Coast/ Europe	150	91	112	122	10

Sources: Argus and OPEC.

Aframax

Aframax spot freight rates also continued to move higher, lifted by the strength of East of Suez and the Atlantic Basin. On average, spot Aframax rates rose 5% m-o-m. Compared with the same month last year, rates were 159% higher.

Rates on the **Indonesia-to-East** route jumped 25% m-o-m to average WS228 points. Y-o-y, rates on the route were up 128%.

Spot rates on the **Caribbean-to-US East Coast (USEC)** route increased 21% m-o-m to average WS299 points. Y-o-y, rates were 260% higher.

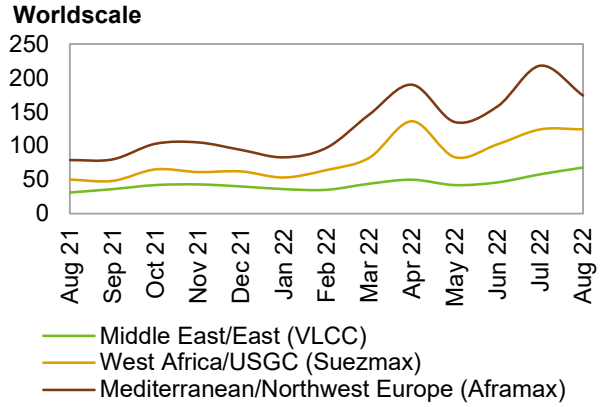
Table 7 - 5: Dirty Aframax spot tanker freight rates, WS

Aframax	Size 1,000 DWT	Jun 22	Jul 22	Aug 22	Change Aug 22/Jul 22
Indonesia/East	80-85	173	183	228	45
Caribbean/US East Coast	80-85	172	248	299	51
Mediterranean/Mediterranean	80-85	169	209	201	-8
Mediterranean/Northwest Europe	80-85	158	218	174	-44

Sources: Argus and OPEC.

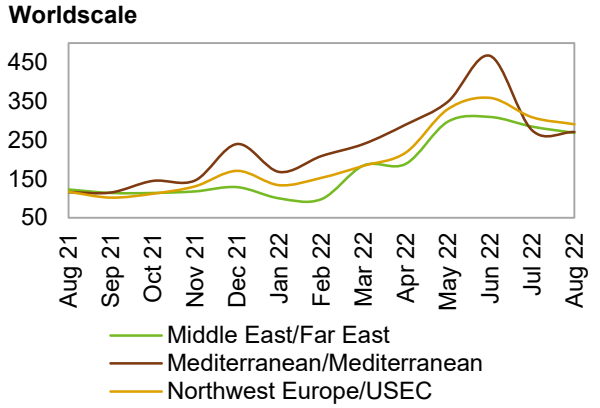
By contrast, spot freight rates retraced some of the gains seen in the previous month. **Cross-Med** spot freight rates fell 4% m-o-m in August, to average WS201 points. Y-o-y, rates were still 134% higher. On the **Mediterranean-to-NWE** route, rates dropped by a stronger 20% m-o-m to average WS174 points. Compared with the same month last year, rates were around 120% 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 saw across-the-board declines, falling from relatively high levels with the end of the driving season in the Northern Hemisphere and a shift towards refinery maintenance. On average, rates fell 6% m-o-m in August but were still up 129% compared with the levels seen in the same month last year. Losses were seen on both sides of the Suez, but primarily in the East.

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

East of Suez	Size 1,000 DWT	Jun 22	Jul 22	Aug 22	Change Aug 22/Jul 22
Middle East/East	30-35	310	285	269	-16
Singapore/East	30-35	414	396	342	-54
West of Suez					
Northwest Europe/US East Coast	33-37	359	309	291	-18
Mediterranean/Mediterranean	30-35	467	275	271	-4
Mediterranean/Northwest Europe	30-35	477	285	282	-3

Sources: Argus and OPEC.

Rates on the **Middle East-to-East** route declined 6% m-o-m in August to average WS269. Y-o-y, rates were up 119%. Freight rates on the **Singapore-to-East** route dropped by 14% m-o-m to average WS342 but were 116% higher compared with the same month last year.

In the West of Suez market, rates on the **Northwest Europe (NWE)-to-USEC** route decreased 6% m-o-m to average WS291 points. They were 149% higher y-o-y. Rates in the **Cross-Med** and **Med-to-NWE** edged down about 1% each to average WS271 and WS282 points, respectively. Compared with the same month last year, rates were 134% higher in the Cross-Med and up 126% on the Med-to-NWE route.

Crude and Refined Products Trade

Preliminary data shows US crude imports declined from a three-year high in August to average 6.1 mb/d, while exports set a new record high of just under 4.0 mb/d. US product imports experienced a seasonal decline, dropping by 5%, with gasoline and fuel oil leading losses. Product exports recovered some of the previous month's declines, with gains seen in gasoline, while distillates fell.

China's crude imports remained at relatively low levels in July, averaging 8.8 mb/d, as ongoing lockdowns weighed on domestic demand and throughput. Recently released data for August shows China's crude imports recovering to 9.5 mb/d, although they are still down by 10% y-o-y. Product exports edged up 2% in August as increased outflows of gasoline, fuel oil and gasoil outpaced declines in jet fuel and naphtha.

India's crude imports edged 3% higher to average a robust 4.8 mb/d in July. Crude imports from Russia remained above 1.0 mb/d, according to secondary sources. Product imports rose by about 7%, with fuel oil, LPG and gasoil contributing. India's product exports experienced a seasonal drop of 18%, with losses seen in naphtha and gasoil.

Japan's crude imports recovered from an 11-month low, averaging 2.6 mb/d in July, representing a strong y-o-y increase. Product imports and exports both rose, with Japan bringing in higher volumes of LPG and kerosene and exporting high volumes of jet fuel and fuel oil.

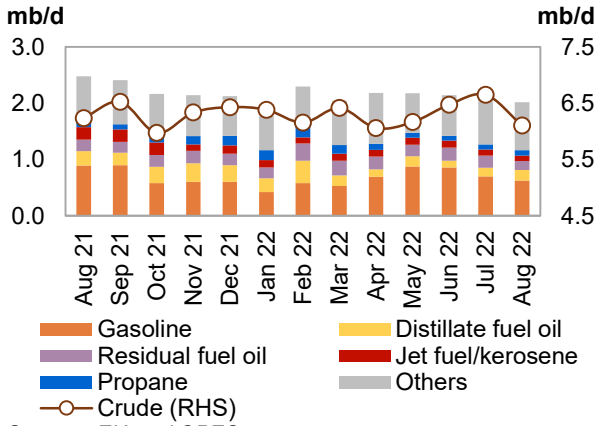
Preliminary figures show OECD Europe crude imports at higher levels starting in May, while crude exports continued to be muted. Product imports were seen falling back in May and June before picking up again in July. Product exports strengthened in May before trending somewhat lower.

US

Preliminary data shows **US crude imports** decline from a three-year high to average 6.1 mb/d in **August**, amid lower flows from Canada and Mexico. Crude imports fell 0.5 mb/d or over 8% m-o-m. Compared with the same month in 2021, inflows declined by 0.1 mb/d, or more than 2%.

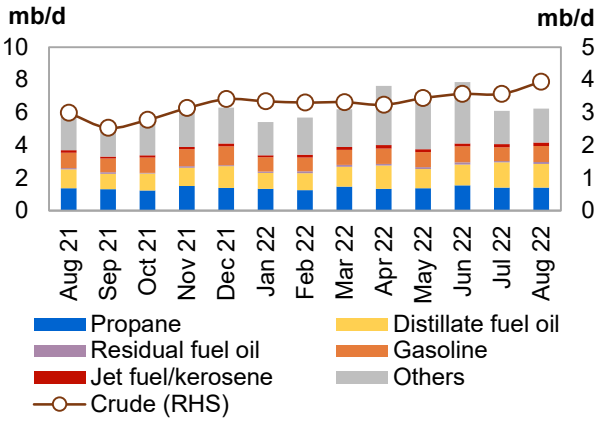
The **top three suppliers of crude** to the US remained unchanged in **June**, according to the latest monthly US Energy Information Administration (EIA) data. Canada held the top spot with a share of just under 61%, followed by Mexico with almost 10%. Saudi Arabia was third with a share of close to 7%.

Graph 8 - 1: US imports of crude and products



Sources: EIA and OPEC.

Graph 8 - 2: US exports of crude and products



Sources: EIA and OPEC.

US crude exports jumped to a new record high of just under 4.0 mb/d based on preliminary weekly data, as the end of the driving season, strong international demand and a gradual rise in domestic production left additional volumes for export. Outflows rose by 0.4 mb/d or more than 10% m-o-m. The preliminary August figure compares to a previous monthly high of 3.6 mb/d in March 2020, which was a particularly volatile time for the oil market. Compared with the same month last year, crude exports were almost 1 mb/d, or 32% higher.

According to the latest EIA monthly data, the Netherlands was the top **destination** for **US crude exports** in **June**, with a share of 12%, along with Singapore, also with 12% and then Canada with 11%. The top two destinations generally serve as transhipment points in their respective regions.

Based on weekly data, **US net crude imports** averaged 2.2 mb/d in **August**, compared with 3.1 mb/d in July and 3.2 mb/d in the same month last year.

On the **product** side, **imports** fell by 5% to average 2.0 mb/d, in line with seasonal trends at the end of the driving season. Gasoline and fuel oil led declines. Compared with the same month last year, product imports declined by 0.5 mb/d, or almost 19%.

Product exports recovered some of the previous month's declines, averaging 6.2 mb/d in August. Gains were seen in gasoline, while distillates fell. Compared with August 2021, product exports were 0.4 mb/d, or about 6%, higher.

As a result, preliminary data shows **US net product exports** averaged 4.2 mb/d in August, compared with 4.0 mb/d in July and 3.4 mb/d in the same month of 2021.

Preliminary data indicates that US **net crude and product exports** averaged 2.1 mb/d in August, compared with 0.9 mb/d the month before and 152 tb/d in August 2021.

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

US	Jun 22	Jul 22	Aug 22	Change Aug 22/Jul 22
Crude oil	2.90	3.08	2.16	-0.92
Total products	-4.17	-3.97	-4.22	-0.25
Total crude and products	**-1.27**	**-0.89**	**-2.07**	**-1.17**

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

Sources: EIA and OPEC.

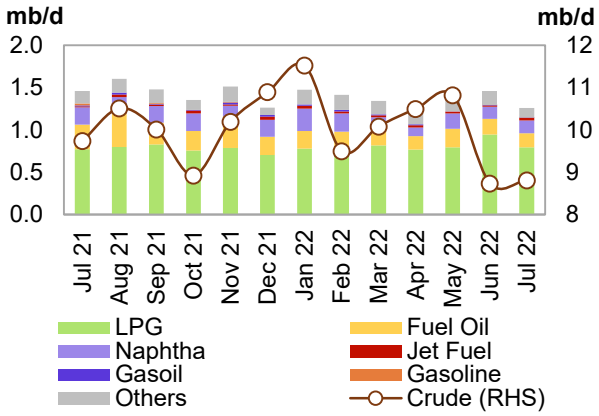
Looking ahead, US crude imports are likely to see a seasonal decline in September. Meanwhile, crude and product exports can be expected to remain healthy, supported by ongoing trade dislocations.

China

China's crude imports remained at relatively low levels in **July**, averaging 8.8 mb/d, as ongoing lockdowns weighed on domestic demand. Compared with the previous month, crude imports for the month edged up by just under 1%, or 74 tb/d. Y-o-y, crude inflows were down by 0.9 mb/d or almost 10%.

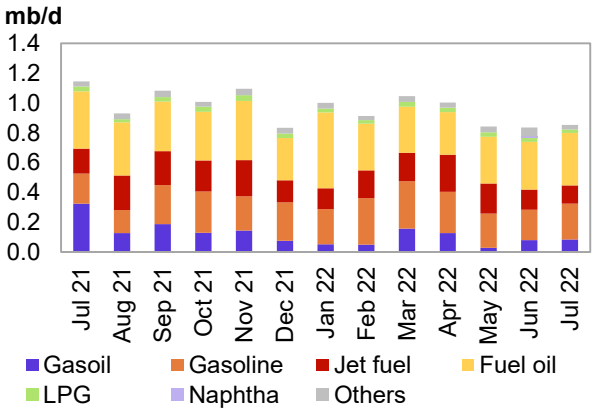
Preliminary customs data for **August** shows crude imports averaging 9.5 mb/d, representing an increase of 8% or around 0.7 mb/d over the previous month, as flows picked up from the exceptional lows seen in June and July. Y-o-y, however, crude imports were some 10% lower amid constrained domestic demand and limited quotas for product export.

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.

In terms of **crude imports by source**, Russia remained the top supplier of crude to China in **July**, with a lower share of 19% amid a decline in volumes. Saudi Arabia held second place with 18%, as volumes increased m-o-m. Iraq came in third with a share of almost 10%.

Product imports fell 13%, or 0.2 mb/d, to average 1.3 mb/d, as inflows of LPG, fuel oil, diesel and gasoline declined. Compared with the same month last year, product imports decreased by close to 14%, or around 0.2 mb/d.

Product exports also remained soft in July, increasing 2% to average 0.9 mb/d, with increased outflows of gasoline, fuel oil and gasoil offsetting declines in jet fuel and naphtha. Y-o-y, product outflows fell by almost 26%, or 0.3 mb/d, reflecting lower product export quotas.

As a result, China's **net product imports** averaged 409 tb/d in July, compared with net imports of 620 tb/d the month before and net exports of 313 tb/d in the same month of 2021.

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

China	May 22	Jun 22	Jul 22	*Change* Jul 22/Jun 22
Crude oil	10.82	8.69	8.80	0.12
Total products	0.50	0.62	0.41	-0.21
Total crude and products	**11.32**	**9.31**	**9.21**	**-0.10**

Note: Totals may not add up due to independent rounding.
Sources: China, Oil and Gas Petrochemicals and OPEC.

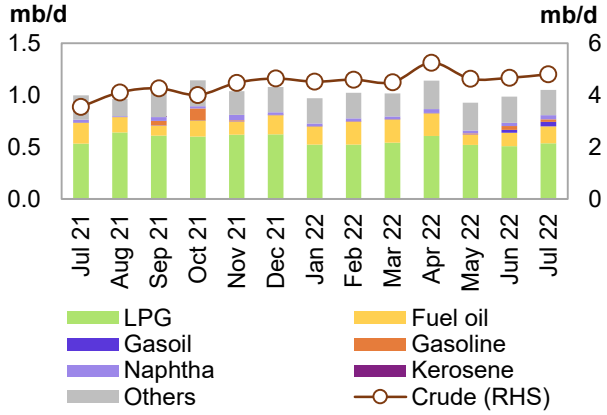
Looking ahead, crude imports are expected to be muted in the coming months as lockdown measures continue to dampen China's product demand and as limited product export quotas constrain product outflows. As a result, China is on a path to showing a y-o-y decline in annual crude oil imports for the second year in a row.

India

India's crude imports rose 3%, or 0.1 mb/d, to average a robust 4.8 mb/d in **July**. Russian flows remained above 1.0 mb/d, according to secondary sources. Crude inflows were sharply higher y-o-y, up by 35%, or 1.3 mb/d.

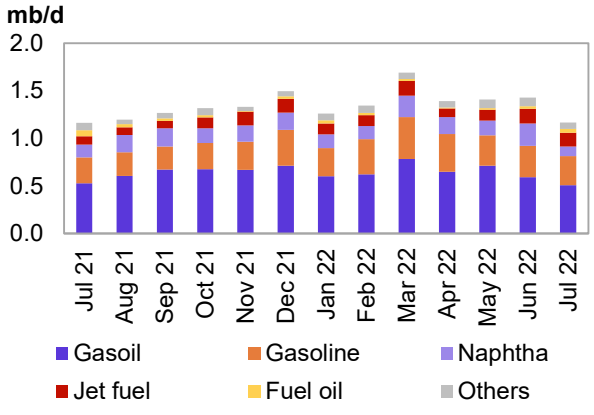
In terms of **crude imports by source**, Kpler data shows Russia as the top supplier of crude to India in July for the second month in a row, with a 30% share. Saudi Arabia was second with a share of 14%, followed by Iraq with 12%.

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.

In terms of **products**, **imports** in July averaged 1.1 mb/d, representing an increase of about 7%, with most major categories contributing, with the exception of gasoline. Compared with the same month in 2021, inflows edged up 5%, or less than 0.1 mb/d.

Product exports dropped by 18% or 0.3 mb/d to average 1.2 mb/d. Losses were seen across all products except fuel oil. Compared with the same month last year, product exports were negligibly higher.

As a result, **net product exports** averaged 114 tb/d in July, compared with 442 tb/d in June and 163 tb/d in the same month of 2021.

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

India	May 22	Jun 22	Jul 22	Change Jul 22/Jun 22
Crude oil	4.63	4.66	4.80	0.14
Total products	-0.48	-0.44	-0.11	0.33
Total crude and products	**4.15**	**4.22**	**4.69**	**0.47**

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.

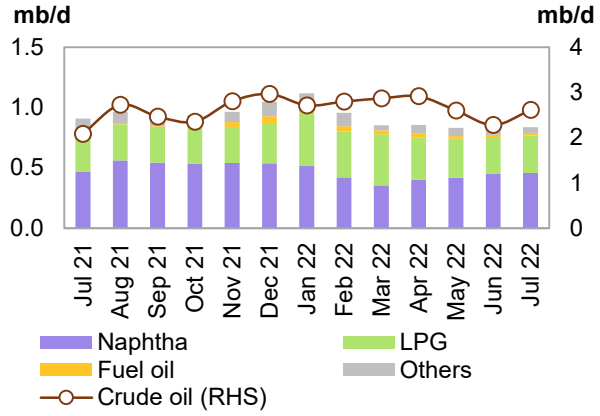
Looking ahead, crude imports will likely remain supported by lower cost input and higher international demand for Indian refined products. Product imports are seen remaining steady in August, as domestic demand has been healthy. Meanwhile, product exports are expected to pick up on increased flows to regions outside Asia amid product trade dislocations.

Japan

Japan's crude imports recovered from an 11-month low, averaging 2.6 mb/d in **July**, representing a strong y-o-y increase. Inflows declined by 0.3 mb/d or almost 15%. Compared with the same month last year, imports were almost 26%, or 0.5 mb/d, higher.

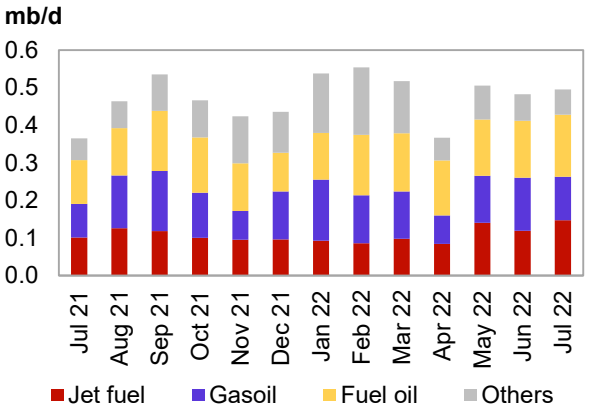
In terms of **crude imports by source**, the United Arab Emirates claimed the top spot in July with a share of almost 42%. Saudi Arabia was second with 35%, followed by Qatar with just over 9%. Flows from Russia remained at zero for the second month in a row in July.

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 imports, including LPG, rose by 2% to average 836 tb/d in July. Gains were primarily driven by LPG and kerosene, which offset declines in gasoil and fuel oil. Y-o-y imports declined by almost 8%, or 72 tb/d.

Product exports increased by around 3%, averaging 495 tb/d, with fuel oil and jet fuel outpacing declines in gasoil and kerosene. Product outflows were 130 tb/d, or around 36%, higher than in the same month of 2021.

As a consequence, Japan's **net product imports** averaged 341 tb/d in July. This compares with 337 tb/d the month before and 543 tb/d in July 2021.

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

Japan	May 22	Jun 22	Jul 22	Change Jul 22/Jun 22
Crude oil	2.60	2.28	2.61	0.34
Total products	0.33	0.34	0.34	0.00
Total crude and products	**2.93**	**2.62**	**2.96**	**0.34**

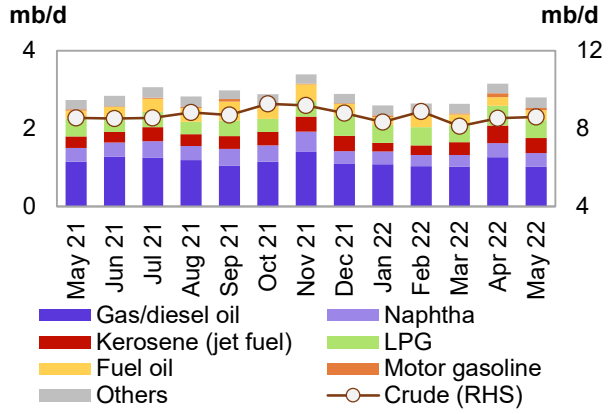
Looking ahead, crude imports are expected to continue moving higher in August. Product imports are seen increasing amid higher flows of fuel oil, while product exports are also seen moving higher, driven by gasoil outflows.

OECD Europe

The latest official regional data shows **OECD Europe** crude imports averaged 8.6 mb/d in May, broadly flat compared with the previous month. Y-o-y, crude imports were in line with volumes seen in the same month of 2021.

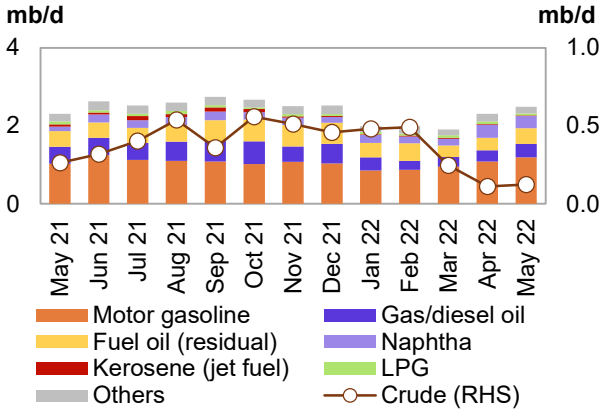
In terms of **import sources** from outside the region, Russia retained the top spot in May with around 2.1 mb/d, despite lower volumes m-o-m. Imports from the US increased, averaging 1.4 mb/d, followed by Iraq with 0.8 mb/d and Saudi Arabia with 0.7 mb/d.

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 remained at close to seven-year lows, averaging 123 tb/d, as more crude was kept in the region. Y-o-y, outflows were 0.1 mb/d, or 53%, lower.

In terms of **destination**, Korea took the top spot in May, representing more than half of total outflows and receiving more than half of total flows outside the region.

Net crude imports averaged 8.5 mb/d in May, compared with 8.4 mb/d in April and 8.3 mb/d in the same month last year.

On the **product** side, **imports** fell back from strong levels seen the month before, averaging 2.8 mb/d in May, with declines across most major products, particularly diesel. This represented a 0.4 mb/d, or 11%, decline m-o-m and minor 67 tb/d, or 2% increase y-o-y.

Product exports rose a further 8% or 0.2 mb/d m-o-m to average 2.5 mb/d, with gains in gasoline as well as diesel. Exports saw a similar increase y-o-y.

Net product imports averaged 307 tb/d in May, compared with net imports of 846 tb/d in April and 424 tb/d in May 2021.

Combined, **net crude and product imports** averaged 8.8 mb/d in May. This compares with 9.3 mb/d the month before and 8.7 mb/d in May 2021.

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

OECD Europe	Mar 22	Apr 22	May 22	Change May 22/Apr 22
Crude oil	7.88	8.42	8.47	0.05
Total products	0.72	0.85	0.31	-0.54
Total crude and products	**8.61**	**9.27**	**8.78**	**-0.49**

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

Sources: IEA and OPEC.

Looking ahead, preliminary figures show crude imports at higher levels starting in May, while crude exports continue to be muted, as regional supply fills the gap left by trade dislocations. Product imports are seen falling back in May and June before picking up again in July. Meanwhile, product exports are seen strengthening in May before trending somewhat lower in June and July.

Eurasia

Total crude oil exports from Russia and Central Asia rose marginally, by less than 1% m-o-m in **July,** to average 6.6 mb/d. Gains were seen primarily on the **Druzhba** pipeline, while volumes in the Black and Baltic seas declined. Compared with the same month in 2021, total crude exports from the region were 11%, or 0.6 mb/d, higher.

Crude exports through the **Transneft system** declined m-o-m in July. Outflows fell by 83 tb/d, or about 2%, to stand at 4.3 mb/d. Compared with the same month last year, exports were 0.9 mb/d, or 28%, higher. Exports fell from the **Baltic Sea** by 55 tb/d m-o-m, or about 4%, to average 1.5 mb/d. Those from Ust-Luga declined 47 tb/d m-o-m, or almost 7%, to average 644 tb/d, while flows from Primorsk were marginally lower at 846 tb/d. Shipments from the **Black Sea** port of Novorossiysk declined by 114 tb/d, or 16%, to average 581 tb/d.

Shipments via the **Druzhba** pipeline recovered most of the previous month's losses, up by 116 tb/d, or about 17% m-o-m, to average 820 tb/d. Pacific flows declined, with **Kozmino** shipments down by 5% m-o-m to average 818 tb/d. Exports to China via the **ESPO pipeline** rose by 13 tb/d, or 2%, to average 632 tb/d in July.

In the **Lukoil system**, exports via the Varandey offshore platform in the Barents Sea averaged 68 tb/d in July, down 38% m-o-m, to average 68 tb/d. Exports from the Kaliningrad terminal fell to zero.

On other routes, **Russia's Far East** exports were broadly unchanged at 74 tb/d on average in July. This was still 75%, or 0.2 mb/d, lower than volumes shipped in July 2021.

Central Asian exports averaged 223 tb/d in July, representing an increase of around 7% compared with the month before, but showing a drop of about 3% y-o-y.

Black Sea total exports from the CPC terminal have been volatile in recent months, up by 0.1 mb/d m-o-m, or almost 11%, to average 1.2 mb/d in July. This was a decline of 10%, or 141 tb/d, compared with the same month in 2021. There were no exports via the Supsa pipeline in July. Exports via the **Baku-Tbilisi-Ceyhan (BTC) pipeline** regained the previous month's losses, up by 41 tb/d in July, or about 7%, to average 658 tb/d, which represents a y-o-y increase of 42%.

Total product exports from Russia and Central Asia slipped were negligibly lower m-o-m, to average 2.5 mb/d in June. M-o-m declines were led by naphtha, followed by fuel oil, with VGO and gasoline outflows higher. Y-o-y, total product exports were 4%, or 116 tb/d, lower in July, with fuel oil, VGO and jet fuel leading declines, partly offset by gains in gasoil and naphtha.

Commercial Stock Movements

Preliminary July data sees total OECD commercial oil stocks up m-o-m by 18.1 mb. At 2,699 mb, they were 148 mb less than the same time one year ago, 279 mb lower than the latest five-year average and 271 mb below the 2015-2019 average. Within the components, crude and product stocks rose m-o-m by 6.4 mb and 11.7 mb.

At 1,318 mb, OECD crude stocks were 45 mb lower than the same time a year ago, 128 mb below the latest five-year average and 144 mb lower than the 2015-2019 average. OECD product stocks stood at 1,380 mb, 103 mb lower than the same time a year ago, 151 mb lower than the latest five-year average and 127 mb below the 2015-2019 average.

In terms of days of forward cover, OECD commercial stocks rose by 0.3 days m-o-m in July to stand at 59.1 days. This is 2.7 days below July 2021 levels, 5.3 days less than the latest five-year average and 3.4 days lower than the 2015-2019 average.

Preliminary data for August showed that total US commercial oil stocks rose by 16.2 mb m-o-m to stand at 1,225 mb. This is 25.1 mb, or 2.0%, lower than the same month in 2021 and 79.9 mb, or 6.1%, below the latest five-year average. Crude and product stocks rose by 0.6 mb and 15.6 mb, m-o-m, respectively.

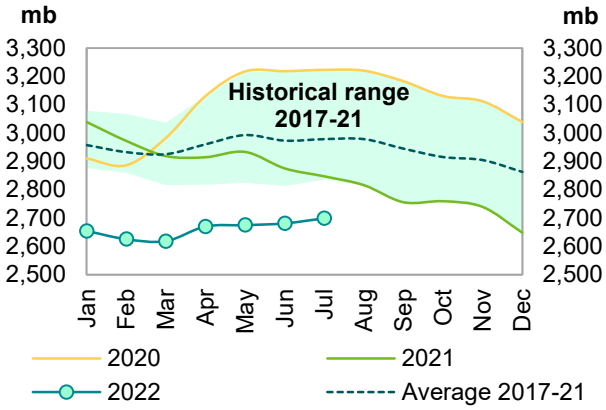
OECD

Preliminary **July** data sees **total OECD commercial oil stocks** up m-o-m by 18.1 mb. At 2,699 mb, they were 148 mb less than the same time one year ago, 279 mb lower than the latest five-year average and 271 mb below the 2015-2019 average.

Within the components, crude and product stocks rose m-o-m by 6.4 mb and 11.7 mb, respectively. Total commercial oil stocks in July rose in OECD Americas and OECD Asia Pacific, while OECD Europe saw a stock draw.

OECD commercial **crude stocks** stood at 1,318 mb in July. This is 45 mb lower than the same time a year ago, 128 mb below the latest five-year average and 144 mb lower than the 2015-2019 average.

Graph 9 - 1: OECD commercial oil stocks



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

Compared with the previous month, OECD Europe saw a stock draw of 3.0 mb, OECD Americas stocks rose by 9.1 mb and stocks in OECD Asia Pacific increased by 0.3 mb.

Total product inventories stood at 1,380 mb in July. This is 103 mb below the same time a year ago, 151 mb lower than the latest five-year average and 127 mb below the 2015-2019 average. Product stocks in OECD Americas and OECD Asia Pacific rose by 14.2 mb and 0.4 mb, respectively, while they fell m-o-m by 2.8 mb in OECD Europe.

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

OECD stocks	Jul 21	May 22	Jun 22	Jul 22	*Change* Jul 22/Jun 22
Crude oil	1,363	1,313	1,312	1,318	*6.4*
Products	1,483	1,362	1,369	1,380	*11.7*
Total	**2,847**	**2,674**	**2,681**	**2,699**	***18.1***
Days of forward cover	**61.8**	**58.9**	**58.8**	**59.1**	***0.3***

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 rose by 0.3 days m-o-m in July to stand at 59.1 days. This is 2.7 days below July 2021 levels, 5.3 days less than the latest five-year average and 3.4 days lower than the 2015-2019 average. All three OECD regions were below the latest five-year average: the Americas by 3.9 days at 60.0 days; Asia Pacific by 7.2 days at 46.4 days; and Europe by 7.1 days at 63.7 days.

OECD Americas

OECD Americas total commercial stocks rose by 23.2 mb m-o-m in July to settle at 1,475 mb. This is 72 mb less than the same month in 2021 and 103 mb lower than the latest five-year average.

Commercial **crude oil stocks** in OECD Americas rose m-o-m by 9.1 mb in July to stand at 749 mb, which is 26.4 mb lower than in July 2021 and 32.5 mb less than the latest five-year average. The monthly build in crude oil stocks can be attributed to lower crude runs, as well as additional barrels released from strategic petroleum reserves (SPRs).

Total product stocks in OECD Americas also rose m-o-m by 14.2 mb in July to stand at 726 mb. This was 45.6 mb lower than in the same month in 2021 and 71 mb below the latest five-year average. Lower total consumption in the region was behind the products stock build.

OECD Europe

OECD Europe total commercial stocks fell m-o-m by 5.8 mb in July to settle at 899 mb. This is 54.6 mb less than the same month in 2021 and 100.3 mb below the latest five-year average.

OECD Europe's **commercial crude stocks** fell in July by 3.0 mb m-o-m to end the month at 411 mb, which is 1.0 mb lower than one year ago and 31.3 mb below the latest five-year average. The drop in crude oil inventories came on the back of higher m-o-m refinery throughput in the EU-14, plus the UK and Norway, which increased by 180 tb/d to stand at 10.1 mb/d.

Europe's **product stocks** also fell m-o-m by 2.8 mb to end July at 489 mb. This is 53.6 mb lower than a year ago and 69.1 mb below the latest five-year average.

OECD Asia Pacific

OECD Asia Pacific's total commercial oil stocks rose m-o-m by 0.7 mb in July to stand at 324 mb. This is 21.3 mb lower than a year ago and 75.4 mb below the latest five-year average.

OECD Asia Pacific's **crude inventories** rose by 0.3 mb m-o-m to end July at 158 mb, which is 17.6 mb lower than one year ago and 64.4 mb below the latest five-year average.

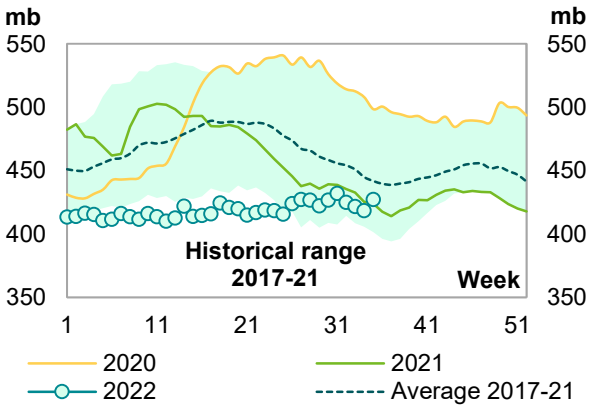
OECD Asia Pacific's **total product inventories** also rose m-o-m by 0.4 mb to end July at 165 mb. This is 3.7 mb lower than the same time a year ago and 11.0 mb below the latest five-year average.

US

Preliminary data for August showed that **total US commercial oil stocks** rose by 16.2 mb m-o-m to stand at 1,225 mb. This is 25.1 mb, or 2.0%, lower than the same month in 2021 and 79.9 mb, or 6.1%, below the latest five-year average. Crude and product stocks rose by 0.6 mb and 15.6 mb, m-o-m, respectively.

US **commercial crude stocks** in August stood at 427.2 mb. This is 5.7 mb, or 1.3%, higher than the same month of the previous year, and 17.5 mb, or 3.9%, below the latest five-year average. The monthly build in crude oil stocks can be attributed to lower crude imports, as well as additional barrels released from the SPR.

Graph 9 - 2: US weekly commercial crude oil inventories



Sources: EIA and OPEC.

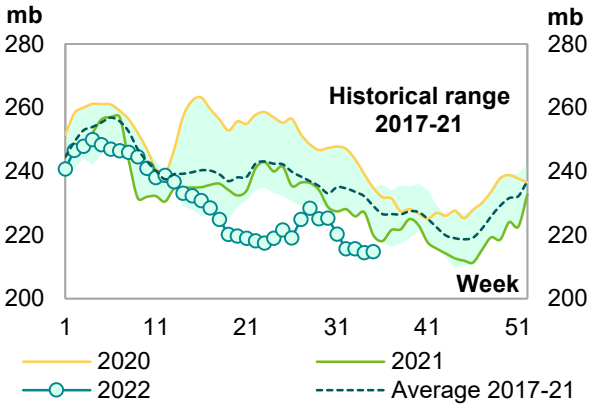
Total product stocks also rose in August to stand at 798.0 mb. This is 30.7 mb, or 3.7%, below August 2021 levels, and 62.4 mb, or 7.2%, lower than the latest five-year average. The stock build was mainly driven by lower product consumption.

Gasoline stocks in August fell m-o-m by 10.5 mb to settle at 214.8 mb. This is 10.7 mb, or 4.8% lower than in the same month of 2021, and 16.5 mb, or 7.1%, lower than the latest five-year average. The monthly stock drop came mainly on the back of higher gasoline consumption.

Jet fuel stocks also fell m-o-m by 2.9 mb, ending August at 38.7 mb. This is 3.8 mb, or 8.8%, lower than the same month of 2021, and 2.9 mb, or 6.9%, below the latest five-year average.

Residual fuel oil stocks also decreased by 0.9 mb m-o-m in August. At 27.3 mb, this was 2.5 mb, or 8.5%, lower than a year earlier, and 3.4 mb, or 11.2%, below the latest five-year average.

Graph 9 - 3: US weekly gasoline inventories



Sources: EIA and OPEC.

By contrast, **distillate stocks** rose m-o-m in August by 2.5 mb to stand at 111.8 mb. This is 25.8 mb, or 18.8%, lower than the same month of the previous year, and 34.8 mb, or 23.7%, below the latest five-year average.

Table 9 - 2: US commercial petroleum stocks, mb

US stocks	Aug 21	Jun 22	Jul 22	Aug 22	Change Aug 22/Jul 22
Crude oil	**421.5**	**417.5**	**426.6**	**427.2**	***0.6***
Gasoline	225.6	221.0	225.3	214.8	*-10.5*
Distillate fuel	137.6	111.4	109.3	111.8	*2.5*
Residual fuel oil	29.8	29.2	28.2	27.3	*-0.9*
Jet fuel	42.5	39.3	41.6	38.7	*-2.9*
Total products	**828.7**	**762.2**	**782.4**	**798.0**	***15.6***
Total	**1,250.2**	**1,179.7**	**1,208.9**	**1,225.1**	***16.2***
SPR	**621.3**	**493.3**	**469.9**	**442.5**	***-27.4***

Sources: EIA and OPEC.

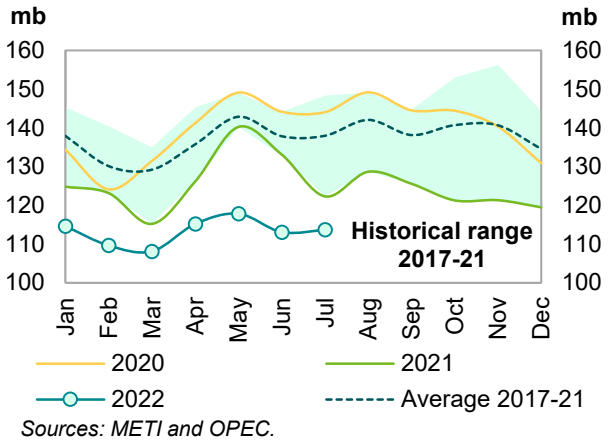
Japan

In **Japan**, **total commercial oil stocks** in July rose m-o-m by 0.7 mb to settle at 113.7 mb. This is 8.6 mb, or 7.0%, lower than the same month in 2021 and 24.2 mb, or 17.5%, below the latest five-year average. Crude and product stocks rose m-o-m by 0.3 mb and 0.4 mb, respectively.

Japanese **commercial crude oil stocks** rose in July to stand at 60.1 mb. This is 5.4 mb, or 8.3% lower than the same month of the previous year, and 18.7 mb, or 23.7%, lower than the latest five-year average. The drop came on the back of higher crude imports.

Japan's **total product inventories** also rose m-o-m by 0.4 mb to end July at 53.6 mb. This is 3.2 mb, or 5.6%, lower than the same month in 2021 and 5.5 mb, or 9.4%, below the latest five-year average.

Graph 9 - 4: Japan's commercial oil stocks



Sources: METI and OPEC.

Gasoline stocks fell by 1.0 mb m-o-m to stand at 8.9 mb in July. This was 1.0 mb, or 10.2% lower than a year earlier, and 1.3 mb, or 13.1%, lower than the latest five-year average. The drop came back on higher gasoline demand by 11.9% m-o-m.

Total residual fuel oil stocks also fell m-o-m by 0.6 mb to end July at 10.8 mb. This is 1.1 mb, or 8.9%, lower than in the same month of the previous year, and 1.8 mb, or 14.1%, below the latest five-year average. Within the components, fuel oil A and fuel oil B.C stocks fell by 2.3% and 6.9%, m-o-m, respectively.

By contrast, **distillate stocks** rose m-o-m by 2.3 mb to end July at 24.7 mb. This is 1.8 mb, or 7.0%, lower than the same month in 2021, and 2.2 mb, or 8.3%, below the latest five-year average. Within distillate components, jet fuel, kerosene and gasoil stocks went up by 11.9%, 14.7% and 4.9%, respectively.

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

Japan's stocks	Jul 21	May 22	Jun 22	Jul 22	Change Jul 22/Jun 22
Crude oil	**65.5**	**63.9**	**59.8**	**60.1**	***0.3***
Gasoline	10.0	10.4	10.0	8.9	*-1.0*
Naphtha	8.5	9.8	9.6	9.3	*-0.4*
Middle distillates	26.5	22.0	22.3	24.7	*2.3*
Residual fuel oil	11.8	11.7	11.3	10.8	*-0.6*
Total products	**56.8**	**54.0**	**53.3**	**53.6**	***0.4***
Total**	**122.3**	**117.9**	**113.1**	**113.7**	***0.7***

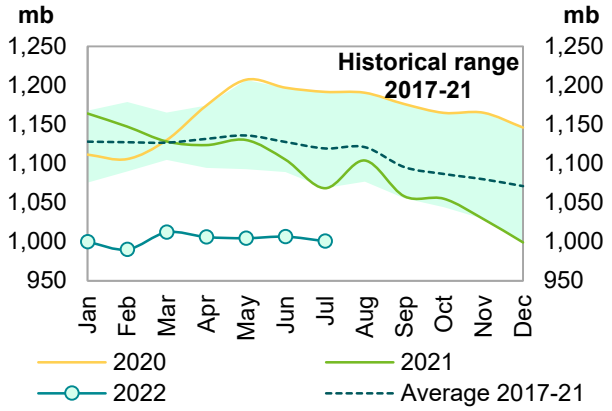
*Note: * At the end of the month. ** Includes crude oil and main products only.*
Sources: METI and OPEC.

EU-14 plus UK and Norway

Preliminary data for July showed that **total European commercial oil stocks** fell m-o-m by 5.8 mb to stand at 1,000.9 mb. At this level, they were 67.8 mb, or 6.3%, below the same month a year earlier, and 118.6 mb, or 10.6% lower than the latest five-year average. Crude and product stocks fell m-o-m by 3.0 mb and 2.8 mb, respectively.

European **crude inventories** fell in July to stand at 431.4 mb. This is 19.0 mb, or 4.2%, lower than the same month in 2021, and 54.2 mb, or 11.2%, below the latest five-year average. The drop in crude oil inventories came on the back of higher m-o-m refinery throughput in the EU-14, plus the UK and Norway, which increased by 180 tb/d to stand at 10.10 mb/d.

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



Sources: Argus, Euroilstock and OPEC.

Total European product stocks also fell m-o-m by 2.8 mb to end July at 569.5 mb. This is 48.8 mb, or 7.9%, lower than the same month of the previous year, and 64.4 mb, or 10.2%, below the latest five-year average.

Gasoline stocks fell m-o-m by 0.7 mb in July to stand at 110.8 mb. At this level, they were 9.8 mb, or 9.7%, higher than the same time a year earlier, and 2.1 mb/d, or 1.9%, above the latest five-year average.

Distillate stocks also fell m-o-m by 1.1 mb in July to stand at 368.9 mb. This is 60.3 mb, or 14.1%, below the same month in 2021, and 61.8 mb, or 14.3%, less than the latest five-year average.

Residual fuel stocks also fell m-o-m by 1.0 mb in July to stand at 59.5 mb. This is 2.4 mb, or 3.8%, lower than the same month in 2021, and 6.9 mb, or 10.4%, below the latest five-year average.

Meanwhile, **naphtha stocks** remained unchanged in July, ending the month at 30.3 mb. This is 4.1 mb, or 15.4% higher than July 2021 levels, and 2.2 mb, or 7.9%, higher than the latest five-year average.

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

EU stocks	Jul 21	May 22	Jun 22	Jul 22	Change Jul 22/Jun 22
Crude oil	**450.3**	**428.5**	**434.4**	**431.4**	***-3.0***
Gasoline	101.1	110.8	111.5	110.8	*-0.7*
Naphtha	26.2	29.6	30.3	30.3	*0.0*
Middle distillates	429.2	373.0	370.0	368.9	*-1.1*
Fuel oils	61.9	62.9	60.5	59.5	*-1.0*
Total products	**618.3**	**576.2**	**572.3**	**569.5**	***-2.8***
Total	**1,068.7**	**1,004.7**	**1,006.6**	**1,000.9**	***-5.8***

Sources: Argus, Euroilstock and OPEC.

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

Singapore

In July, **total product stocks in Singapore** fell m-o-m by 0.7 mb to 43.6 mb. This is 3.7 mb, or 7.8%, lower than the same month in 2021.

Light distillate stocks rose m-o-m by 2.2 mb in June to stand at 17.7 mb. This is 4.0 mb, or 29.6%, higher than the same month of the previous year.

By contrast, **residual fuel oil stocks** fell m-o-m by 2.9 mb, ending July at 18.0 mb. This is 4.7 mb, or 20.7%, lower than in July 2021.

Meanwhile, **middle distillate stocks** remained unchanged m-o-m in July to stand at 7.9 mb. This is 3.0 mb, or 27.6%, lower than a year earlier.

ARA

Total product stocks in ARA rose m-o-m in July by 0.9 mb, for the second consecutive months. At 40.2 mb, they were 1.1 mb, or 2.7%, lower than the same month in 2021.

Gasoline stocks in July rose by 1.4 mb m-o-m to stand at 11.7 mb, which is 5.1 mb, or 76.7%, higher than the same month of the previous year.

Jet oil stocks also rose by 0.2 mb m-o-m to stand at 6.5 mb. This is 2.5 mb, or 28.1%, lower than levels seen in July 2021.

By contrast, **gasoil stocks** fell by 0.2 mb m-o-m, ending July at 11.1 mb. This is 4.5 mb, or 29%, lower than levels seen in July 2021.

Fuel oil stocks also fell by 0.6 mb m-o-m in July to stand at 7.4 mb, which is 0.2 mb, or 2.4%, higher than in July 2021.

Fujairah

During the week ending 29 August 2022, **total oil product stocks in Fujairah** rose w-o-w by 0.19 mb to stand at 21.97 mb, according to data from Fed Com and S&P Global Platts. At this level, total oil stocks were 4.29 mb higher than the same time a year ago.

Light distillate stocks fell by 1.15 mb w-o-w to stand at 7.27 mb in the week to 29 August 2022, which is 1.51 mb higher than the same period a year ago. By contrast**, middle distillate stocks** rose by 0.22 mb to stand at 3.02 mb, which is 0.65 mb lower than a year ago. **Heavy distillate stocks** also rose w-o-w by 1.12 mb to stand at 11.68 mb, which is 3.43 mb higher than the same time last year.

Balance of Supply and Demand

Demand for OPEC crude in 2022 remained unchanged from the previous MOMR to stand at 28.9 mb/d, which is around 0.9 mb/d higher than in 2021. According to secondary sources, OPEC crude production averaged 28.4 mb/d in 1Q22, which is 0.3 mb/d lower than the demand for OPEC crude. In 2Q22, OPEC crude production averaged 28.6 mb/d, which is 0.2 mb/d lower than demand for OPEC crude.

Demand for OPEC crude in 2023 remained unchanged from the previous MOMR to stand at 29.8 mb/d, which is around 0.9 mb/d higher than in 2022.

Balance of supply and demand in 2022

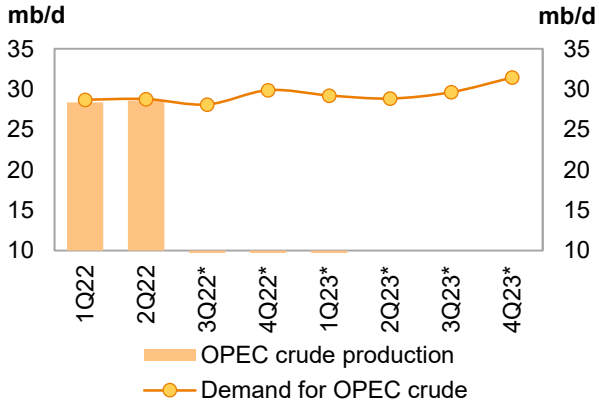
Demand for OPEC crude in 2022 remained unchanged from the previous MOMR to stand at 28.9 mb/d, which is around 0.9 mb/d higher than in 2021.

Compared with the previous assessment, both 2Q22 and 4Q22 were revised up by 1.0 mb/d, while 3Q22 was revised down by 0.2 mb/d. Meanwhile, 1Q22 remained unchanged compared with the previous month.

Compared with the same quarters in 2021, demand for OPEC crude in 1Q22 and 2Q22 is estimated to be higher by 2.6 mb/d and 1.8 mb/d, respectively, while both 3Q22 and 4Q22 are forecast to be lower by 0.6 mb/d and 0.2 mb/d, respectively.

According to secondary sources, OPEC crude production averaged 28.4 mb/d in 1Q22, which is 0.3 mb/d lower than the demand for OPEC crude. In 2Q22, OPEC crude production averaged 28.6 mb/d, which is 0.2 mb/d lower than demand for OPEC crude.

Graph 10 - 1: Balance of supply and demand, 2022–2023*



*Note: * 3Q22-4Q23 = Forecast. Source: OPEC.*

Table 10 - 1: Supply/demand balance for 2022*, mb/d

	2021	1Q22	2Q22	3Q22	4Q22	2022	Change 2022/21
(a) World oil demand	**96.92**	**99.36**	**98.63**	**99.67**	**102.42**	**100.03**	***3.10***
Non-OPEC liquids production	63.67	65.33	64.48	66.17	67.12	65.78	*2.11*
OPEC NGL and non-conventionals	5.28	5.35	5.38	5.41	5.43	5.39	*0.11*
(b) Total non-OPEC liquids production and OPEC NGLs	**68.96**	**70.68**	**69.86**	**71.57**	**72.56**	**71.17**	***2.22***
Difference (a-b)	**27.97**	**28.68**	**28.77**	**28.10**	**29.87**	**28.85**	***0.89***
OPEC crude oil production	**26.35**	**28.36**	**28.59**				
Balance	**-1.62**	**-0.32**	**-0.18**				

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

Balance of supply and demand in 2023

Demand for OPEC crude in 2023 remained unchanged from the previous MOMR to stand at 29.8 mb/d, which is around 0.9 mb/d higher than in 2022.

Compared with the previous assessment, 2Q23 and 4Q23 were revised up by 0.2 mb/d and 0.1 mb/d, respectively, while 3Q22 was revised down by 0.3 mb/d. Meanwhile, 1Q23 remained unchanged compared with the previous month.

Compared with the same quarters in 2022, demand for OPEC crude in 1Q23 and 2Q22 is forecast to be 0.5 mb/d and 0.1 mb higher, respectively, while 3Q23 and 4Q23 are expected to be higher by 1.5 mb/d and 1.6 mb/d, respectively.

Table 10 - 2: Supply/demand balance for 2023*, mb/d

	2022	1Q23	2Q23	3Q23	4Q23	2023	*Change* 2023/22
(a) World oil demand	**100.03**	**101.80**	**101.50**	**102.60**	**104.99**	**102.73**	***2.70***
Non-OPEC liquids production	65.78	67.16	67.19	67.55	68.12	67.51	*1.73*
OPEC NGL and non-conventionals	5.39	5.44	5.47	5.43	5.43	5.44	*0.05*
(b) Total non-OPEC liquids production and OPEC NGLs	**71.17**	**72.60**	**72.66**	**72.98**	**73.55**	**72.95**	***1.78***
Difference (a-b)	**28.85**	**29.21**	**28.83**	**29.62**	**31.44**	**29.78**	***0.92***

*Note: * 2022-2023 = 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	2019	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023
World demand													
Americas	25.42	22.47	24.22	24.79	24.88	25.16	25.40	25.06	25.13	25.35	25.71	25.88	25.52
of which US	*20.58*	*18.35*	*19.93*	*20.38*	*20.31*	*20.54*	*20.91*	*20.53*	*20.42*	*20.50*	*20.79*	*21.06*	*20.69*
Europe	14.31	12.41	13.13	13.15	13.52	14.24	14.35	13.82	13.19	13.59	14.38	14.46	13.91
Asia Pacific	7.95	7.17	7.38	7.85	6.98	7.19	7.94	7.49	7.88	7.03	7.23	7.96	7.53
Total OECD	**47.68**	**42.05**	**44.74**	**45.79**	**45.38**	**46.59**	**47.70**	**46.37**	**46.20**	**45.97**	**47.32**	**48.30**	**46.95**
China	13.81	13.94	14.97	14.74	14.76	15.09	15.74	15.08	15.35	15.74	15.78	16.27	15.79
India	4.99	4.51	4.77	5.18	5.16	4.89	5.35	5.14	5.41	5.44	5.15	5.59	5.40
Other Asia	9.06	8.13	8.63	9.09	9.27	8.73	8.90	8.99	9.49	9.61	9.09	9.25	9.36
Latin America	6.59	5.90	6.23	6.32	6.36	6.55	6.40	6.41	6.48	6.48	6.71	6.54	6.55
Middle East	8.20	7.45	7.79	8.06	8.13	8.40	8.22	8.20	8.45	8.46	8.73	8.51	8.54
Africa	4.34	4.05	4.22	4.51	4.25	4.22	4.53	4.38	4.71	4.44	4.41	4.72	4.57
Russia	3.57	3.39	3.61	3.67	3.42	3.45	3.59	3.53	3.69	3.44	3.62	3.77	3.63
Other Eurasia	1.19	1.07	1.21	1.22	1.16	1.03	1.21	1.15	1.22	1.16	1.04	1.22	1.16
Other Europe	0.76	0.70	0.75	0.79	0.75	0.73	0.80	0.77	0.80	0.76	0.75	0.82	0.78
Total Non-OECD	**52.52**	**49.13**	**52.18**	**53.58**	**53.25**	**53.07**	**54.73**	**53.66**	**55.60**	**55.53**	**55.28**	**56.69**	**55.78**
(a) Total world demand	**100.20**	**91.19**	**96.92**	**99.36**	**98.63**	**99.67**	**102.42**	**100.03**	**101.80**	**101.50**	**102.60**	**104.99**	**102.73**
Y-o-y change	***1.00***	***-9.01***	***5.74***	***5.31***	***3.03***	***2.01***	***2.11***	***3.10***	***2.44***	***2.87***	***2.93***	***2.56***	***2.70***
Non-OPEC liquids production													
Americas	25.84	24.75	25.25	25.86	26.26	26.90	27.34	26.59	27.58	27.68	28.05	28.42	27.94
of which US	*18.49*	*17.64*	*17.85*	*18.27*	*18.83*	*19.19*	*19.52*	*18.95*	*19.77*	*20.07*	*20.26*	*20.49*	*20.15*
Europe	3.70	3.89	3.76	3.73	3.43	3.74	3.99	3.72	4.05	3.97	3.88	3.98	3.97
Asia Pacific	0.52	0.52	0.51	0.49	0.51	0.55	0.54	0.52	0.53	0.50	0.53	0.48	0.51
Total OECD	**30.07**	**29.16**	**29.52**	**30.08**	**30.20**	**31.19**	**31.86**	**30.84**	**32.17**	**32.16**	**32.46**	**32.88**	**32.42**
China	4.05	4.15	4.31	4.50	4.50	4.42	4.43	4.46	4.51	4.51	4.48	4.48	4.49
India	0.82	0.78	0.77	0.77	0.77	0.80	0.82	0.79	0.82	0.80	0.79	0.78	0.80
Other Asia	2.72	2.51	2.41	2.37	2.32	2.36	2.39	2.36	2.37	2.33	2.29	2.28	2.31
Latin America	6.08	6.03	5.95	6.11	6.15	6.32	6.49	6.27	6.44	6.61	6.70	6.76	6.63
Middle East	3.19	3.19	3.24	3.29	3.33	3.40	3.40	3.35	3.38	3.40	3.42	3.41	3.40
Africa	1.51	1.41	1.35	1.33	1.32	1.34	1.33	1.33	1.34	1.35	1.37	1.39	1.36
Russia	11.61	10.59	10.80	11.33	10.62	10.90	10.70	10.88	10.49	10.48	10.54	10.57	10.52
Other Eurasia	3.07	2.91	2.93	3.05	2.77	2.93	3.21	2.99	3.08	2.98	2.94	3.02	3.00
Other Europe	0.12	0.12	0.11	0.11	0.11	0.10	0.10	0.11	0.10	0.10	0.10	0.10	0.10
Total Non-OECD	**33.18**	**31.71**	**31.87**	**32.85**	**31.89**	**32.58**	**32.86**	**32.54**	**32.52**	**32.56**	**32.63**	**32.78**	**32.62**
Total Non-OPEC production	63.25	60.87	61.39	62.94	62.08	63.77	64.72	63.38	64.69	64.72	65.08	65.65	65.04
Processing gains	2.37	2.16	2.29	2.40	2.40	2.40	2.40	2.40	2.47	2.47	2.47	2.47	2.47
Total Non-OPEC liquids production	**65.62**	**63.02**	**63.67**	**65.33**	**64.48**	**66.17**	**67.12**	**65.78**	**67.16**	**67.19**	**67.55**	**68.12**	**67.51**
OPEC NGL + non-conventional oils	5.21	5.17	5.28	5.35	5.38	5.41	5.43	5.39	5.44	5.47	5.43	5.43	5.44
(b) Total non-OPEC liquids production and OPEC NGLs	**70.84**	**68.19**	**68.96**	**70.68**	**69.86**	**71.57**	**72.56**	**71.17**	**72.60**	**72.66**	**72.98**	**73.55**	**72.95**
Y-o-y change	***2.12***	***-2.65***	***0.77***	***2.72***	***1.20***	***2.59***	***2.35***	***2.22***	***1.92***	***2.80***	***1.41***	***1.00***	***1.78***
OPEC crude oil production (secondary sources)	29.36	25.72	26.35	28.36	28.59								
Total liquids production	100.20	93.91	95.30	99.04	98.45								
Balance (stock change and miscellaneous)	0.00	2.72	-1.62	-0.32	-0.18								
OECD closing stock levels, *mb*													
Commercial	2,894	3,038	2,648	2,618	2,681								
SPR	1,535	1,541	1,484	1,442	1,348								
Total	**4,429**	**4,579**	**4,131**	**4,060**	**4,028**								
Oil-on-water	1,033	1,148	1,202	1,222	1,290								
Days of forward consumption in OECD, *days*													
Commercial onland stocks	69	68	57	58	58								
SPR	37	34	32	32	29								
Total	**105**	**102**	**89**	**89**	**86**								
Memo items													
(a) - (b)	**29.36**	**22.99**	**27.97**	**28.68**	**28.77**	**28.10**	**29.87**	**28.85**	**29.21**	**28.83**	**29.62**	**31.44**	**29.78**

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

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

World oil demand and supply balance	2019	2020	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023
World demand													
Americas	-0.11	-0.09	-0.05	-0.10	-0.11	-0.15	-0.05	-0.10	-0.12	-0.12	-0.15	-0.08	-0.12
of which US	-	-	-	-	*-0.07*	*-0.20*	-	*-0.07*	-	*-0.07*	*-0.20*	-	*-0.07*
Europe	-	-0.02	0.05	0.07	0.21	0.08	0.17	0.13	0.09	0.23	0.05	0.17	0.13
Asia Pacific	0.01	0.03	-0.03	-0.04	-0.15	-0.04	0.01	-0.05	-0.04	-0.15	-0.04	0.01	-0.05
Total OECD	**-0.10**	**-0.08**	**-0.03**	**-0.07**	**-0.04**	**-0.11**	**0.13**	**-0.02**	**-0.07**	**-0.03**	**-0.14**	**0.10**	**-0.03**
China	0.10	0.08	0.03	0.07	-0.05	-0.16	-0.01	-0.04	0.04	-0.08	-0.19	-0.04	-0.07
India	-	-	-	-	-	-0.02	0.03	-	0.03	0.03	-0.02	0.03	0.02
Other Asia	-	-	-	-	-0.12	-	-	-0.03	0.01	-0.11	-	-	-0.02
Latin America	-	-	-	-	0.04	-	-	0.01	-	0.04	-	-	0.01
Middle East	-	-	-	-	0.11	0.02	0.05	0.04	0.02	0.16	0.02	0.05	0.06
Africa	-	-	-	-	0.06	-	-	0.02	0.01	0.06	-	-	0.02
Russia	-	-	-	-	0.06	-0.04	-	0.01	0.01	0.07	-0.04	-	0.01
Other Eurasia	-	-	-	-	0.01	0.05	-	0.02	-	0.01	0.05	-	0.02
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	**0.10**	**0.08**	**0.03**	**0.07**	**0.11**	**-0.15**	**0.07**	**0.02**	**0.12**	**0.18**	**-0.18**	**0.04**	**0.04**
(a) Total world demand	**-**	**-**	**-**	**-**	**0.07**	**-0.26**	**0.20**	**-**	**0.05**	**0.15**	**-0.32**	**0.14**	**-**
Y-o-y change	***-***	***-***	***-***	***-0.01***	***0.07***	***-0.26***	***0.20***	***-***	***0.05***	***0.08***	***-0.06***	***-0.06***	***-***
Non-OPEC liquids production													
Americas	0.03	-	0.03	-	-0.04	0.03	0.03	-	0.01	0.01	0.01	0.01	0.01
of which US	*0.03*	-	*0.03*	-	*-0.05*	-	-	*-0.01*	*-0.01*	*-0.01*	*-0.01*	*-0.01*	*-0.01*
Europe	-	-	-	-	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
Asia Pacific	-	-	-	-	-0.01	-	-	-	-	-	-	-	-
Total OECD	**0.03**	**-**	**0.03**	**-**	**-0.07**	**0.01**	**0.01**	**-0.01**	**-0.01**	**-0.01**	**-0.01**	**-0.01**	**-0.01**
China	-	-	-	0.01	0.01	-	-	-	-	-	-	-	0.01
India	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Asia	-	-	-	-	0.01	-	0.04	0.01	0.01	0.01	0.01	0.01	0.01
Latin America	-	-	-	-0.03	0.01	0.02	0.06	0.02	0.04	0.01	-	-	0.01
Middle East	-	-	-	-	-	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Africa	-	-	-	-	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Russia	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Eurasia	-	-	-0.01	-0.01	-0.03	-0.16	-0.01	-0.06	-0.07	-0.04	-0.02	-0.03	-0.04
Other Europe	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OECD	**-**	**-**	**-0.01**	**-0.03**	**-**	**-0.10**	**0.11**	**-0.01**	**0.01**	**-**	**0.02**	**0.01**	**0.01**
Total Non-OPEC production	0.03	-	0.02	-0.03	-0.06	-0.09	0.12	-0.02	-	-0.01	0.01	-	-
Processing gains	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-OPEC liquids production	**0.03**	**-**	**0.02**	**-0.03**	**-0.06**	**-0.09**	**0.12**	**-0.02**	**-**	**-0.01**	**0.01**	**-**	**-**
OPEC NGL + non-conventional oils	-	-	-	-	-	-	-	-	-	-	-	-	-
(b) Total non-OPEC liquids production and OPEC NGLs	**0.03**	**-**	**0.02**	**-0.03**	**-0.06**	**-0.09**	**0.12**	**-0.02**	**-**	**-0.01**	**0.01**	**-**	**-**
Y-o-y change	***0.01***	***-0.03***	***0.02***	***-0.06***	***-0.10***	***-0.12***	***0.13***	***-0.04***	***0.03***	***0.06***	***0.10***	***-0.12***	***0.02***
OPEC crude oil production (secondary sources)	-	-	-	0.01	0.01								
Total liquids production	0.02	-	0.02	-0.03	-0.06								
Balance (stock change and miscellaneous)	0.02	-	0.02	-0.03	-0.13								
mb													
Commercial	-	-	-	-	-31								
SPR	-	-	-	1	-1								
Total	**-**	**-**	**-**	**-**	**-32**								
Oil-on-water	-	-	-	-3	-2								
Days of forward consumption in OECD, *days*													
Commercial onland stocks	-	-	-	-	-1								
SPR	-	-	-	-	-								
Total	**-**	**-**	**-**	**-**	**-**								
Memo items													
(a) - (b)	**-0.03**	**0.00**	**-0.02**	**0.03**	**0.14**	**-0.17**	**0.08**	**0.02**	**0.05**	**0.16**	**-0.33**	**0.14**	**0.00**

*Note: * This compares Table 11 - 1 in this issue of the MOMR with Table 11 - 1 in the August 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	2020	2021	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	3Q21	4Q21	1Q22	2Q22
Closing stock levels, mb												
OECD onland commercial	**3,038**	**2,648**	**2,982**	**3,217**	**3,182**	**3,038**	**2,918**	**2,875**	**2,755**	**2,648**	**2,618**	**2,681**
Americas	1,615	1,466	1,583	1,719	1,691	1,615	1,570	1,543	1,508	1,466	1,410	1,452
Europe	1,043	858	1,033	1,099	1,079	1,043	1,002	974	892	858	892	905
Asia Pacific	380	324	366	400	411	380	346	357	355	324	316	323
OECD SPR	**1,541**	**1,484**	**1,537**	**1,561**	**1,551**	**1,541**	**1,546**	**1,524**	**1,513**	**1,484**	**1,442**	**1,348**
Americas	640	596	637	658	644	640	640	623	620	596	568	496
Europe	488	479	484	487	490	488	493	487	485	479	468	455
Asia Pacific	414	409	416	416	417	414	413	413	408	409	406	396
OECD total	**4,579**	**4,131**	**4,519**	**4,779**	**4,733**	**4,579**	**4,464**	**4,398**	**4,268**	**4,131**	**4,060**	**4,028**
Oil-on-water	**1,148**	**1,202**	**1,187**	**1,329**	**1,174**	**1,148**	**1,138**	**1,131**	**1,169**	**1,202**	**1,225**	**1,292**
Days of forward consumption in OECD, days												
OECD onland commercial	**68**	**57**	**79**	**76**	**74**	**72**	**66**	**63**	**59**	**58**	**58**	**57**
Americas	67	58	79	76	73	71	64	62	60	59	56	57
Europe	80	63	94	85	86	88	79	70	64	66	67	64
Asia Pacific	51	43	55	59	56	50	49	50	45	41	44	45
OECD SPR	**35**	**34**	**41**	**37**	**36**	**36**	**35**	**33**	**32**	**32**	**32**	**29**
Americas	26	24	32	29	28	28	26	25	25	24	23	20
Europe	37	35	44	38	39	41	39	35	35	37	35	32
Asia Pacific	56	54	63	62	57	54	59	58	52	52	57	55
OECD total	**104**	**91**	**120**	**113**	**110**	**108**	**101**	**96**	**91**	**90**	**89**	**86**

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	2019	2020	2021	3Q22	4Q22	2022	Change 22/21	1Q23	2Q23	3Q23	4Q23	2023	Change 23/22
US	18.5	17.6	17.8	19.2	19.5	19.0	1.1	19.8	20.1	20.3	20.5	20.2	1.2
Canada	5.4	5.2	5.4	5.7	5.8	5.6	0.2	5.8	5.6	5.8	6.0	5.8	0.2
Mexico	1.9	1.9	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0	1.9	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	**25.8**	**24.7**	**25.3**	**26.9**	**27.3**	**26.6**	**1.3**	**27.6**	**27.7**	**28.1**	**28.4**	**27.9**	**1.3**
Norway	1.7	2.0	2.0	2.1	2.2	2.0	0.0	2.2	2.2	2.2	2.3	2.2	0.2
UK	1.1	1.1	0.9	0.9	1.0	0.9	0.0	1.0	0.9	0.9	0.9	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	0.7	0.7	0.7	0.7	0.7	0.7	0.0	0.8	0.8	0.7	0.7	0.8	0.0
OECD Europe	**3.7**	**3.9**	**3.8**	**3.7**	**4.0**	**3.7**	**0.0**	**4.1**	**4.0**	**3.9**	**4.0**	**4.0**	**0.2**
Australia	0.5	0.5	0.4	0.5	0.5	0.5	0.0	0.5	0.4	0.5	0.4	0.4	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	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.0**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.0**
Total OECD	**30.1**	**29.2**	**29.5**	**31.2**	**31.9**	**30.8**	**1.3**	**32.2**	**32.2**	**32.5**	**32.9**	**32.4**	**1.6**
China	**4.1**	**4.2**	**4.3**	**4.4**	**4.4**	**4.5**	**0.2**	**4.5**	**4.5**	**4.5**	**4.5**	**4.5**	**0.0**
India	**0.8**	**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	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8	0.0
Malaysia	0.7	0.6	0.6	0.6	0.7	0.6	0.0	0.6	0.6	0.6	0.6	0.6	0.0
Thailand	0.5	0.5	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.0
Vietnam	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Asia others	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0
Other Asia	**2.7**	**2.5**	**2.4**	**2.4**	**2.4**	**2.4**	**0.0**	**2.4**	**2.3**	**2.3**	**2.3**	**2.3**	**0.0**
Argentina	0.7	0.7	0.7	0.8	0.7	0.7	0.1	0.8	0.8	0.8	0.8	0.8	0.1
Brazil	3.6	3.7	3.6	3.7	3.9	3.7	0.1	3.8	3.9	4.0	4.0	3.9	0.2
Colombia	0.9	0.8	0.8	0.8	0.8	0.8	0.0	0.8	0.8	0.7	0.8	0.8	0.0
Ecuador	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.0
Guyana	0.0	0.1	0.1	0.3	0.3	0.2	0.1	0.4	0.3	0.4	0.4	0.3	0.1
Latin America	0.4	0.3	0.3	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.0
Latin America	**6.1**	**6.0**	**6.0**	**6.3**	**6.5**	**6.3**	**0.3**	**6.4**	**6.6**	**6.7**	**6.8**	**6.6**	**0.4**
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	1.1	1.1	1.1	0.1	1.1	1.1	1.1	1.1	1.1	0.0
Qatar	1.9	1.9	2.0	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	0.1	0.0	0.0
Yemen	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Middle East	**3.2**	**3.2**	**3.2**	**3.4**	**3.4**	**3.4**	**0.1**	**3.4**	**3.4**	**3.4**	**3.4**	**3.4**	**0.0**
Cameroon	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Chad	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0
Egypt	0.7	0.6	0.6	0.6	0.6	0.6	0.0	0.6	0.6	0.6	0.6	0.6	0.0
Ghana	0.2	0.2	0.2	0.2	0.1	0.2	0.0	0.1	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**	**1.4**	**1.3**	**1.3**	**1.3**	**1.3**	**0.0**	**1.3**	**1.4**	**1.4**	**1.4**	**1.4**	**0.0**
Russia	**11.6**	**10.6**	**10.8**	**10.9**	**10.7**	**10.9**	**0.1**	**10.5**	**10.5**	**10.5**	**10.6**	**10.5**	**-0.4**
Kazakhstan	1.9	1.8	1.8	1.8	2.0	1.9	0.1	2.0	1.9	1.9	2.0	2.0	0.1
Azerbaijan	0.8	0.7	0.7	0.8	0.8	0.8	0.0	0.7	0.7	0.7	0.7	0.7	-0.1
Eurasia others	0.4	0.4	0.4	0.3	0.3	0.3	0.0	0.3	0.3	0.3	0.3	0.3	0.0
Other Eurasia	**3.1**	**2.9**	**2.9**	**2.9**	**3.2**	**3.0**	**0.1**	**3.1**	**3.0**	**2.9**	**3.0**	**3.0**	**0.0**
Other Europe	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**	**0.1**	**0.1**	**0.1**	**0.1**	**0.1**	**0.0**
Total Non-OECD	**33.2**	**31.7**	**31.9**	**32.6**	**32.9**	**32.5**	**0.7**	**32.5**	**32.6**	**32.6**	**32.8**	**32.6**	**0.1**
Non-OPEC	63.3	60.9	61.4	63.8	64.7	63.4	2.0	64.7	64.7	65.1	65.7	65.0	1.7
Processing gains	2.4	2.2	2.3	2.4	2.4	2.4	0.1	2.5	2.5	2.5	2.5	2.5	0.1
Non-OPEC liquids production	**65.6**	**63.0**	**63.7**	**66.2**	**67.1**	**65.8**	**2.1**	**67.2**	**67.2**	**67.6**	**68.1**	**67.5**	**1.7**
OPEC NGL	5.1	5.1	5.2	5.3	5.3	5.3	0.1	5.3	5.4	5.3	5.3	5.3	0.0
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)	**5.2**	**5.2**	**5.3**	**5.4**	**5.4**	**5.4**	**0.1**	**5.4**	**5.5**	**5.4**	**5.4**	**5.4**	**0.0**
Non-OPEC & OPEC (NGL+NCF)	**70.8**	**68.2**	**69.0**	**71.6**	**72.6**	**71.2**	**2.2**	**72.6**	**72.7**	**73.0**	**73.6**	**73.0**	**1.8**

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

Table 11 - 5: World rig count, units

World rig count	2019	2020	2021	Change 2021/20	4Q21	1Q22	2Q22	Jul 22	Aug 22	Change Aug/Jul
US	944	436	475	39	559	634	718	758	763	5
Canada	134	90	133	43	161	195	114	191	203	12
Mexico	37	41	45	4	48	44	44	45	48	3
OECD Americas	**1,116**	**567**	**654**	**87**	**770**	**874**	**878**	**997**	**1,016**	**20**
Norway	17	16	17	1	18	16	18	16	19	3
UK	15	6	8	2	8	7	10	13	14	1
OECD Europe	**74**	**59**	**58**	**-1**	**61**	**57**	**65**	**67**	**72**	**5**
OECD Asia Pacific	**29**	**22**	**23**	**1**	**25**	**22**	**23**	**25**	**25**	**0**
Total OECD	**1,219**	**648**	**735**	**87**	**856**	**954**	**966**	**1,089**	**1,113**	**24**
Other Asia*	221	187	174	-13	182	185	184	186	186	0
Latin America	128	58	91	33	105	111	113	116	122	6
Middle East	68	57	57	0	59	60	62	59	61	2
Africa	55	43	42	-1	49	57	55	56	59	3
Other Europe	14	12	9	-3	9	9	9	11	10	-1
Total Non-OECD	**486**	**357**	**373**	**16**	**404**	**423**	**423**	**428**	**438**	**10**
Non-OPEC rig count	**1,705**	**1,005**	**1,108**	**103**	**1,260**	**1,376**	**1,389**	**1,517**	**1,551**	**34**
Algeria	45	31	26	-5	31	30	32	33	33	0
Angola	4	3	4	1	5	6	6	6	6	0
Congo	3	1	0	-1	1	1	0	1	1	0
Equatorial Guinea**	1	0	0	0	1	1	0	0	0	0
Gabon	7	3	2	-1	4	2	3	1	1	0
Iran**	117	117	117	0	117	117	117	117	117	0
Iraq	74	47	39	-8	45	46	50	54	54	0
Kuwait	46	45	25	-20	23	27	27	28	27	-1
Libya	14	12	13	1	14	15	4	2	2	0
Nigeria	16	11	7	-4	7	8	10	11	10	-1
Saudi Arabia	115	93	62	-31	64	70	71	72	68	-4
UAE	62	54	42	-12	42	38	48	48	50	2
Venezuela	25	15	6	-9	3	3	3	3	3	0
OPEC rig count	**529**	**432**	**343**	**-89**	**358**	**364**	**371**	**376**	**372**	**-4**
World rig count* **	**2,234**	**1,437**	**1,451**	**14**	**1,618**	**1,740**	**1,760**	**1,893**	**1,923**	**30**
of which:										
Oil	1,788	1,116	1,143	27	1,294	1,383	1,392	1,501	1,519	18
Gas	415	275	275	0	293	329	337	358	368	10
Others	31	46	33	-13	31	28	31	34	36	2

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

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

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

Totals may not add up due to independent rounding.

Sources: Baker Hughes and OPEC.

Glossary of Terms

Abbreviations

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

Acronyms

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

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

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

OPEC Basket average price

US$/b

down 6.65 in August

August 2022	101.90
July 2022	108.55
Year-to-date	**105.29**

August OPEC crude production

mb/d, according to secondary sources

up 0.62 in August

August 2022	29.65
July 2022	29.03

Economic growth rate

per cent

	World	OECD	US	Euro–zone	Japan	China	India
2022	3.1	2.5	1.8	3.1	1.4	4.2	7.1
2023	3.1	1.8	1.7	1.7	1.6	5.0	6.0

Supply and demand

mb/d

2022		**22/21**	**2023**		**23/22**
World demand	100.0	3.1	World demand	102.7	2.7
Non-OPEC liquids production	65.8	2.1	Non-OPEC liquids production	67.5	1.7
OPEC NGLs	5.4	0.1	OPEC NGLs	5.4	0.0
Difference	**28.9**	**0.9**	**Difference**	**29.8**	**0.9**

OECD commercial stocks

mb

	May 22	Jun 22	Jul 22	Jul 22/Jun 22
Crude oil	1,313	1,312	1,318	6.4
Products	1,362	1,369	1,380	11.7
Total	**2,674**	**2,681**	**2,699**	**18.1**
Days of forward cover	58.9	58.8	59.1	0.3

Next report to be issued on 12 October 2022.