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Global Oil Market Update: H2 2023

Oil Research Programme

Oxford Institute for Energy Studies

Oxford, 11 August 2023

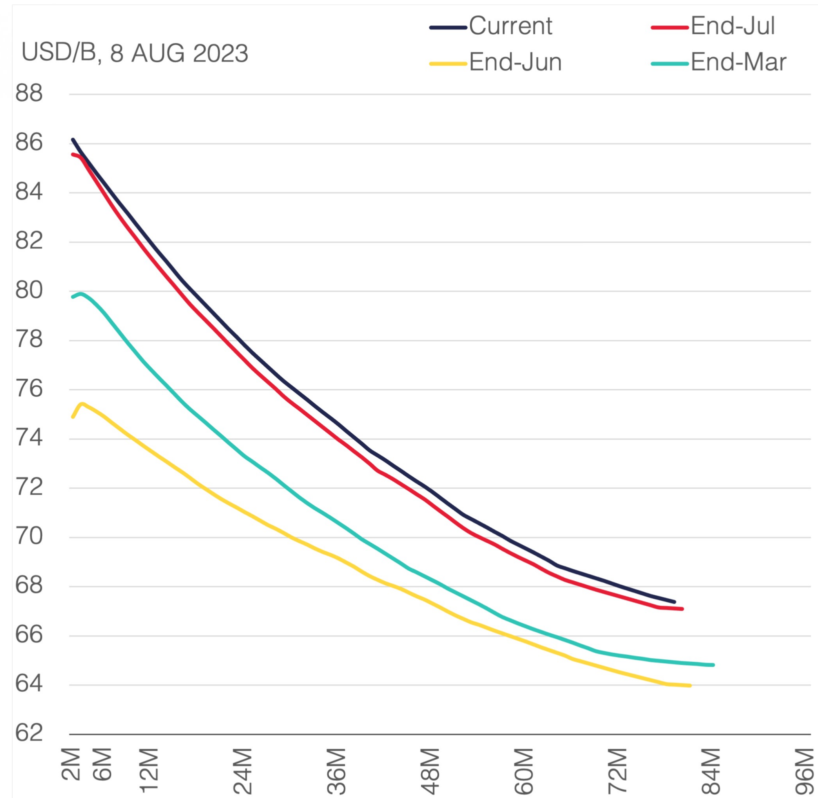
Oil price movements

- Brent prices found a new range around $85/b as oil indicators strengthened on the additional Saudi voluntary cut started taking effect in July, recessionary fears receding, and robust H1 China oil data.

Daily Brent price

Source: Bloomberg, ICE

Forward curves



Source: ICE

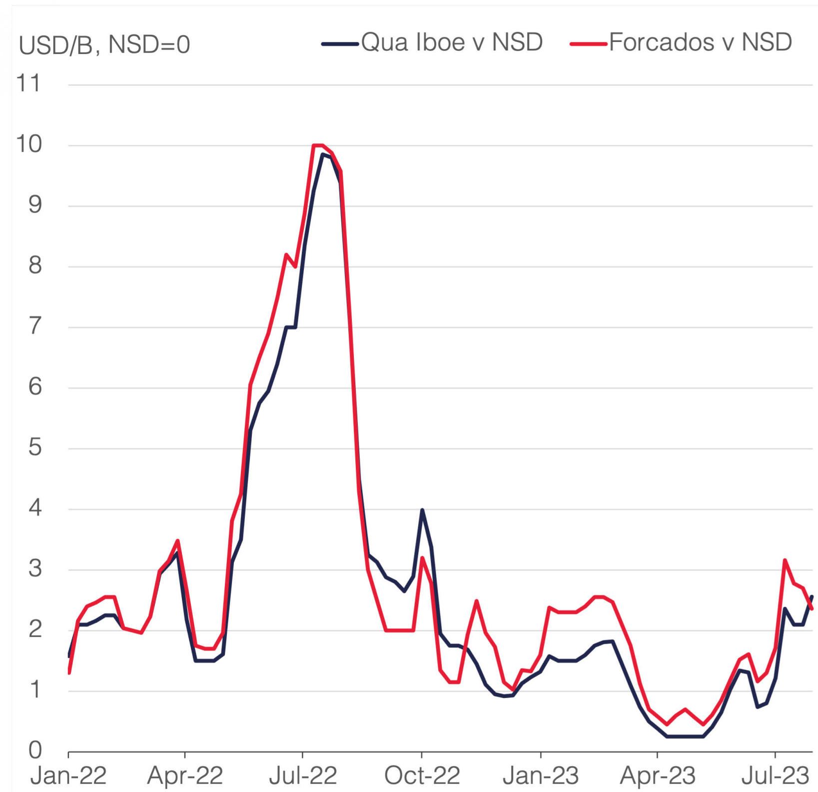
Physical differentials

- The recent recovery in flat prices was preceded by the strengthening of physical differentials, particularly for the sour crude market, that was eventually transmitted to the whole oil complex.

Brent-Dubai EFS

Source: S&P Commodity Insights

WAF crude differentials



Source: Argus

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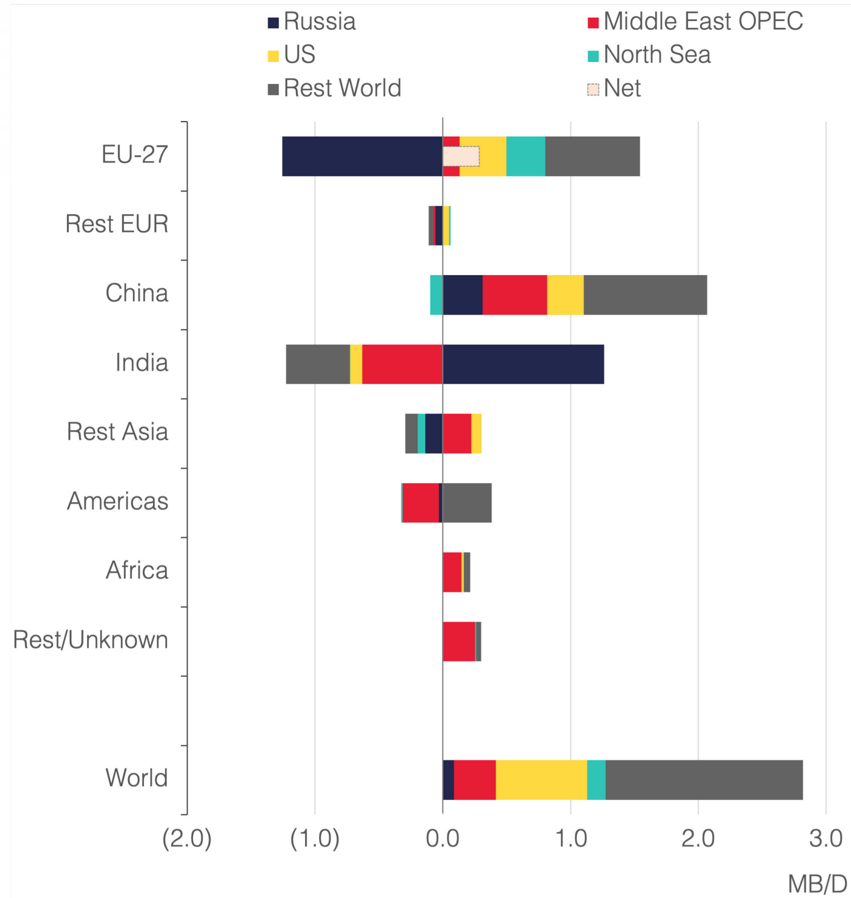
Transformations in trade flows

Shifts in crude trade flows (1/2)

Oil markets have adjusted well to the Russia-Ukraine war shock, but this has come at a cost:

- After the full enforcement of the EU embargo on Russian crude and product imports, we have seen massive transformations in trade flows.
- Russian crude exports in H1 2023 continued to average marginally higher y/y, mainly directed to India and China.
- To replace the loss of Russian crude, exports to the EU from the US, the Middle East and West Africa have been on the rise.
- The markets however have become more segmented and less transparent, crude and products trade routes longer, and the optimization of oil trade more costly.

Shifts in crude trade flows

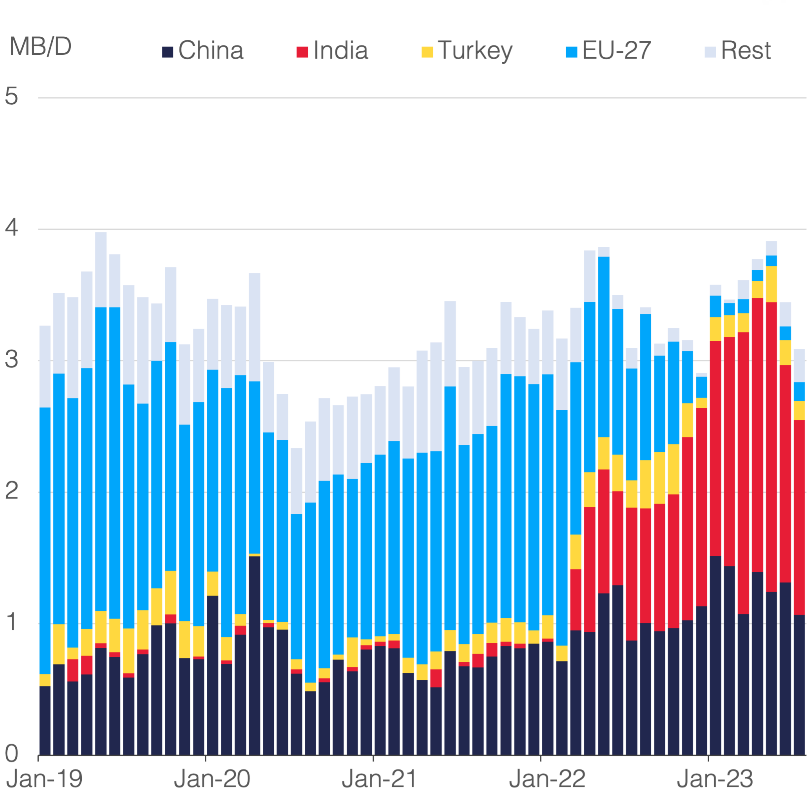


Notes: Jan/Jul-23 versus Jan/Jul-22.
Source: Kpler, OIES analysis

Shifts in crude trade flows (2/2)

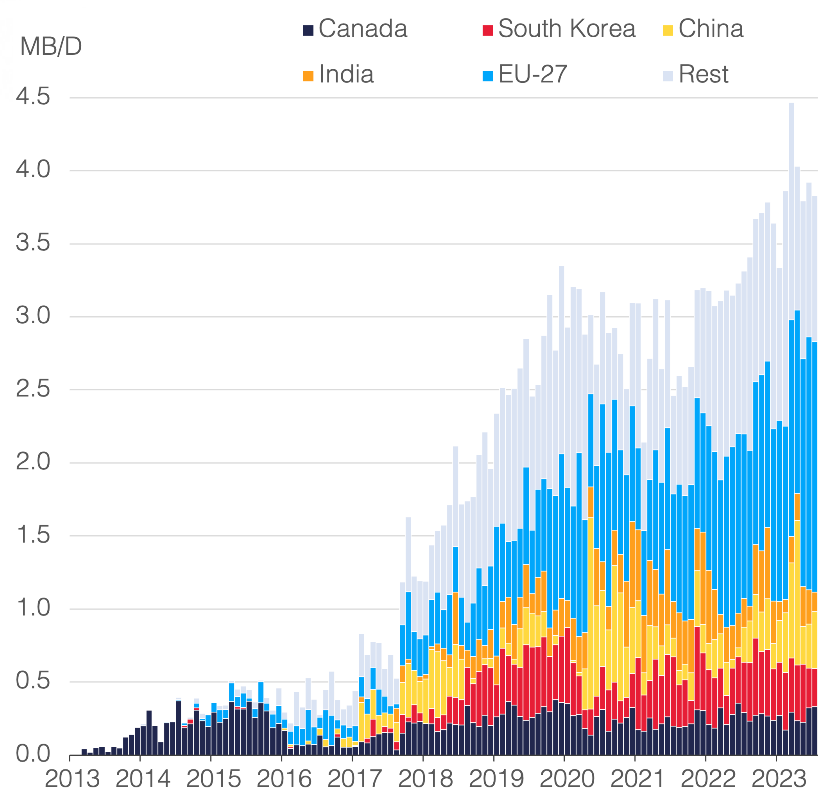
- India and China now account for 90% of Russian seaborne crude exports.
- US crude exports this year reached a record high, with exports in Europe and Asia rising.

Russian seaborne crude exports



Source: Kpler

US crude exports



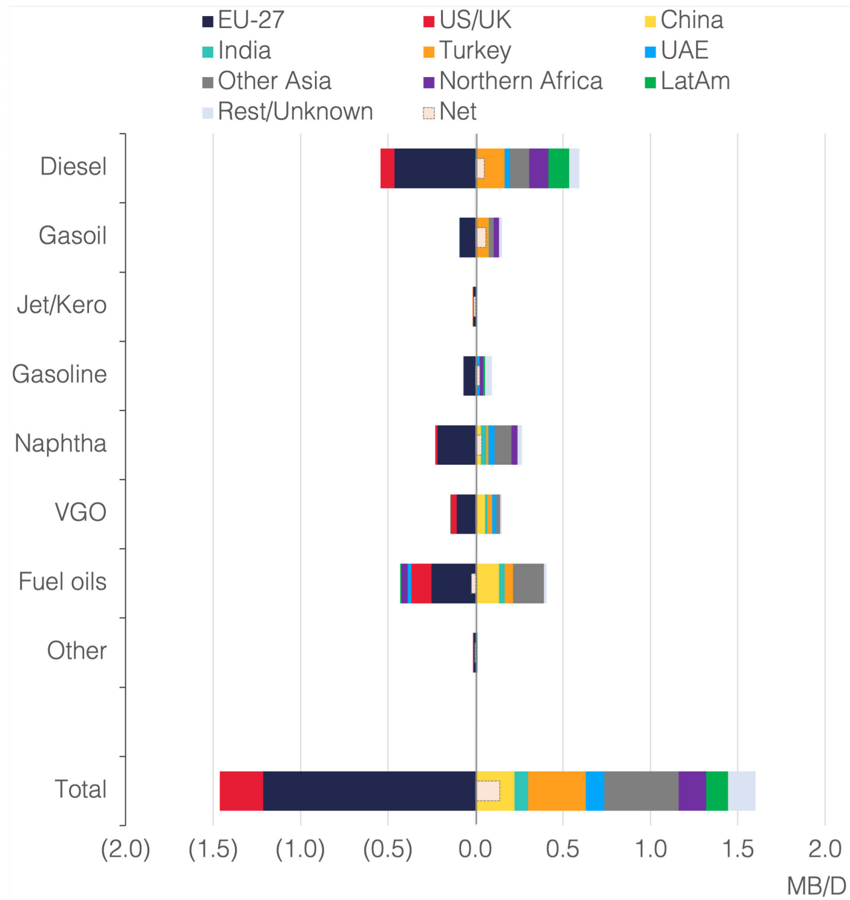
Source: Kpler

Shifts in products trade flows

Russian exports of products have found new outlets outside the EU and G7:

- EU imports of Russian products have almost ceased.
- Russian product exports have found new outlets in Asia, the Gulf, Northern Africa and Latin America, and in H1 held above pre-sanction levels.
- Discounted prices provided a strong inventive for countries to import more Russian products, more than offsetting increased cost of transportation.
- Fuel oil in particular has been faring particularly well with shipments to India, Singapore, China and Malaysia rising for use in power gen, as well as refinery feedstock in China.
- The loss of Russian products to EU has been replaced by increased exports from the Middle East, Asia and the US.

Shifts in Russian product flows



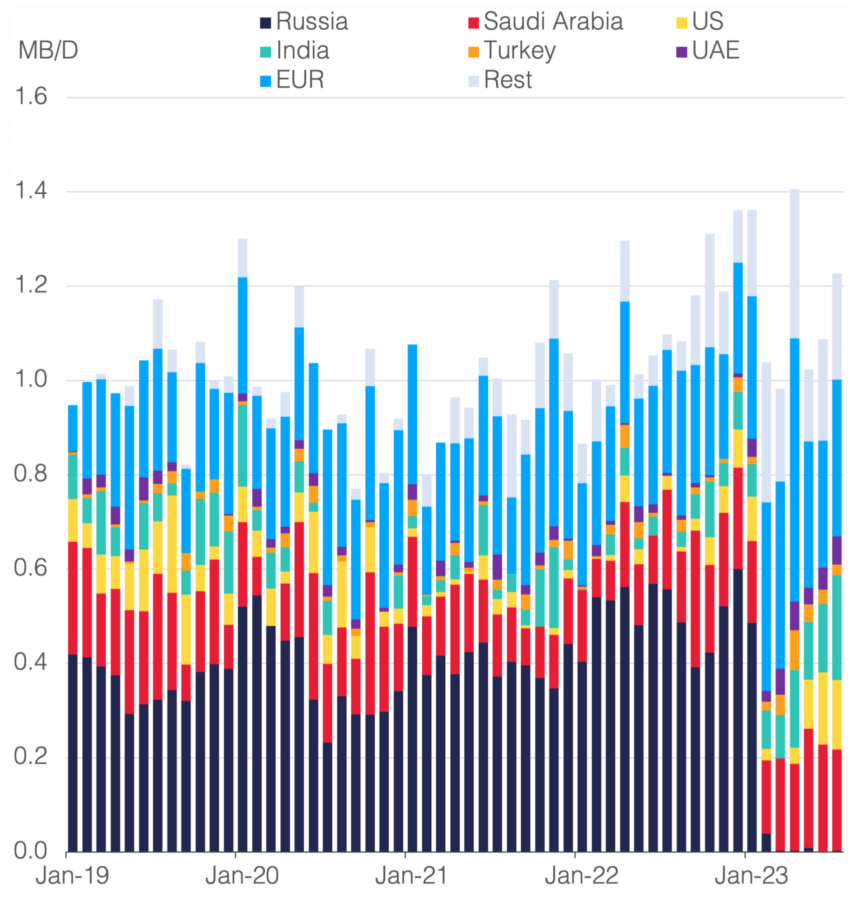
Notes: Jan/Jul-23 versus Jan/Jul-22.
Source: Kpler, OIES analysis

EU diesel concerns

Before the EU embargo on Russian products, a key concern was that Europe may face a diesel shortage:

- Russia was a major exporter of diesel to the EU, but after the embargo Russian diesel flows to the EU almost ceased.
- The impact however has been muted, as diesel flows into EU from the Middle East, Asia and the US increased and EU diesel demand took a hit as economic activity slowed down.
- These factors have led to a general weakness in the diesel complex, but diesel prices have strengthened recently.
- Structural patterns of products trade are emerging with long-term consequences.
- Europe now relies on new suppliers from further away places, but these supplies come at a premium and these external suppliers have the ability to arbitrage between markets.

EU imports of diesel by origin



Source: Kpler

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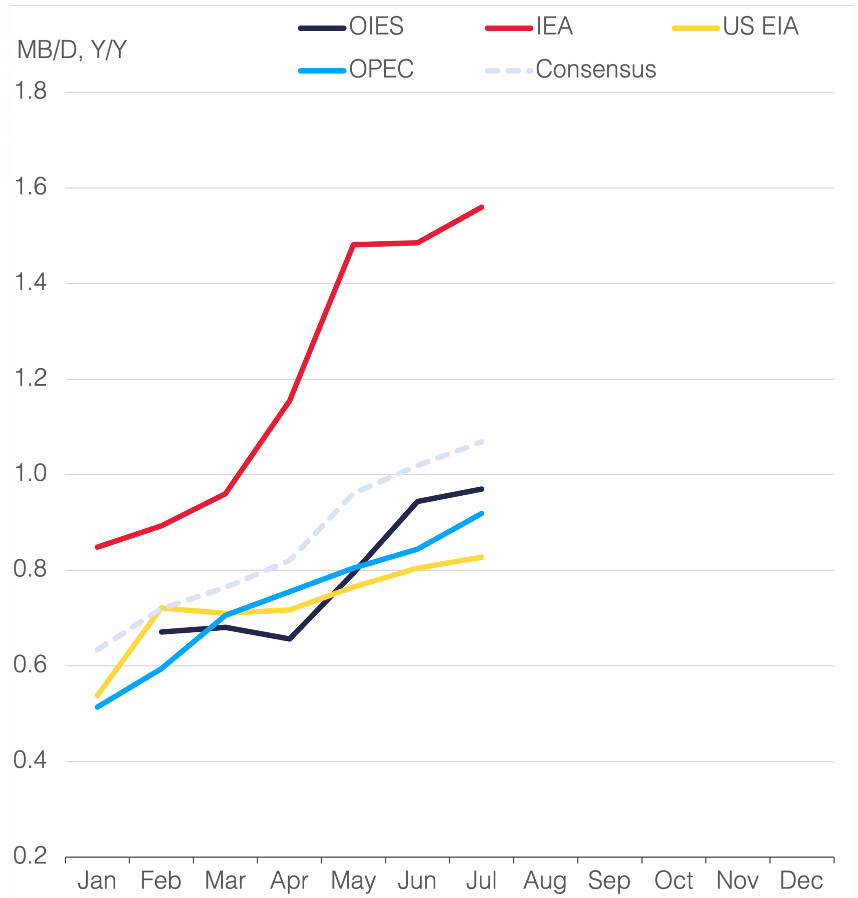
Global oil demand

The China factor

China remains a key source of uncertainty:

- At the macro front, China's recovery remains uneven and the rebound is less strong than originally projected.
- The Chinese economy continues to face structural hurdles and heightened risks from high local debt and a weak property sector.
- But the flow of Chinese oil data has been generally more positive, with refinery runs and crude imports rebounding strongly in H1 2023.
- The oil demand rebound has also been strong but the unevenness in China's economic recovery has been reflected in product demand patterns.
- The key uncertainty now is whether the H1 strength in oil indicators will continue into the rest of 2023.

China's oil demand growth forecasts for 2023

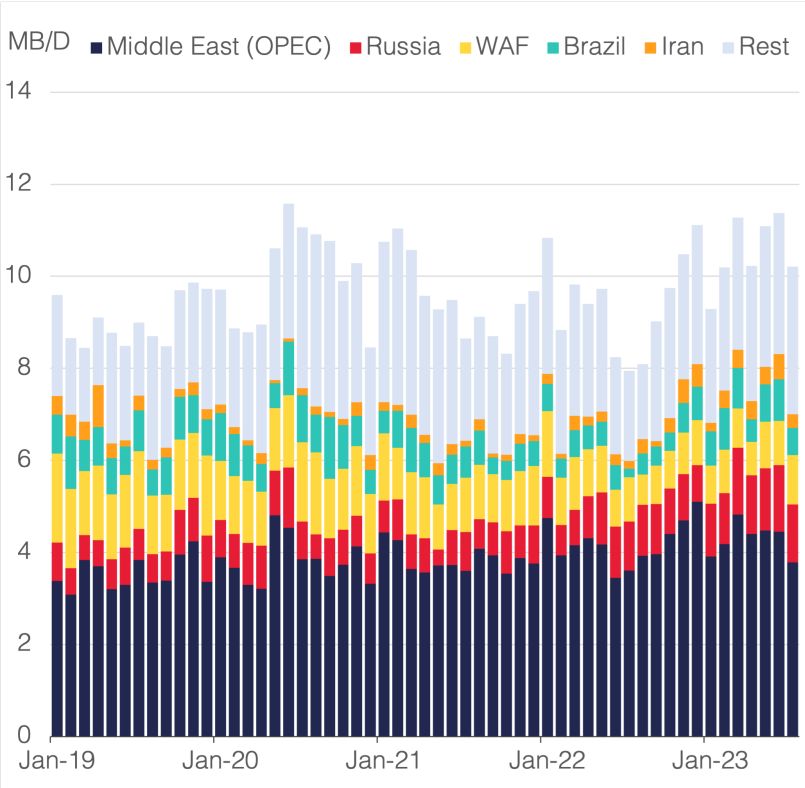


Source: IEA, US EIA, OPEC, OIES

China’s oil indicators (1/2)

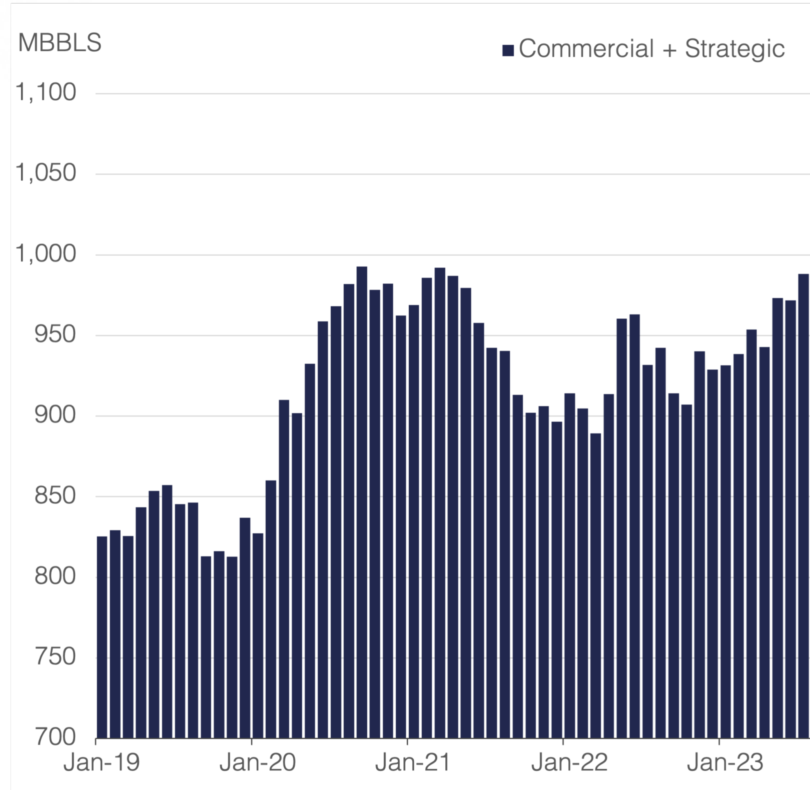
- China’s crude imports held 1 mb/d higher y/y in H1 2023.
- But a key indicator monitoring with little visibility is China’s crude stock building.

China crude imports



Source: Kpler

China observed crude stocks

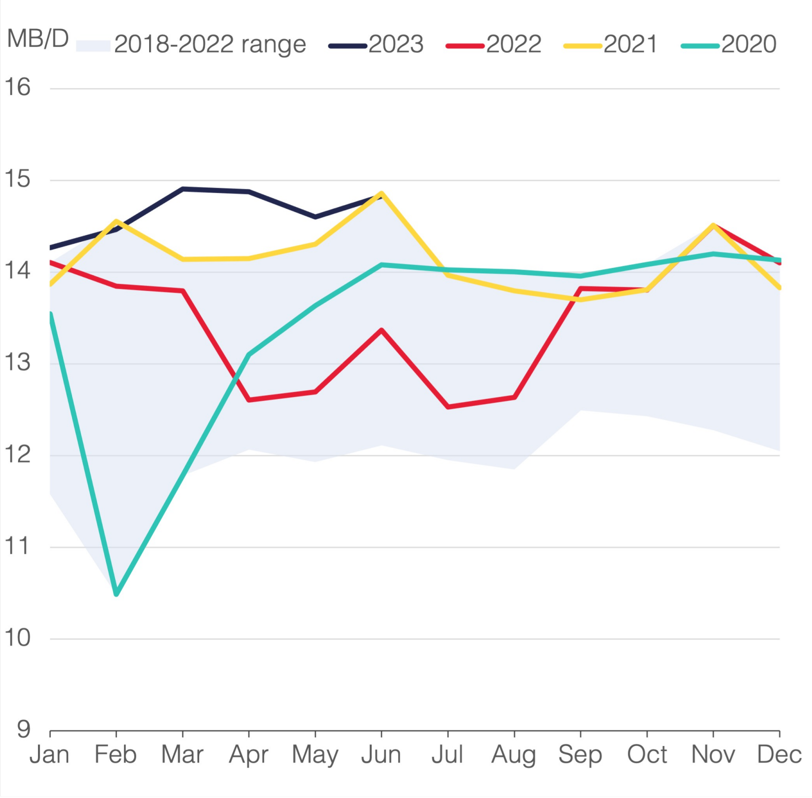


Notes: Observed Chinese crude stocks report only crude stocks from visible inventory installations in China’s importing facilities. Source: Kpler

China's oil indicators (2/2)

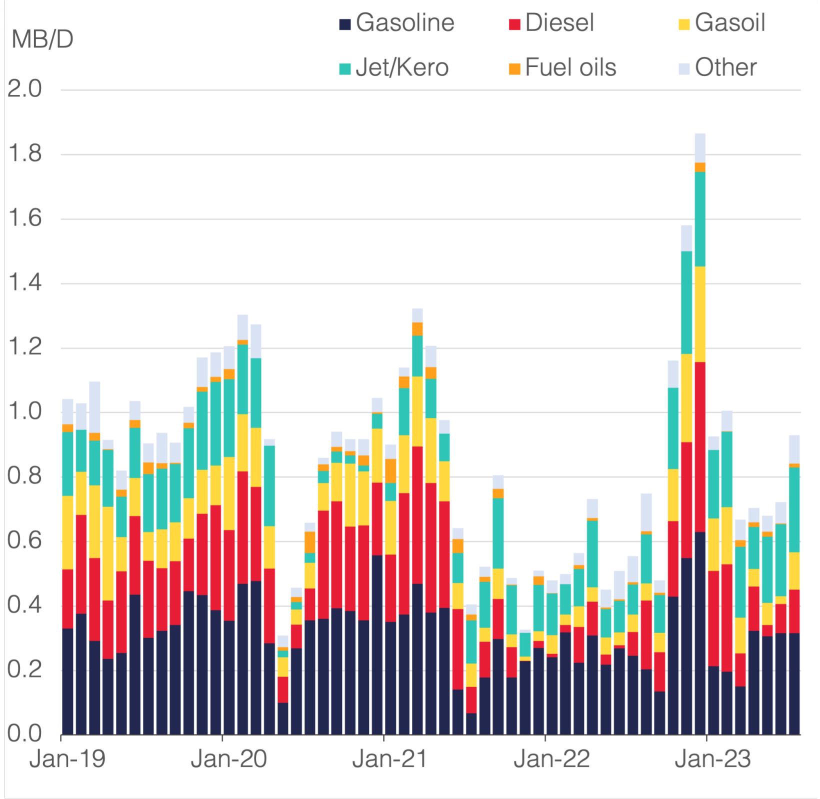
- China's refinery runs also rose y/y in H1, on rebounding domestic consumption, discounted sanctioned crude and FO from China and Iran, the start of new petrochemical plants and a jump in exports on better margins.

China refinery runs



Source: Argus

China product exports

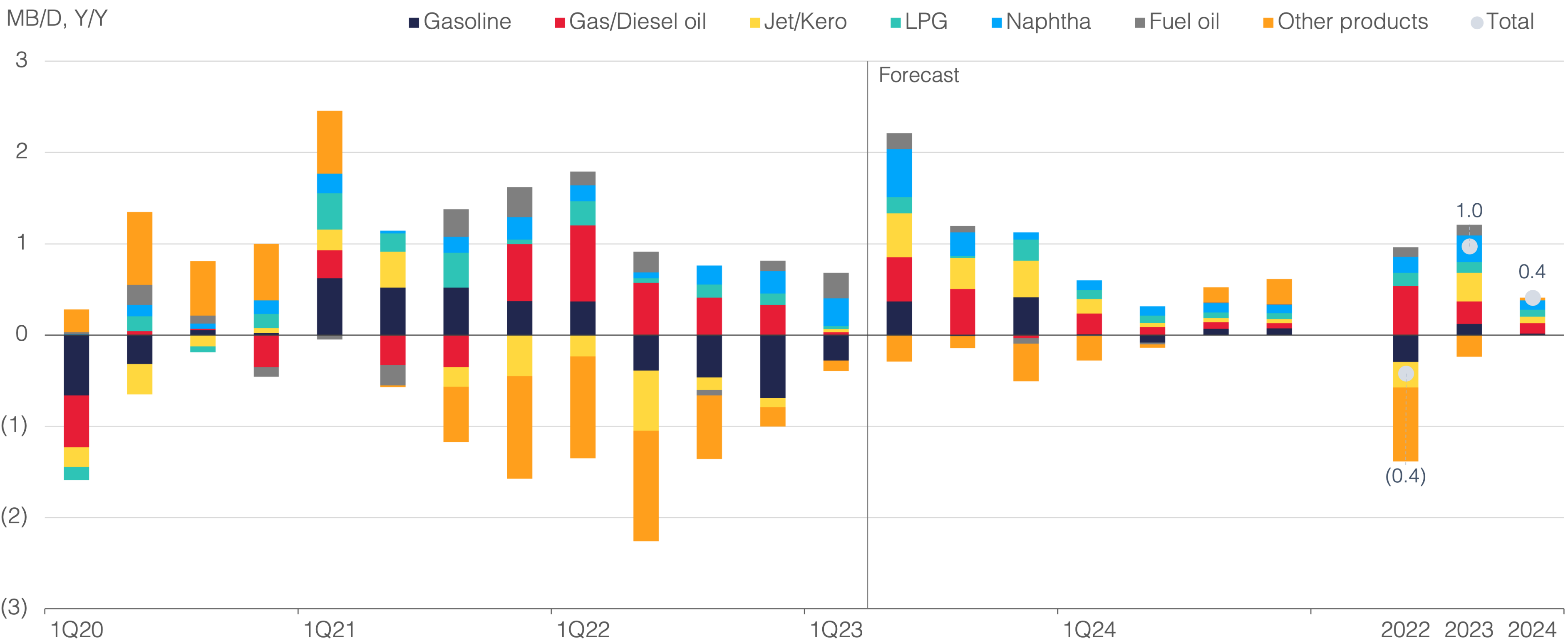


Source: Kpler

China's oil demand outlook

- China's oil demand is forecast to grow y/y 970 kb/d in 2023, heading to a slower growth in H2 to 835 kb/d from 1.1 mb/d in H1.

China oil demand growth

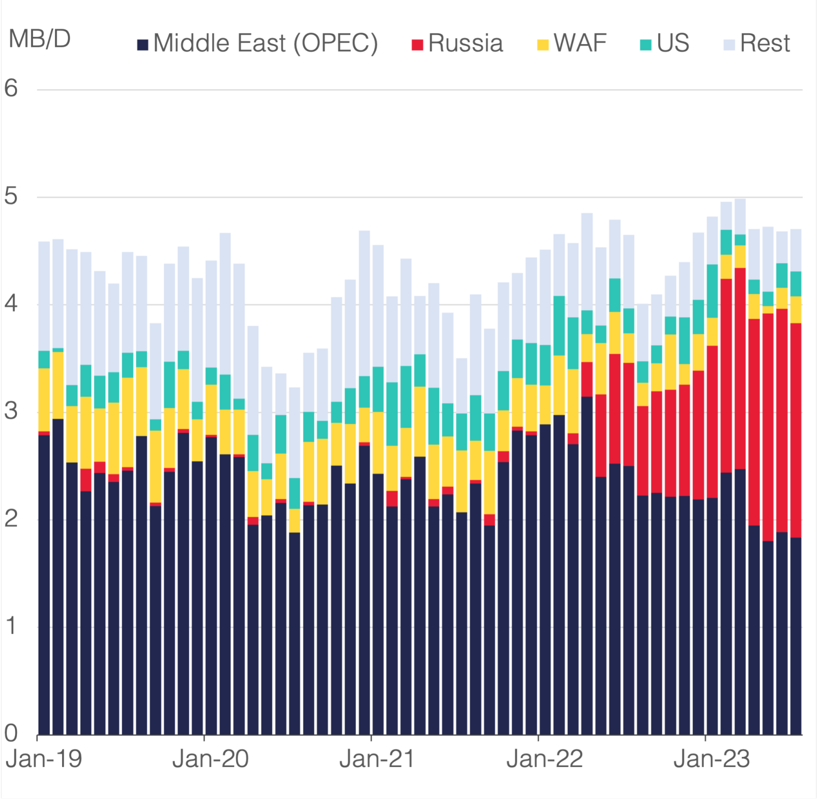


Source: IEA, Argus, NBS, OIES Forecast

India a bright spot

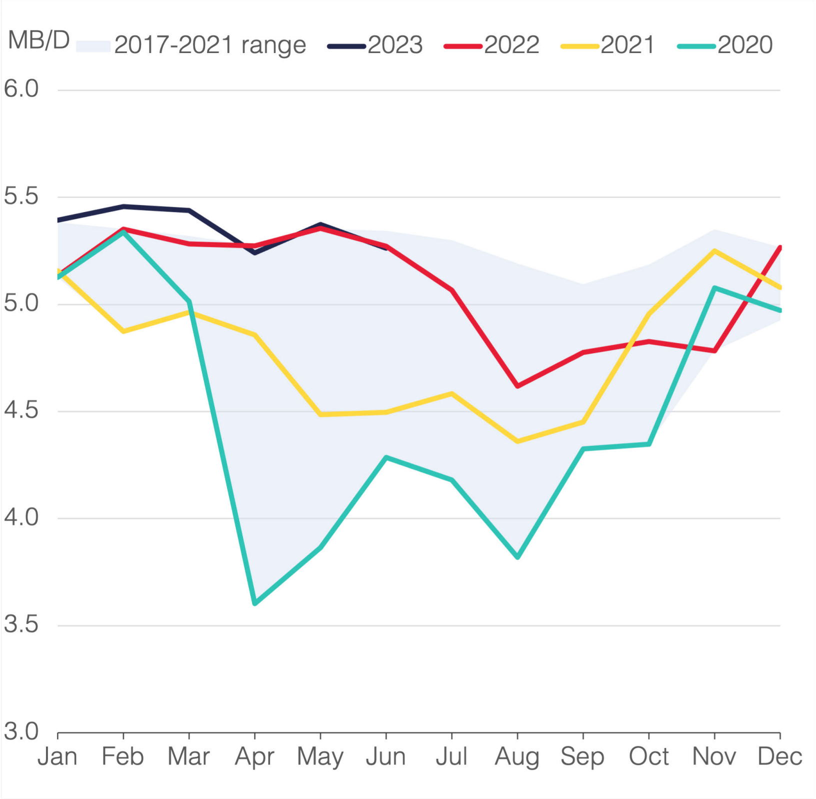
- India's refinery runs have been at all time high due to strong domestic demand and high product exports, but also due to discounted Russian crude that now accounts for nearly half of India's total crude imports from almost zero pre-war.

India crude imports



Source: Kpler

India refinery runs

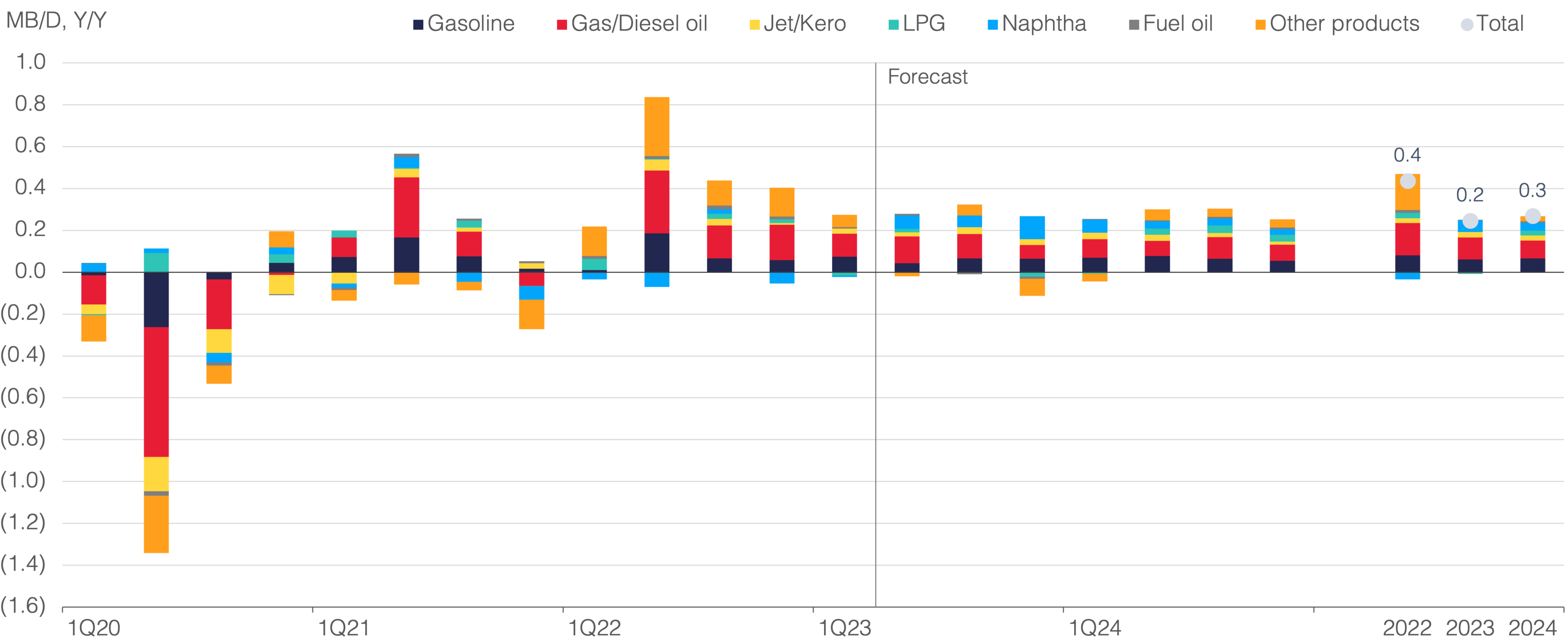


Source: PPAC

India's oil demand outlook

- India's oil demand is forecast to grow y/y 245 kb/d in 2023, with y/y gasoil/diesel demand growth projected to outperform all other products again this year.

India oil demand growth

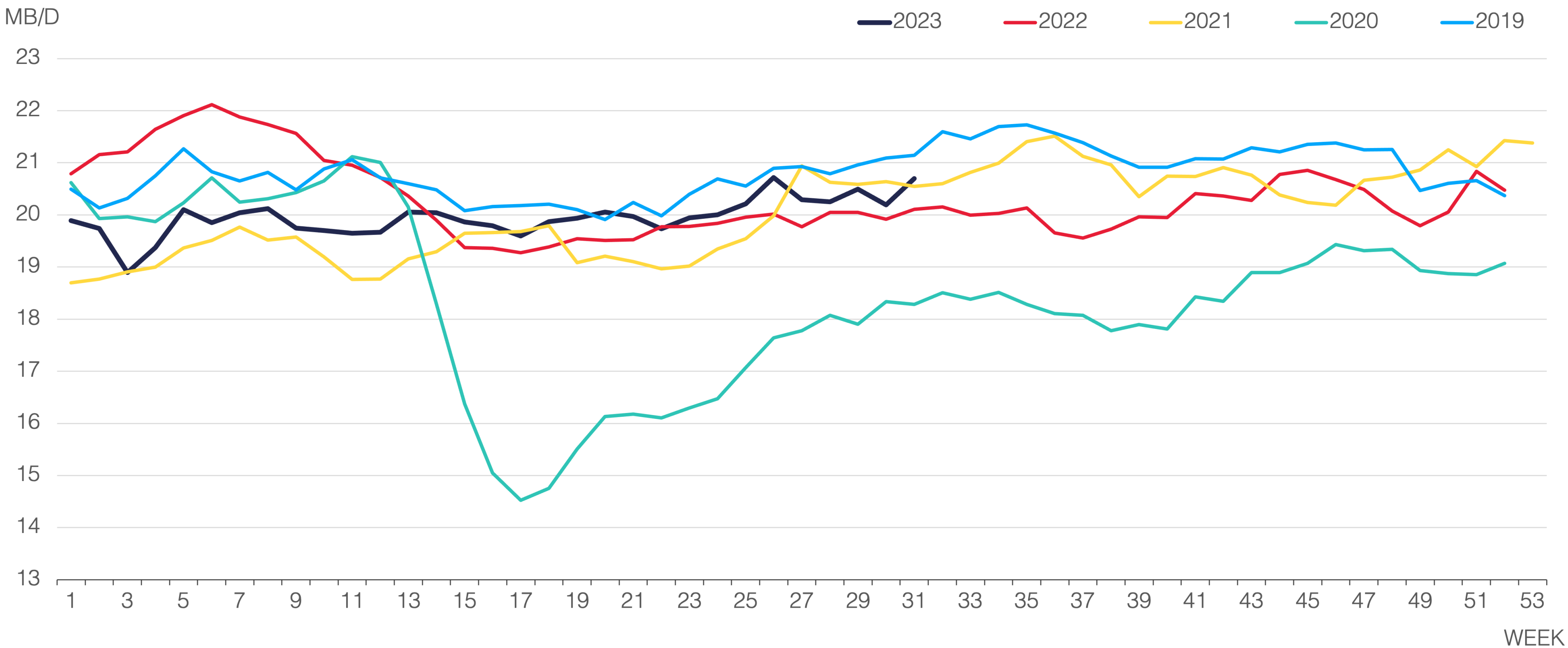


Source: PPAC, OIES Forecast

OECD resilience and risks

- OECD oil demand resilience continues, but the H2 outlook remains uncertain due to the lag in monetary policy transmission and the impact of the rate hikes to economic activity.

US products supplied, 4-week average

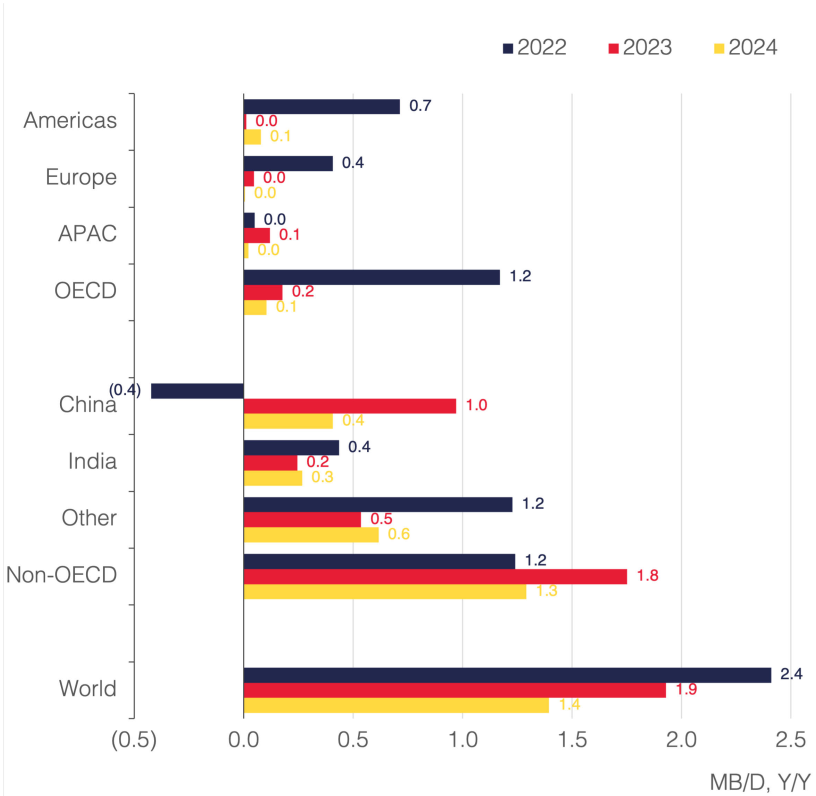


Source: US EIA

Global oil demand outlook

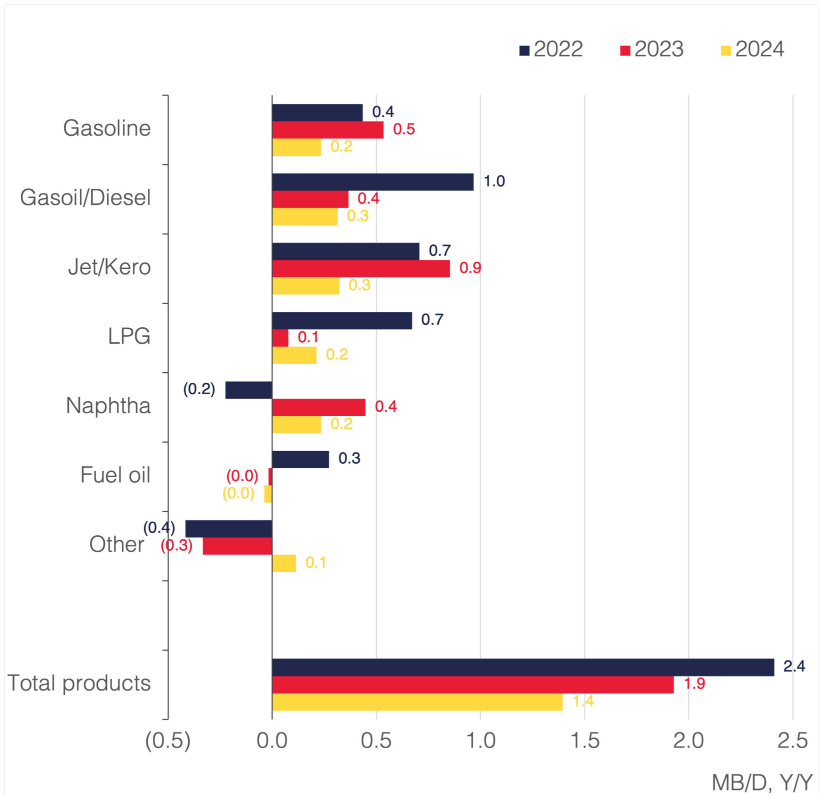
- Global oil demand is forecast to grow 1.9 mb/d in 2023 led by the non-OECD and in particular China, while jet fuel growth will be the fastest growing product globally, rising 850 kb/d.

Global oil demand growth by region



Source: Argus

Global oil demand growth by product



Source: Kpler

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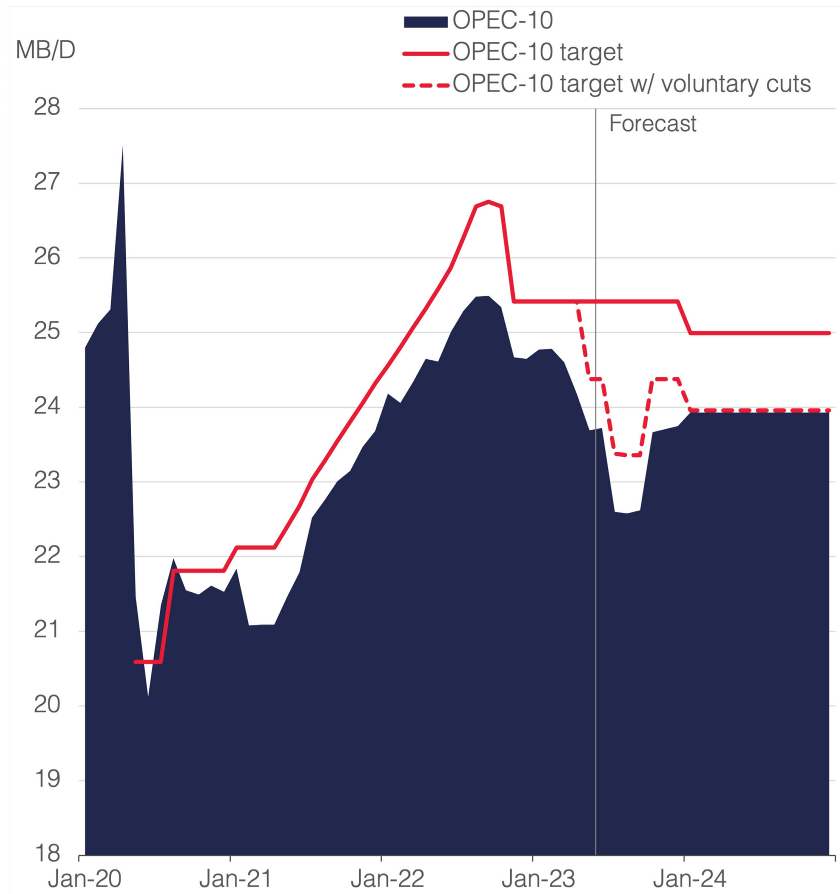
Big-3 oil producers

OPEC+ supply response (1/2)

OPEC+ approach to market management in the current cycle has drastically changed:

- OPEC+ and Saudi Arabia have sent a clear signal of their willingness to act pre-emptively and prevent the market going out of balance, consistent with their cautious approach in a highly uncertain environment.
- In the June meeting, OPEC+ agreed on a supply path for the rest of 2023 and 2024, giving the market more transparency about its future supply path.
- OPEC+ also took some important decisions such as the quota revisions and assigning the assessment of its members' upstream capacities to independent bodies, enhancing the cohesion of the group and making its output decisions more effective.
- It is important to recognize that OPEC+ in the current cycle departed from previous behaviour by acting pre-emptively and not reversing supply quickly until trends are confirmed and providing some supply guidance beyond the near-term while maintaining a surprise element through voluntary cuts.

OPEC-10 crude oil production



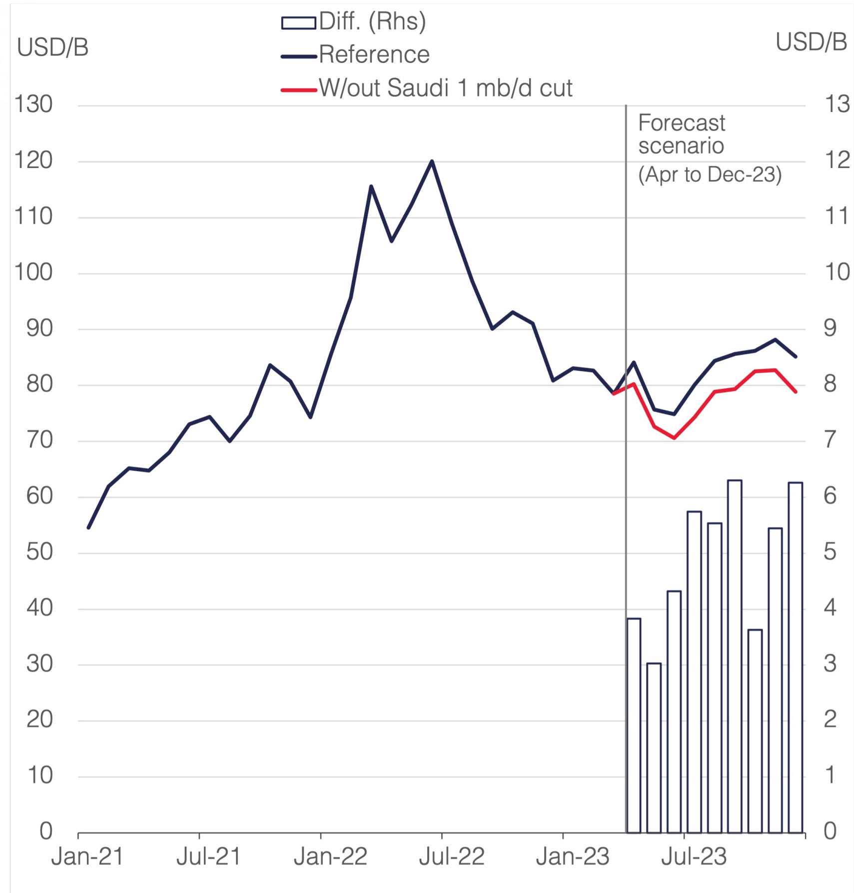
Notes: Crude oil only. Source: IEA, OPEC, OIES forecast

OPEC+ supply response (2/2)

The view that the Saudi additional voluntary cuts are no longer effective and OPEC+ influence on market outcomes has diminished proved to be premature:

- The market response to OPEC+ output policy may sometimes be delayed especially in an environment of high uncertainty and recessionary concerns.
- Also, it is not known where prices would have been if Saudi Arabia did not announce the additional voluntary cuts, but this can be empirically assessed via *counterfactual* (what-if) analysis.
- Without the Saudi cut, we estimate that prices would have struggled to break above the $70/b and $80/b range, suggesting that the gain in revenue due to higher oil prices as a response to the additional 1 mb/d cut more than offset the revenue losses due to lower output (roughly 2% higher in total revenues for 2023).
- OPEC+ wanted to send a clear signal that this market is far too important to be left to the influence of financial players and sentiment alone, and to assert the role of producers and physical barrels in shaping market outcomes.

Brent price forecast scenarios with and without the additional 1 mb/d Saudi voluntary cut



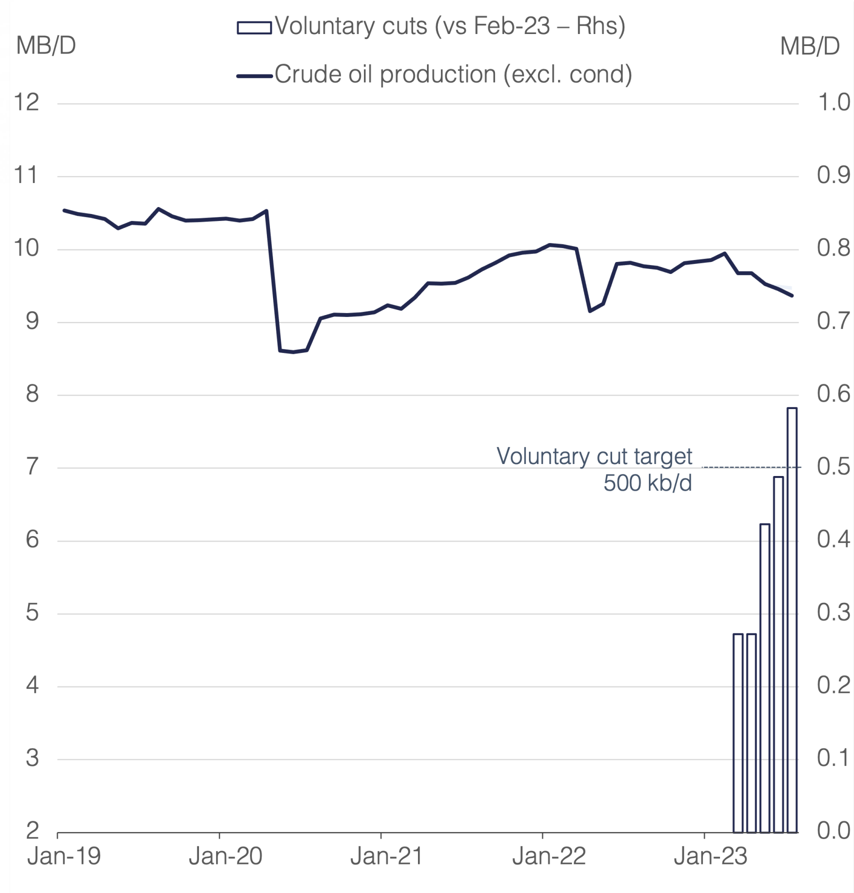
Source: OIES

Russia – OPEC oil relations

The view that the Russia – OPEC relations will break anytime soon can be put to rest:

- Latest data from OPEC secondary sources indicate that Russia has been delivering on its pledged cut.
- Also, there is a convergence in Saudi-Russia oil policy, with Russia following Saudi Arabia in announcing additional supply cuts for the month of August and the extension of these cuts in the month of September (although slightly lowering its crude exports cut for September from 500 kb/d to 300 kb/d).
- Russia is very much in tune with OPEC+ decisions.
- Russia's crude exports have declined substantially since their peak in May.
- As prices move above the G7 price cap Russia may face additional logistical challenges losing access to Western financing, insurance and shipping services, and relying more on the dark fleet; although it is not clear how much of the Russian crude trade still relies on services from G7 countries.

Russian crude oil production



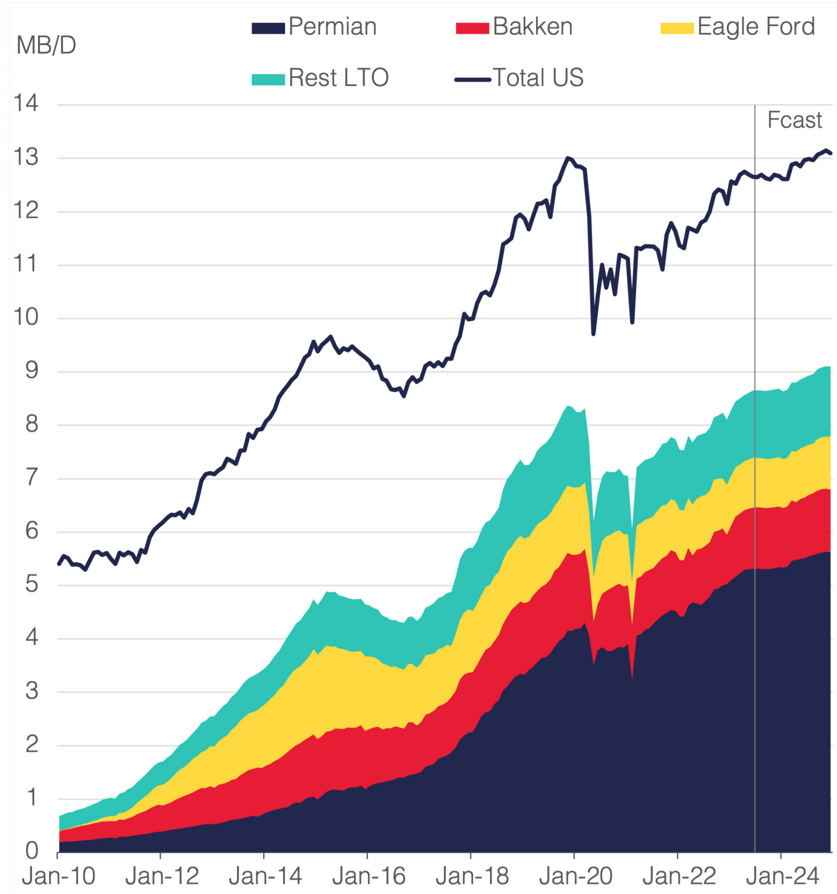
Notes: Crude oil only. Source: IEA, OPEC secondary sources

US supply

US shale has become more financially viable but also more inelastic and asymmetric in its response:

- US shale production in Q2 recovered above its pre-COVID highs, but at the same time drilling activity fell sharply.
- This suggests that US production growth may slow down in the second half of this year.
- But at a more structural level, the shale producers' shift from the strategy of maximizing output during previous cycles towards maximizing returns, higher capital discipline and shareholder pressures all contributed to making the shale production less elastic and more asymmetric in its response to market outcomes.
- In tight market conditions when prices rise, the US shale response comes at a lag and is moderate, but the response is quicker and sharper when the market weakens, and prices fall.
- The use of the US SPR has been much less of a factor in shaping market outcomes in 2023 than in 2022.

US crude oil production



Notes: Crude/co only. Source: US EIA, IEA, OIES forecast

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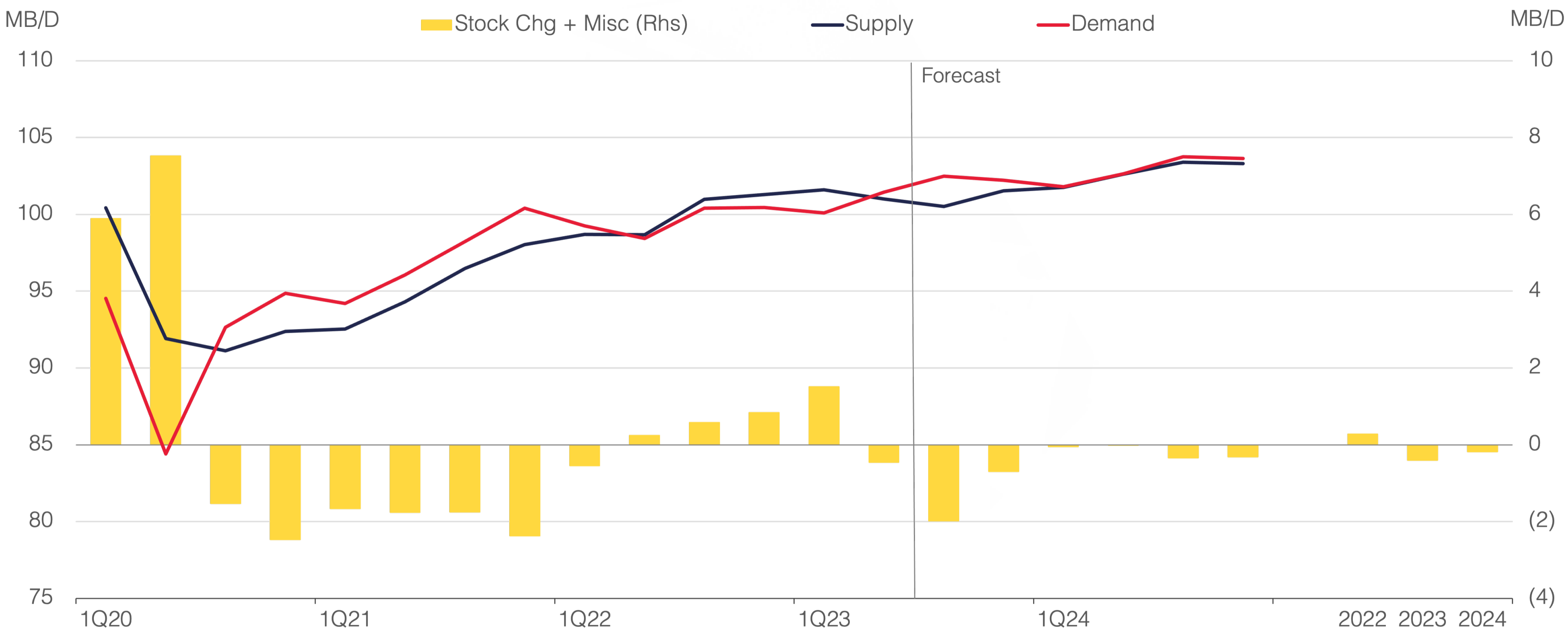
Oil market outlook

Global balance

- The oil market balance is forecast to fall into deficit in the second half of the year by 1.3 mb/d, implying stock drawdowns and providing support for oil prices.

Global balance

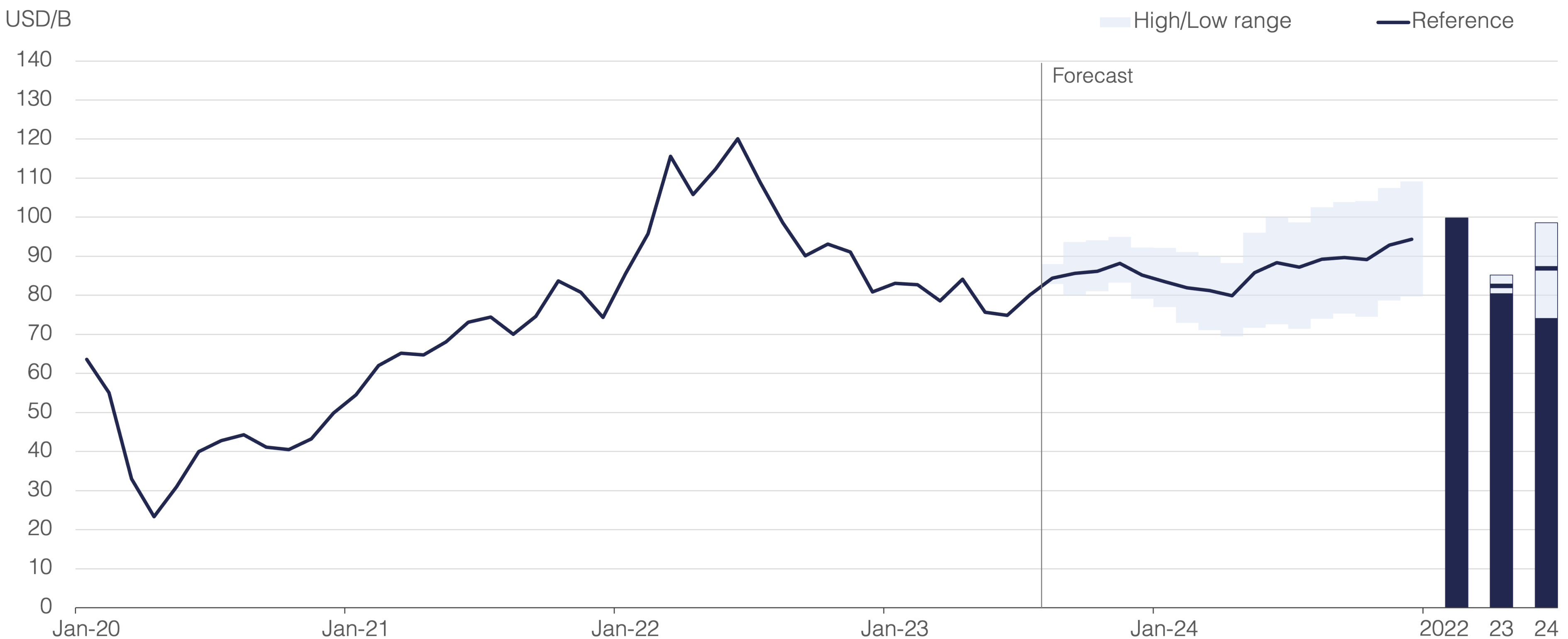


Source: OIES

Price outlook

- The Brent price is forecast to recover to $83.4/b in Q3 and $86.5/b in Q4, from $78.2/b in Q2, and average $82.4/b for the year as a whole.

Brent price outlook

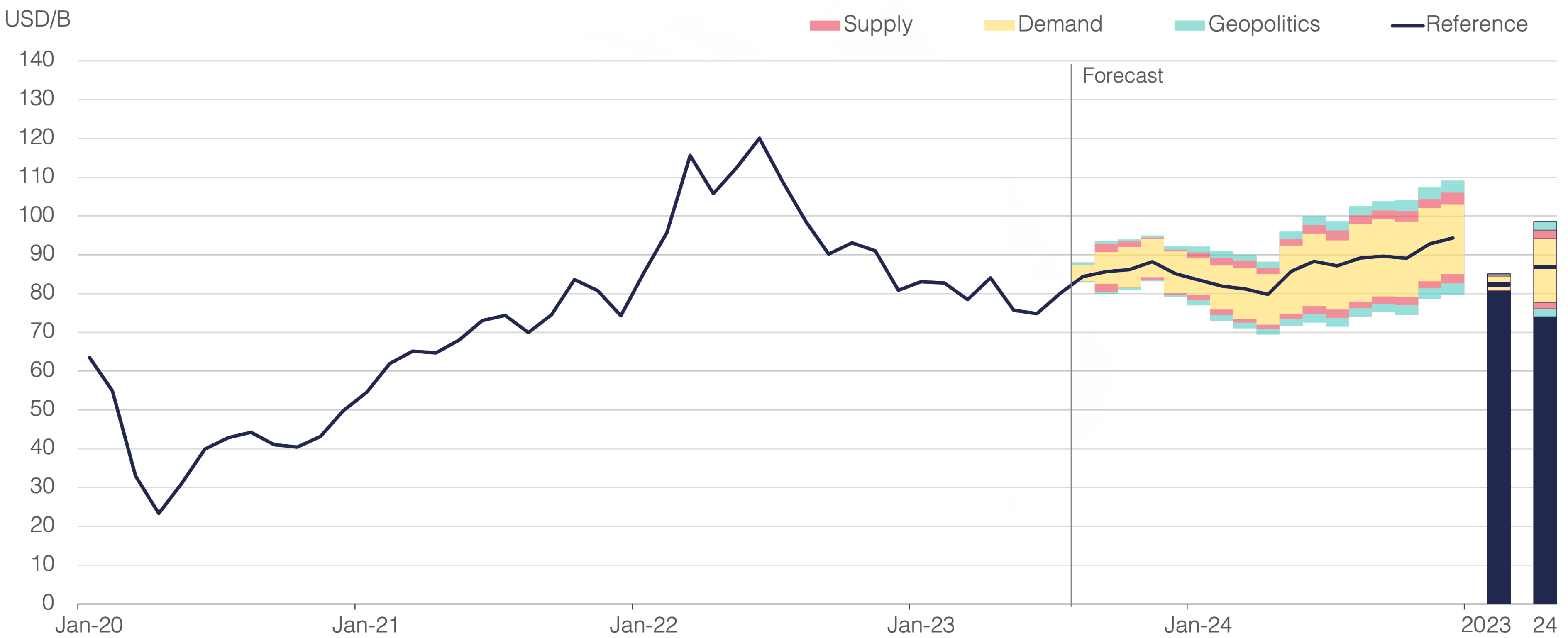


Source: OIES

Balance of risks

- Price risks are balanced in H2 as there are many moving parts shaping the market that move in different directions, with Brent ranging between $81.0/b and $90.5/b versus our reference $84.9/b.

Balance of risks



Notes: Brent price. Source: OIES

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