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Oil Market Recovery Under Pressure

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Oxford Institute for Energy Studies

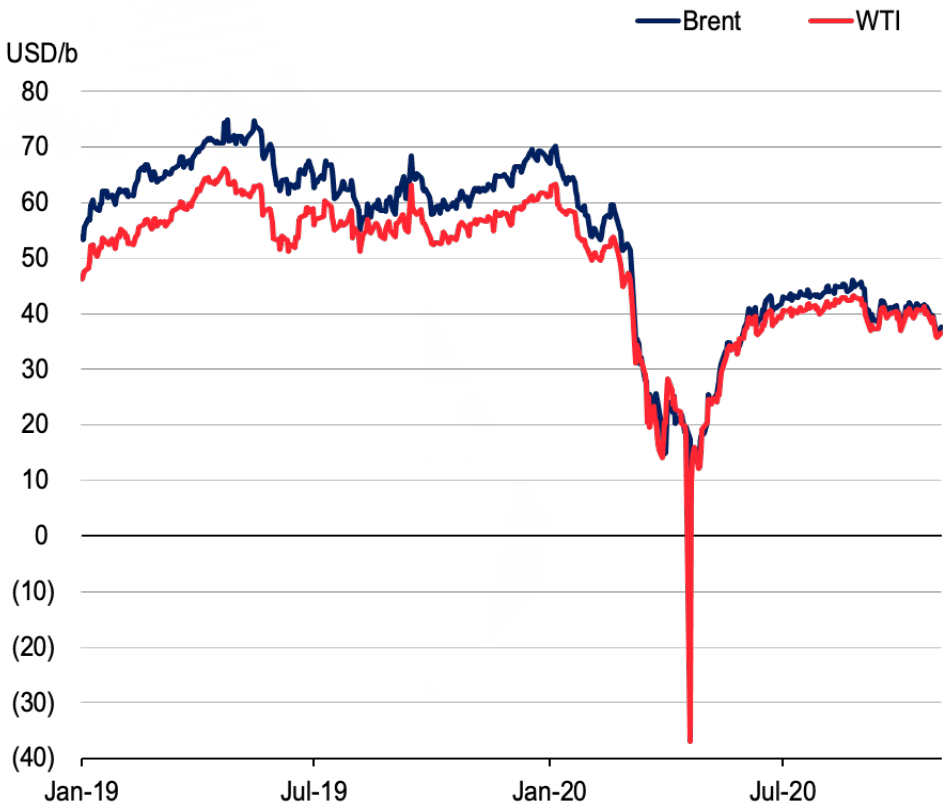
Oxford UK, 09 November 2020

Brent breaks out of range as risks mount

As the oil market entered the final leg of 2020 – a year to remember – market fundamentals and oil prices have come under renewed pressure

- The main risks facing the oil market are still being dominated by demand factors
- The pace of oil demand recovery has been highly uneven
- This unevenness is causing refineries massive headaches
- The clearing of the stocks overhang has been slower than expected
- Downside risks from the supply side have also been rising
- OPEC+ finds itself in an uncertain and harsh environment

Daily oil prices



Source: EIA, OIES

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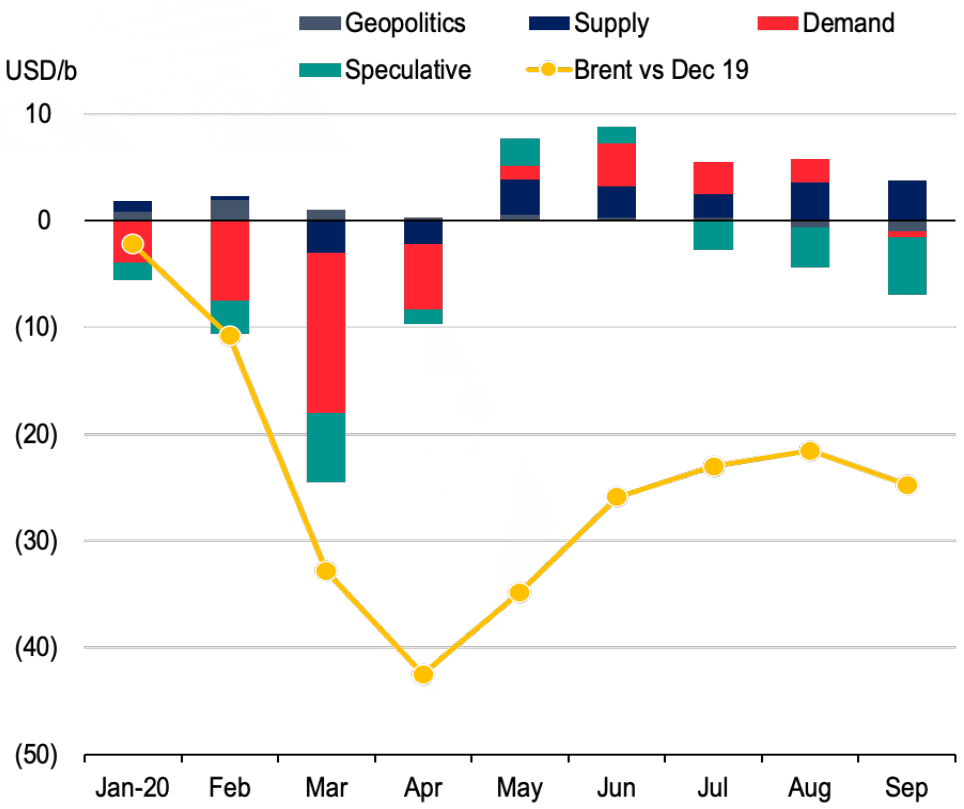
Price recovery halted

Oil price drivers in Sep 20 USD/b	
Geopolitics	-1.0
Supply	+3.7
Demand	-0.6
Speculative	-5.3
Brent chg (m/m)	**-3.2**

- In September, negative demand pressures accounted for most of the m/m price decline, while prices continued to find steady support from the supply-side

Oil price drivers



Source: OIES

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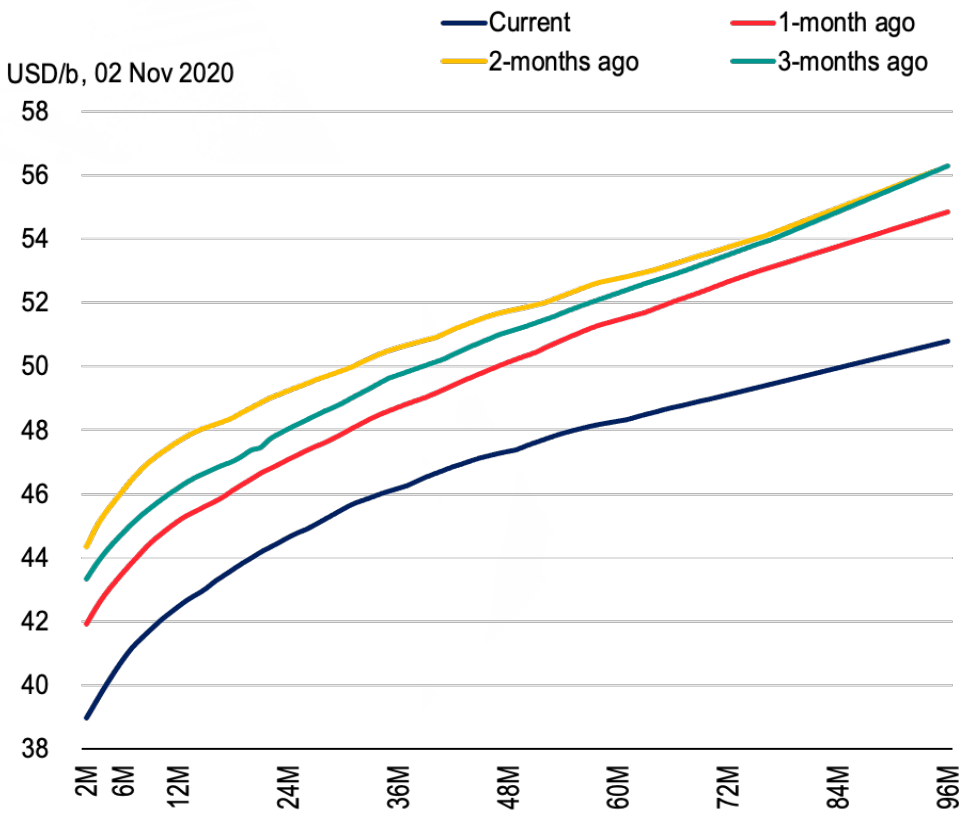
Parallel shift in forward price curve

Forward curves USD/b	02-Nov	Oct	Sep
2M	39.0	41.9	44.4
± 6M	+1.8	+1.6	+1.8
±12M	+3.5	+3.2	+3.3
± 24M	+5.7	+5.2	+4.9

- The forward price curve has been shifting downward in a parallel fashion with the back end of the curve coming under severe pressure and falling almost by as much as the front end

ICE Brent forward curves



Source: ICE, OIES

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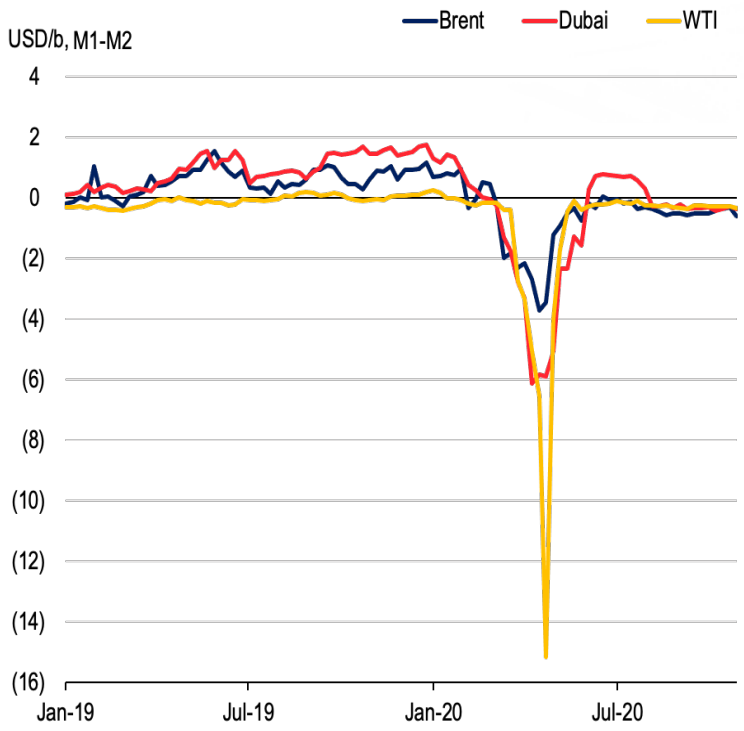
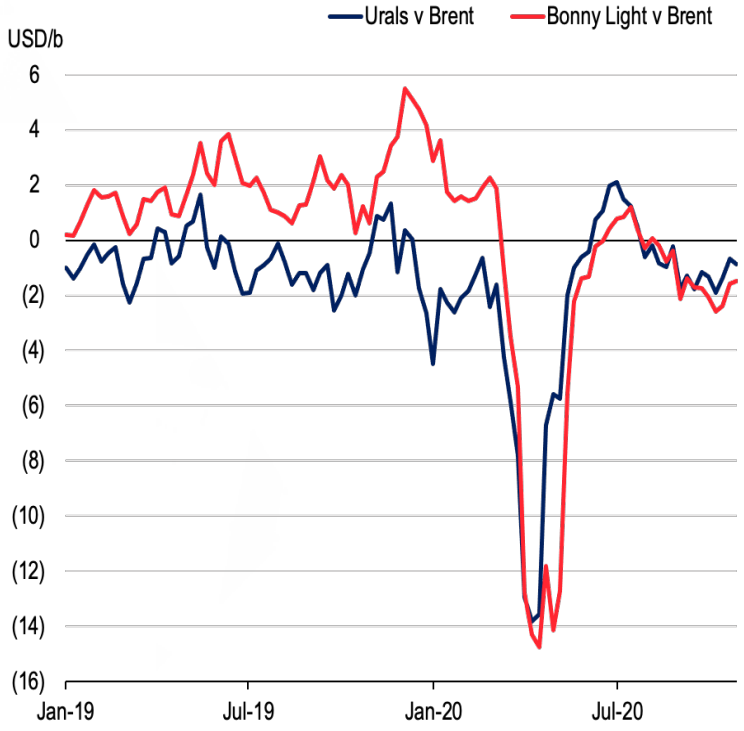
Time spreads and physical differentials holding for now

Time spreads



Price differentials



- Time spreads and differentials hold for now, with heavy medium sour outperforming light sweet grades

Source: Argus, OIES

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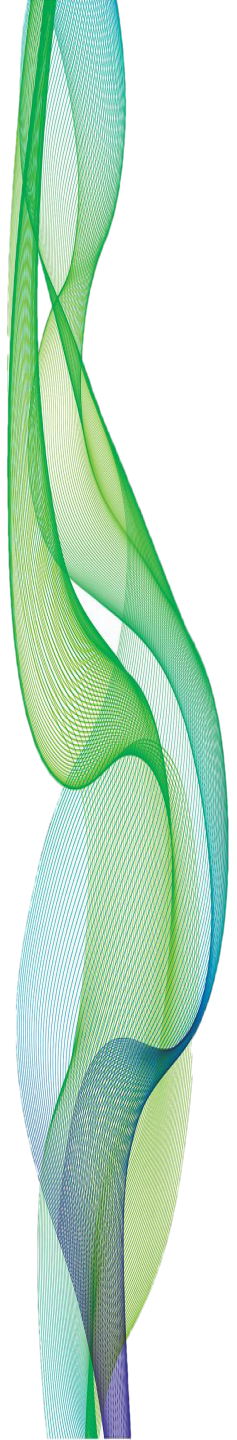
Demand side risks dictate the outlook



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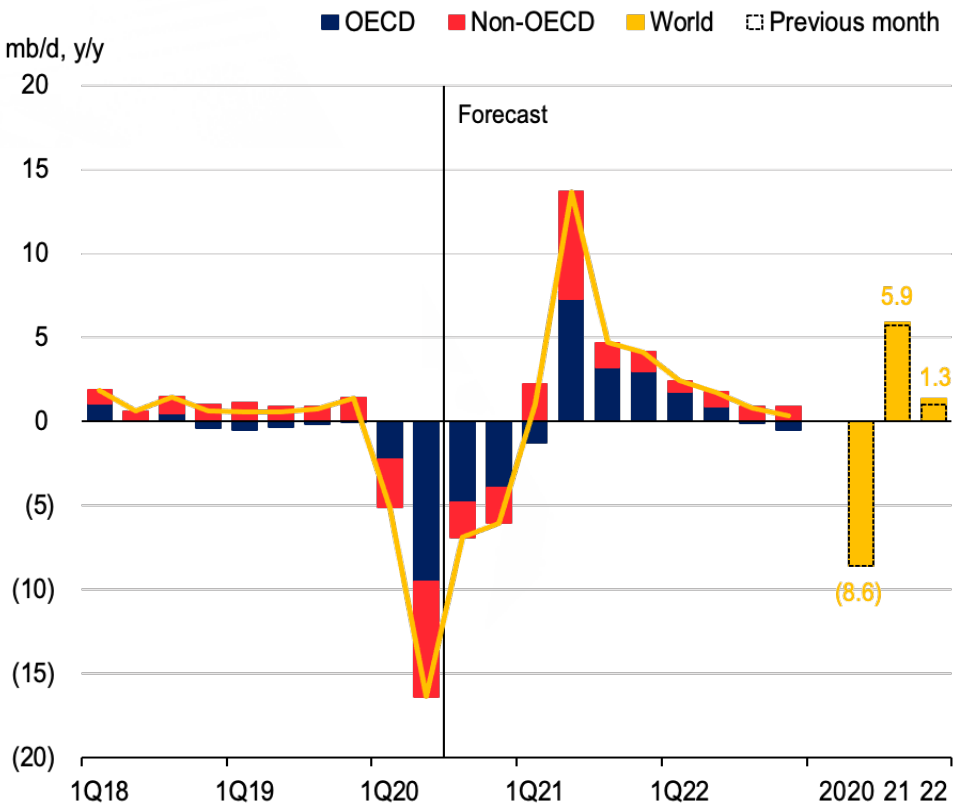
Oil risks still dominated by demand factors

The recovery of oil demand has been slower than expected, leading to downward revisions in oil demand forecasts for 2020 and 2021

- Global oil demand is now expected to take longer to reach its pre-crisis levels
- The pace of oil demand recovery is highly uneven both in terms of geography and fuels
- Asian demand remains robust led by China and India
- Jet fuel remains the weakest link
- This unevenness, alongside the ability to ramp up refinery runs and large product stocks, will continue to keep refining margins under pressure

Global oil demand



Source: OIES

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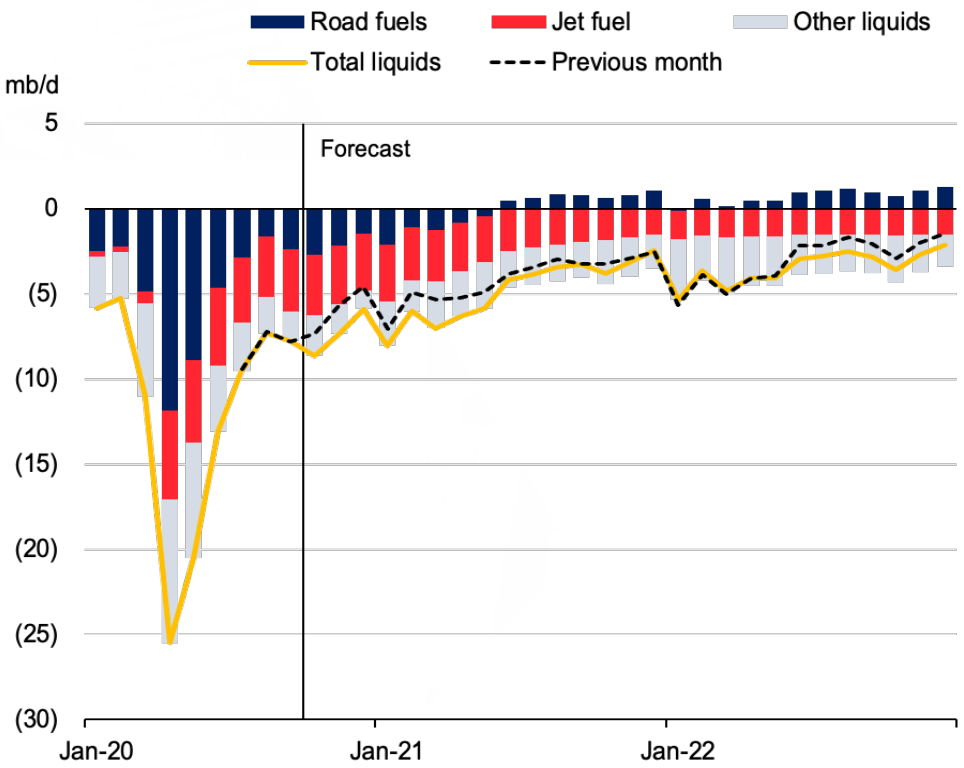
The pace of demand recovery is highly uneven

Global oil demand vs Dec 19 mb/d	Total	± prev
Sep-20	-7.8	0.03
Dec-20	-5.9	-1.33
Dec-21	-2.5	0.07
Dec-22	-2.1	-0.65

- The demand recovery seems to have stalled in recent months with near-term risks weighing heavily on the outlook and jet fuel remaining the weakest link

Global oil demand vs Dec 19



Note: Other liquids include fuels for other transport, commercial/residential use, industry and other uses.

Source: OIES

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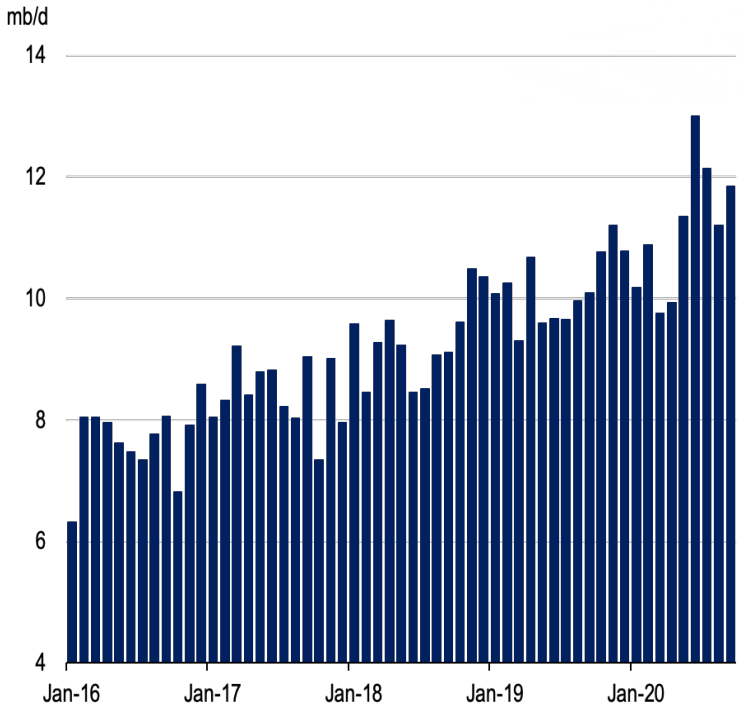
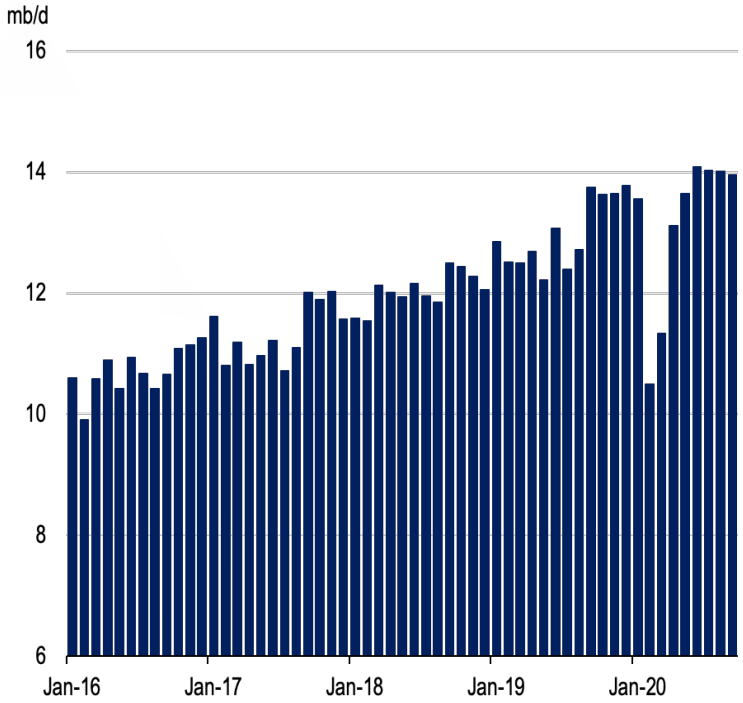
China demand doing most of the heavy lifting

China crude oil imports



China refinery runs



- China's demand remains robust, but its equilibrating role has eased with imports slowing, although imports are expected to rise driven by higher import quotas

Source: Argus, OIES

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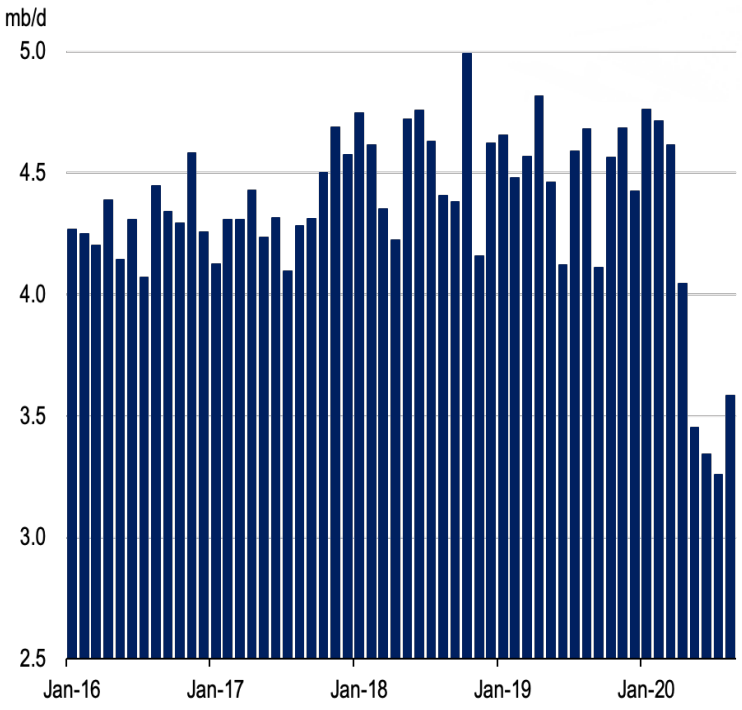
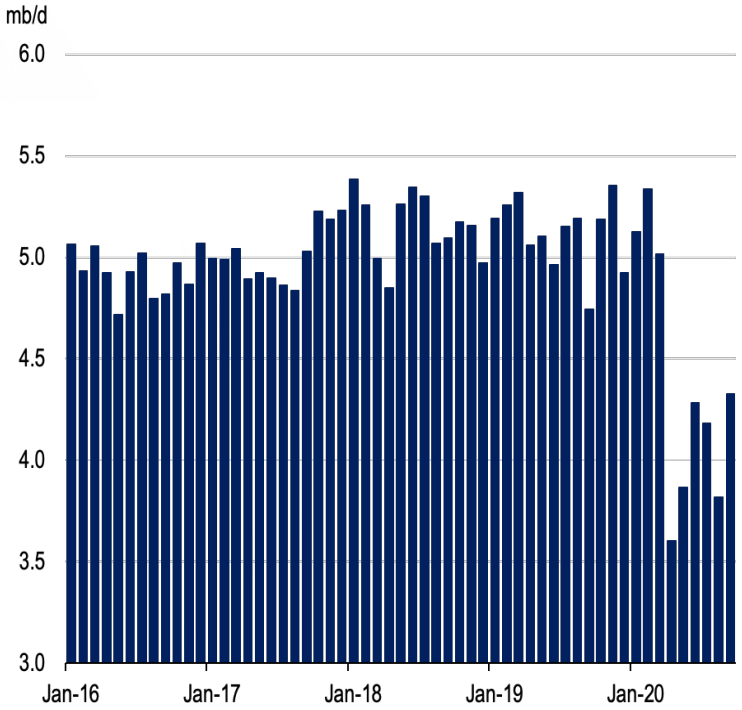
India's demand boosts optimism

India crude oil imports



India refinery runs



- September data from India have been strong across the board which continued into October

Source: Argus, OIES

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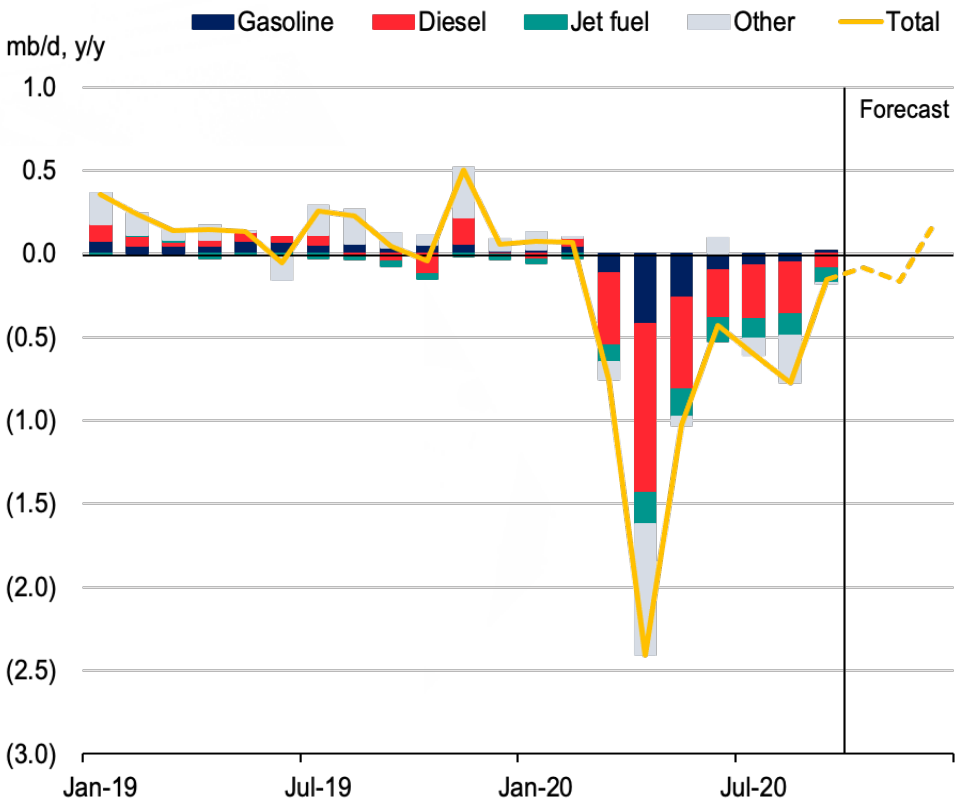
India gasoline demand (and diesel) comeback

India products demand in Sep 20 kb/d, y/y	
Gasoline	+22.0
Diesel	-85.2
Jet fuel	-91.9
Other	-0.9
Total products	**-156.0**

- The most spectacular growth in India's products demand is seen in gasoline sales, while in October diesel is also expected to rebound to y/y growth

India demand growth by product



Source: Argus, OIES

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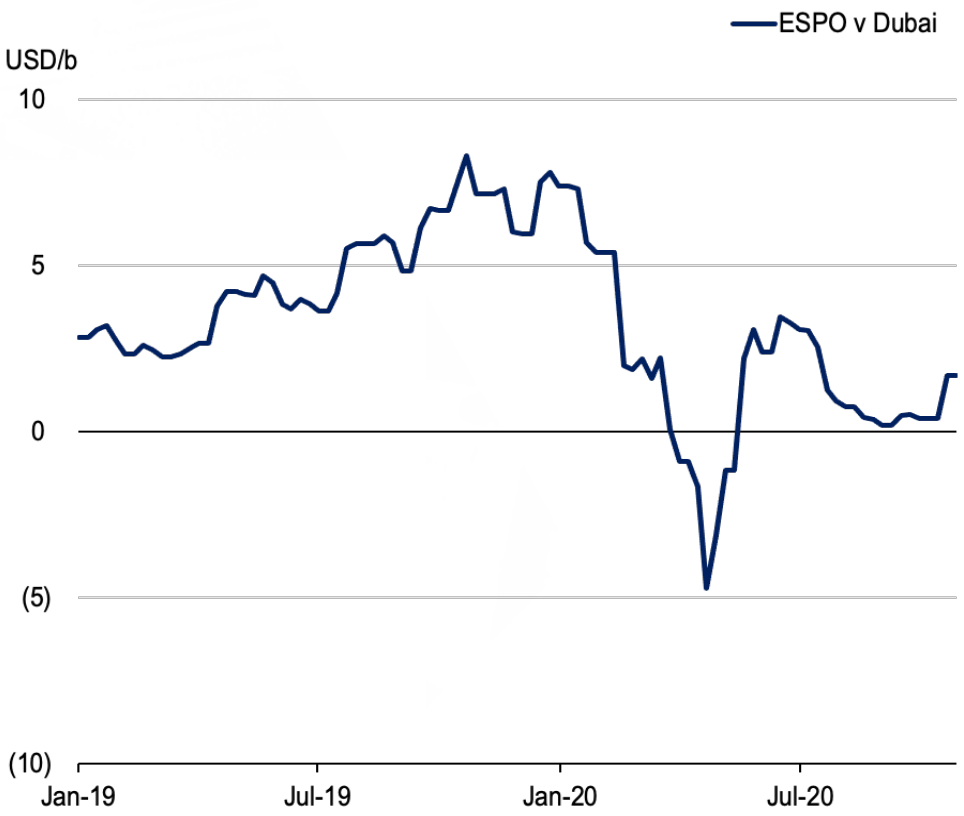
Oil destined to Asia has seen big support

ESPO v Dubai USD/b		
wk-ending		**± m/m**
Sep-20	+0.52	+0.17
Oct-20	+1.68	+1.16

- The robustness of Asian demand has kept grades destined to Asia such as ESPO trading at premiums to their respective benchmarks

ESPO blend fob v Dubai swaps



Source: Argus, OIES

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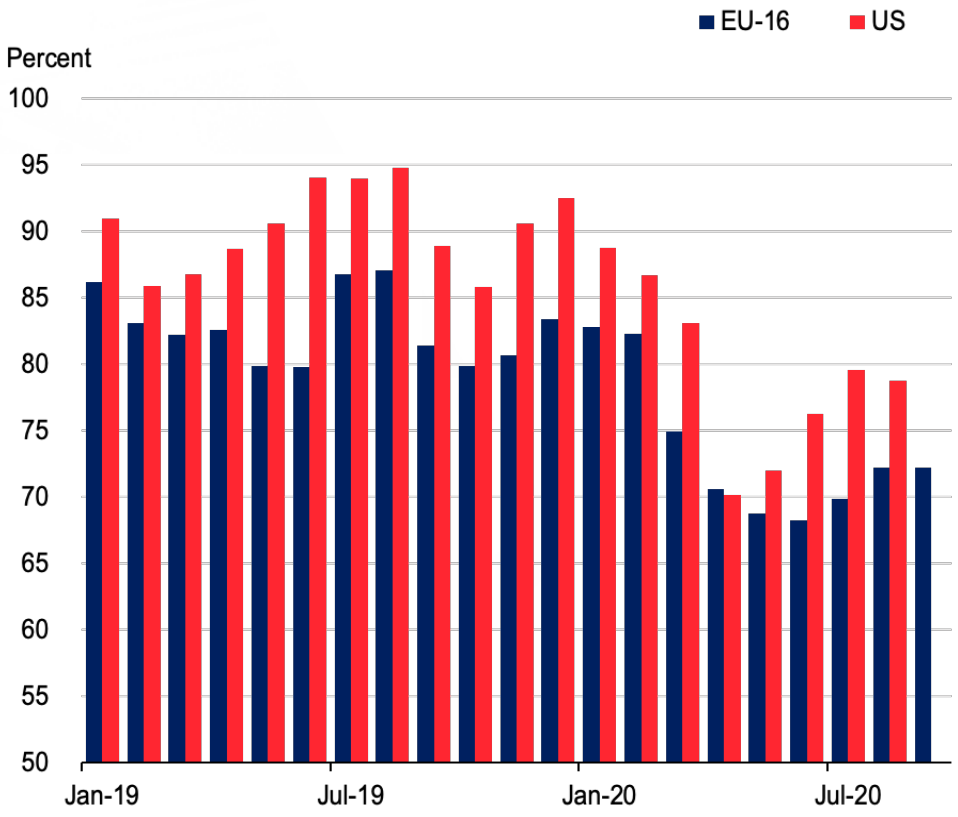
But refining margins remain under pressure

Refining margins* USD/b		
wk-ending	**NWE**	**USGC**
Oct-19	+1.9	+5.6
Oct-20	+1.0	+2.2

* Average netback margins amongst selected grades

- Despite the low refinery runs, the margins for gasoline and diesel have been eroding, with any sustained improvement in margins still distant

Refinery utilisation



Source: Argus, EIA, OIES

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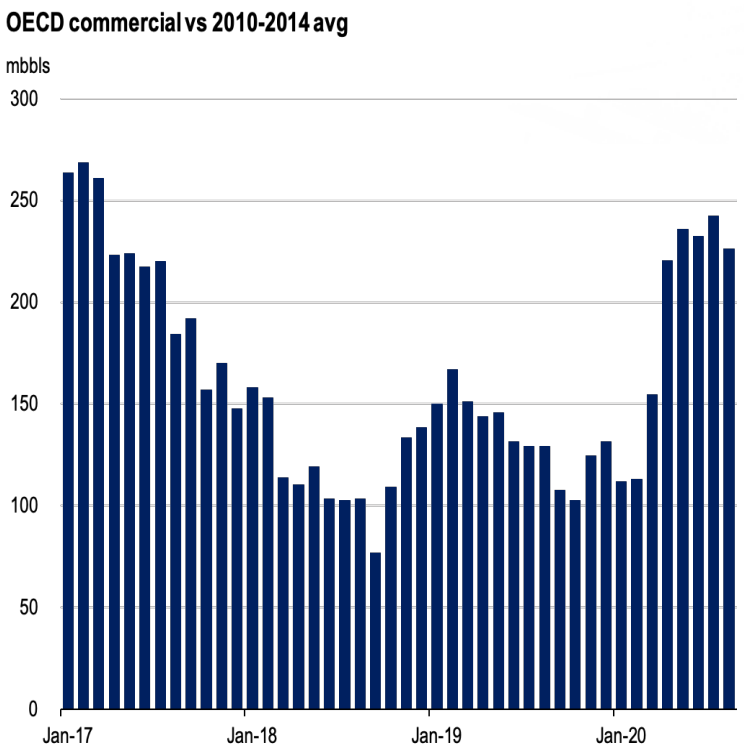
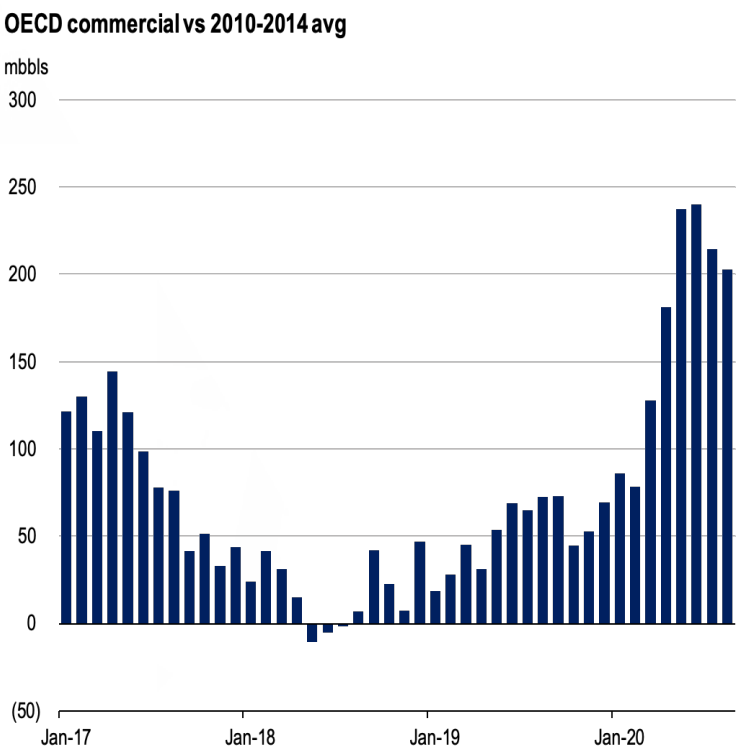
Stocks overhang also weighs on refining margins

OECD surplus crude stocks



OECD surplus product stocks



- Recent gains in demand have also been met from product stocks

Source: IEA, OIES

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Floating storage draws first

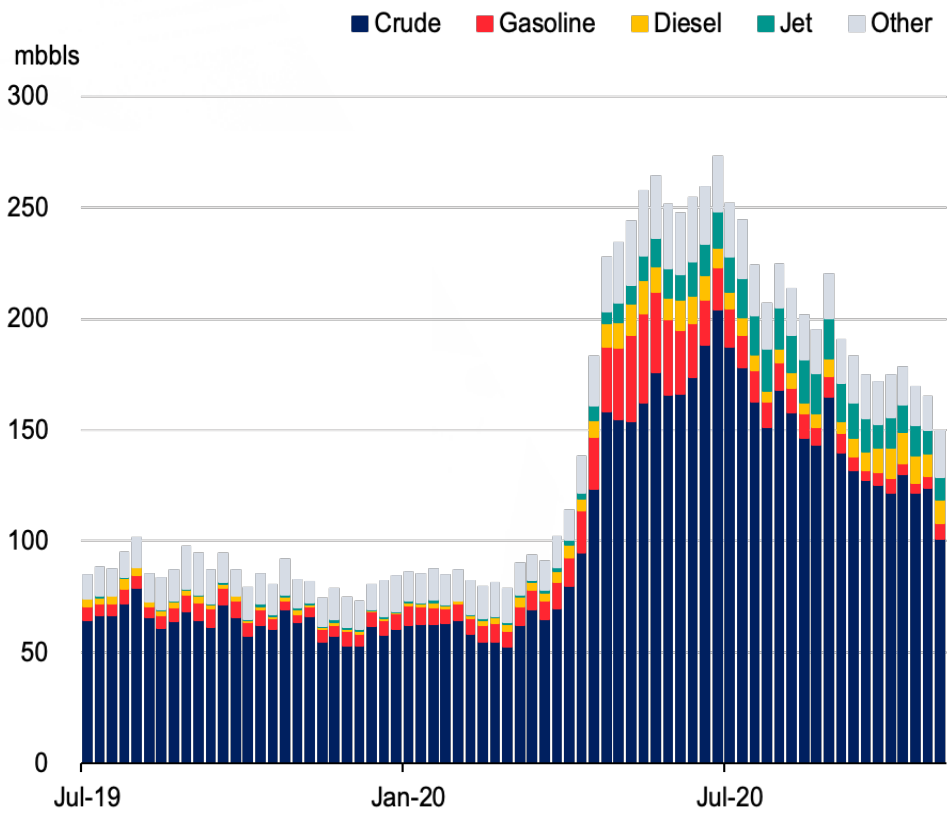
Floating storage surplus
mbbls, ending-stocks

	Oct-20	2Q20*	± chg
Crude	37.7	77.0	-39.3
Gasoline	0.8	27.9	-27.1
Diesel	8.9	10.9	-2.0
Jet	9.7	18.3	-8.6
Other	7.0	2.2	+4.9

* Dates of maximum stock levels in Q2 2020 vary by product. Surplus equals maximum level in 2020 minus 2019 average.

- Gasoline floating stocks are drawn near pre-shock levels, followed by nearly half of the crude and jet fuel stocks overhang cleared

Global weekly floating storage by product



Source: Kpler, OIES

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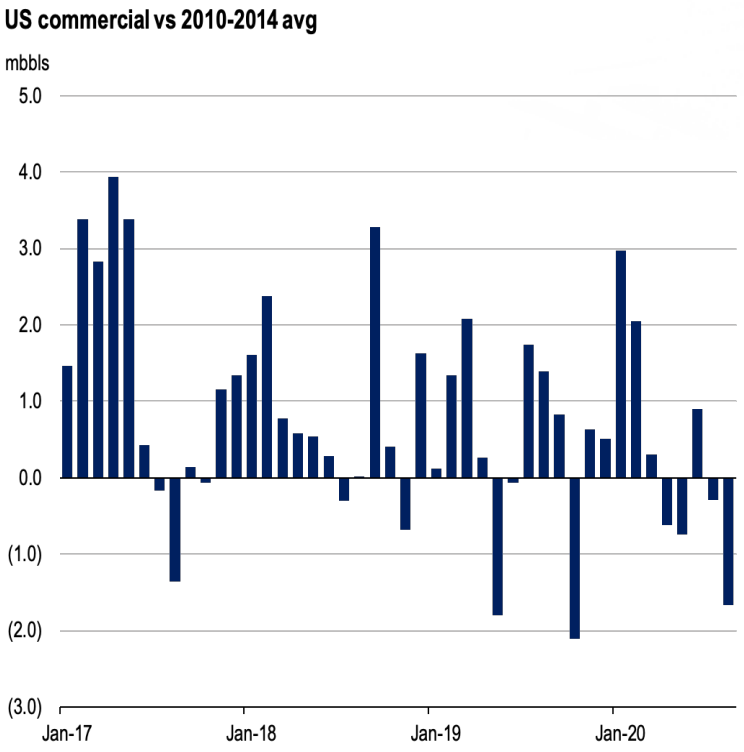
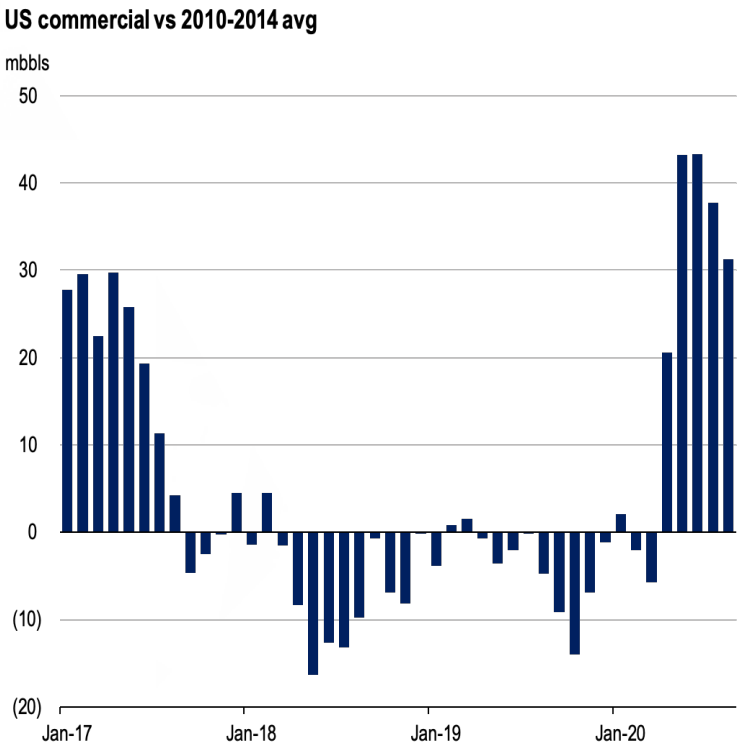
Middle distillates are on the rise

US surplus kero/jet stocks



US surplus middle distillates stocks



- Refineries have been diverting jet fuel output to the diesel pool contributing to a large rise in middle distillate stocks

Source: IEA, EIA, OIES

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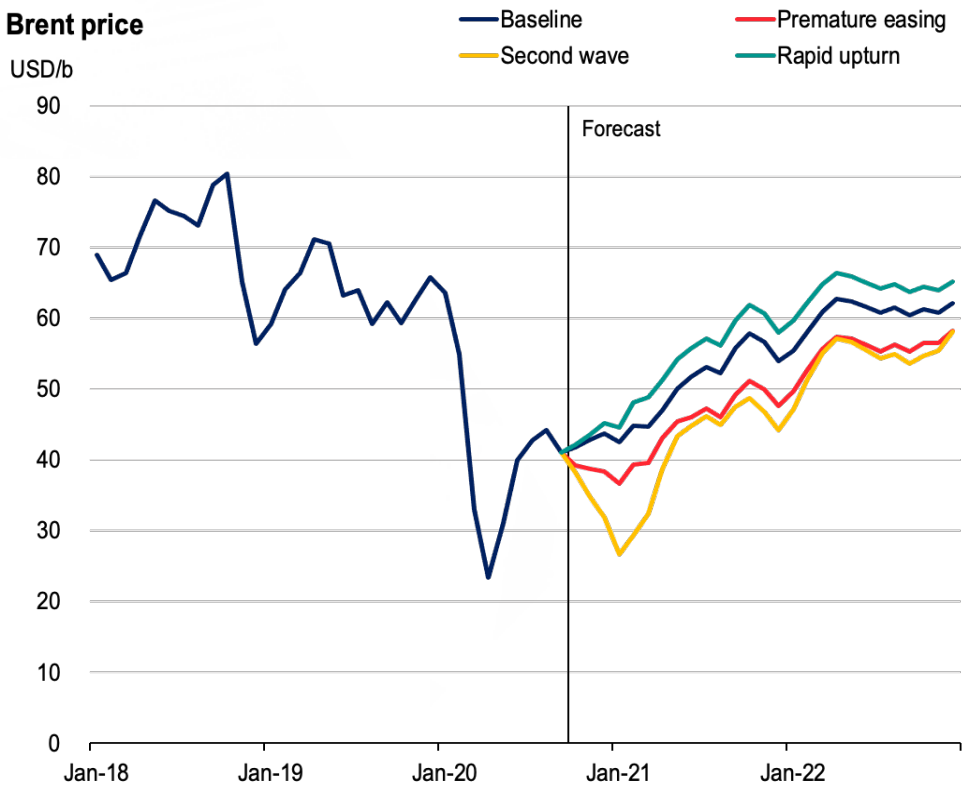
Growth risks continue to weigh heavily on the downside

Brent impact f/ growth risks USD/b, ± base	2020	2021
Premature	-1.0	-5.7
Second wave	-2.0	-9.7
Rapid upturn	+0.2	+3.8

- Global growth risks related to the virus resurgence are elevated, with the extent of policy responses and their impact on demand dictating the outlook

Global growth risks



Baseline assumes 100% compliance with OPEC+ deal and no compensation.

Premature easing: Pandemic accelerates where economy is prioritized over health

Second wave: A second coronavirus wave results in renewed global lockdowns

Rapid upturn: Scientific advances result to a more rapid recovery and less permanent economic damage

Source: Oxford Economics, OIES

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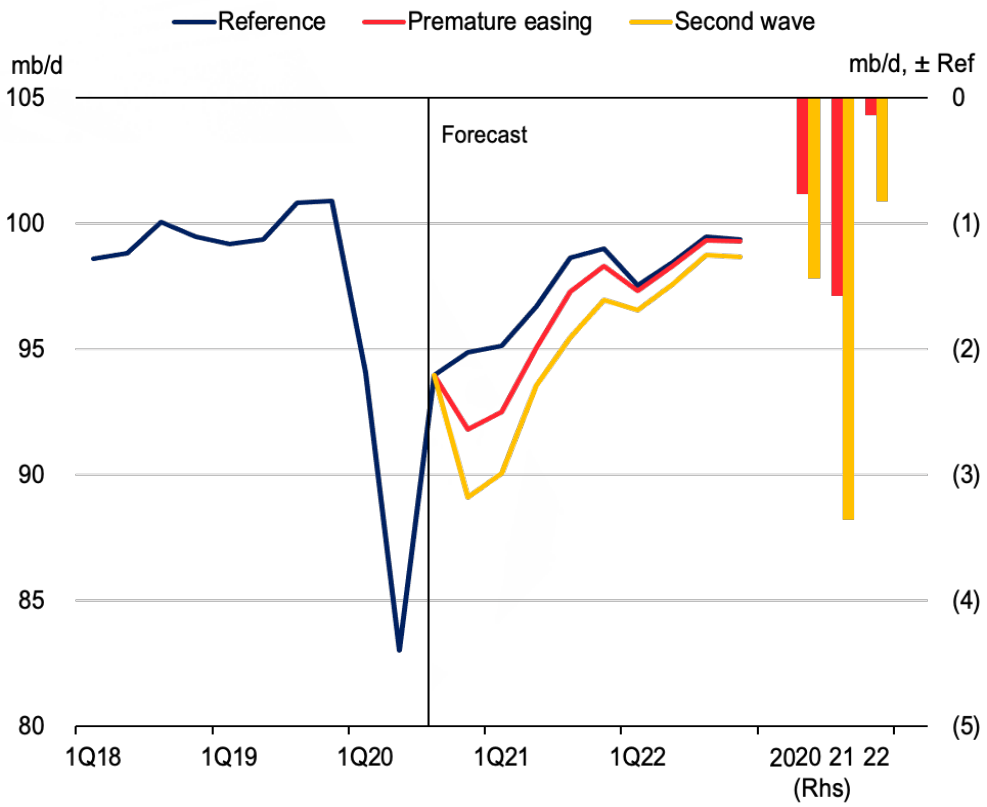
Virus resurgence downplays demand prospects

Covid scenarios impact on demand mb/d, ± Ref	2020	2021
Reference	**-8.6**	**5.9**
GDP, % y/y	-4.2	5.2
Premature	-0.8	-1.4
GDP, % y/y	-5.0	4.8
Second wave	-1.6	-3.4
GDP, % y/y	-5.7	-0.2

- The new lockdowns in Europe are downplaying demand prospects in Q4, but the impact on global demand is expected to be less than six months ago

Covid-19 scenarios impact on global oil demand



Source: Oxford Economics, OIES

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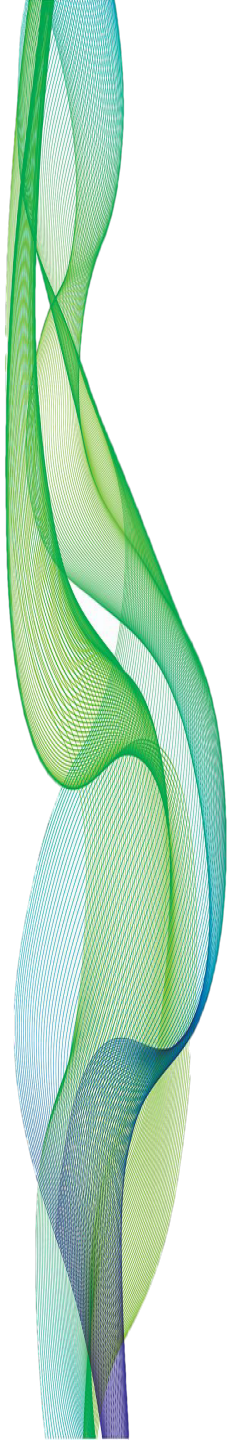
Supply risks on the rise



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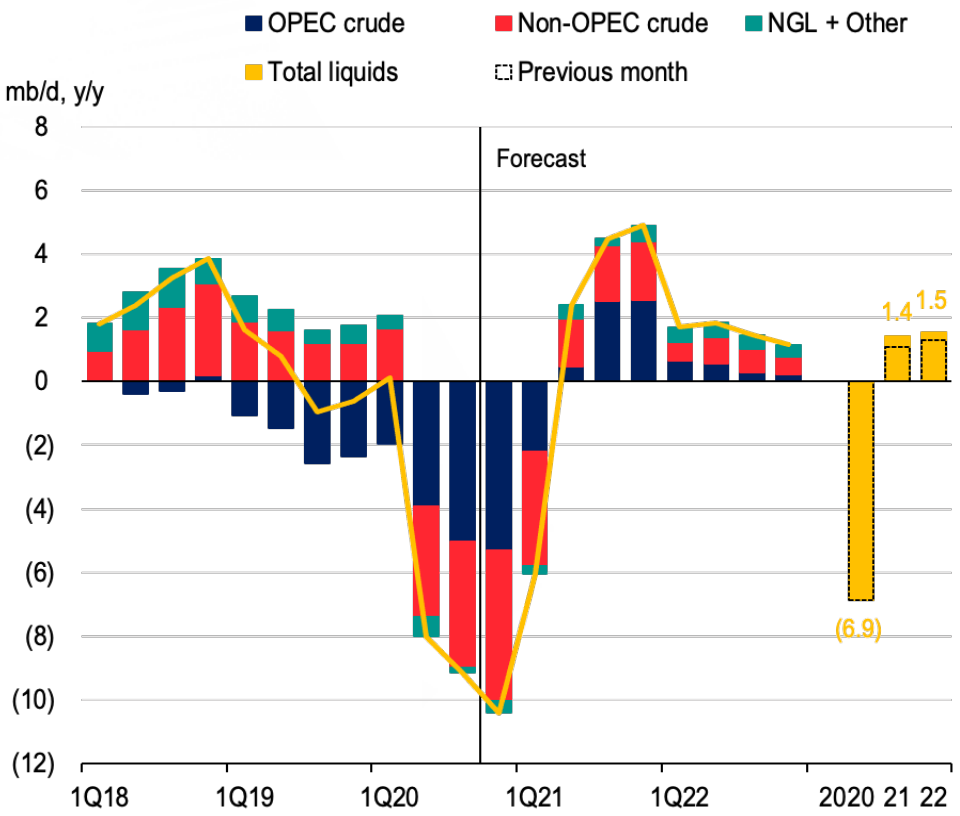
Risks on the supply side are on the rise

As demand starts showing signs of weakness, risks on the supply side – the main driving force of the recovery in September – are now looming

- Demand fragility is now realised by the OPEC+ group
- High compliance will remain key throughout the entirety of the deal
- But the recent market weakness may move the OPEC+ goalposts
- Libyan output makes a spectacular comeback
- Iran's potential return is increasingly becoming a wildcard for 2021 and non-OPEC supply finds small pockets of growth
- The outlook of US production however remains gloomy

Global oil supply



Source: OIES

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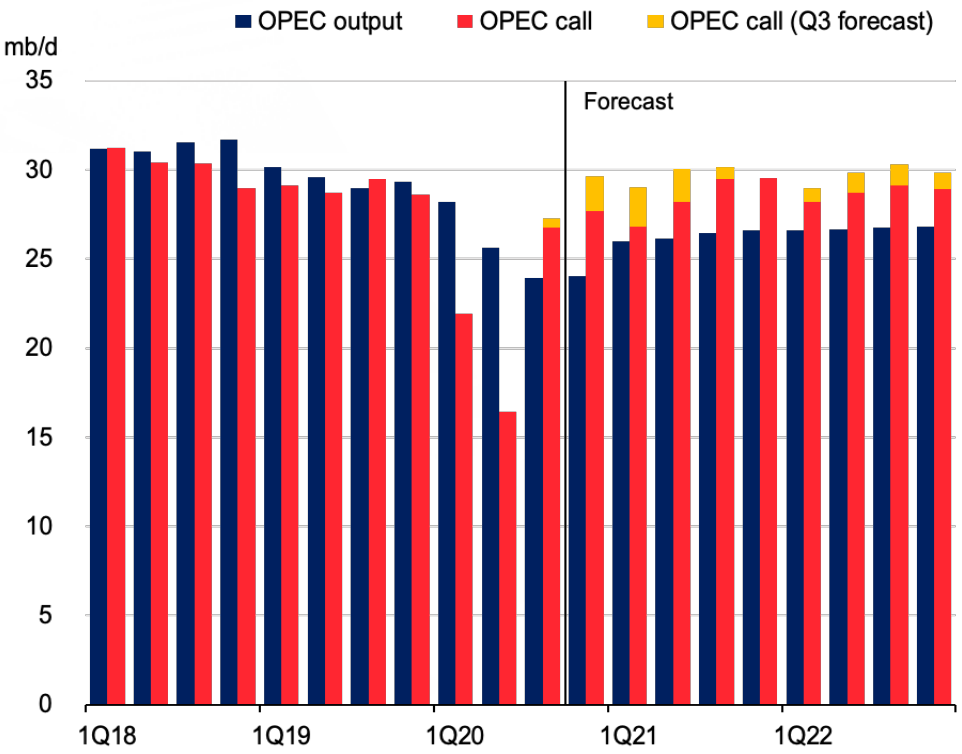
Bearish headwinds hit OPEC+

Call on OPEC mb/d, ± base	2020	2021
Q3 forecast	23.2	23.5
Q4 forecast	28.5	29.7

- OPEC+ heads to its next meeting with the oil demand recovery so far being slower than expected and new lockdown measures in EU dampening growth prospects anew

OPEC crude supply



Assumes 100% compliance with OPEC+ deal and 0.24 mb/d compensation from non-compliers in Oct/Dec 2020.

Source: OIES

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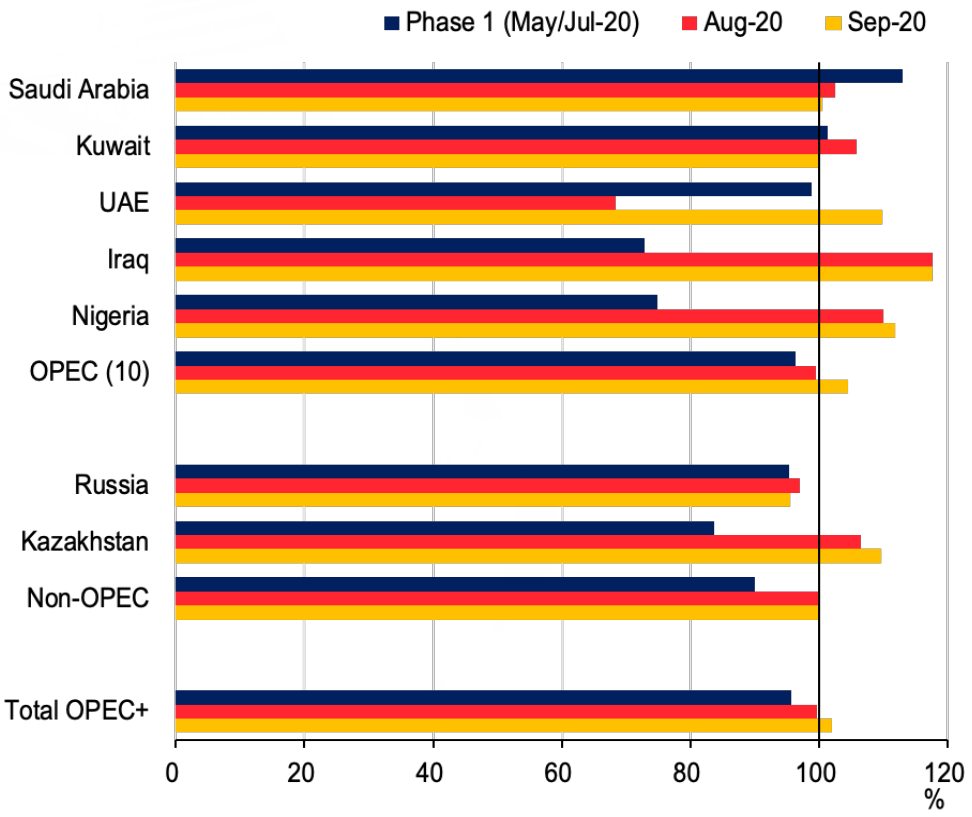
But OPEC+ determination remains strong

OPEC+ output compliance Percent	Total OPEC+
Phase 1	96
Aug-20	100
Sep-20	102

- OPEC+ producers continued to deliver high compliance in the second phase of the agreement, nailing 100% with key non-compliers overperforming

OPEC+ output compliance



Source: OIES

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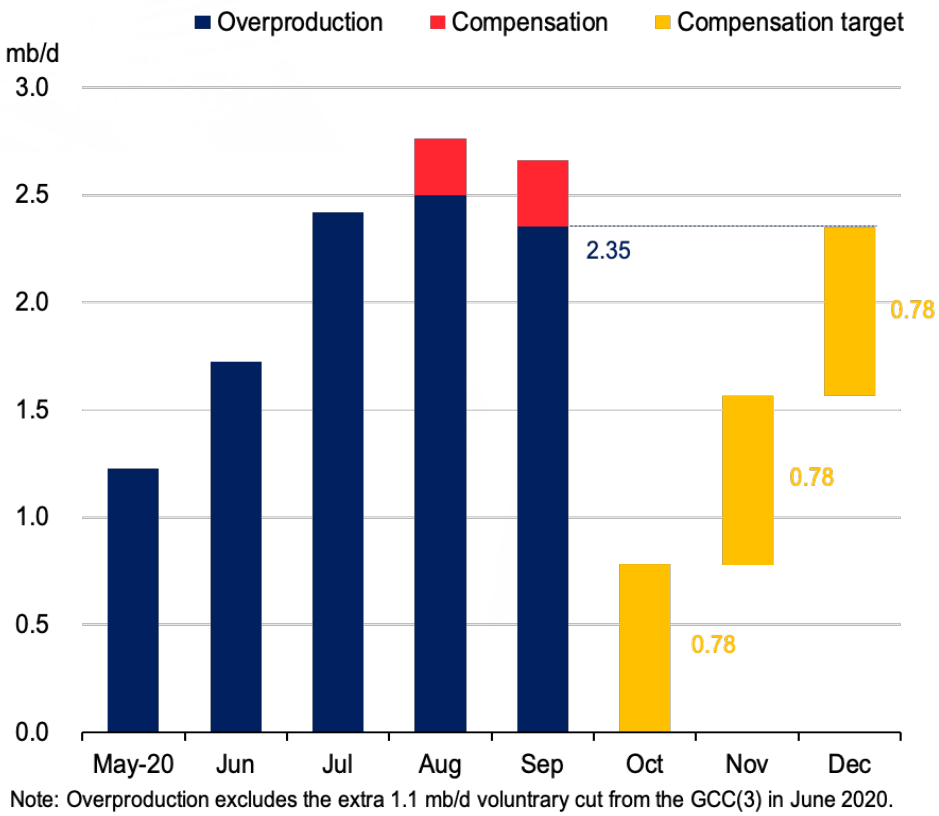
Compensation remains important for its signaling role

OPEC+ compensation scheme mb/d		
	Compensation	Target
Jul-20		2.42
Aug-20	0.26	2.50
Sep-20	0.31	2.35

- Although compensation cuts have been small, the scheme pushed laggards towards full compliance, reinforcing the credibility of the OPEC+ signal

OPEC+ compensation scheme



Note: Overproduction excludes the extra 1.1 mb/d voluntrary cut from the GCC(3) in June 2020.

Source: OIES

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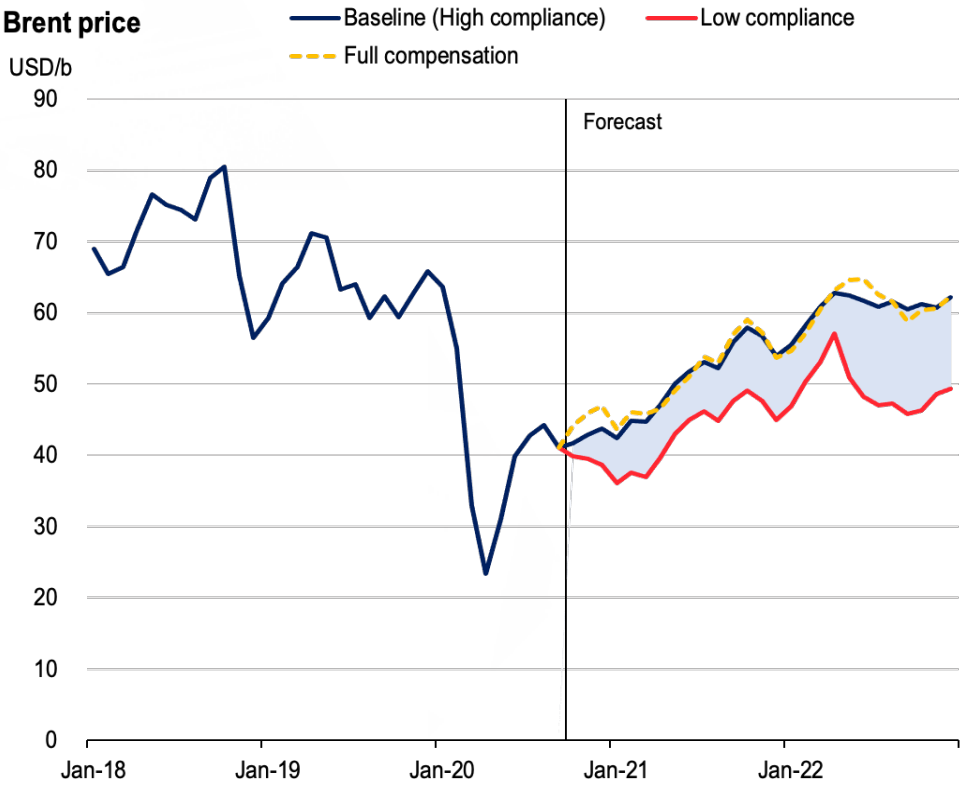
Markets will not tolerate lower compliance in 2021

Brent impact f/ compliance risks USD/b, ± base	2020	2021
Low compliance	-0.9	-7.7
Full compensate	+0.7	+0.4

- OPEC+ again finds itself faced with tough choices trying to balance various trade-offs: easing cuts or extending the cuts but risking lower compliance

OPEC+ compliance risks



Baseline assumes 100% compliance with OPEC+ deal and no compensation.

Low compliance: OPEC+ compliance falls to 70% from January 2021 to April 2022 and producers exit the agreement altogether in May 2022

Full compensation: Non-compliers cut an additional 0.78 mb/d of production in Oct/Dec 2020

Source: OIES

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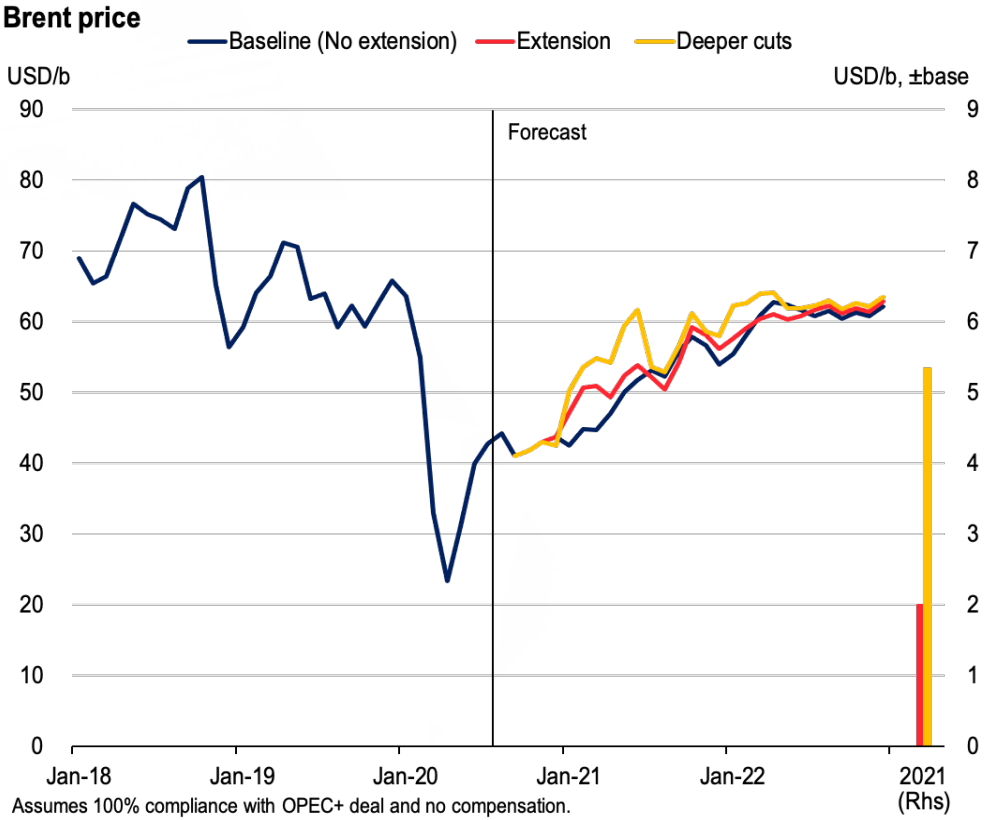
Recent market weakness may move the goalposts

Brent impact f/ OPEC+ options USD/b, ± base		
	2021	**2022**
Extension	+2.0	+0.2
Deeper cuts	+5.3	+2.0

- Another key feature of the OPEC+ deal is that the agreement extends all the way to April 2022, leaving room to 'tweak' the deal to changing market conditions

OPEC+ options



Assumes 100% compliance with OPEC+ deal and no compensation.

Extension (3-months): OPEC+ producers extend the current phase 2 of the agreement in Q1 2021 and unwind their cuts for the next phase in April 2021

Deeper cuts: OPEC+ producers deepen their cuts in Q1 2021, returning to phase 1 of the agreement, before gradually unwinding their cuts in Q2 by moving to phase 2 and enter phase 3 only from July 2021 onwards

Source: OIES

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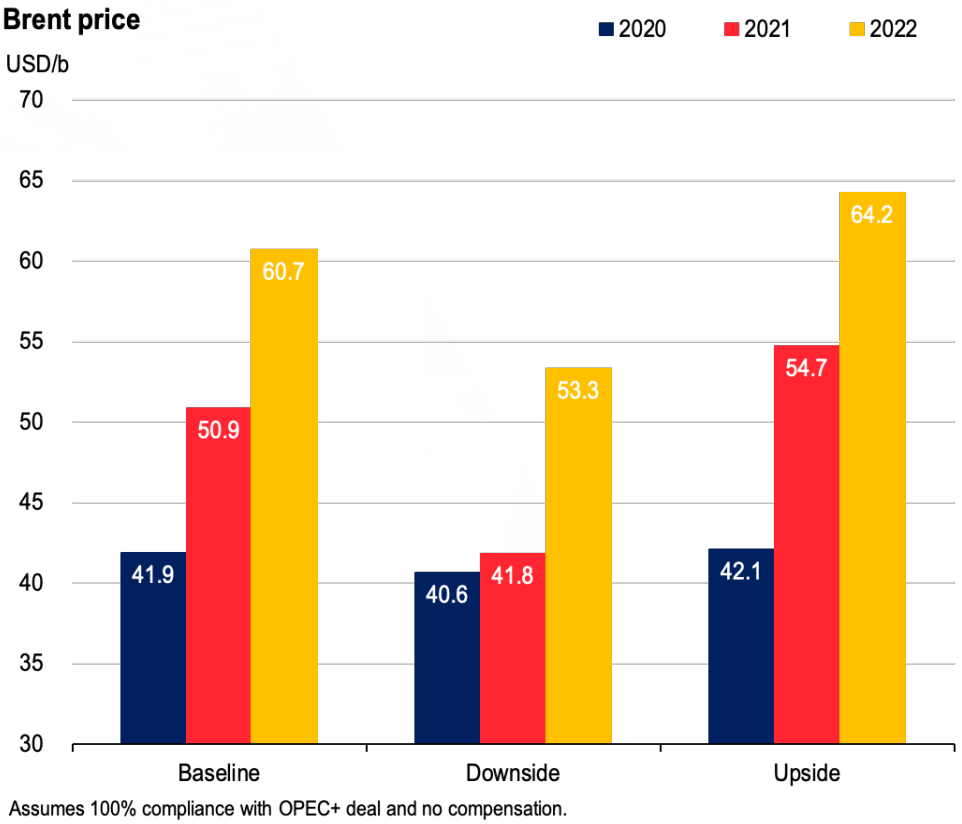
From the C³ to the P³: Predictive, Preventive, Proactive

Brent price risks USD/b, ± base	Downside	Upside
2020	-1.2	+0.2
2021	-9.1	+3.8
2022	-7.4	+3.5

- Ultimately the effectiveness of the OPEC+ balancing act hangs on compliance (under OPEC+ control), but also the demand prospects (outside OPEC+ control); for which OPEC+ can only be proactive

OPEC+ demand side risks



Source: OIES

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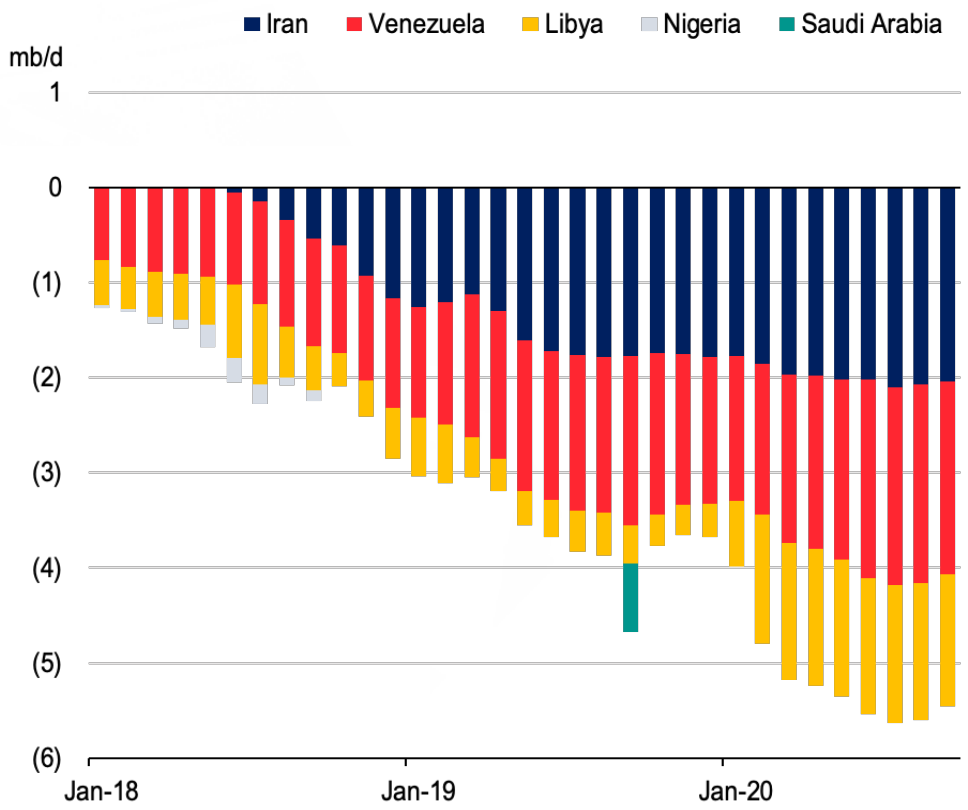
Additional challenges for OPEC+

Estimated operable capacity mb/d	
Libya	1.12
Venezuela	0.78
Iran	3.83

- After reaching a low point in 2020, geopolitical supply disruptions began to ease, adding a new layer of negative supply-driven pressures on the balance of risks

Geopolitical supply disruptions



Source: OIES

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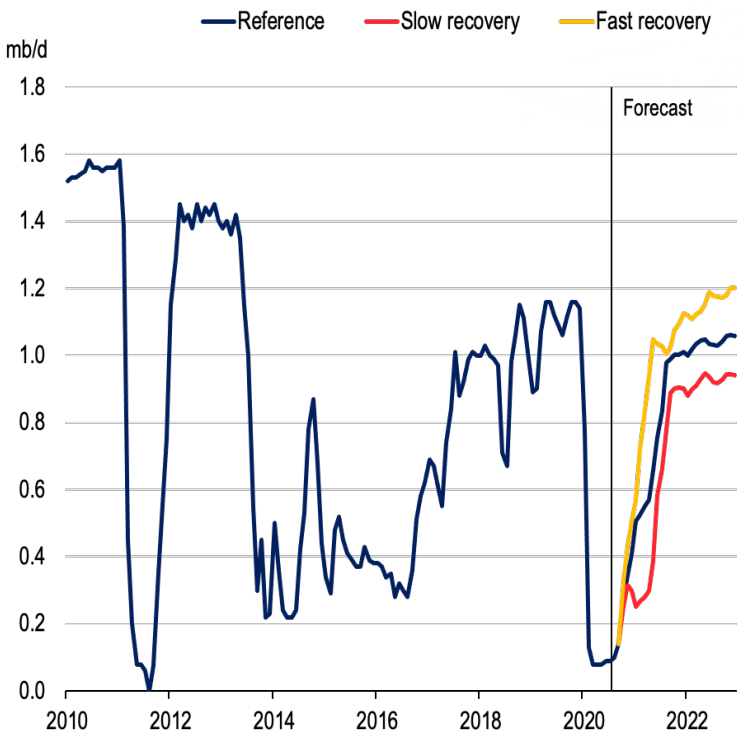
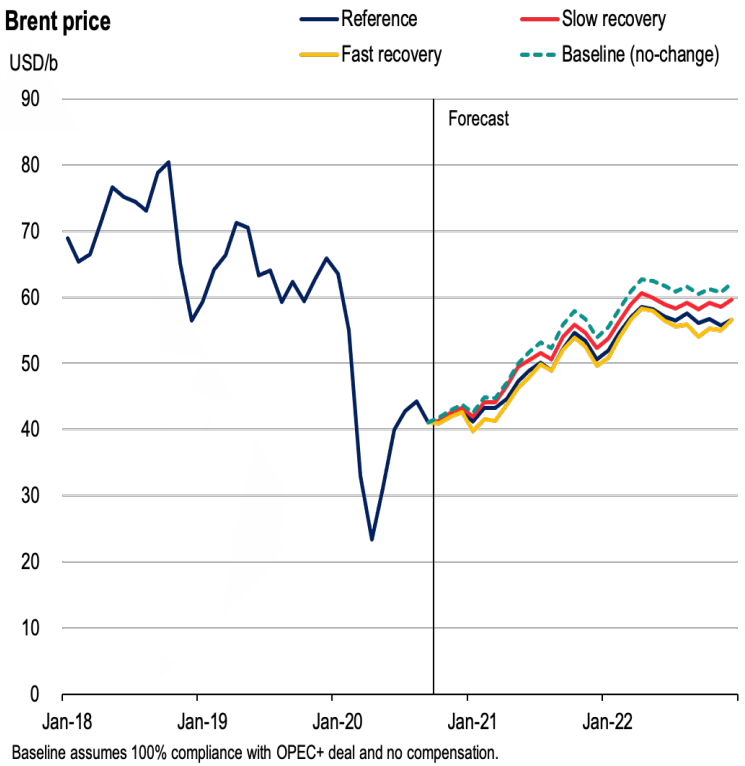
Libya's production on the rise, but fragility persists

Libya production scenarios



Libya price risks



- Libya's return could supress prices by $1/b in 2020 and up to $3.6/b in 2021

Source: OIES

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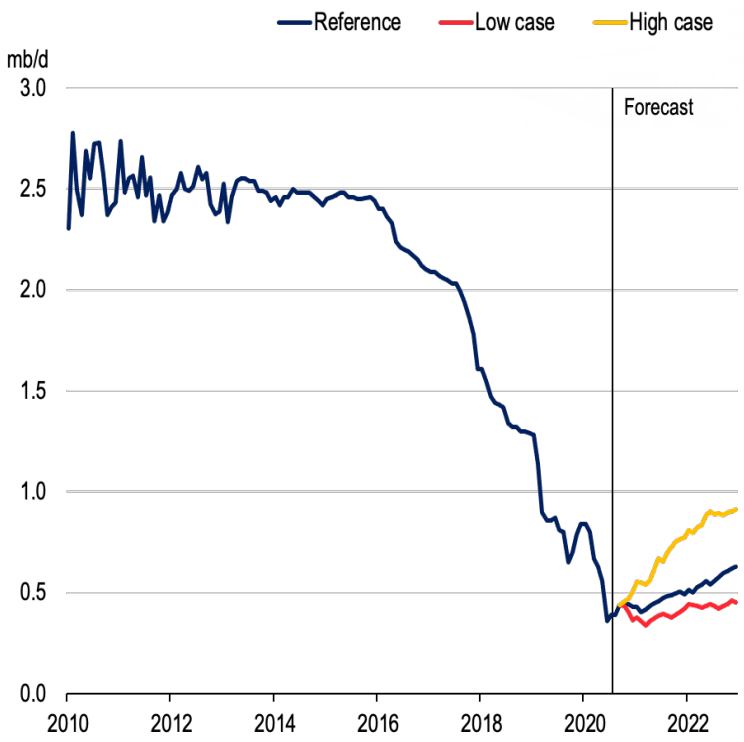
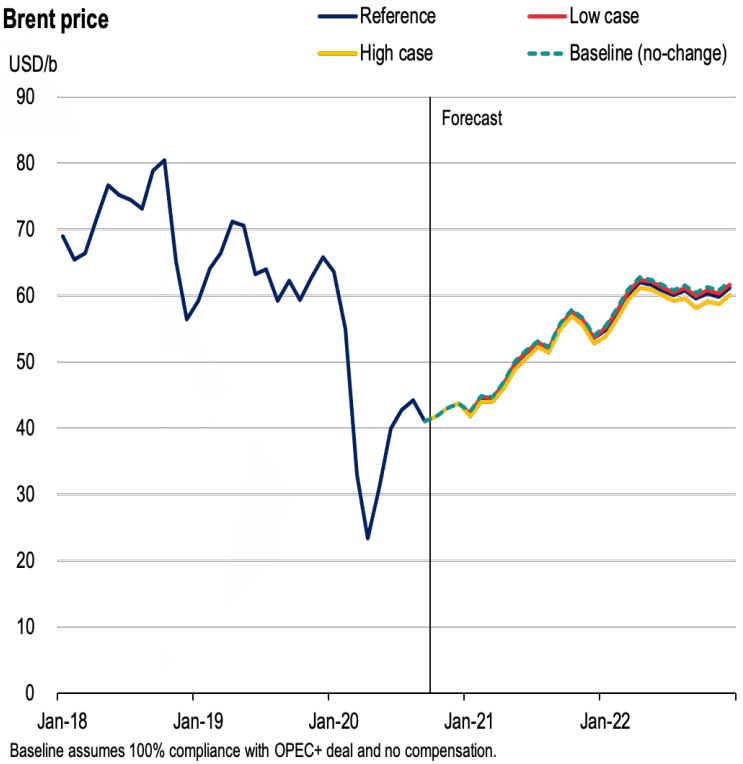
Venezuela's ability to return is limited

Venezuela production scenarios



Venezuela price risks



Baseline assumes 100% compliance with OPEC+ deal and no compensation.

- Even with the US "maximum pressure" campaign easing, Venezuela's oil outlook remains bleak due to chronic underinvestment and mismanagement

Source: OIES

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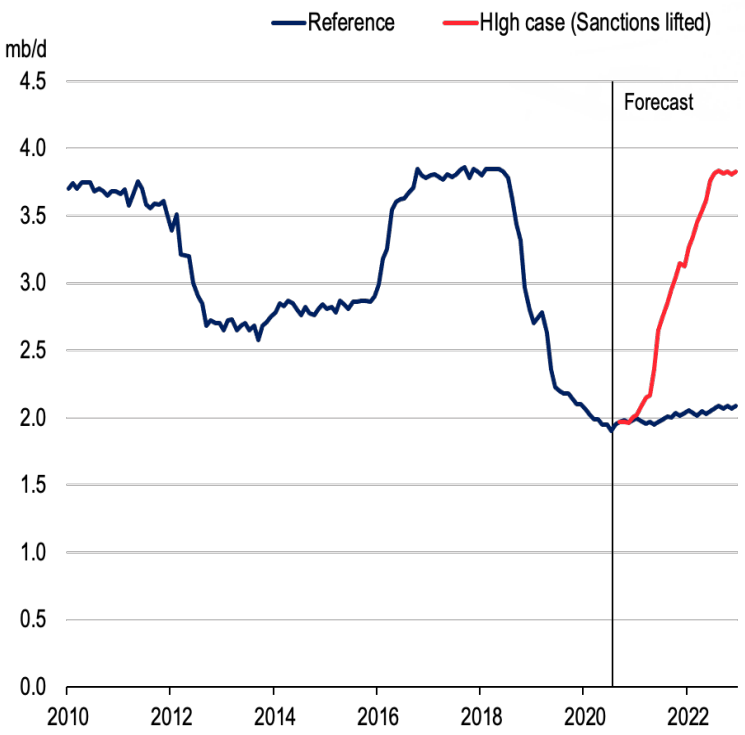
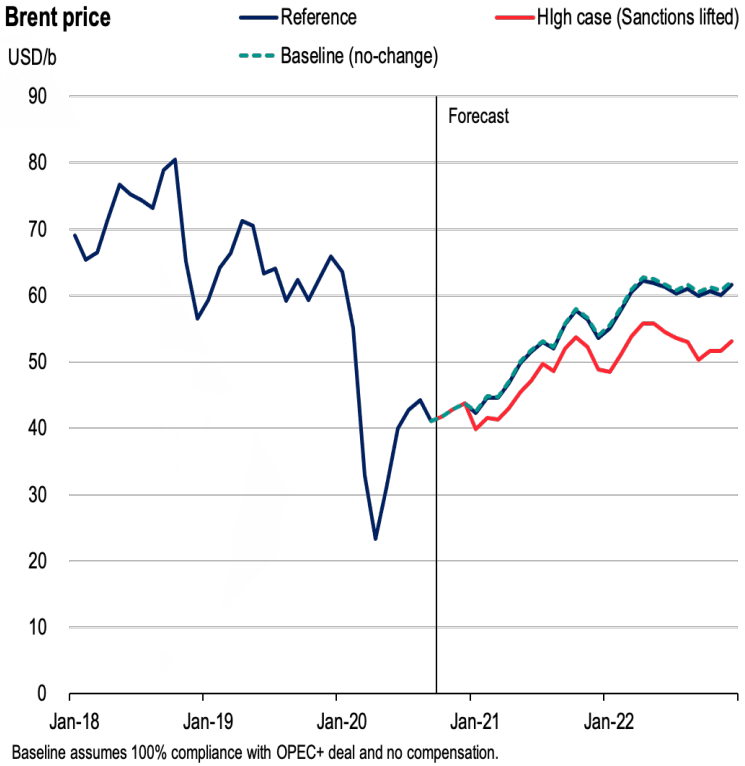
Iran's potential return: A new risk?

Iran production scenarios



Iran price risks



Baseline assumes 100% compliance with OPEC+ deal and no compensation.

- A US return to the JCPOA could lead to a return of Iranian production in 2021

Source: OIES

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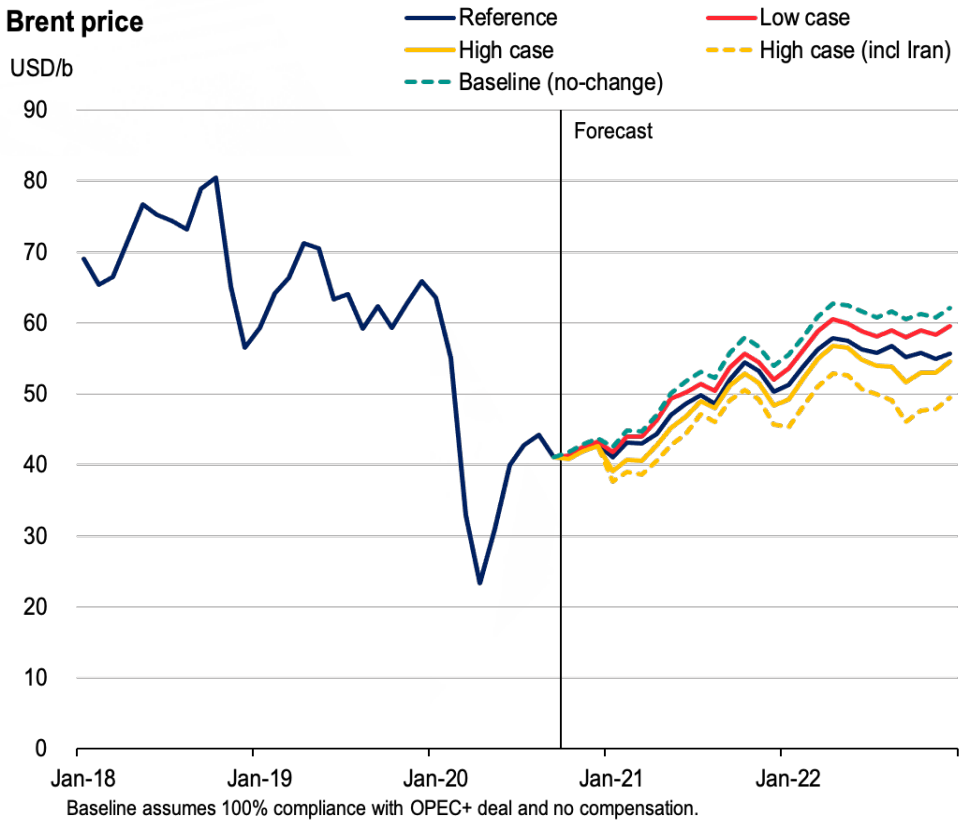
Geopolitical risks cast bearish tone

Brent impact f/ geopolitical risks USD/b, ± base	2020	2021
Reference	-0.2	-2.9
Low case	-0.1	-1.5
High case	-0.3	-4.5
High case (incl. Iran)	-0.3	-6.6

- Geopolitical risks are now clearly building on the downside, with balances and prices in 2021 and 2022 susceptible to negative pressures to some extent

Geopolitical risks



Source: OIES

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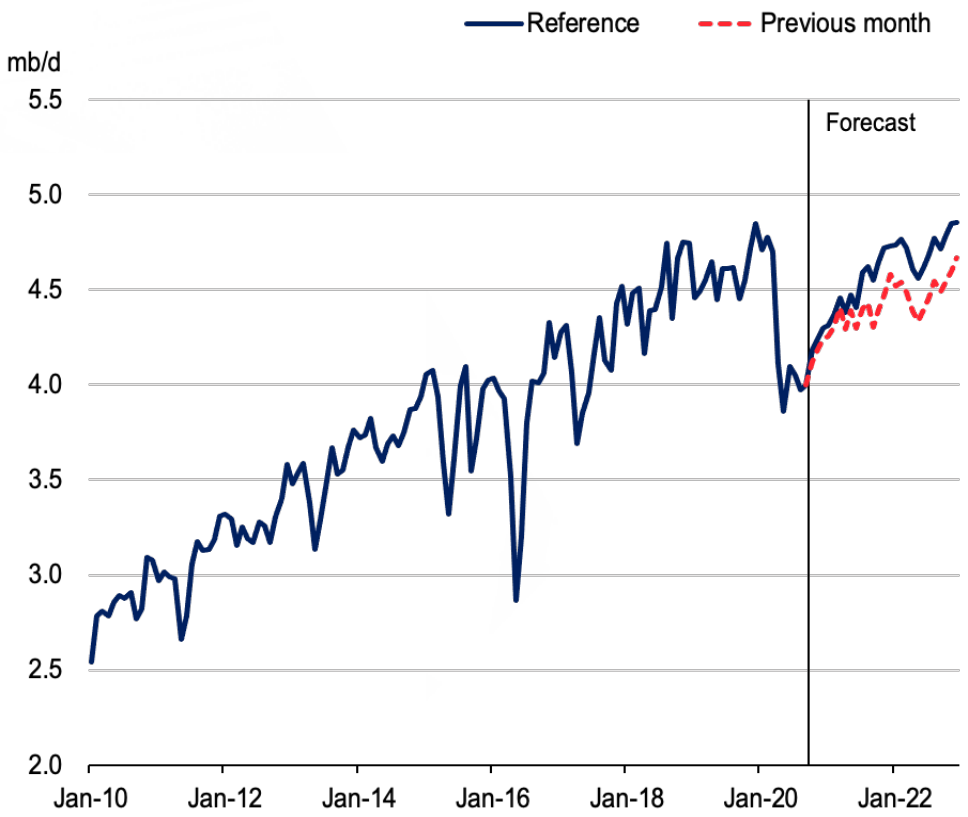
Non-OPEC supply finds small pockets of growth

Canada crude supply mb/d, y/y		
	October forecast	**± prev**
2020	-0.33	-0.05
2021	0.27	0.08
2022	0.20	0.1

- Canada supply outlook finds support from lifting the ban on Alberta output in December, albeit production currently stands well below the imposed limits

Canada crude supply



Source: OIES

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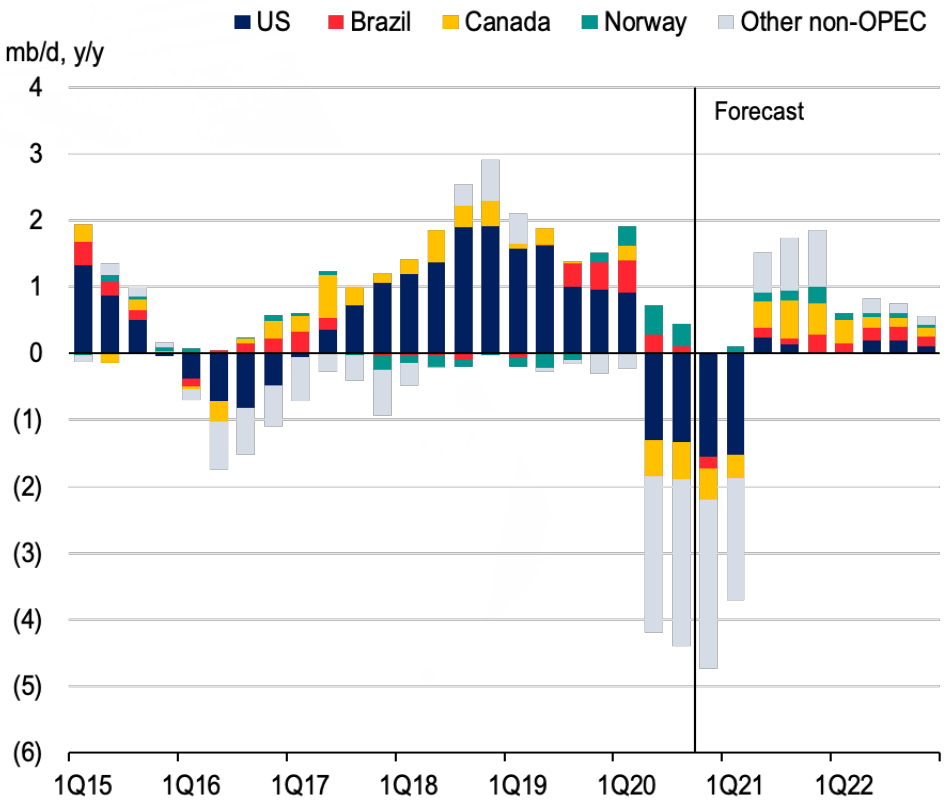
But non-OPEC supply growth outlook remains modest

Non-OPEC crude supply mb/d, y/y		
	Total non-OPEC	**US**
2020	-2.6	-0.8
2021	0.4	-0.3
2022	0.7	0.1

- The rise and fall of US supply from the largest source of new supply at the start of 2020 to the worst hit non-OPEC producer, is an important drag to overall non-OPEC supply growth outlook

Non-OPEC crude supply



Source: OIES

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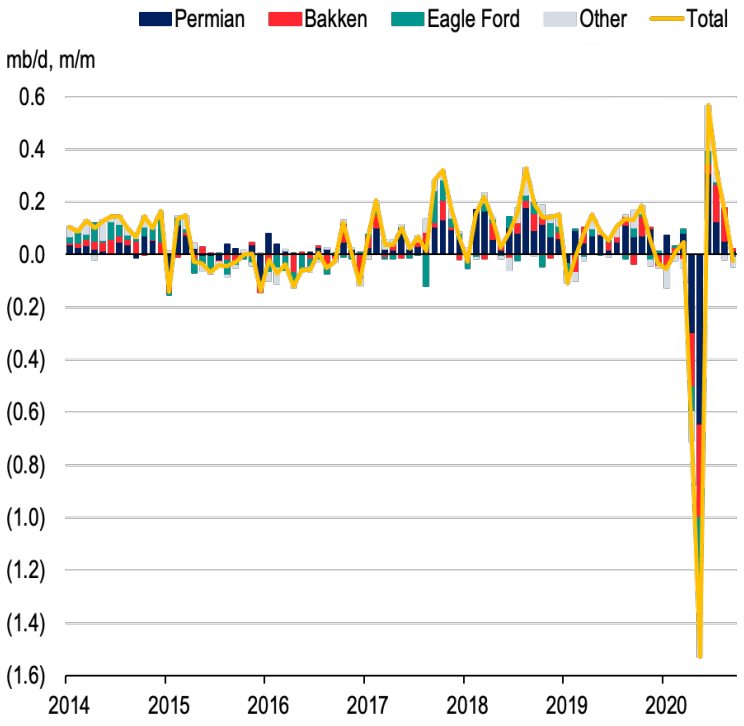
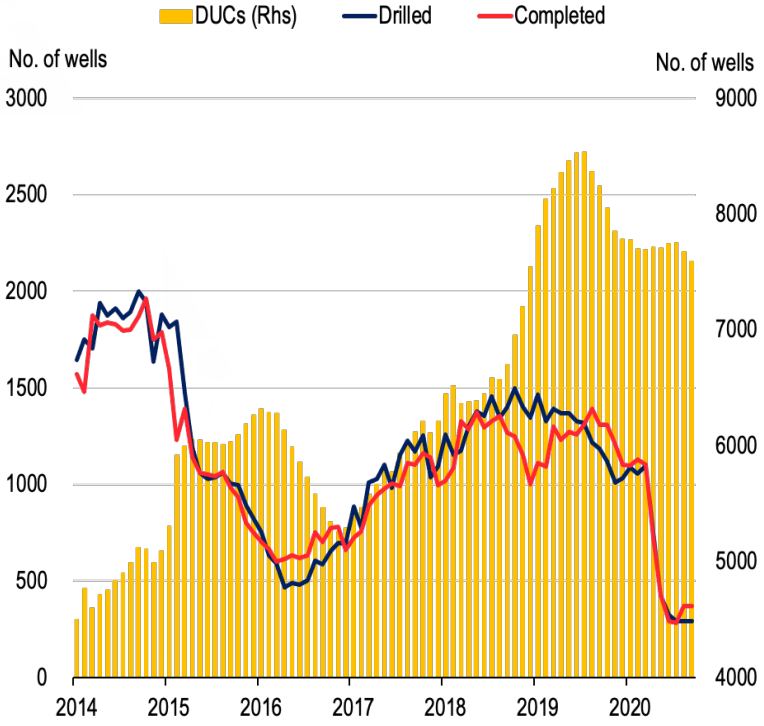
US shut-in production has already returned

US shale production



Drilled, completed wells and DUCs



- Shale producers have turned to drawing down DUCs to offset base declines

Source: EIA, OIES

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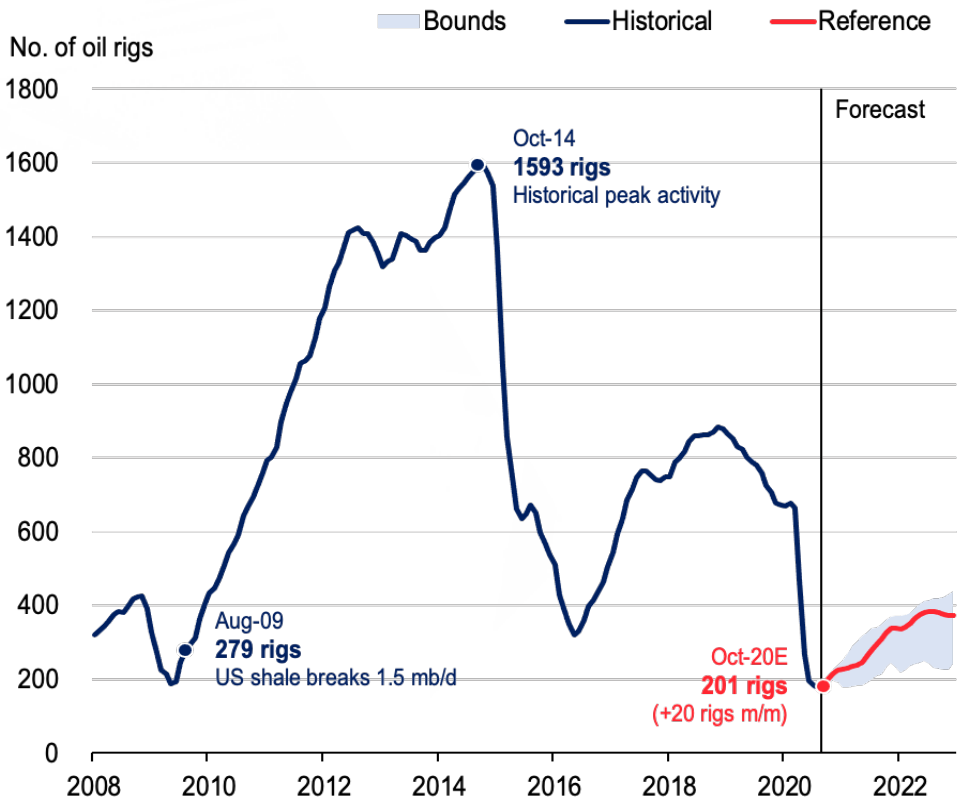
US drilling activity bottomed out

US drilling activity No. of oil rigs		
		± 2019
Jan-20	671	-195
Apr-20	471	-353
Jul-20	181	-600
Oct-20E	201	-708

- US drilling activity in August bottomed out, albeit activity remains too low for a material comeback of US shale output

US drilling activity



Source: Baker Hughes, OIES

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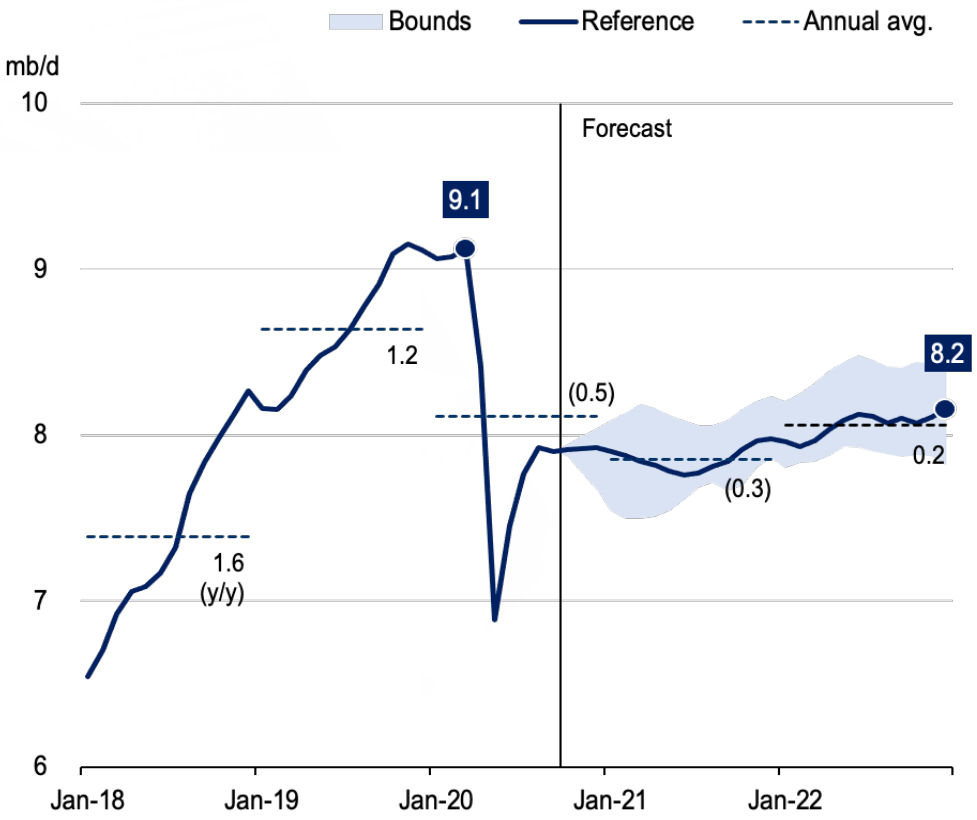
US shale outlook remains bullish for global balance

US crude supply mb/d	US shale	Total US
2019	8.6	12.2
2020	8.1	11.4
2021	7.6	11.1
2022	7.9	11.3

- The notion that US shale supply may have passed its peak back in 2019 is now becoming increasingly popular

US shale supply



Source: OIES

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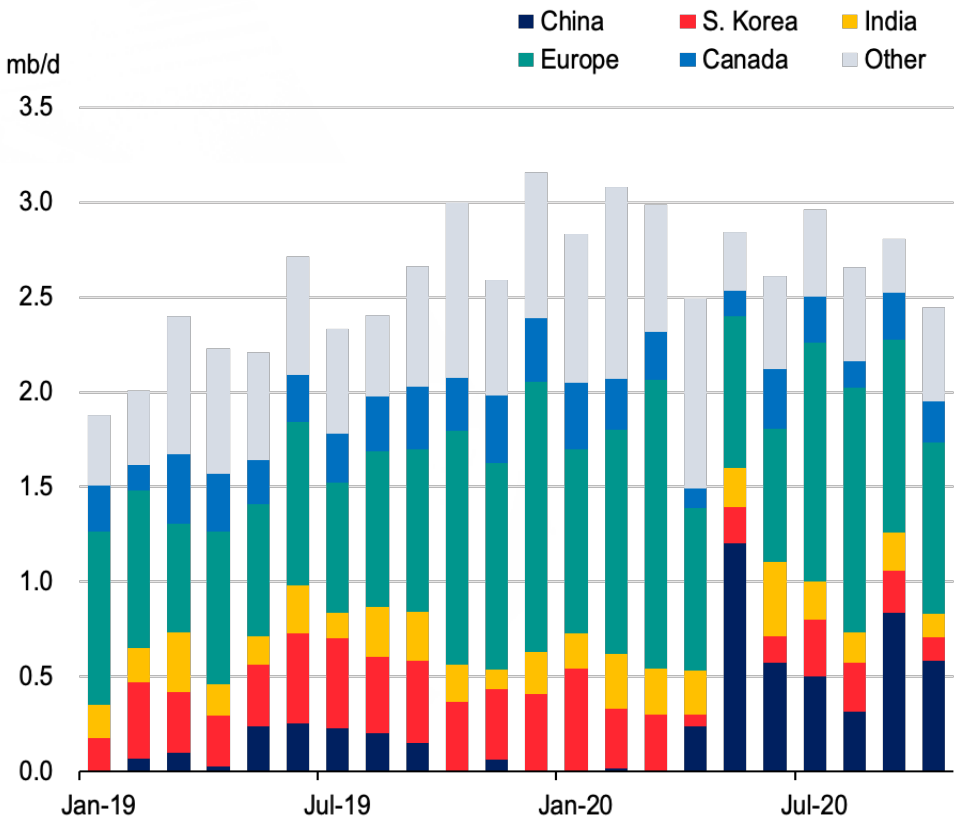
US crude flows relatively steady

Top 5 US crude destinations kb/d	3Q20	± 3Q19
Europe	1188.4	+401.4
China	552.7	+356.2
S. Korea	258.7	-176.1
Canada	208.0	-82.6
India	188.1	-30.6

- US grades remain competitive in global markets by continuing to compete in Asian and European markets with NS and WAF grades

US crude exports by destination



Source: Kpler, OIES

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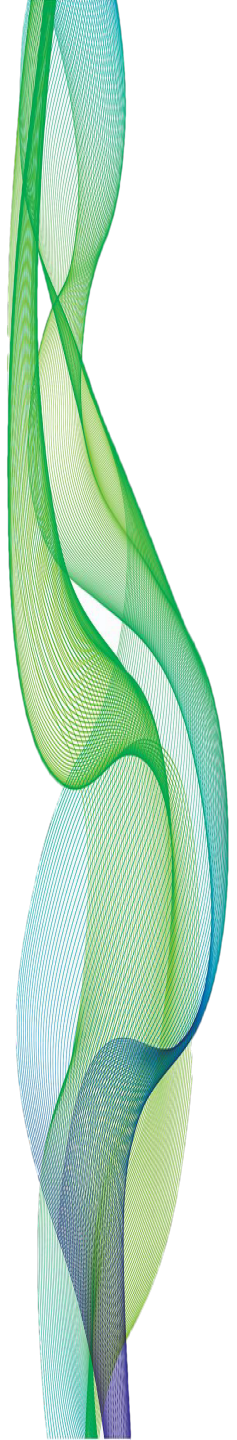
A difficult and lengthy oil recovery



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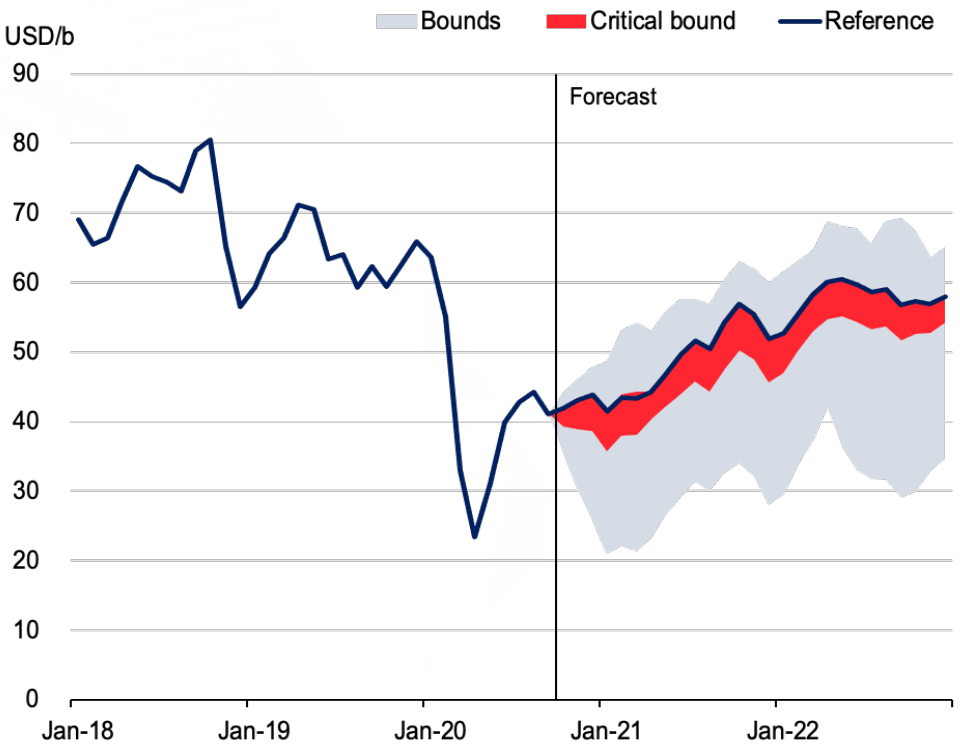
Oil recovery holds but downside risks rising

Oil prices are expected to sustain the $40/b-$45/b range ending 2020 but fragilities are exceptionally high in the near-term and persist in 2021

- Oil recovery stalls but holds in the near-term, with a strong ascent expected in H2 2021
- But the uncertainty surrounding the reference forecast, especially towards H1 2021, is exceptionally high
- Downside risks are significant, with the balance of risks heavily skewed to the downside
- The oil market deficits are expected to persist but continue to weaken
- The stubbornness of the stock clearance in Q3 2020 confirms that the race to the market rebalancing remains a marathon and not a sprint

Brent price outlook



Reference assumes 100% compliance with OPEC+ deal and 0.24 mb/d compensation from non-compliers in Oct/Dec 2020.

Critical bound: Incorporates to our reference assumptions the premature easing growth scenario in which infections surge and localized lockdowns or other support measures are imposed but economy is prioritized over horizontal confinement measures. It does not assume a change in OPEC+ policy as a response.

Source: OIES

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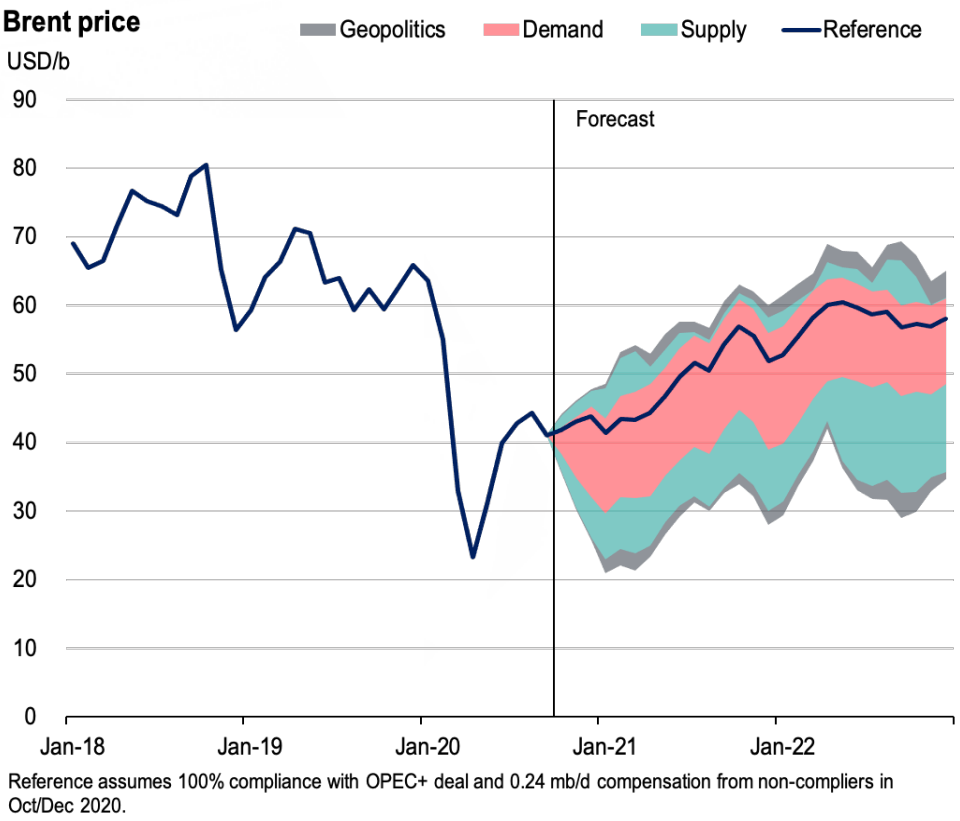
Balance of risks is heavily skewed on the downside

Balance of risks USD/b	2020	2021
Downside	-12.4	-21.5
Upside	3.1	7.8
Balance	**-9.3**	**-13.7**

- Demand risks remain dominant in 2020 and 2021, but downside risks on the supply side build gradually towards 2022, while the upside price potential is capped close but not beyond 2019 levels

Balance of risks



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Source: OIES

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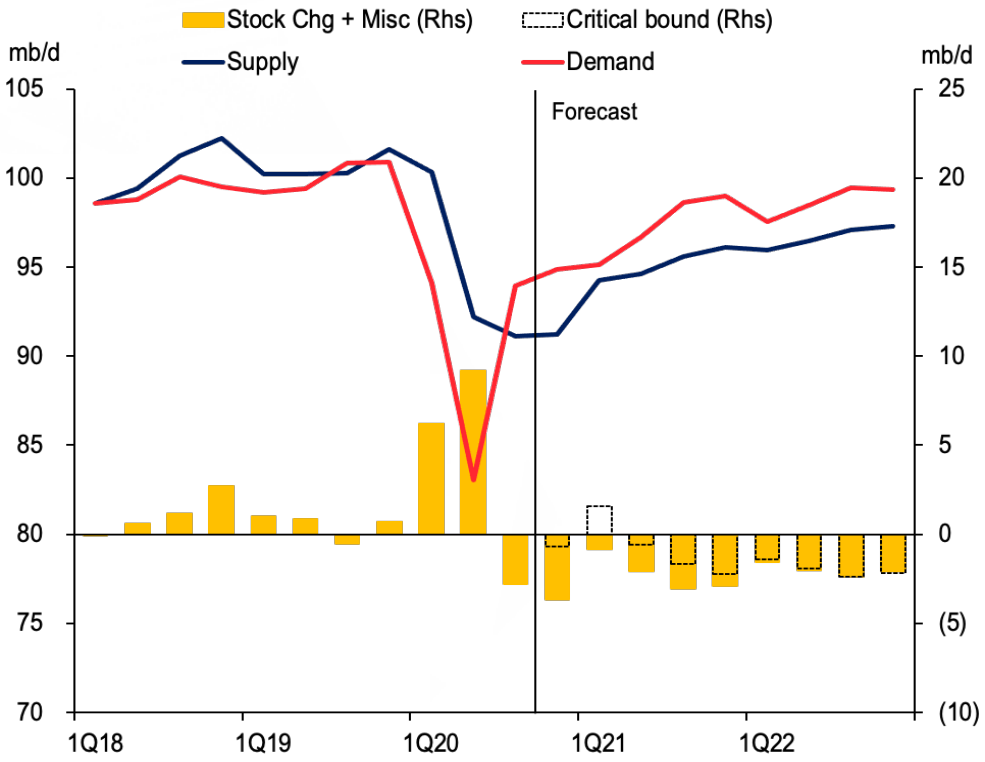
Market deficits weakened but persist

Global balance USD/b	2020	2021
Demand	91.5	97.4
Supply	93.7	95.1
Global balance	**2.2**	**-2.2**

- Market deficits weakened in recent months but they still hold throughout, albeit a renewed virus-induced hit on global demand could flip the market back to surpluses temporarily

Global balance



Assumes 100% compliance with OPEC+ deal and 0.24 mb/d compensation from non-compliers in Oct/Dec 2020.

Source: OIES

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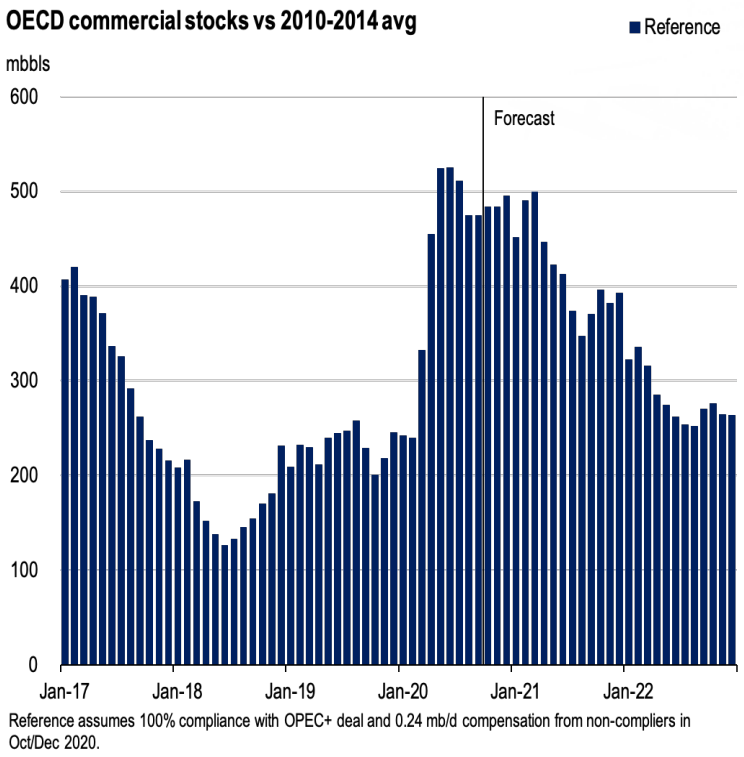
A marathon and not a sprint

OECD surplus stocks



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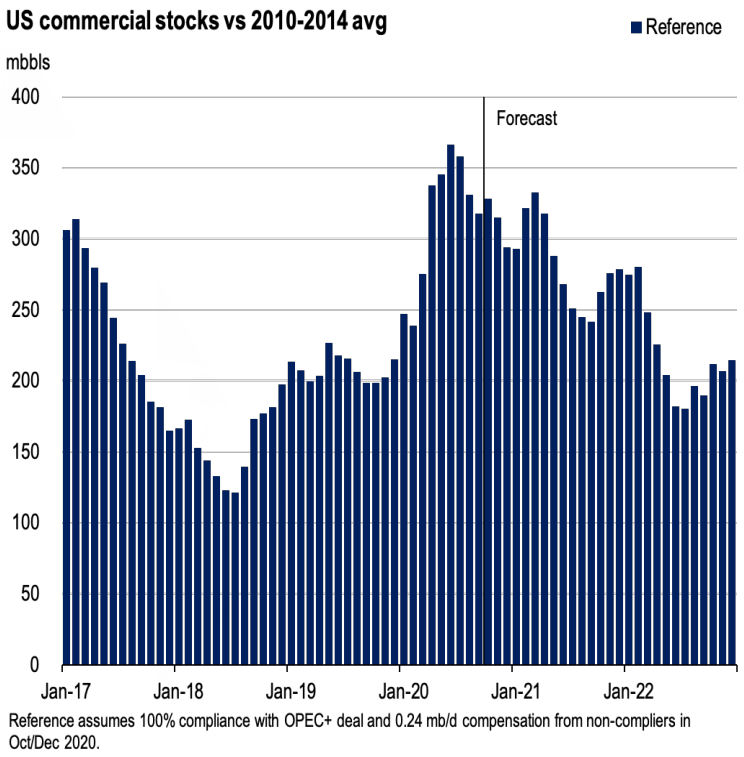
US surplus stocks



Reference assumes 100% compliance with OPEC+ deal and 0.24 mb/d compensation from non-compliers in Oct/Dec 2020.

- Surplus stocks are expected to draw more slowly

Source: OIES

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Bassam Fattouh, Director OIES
Andreas Economou, Senior Research Fellow OIES

November 2020

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