

Argus Fundamentals

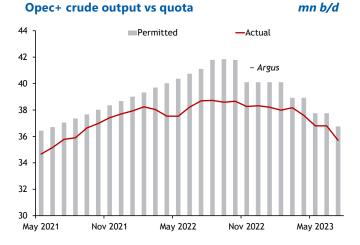


Overview

The price rally that developed in July has continued into August. Part of the reason is that the market appears to have become more relaxed about the state of the global economy, with inflation now edging down in most major economies and a growing perception — perhaps hope is a better word — that interest rates too might soon start to fall. But the main factor is the aggressive market management that producers are pursuing.

Since the third quarter of last year, the Opec+ alliance has been steadily reducing quotas, and total Opec+ production had fallen to 40.8mn b/d in July from 42.8mn b/d at the end of last year. Opec usually talks in terms of supporting the stability and balance of oil markets, rather than targeting a given price level, but this sits rather awkwardly with the

fact that the alliance has been steadily taking oil out of a



market that was already tight — since the second quarter of 2020, global demand has increased by over 16mn b/d, while supply is just 10mn b/d higher, not least because of the cuts imposed by Opec+. Now Saudi Arabia has announced that it will extend its unilateral 1mn b/d cut into September, while also saying that its cut could be "extended, or extended and deepened" if it deems this necessary. It seems clear now that Riyadh is not content to simply keep prices supported, but that it is intent on achieving higher prices — although quite what this means in terms of a hard number is unclear.

The most recent unilateral 1mn b/d cut imposed by Saudi Arabia reduced the Opec+ ceiling to just under 36.8mn b/d. This is 5mn b/d lower than in September last year and only slightly up on where quotas were at the start of the tapering process in the second quarter of 2021. If maintained in the coming months, this will help tighten the market, especially since even at this reduced level the alliance is unable to meet its target. It might be a improvement on the 3mn b/d or so shortfall that was typical towards the end of last year, but June production was still 1mn b/d below quota (see graph).

Just how serious this might be or become also depends on the strength of underlying demand growth. And there are signs that growth might actually be stronger than originally anticipated. Latest data put demand in the second quarter almost 1mn b/d higher than originally thought. The revisions are across the board. Strong crude imports have seen Chinese apparent demand revised up by 0.4mn b/d, although this could give a slightly misleading impression if, as seems likely, this is just swelling crude and product stocks — or

Petroleum illuminating the markets®



perhaps leading to higher product exports. But, unexpectedly, demand in OECD countries is now pegged 0.3mn b/d higher, and demand in the FSU 0.13mn b/d higher.

Annoyingly, given its importance to the market, the absence of hard sales data means that what is actually going on in China is always a bit of a puzzle. Reported high crude imports have supported stronger refinery runs, but this is at odds with the continuing feed of gloomy economic headlines. Industrial output and retail sales growth both underperformed and were short of forecasts in July. Investment in the property sector continues to tumble, while unemployment, particularly youth unemployment, is still rising — with the government announcing that monthly statistics on this metric will no longer be issued. Many analysts now think the official 5pc GDP growth target will be missed, and there is a growing consensus that weak macro data are likely to persist for the foreseeable future as China's economy transitions away from its established debt-fuelled property model.

A hint about what is actually happening with domestic sales can be gained from the quarterly results of PetroChina and Sinopec, which account for 85pc of sales of gasoline, jet fuel and diesel in China (see graph). Sales recovered well in the second half of last year, growing by 14pc on the quarter in July-September and 15pc in October-December and helping deliver an annual gain of just over 0.5pc — not a million miles from the 0.9pc growth reported by NDRC for China as a whole. But first-quarter 2023 sales reversed the trend, falling by 11pc from October-December 2022.

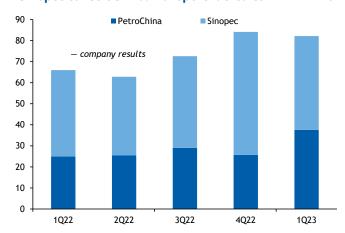
The lack of clarity on what is going on in China and the uncertain economic outlook make it difficult for producers to

calibrate their strategy. This is especially the case for Riyadh, which is now doing most of the heavy lifting — even more so, now that Russia has announced that it will reduce its own voluntary cut to 300,000 b/d in September from 500,000 b/d in August. So far, Saudi Arabia's efforts have cost it revenue. While it can be argued that without the quota reductions prices might have fallen to much lower levels, there is no doubt that lower exports since April have not been covered by higher prices. Take crude production, deduct crude used domestically for refining and power generation and multiply by the average OSP for the three main crude grades and we get to a decent approximation for export revenues. Even after the recent increase in prices, Saudi revenues are about 25pc down on where they were in April (see graph).

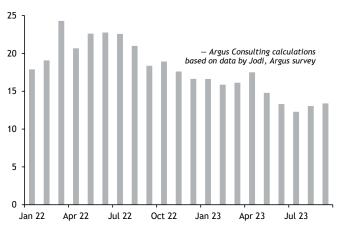
Saudi Arabia finds itself in an awkward position. Sticking with the current 1mn b/d reduction means that Riyadh would need a price of around \$110/bl to match its April revenue position, which suggests a North Sea Dated price of around \$115/bl. It is difficult to see this being achieved without further cuts being made, but this of course would only mean that it would need an even higher price to break even. If instead it increased production by 1mn b/d, a price of around \$92/bl — \$97/bl Dated — would be sufficient. But the reality is that doing so would be more likely to result in lower — not higher — prices.

So the kingdom will have to stick with its current strategy, and if demand growth weakens — as it might — probably cut further. It is not easy to think of a situation that does not involve a compromise on export revenues. This is something that could become increasingly hard to accommodate if Riyadh sees production inching up elsewhere.

Sinopec & PetroChina: Transport fuel sales mn t



Saudi Arabia: Revenue from crude exports





\$bn

Supply and demand balance

Global oil balance		44			46.55	•	4.5.5						mn b/d
	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	2024	2025
Demand													
North America	22.13	22.57	22.57	22.94	22.56	22.66	22.33	22.99	22.88	22.87	22.77	22.88	22.87
Europe	13.83	13.88	14.08	14.70	14.03	14.17	13.77	14.08	14.56	14.07	14.12	14.09	13.99
Asia-Pacific	35.73	36.73	35.26	34.63	37.13	35.94	37.44	38.05	36.63	37.58	37.43	38.30	38.90
Latin America	8.16	8.29	8.67	8.83	8.77	8.64	8.54	8.68	8.84	8.83	8.72	8.87	8.97
Middle East	8.38	8.48	9.04	9.43	8.89	8.96	8.83	8.99	9.33	8.96	9.03	9.19	9.30
FSU	4.46	4.58	3.54	4.15	4.11	4.10	4.38	4.23	4.18	4.27	4.26	4.38	4.52
Africa	4.08	4.29	4.27	4.27	4.41	4.31	4.40	4.36	4.26	4.38	4.35	4.50	4.59
Total	96.77	98.82	97.43	98.95	99.89	98.78	99.69	101.38	100.68	100.97	100.68	102.19	103.14
Year-on-Year change	5.59	4.16	2.20	1.24	0.44	2.01	0.87	3.95	1.72	1.07	1.90	1.51	0.95
Supply													
Non-Opec crude and NGL													
US	16.67	17.12	17.69	18.14	18.20	17.79	18.63	19.00	19.05	18.99	18.92	19.19	19.81
Canada	4.99	5.07	4.94	5.14	5.26	5.10	5.18	4.82	5.27	5.38	5.16	5.55	5.74
Europe	3.45	3.41	3.11	3.17	3.31	3.25	3.36	3.30	3.30	3.43	3.35	3.53	3.53
Latin America	7.22	7.36	7.43	7.70	7.86	7.59	7.99	8.07	8.06	8.10	8.05	8.31	8.71
Africa	1.23	1.20	1.20	1.20	1.19	1.20	1.13	1.18	1.22	1.23	1.19	1.25	1.22
Russia	10.79	11.31	10.63	10.95	11.12	11.00	11.19	10.90	10.52	10.53	10.79	10.52	10.50
Other FSU	2.95	3.05	2.77	2.61	2.91	2.84	2.97	2.89	2.96	3.02	2.96	2.89	3.22
Middle East	2.89	2.93	2.99	3.04	2.99	2.99	2.97	3.03	3.09	3.09	3.04	3.11	3.15
Asia-Pacific	7.12	7.15	7.15	6.89	6.99	7.05	7.16	7.16	7.39	7.44	7.29	7.43	7.30
Total non-Opec supply	57.32	58.61	57.92	58.85	59.83	58.80	60.58	60.36	60.86	61.21	60.75	61.77	63.18
Opec													
Opec crude	26.26	28.44	28.71	29.54	29.24	28.98	28.91	28.41	27.62	28.58	28.38	28.92	29.86
Opec NGL and condensate	4.87	5.17	5.17	5.17	5.17	5.17	5.32	5.32	5.32	5.32	5.32	5.46	5.73
Total Opec supply	31.13	33.61	33.88	34.71	34.41	34.15	34.23	33.73	32.94	33.90	33.70	34.38	35.58
Biofuels	2.78	2.51	3.08	3.30	2.89	2.94	2.65	3.21	3.45	3.03	3.09	3.06	3.14
GTLs and CTLs	0.53	0.55	0.55	0.55	0.56	0.55	0.58	0.56	0.51	0.52	0.54	0.52	0.52
Processing gains	2.24	2.29	2.30	2.33	2.32	2.31	2.31	2.35	2.38	2.37	2.35	2.40	2.40
Global supply	94.00	97.56	97.73	99.74	100.02	98.76	100.34	100.21	100.15	101.03	100.43	102.13	104.82
Strategic stocks	-0.16	-0.46	-1.09	-1.07	-0.34	-0.74	0.03	-0.12	0.07	0.07	0.01	0.00	0.00
Global balance*	-2.61	-0.80	1.39	1.85	0.46	0.73	0.62	-1.05	-0.60	-0.01	-0.26	-0.06	1.68
Opec+ crude output	35.57	38.06	37.74	38.64	38.40	38.21	38.11	37.04	35.89	36.98	37.01	37.26	38.55

^{*}equivalent to global stock change



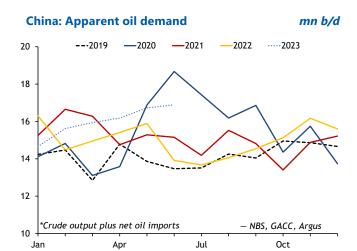
Demand

Our estimate for 2023 annual demand growth has now been revised up to 1.9mn b/d from 1.78mn b/d. This was driven by a large upward revision to the second quarter thanks to stronger than anticipated apparent demand calculations for China and the FSU and as a result of the IEA revising historical figures for several OECD and non-OECD countries. Global oil demand in 2022 is now estimated at 98.78mn b/d, up by 100,000 b/d against our July report, and rising to 100.68mn b/d this year. This year's figure is up by 340,000 b/d against pre-pandemic 2019's 100.3mn b/d. Our demand growth forecasts for 2024 and 2025 are unchanged — at 1.5mn b/d and 0.95mn b/d, respectively.

China's pullback imminent

Chinese apparent oil demand — crude output plus net oil imports — edged up to 16.9mn b/d in June from 16.7mn b/d in May, but the data mask growing stockbuilds. Net crude and product imports increased, leaving January-June demand 1.3mn b/d up on the year. Crude imports hit 12.6mn b/d in June, the highest since the record set in June 2020, when artificially strong refining margins and collapsing global oil prices encouraged China to pull in record amounts of crude. This pushed China's crude stocks to a then-record 1.097bn bl in late August 2020, data from oil analytics company Vortexa show. Stocks stood at 1.107bn bl late last month, the Vortexa data show.

China's exports of transport fuels fell on the month in June, led by diesel. Exports of diesel fell to just 70,000 b/d, nearly half the expected 120,000 b/d and down from 144,000 b/d in May. Oil firms had hoped diesel demand would pick up in June, the month when real estate investment typically peaks in China. But investment was down by 18pc on the year, leaving the domestic market awash with fuel. Spot diesel prices



have dropped sharply, opening up an export arbitrage to Singapore and northwest Europe. Diesel exports jumped to 320,000 b/d in July, *Argus* surveys indicate. China's GDP grew by 6.3pc in the second quarter, undershooting consultancy Oxford Economics' forecast by 0.8 percentage points.

And yet apparent oil demand, which does not capture stock movements, averaged 1.5mn b/d above *Argus'* seasonally adjusted forecast for the period. This suggests that a sharp pullback in apparent oil demand is on the cards — China needs about 900,000 b/d of additional oil input into the economy to achieve its expected annual GDP growth of 5pc. It must either cut crude runs, increase product exports or pump more oil into storage in the second half of this year.

Crude runs are likely to remain resilient. State-owned oil giant Sinopec's diesel storage units are about 60pc full at present, *Argus* estimates. Private-sector tanks are only about a quarter full, but filling them comes at a cost that risks

Demand by product mn b,												mn b/d	
	2021	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	2024	2025
LPG and ethane	12.34	13.38	12.25	12.74	12.68	12.76	13.08	13.09	12.93	13.66	13.19	13.51	13.79
Naphtha	6.66	6.70	6.13	6.28	6.44	6.39	6.76	6.63	6.29	6.47	6.54	6.59	6.71
Gasoline	24.80	24.74	25.03	25.38	24.98	25.03	25.20	26.14	25.70	25.32	25.59	25.75	25.81
Jet-kerosine	5.14	5.90	5.64	6.12	6.18	5.96	6.83	6.91	7.21	7.19	7.04	7.82	8.18
Diesel/gasoil	26.52	27.92	27.33	27.50	28.68	27.86	27.99	28.39	27.53	28.21	28.03	28.07	28.10
Fuel oil	6.24	6.16	6.36	6.62	6.54	6.42	6.51	6.55	6.27	6.28	6.40	6.31	6.26
Other	15.06	14.02	14.68	14.31	14.40	14.35	13.33	13.67	14.75	13.84	13.90	14.13	14.28
Total	96.77	98.82	97.43	98.95	99.89	98.78	99.69	101.38	100.68	100.97	100.68	102.19	103.14



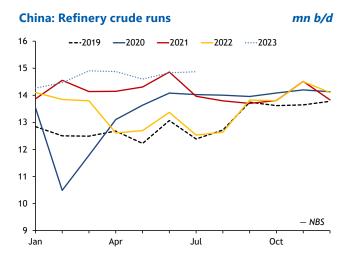
creating a persistent drag on prompt product prices in China. This would suggest that exports will rise. Beijing is likely to award a third batch of clean product export quotas totalling 81mn bl (10mn t) this month. It might have to issue more. The government has in the past issued up to five batches a year. Beijing awarded a supplementary 107mn bl quota in September 2022 — in response to weakness in the domestic oil market because of its zero-Covid policy. This led to a spike in fourth-quarter transport fuel exports.

July data are incomplete, so an apparent oil demand calculation cannot be made yet. But July data released so far show Chinese crude throughputs rising only slightly from June, with weaker than expected domestic fuel demand discouraging refiners from lifting runs further.

Crude throughputs last month rose by 19pc from a year earlier to 14.87mn b/d — only slightly down from a historical high of 14.9mn b/d during March and 14.88mn b/d in April — according to National Bureau of Statistics data. But the volume was just 34,000 b/d, or 0.27pc, higher than June's 14.83mn b/d. Crude runs during January-July were at 14.69mn b/d, up by 10.7pc from the same period last year, as increased travel post-Covid boosted fuel demand, while new refining capacity buoyed runs.

Firm refining margins — especially for diesel — helped push up refinery runs significantly compared with a year earlier. The *Argus*-assessed diesel crack spread averaged \$20.65/ bl in July, up from \$18.30/bl in the same month of last year. The *Argus*-assessed gasoline crack averaged \$13.66/bl in July, recovering strongly from minus \$0.25/bl a year earlier. But China's state-controlled refiners did not raise their runs significantly compared with June, despite the end of the maintenance season.

China appare	ent deman	d			'0	00 b/d
	1H 22	1H 23	±	Jun 22	Jun 23	±
Crude production	4,095	4,186	91	4,127	4,206	79
Net imports	11,064	12,531	1,467	9,786	14,301	4,515
Crude	10,154	11,384	1,230	8,616	12,643	4,026
Products	910	1,147	237	1,169	1,658	489
Apparent demand*	14,681	16,003	1,323	14,287	16,894	2,606
Refinery runs	13,403	14,658	1,254	13,368	14,832	1,464
*excluding crude	into SPR			— National	Bureau of S	Statistics



Sinopec and PetroChina brought back on line three refineries with a combined capacity of 590,000 b/d in July, with no new refineries starting turnarounds. But the drawing to a close of refinery maintenance did not translate into increased crude runs, as diesel demand was weak and gasoline demand continued to be further eroded by competition from new energy vehicles (NEVs). Sales of NEVs — comprising hybrids and plug-ins — reached 780,000 units in July, up by 31.6pc from a year earlier, while their share of China's total car sales hit 32.7pc, according to data from the China Association of Automobile Manufacturers.

Faced with a modest domestic demand recovery, state-controlled refiners hiked their product exports to ease a supply glut and cash in on firmer export margins. Combined exports of gasoline, diesel, jet-kerosine and fuel oil rose by 13pc from the previous month and 56pc against a year earlier to 1.35mn b/d in July, preliminary customs data show. Argusassessed diesel export margins averaged \$7.77/bl in July, compared with minus \$2.47/bl in June. Argus-assessed gasoline export margins averaged \$2.53/bl in July, against minus \$5.09/bl in June. China's three large-scale private-sector refiners — Hengli, Rongsheng and Shenghong — were running their respective 400,000 b/d, 800,000 b/d and 320,000 b/d complexes at full capacity in July. They have pinned their hopes on a brisk recovery in petrochemical demand during September and October, when increased farming, construction and industrial activity typically boosts plastics demand.

Chinese refiners might have drawn on crude from storage in July, when crude imports hit a six-month low of 10.29mn b/d, preliminary customs data show. This means about 500,000 b/d was withdrawn from storage for the month,



based on crude output of 4.1mn b/d. Crude throughputs could stay at elevated levels in August, as refiners' diesel stock start to recede in the wake of brisk restocking from trading firms and consumers, which are already buying earlier than usual for fear of further price increases. Refiners are also lifting naphtha output to meet an expected rise in petrochemical demand for the next two months.

Indian demand down seasonally

India's motor fuel demand continued to rise on the year in July as economic growth remains robust. But diesel and gasoline consumption fell sharply from June as the monsoon season affected transportation. Indian diesel demand came in at 1.67mn b/d in July, up from 1.61mn b/d a year earlier, but down from 1.98mn b/d in June, according to oil ministry data. Gasoline demand averaged 814,000 b/d in July, up from 765,000 b/d in July 2022, but down from 888,000 b/d in June. Jet-kerosine consumption rose by 18.6pc from a year earlier to 181,000 b/d in July — air passenger numbers were still recovering last year from the impact of the pandemic. But jet-kerosine consumption bucked the downward month-onmonth trajectories, and was little changed from June.

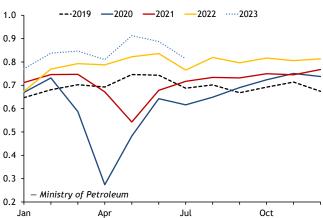
Indian economic growth has accelerated over the past year, with GDP rising by 6.1pc during January-March, compared with 4.5pc in October-December, according to government data. The Reserve Bank of India estimated India's GDP growth rate at 7.9pc during April-June in its monthly bulletin released last month. The Indian economy had grown by 13.5pc during April-June 2022, largely reflecting the low base resulting from the impact of the pandemic. Higher transport fuel demand pushed India's overall oil product consumption to 5.12mn b/d in July, up by 1.4pc from a year earlier and up by 0.9pc compared with pre-pandemic July 2019, although consumption was down by 8.7pc on the month. The month-on-month decline in product consumption was driven by a sharply reduction in bitumen demand, which fell to 531,000t in July from 755,000t in June, as monsoon conditions affect-

India inland deliveries '000 b/o												
	Jan-Jul 22	Jan-Jul 23	±	Jul 22	Jul 23	±						
Gasoline	778	840	62	765	814	48						
Jet-kero	160	181	21	153	181	28						
Distillate	1,756	1,875	119	1,611	1,674	63						
Fuel oil	116	123	6	116	118	2						
Total	5,280	5,541	262	5,047	5,118	71						

— Ministry of Petroleum



mn b/d

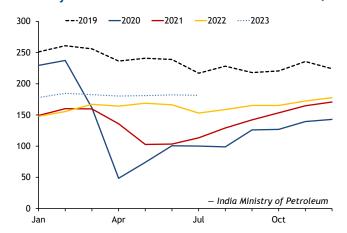


ed the whole country, affecting construction and roadworks. But bitumen demand in July surged by 56pc from 341,000t a year earlier. Indian bitumen consumption is poised to exceed the 8mn t mark in 2023, driven by market expectations of new infrastructure development initiatives ahead of 2024's general elections.

India's overall oil demand in January-July was up by around 260,000 b/d, or 5pc, against a year earlier, led by higher jet fuel consumption as airline travel continued to recover from the pandemic. Jet-kerosine fuel consumption rose to 181,000 b/d during April-July, up by 13pc from a year earlier. Consumption of diesel increased by 6.8pc on the year to 1.87mn b/d and gasoline consumption by 7.9pc to 840,000 b/d. But growth rates for the first seven months of the year are lower than they were in the same period of 2022 as the post-pandemic rebound runs out of steam.

Indian jet-kerosine demand

'000 b/d





Opec supply

Opec crude production fell to 27.7mn b/d in July from 28.45mn b/d in June. The anticipated fall in Saudi output and disrupted supply in Libya and Nigeria offset slight increases from most other Opec producers. Nigerian crude supply was disrupted by a leak at one of the single buoy moorings at Shell's Forcados terminal that was discovered on 12 July. Exports from the terminal resumed on 13 August. Overall Nigerian output fell by 80,000 b/d to 1.28mn b/d — 460,000 b/d below the country's quota. Iran raised its output to more than the 3mn b/d for the first time since 2018, when US sanctions were implemented.

The 10 Opec members of Opec+ produced 22.74mn b/d in July, down by 820,000 b/d on June and 640,000 b/d below their collective Opec+ target. Saudi Arabia had committed to an additional output cut of 1mn b/d in July and August, and has now extended this through September. *Argus* estimates that the Saudis reduced their July output by just short of the promised 1mn b/d cut, producing 9mn b/d.

Despite the Opec+ cuts, oil prices had been range-bound in May and June. To balance the market and boost prices, Saudi Arabia has acted to constrain supply. In conjunction with Riyadh's announcement on 3 August that it is to extend its additional production cut, the Saudi energy ministry has

Opec crude prod	uction				mn b/d
	May 23	Jun 23	Jul 23	Jul 22	±Jul 23/22
Saudi Arabia	9.98	9.97	9.00	10.80	-1.80
Iran	2.78	2.95	3.04	2.56	0.48
Iraq	4.18	4.21	4.29	4.53	-0.24
Kuwait	2.57	2.56	2.58	2.79	-0.21
UAE	2.90	2.89	2.90	3.12	-0.22
Algeria	0.98	0.94	0.96	1.02	-0.06
Libya	1.18	1.18	1.14	0.67	0.47
Nigeria	1.28	1.36	1.28	1.23	0.05
Angola	1.12	1.11	1.20	1.17	0.03
Congo (Brazzaville)	0.25	0.25	0.26	0.25	0.01
Gabon	0.19	0.21	0.21	0.21	0.00
Equatorial Guinea	0.05	0.06	0.06	0.10	-0.04
Venezuela	0.79	0.76	0.78	0.65	0.13
Total	28.25	28.45	27.70	29.10	-1.40
Opec-10	23.50	23.56	22.74	25.22	-2.48
Exempt-3	4.75	4.89	4.96	3.88	1.08

Gabon (re)joined in July 2016, Equatorial Guinea in June 2017, Congo (Brazzaville) in June 2018

pledged to go further to balance the market — extending and even deepening supply cuts if necessary.

The Saudi economy is dominated by energy, which accounts for 80pc of the country's revenues. After a period of robust growth — the economy grew by 8.7pc in 2022, the fastest pace in 11 years — growth slowed to just 1.1pc in the second quarter of this year as oil prices dropped. The IMF recently downgraded its 2023 forecast for Saudi economic growth to 1.9pc from 2.1pc.

In early August, state-controlled Aramco reported that its second-quarter profits had fallen by 38pc on the year to \$30.1bn, while the government announced a budget deficit for January-June of 8.2bn riyals (\$2.2bn) — the result of higher spending, lower oil prices and reduced production. Saudi Arabia's extra output cuts have helped push oil prices past \$80/bl and if these prices can be maintained, the boost in revenues will help the country meet its budget requirements and fund its ambitious 'Vision 2030' diversification drive.

Aramco announced an increase of some \$10bn in dividend payments in the third quarter, introducing new performance-related payouts on top of base dividends. With its majority stake in Aramco, the state coffers will receive around \$9bn in additional revenue, helping ease budgetary pressure. Aramco plans to extend performance-related quarterly dividend payments, which are based on its 2022 and 2023 results, through to the end of 2024.

Going it alone with those extra output cuts will inevitably affect Aramco's market share. Retaining customers in the crucial Asian market — where long-term demand is expected to stay high — is essential, and the Saudis are angling for long-term contracts with key customers. In July, Aramco finalised its purchase of a 10pc stake in China's Rongsheng Petrochemical and will supply 480,000 b/d of crude to its subsidiary Zhejiang Petroleum and Chemical's 800,000 b/d refinery. Aramco also has a joint venture with the Norinco Group and Panjiin Sincen, which is to build a 300,000 b/d refinery as part of a fully integrated refining and petrochemical complex in Liaoning province. Aramco will supply feedstock for the project, which is expected to start up in 2024.

Iraq increased crude production by 80,000 b/d in July to 4.29mn b/d, 70,000 b/d above its Opec+ target, which



includes its additional cut of 211,000 b/d agreed in April. Exports are still being constrained by the closure of the pipeline from Kirkuk to Ceyhan, which has been shut since 25 March. Turkey is seeking concessions from Baghdad over reparations awarded by the International Chamber of Commerce, which ruled that Turkey had breached a 1973 agreement with Iraq by allowing crude marketed by the Kurdistan Regional Government to be exported without Baghdad's consent. Baghdad is holding talks with Turkey to facilitate the pipeline's reopening, but its continued closure is hitting the cashflow of producers in the semi-autonomous region of Kurdistan. Last year, Kurdistan produced around 430,000 b/d from fields mainly operated by foreign companies.

As part of its agreement with Baghdad to claim a 12.6pc share of the federal budget, the KRG must supply at least 400,000 b/d of crude each month to Somo's Ceyhan storage facilities — for marketing solely by the latter. If this crude cannot be exported, it must be redirected to domestic refineries. Some 50,000 b/d of Kurdish crude is reportedly being sent to refineries operated by Kurdish private-sector Kar, but this is far short of the 400,000 b/d requirement and it is uncertain how much of the allocated funds Baghdad is paying KRG. Without regular budgetary payouts, the KRG cannot compensate foreign operators. The loss of revenue has affected companies' cash flows, hit dividend payments and lowered capital expenditure expectations.

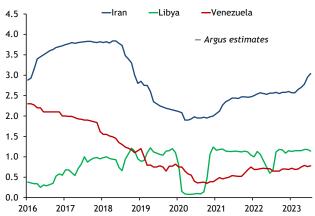
Genel Energy is the latest foreign operator to announce that it is giving up its stake in one of the region's oil fields. Genel has interests in several Kurdish fields, but has received no payments from the KRG as production and sales have been decimated by the lack of export capacity. Genel will now surrender its 30pc stake in the Sarta field, which began producing in 2020 but has not reached its potential, and the company sees further investment in expansion as unfeasible. Genel also holds stakes in the Taq Taq and Tawke fields, where net output of just 1,000 b/d was reported in April-June. Fellow Tawke stakeholder DNO says there are no plans for further drilling at the field this year.

In July, Iraq finally concluded its much-delayed \$27bn investment contract with TotalEnergies. This could help bring about an expansion in production capacity at Iraq's giant southern fields through construction of a 7.5mn b/d seawater treatment plant — water from the plant will be injected at the fields to enhance oil recovery. TotalEnergies is looking to fast-track development of the Ratawi field to finance other elements of the TotalEnergies agreement. Ratawi has a capacity of 85,000 b/d, but currently only produces around 30,000 b/d. TotalEnergies aims to quickly lift this to 50,000-60,000 b/d. Further development is expected to boost capacity to 210,000 b/d by 2027.

The three Opec members exempt from Opec+ cuts upped production by a collective 70,000 b/d to 4.96mn b/d during July. Increased output from Venezuela and Iran offset a fall in Libyan supply caused by blockades that shut down several fields. Libyan production has averaged 1.15mn b/d since last summer, when blockades of energy infrastructure disrupted exports and shut in fields. Since the 2011 overthrow of long-time leader Muammar Gaddafi, civil unrest and violent clashes between militia groups vying for political control have been the norm in Libya, severely damaging basic infrastructure. Oil supply has repeatedly been held hostage by the rival factions, some of which are backed by other countries. The hot summer months — during which demand for electricity and water is especially high — can bring with them a surge in the civil unrest, which often escalates into violent protests and labour strikes. There has been relatively little disruption to oil supply this summer, but there was a temporary stoppage at the El Sharara and neighbouring El Feel field in mid-July, removing around 350,000 b/d of output for 2-3 days.

Libya is trying to raise its oil production capacity and is eager to attract foreign investment. Exploration prospects received a boost after BP and Eni announced on 3 August that they were lifting the force majeure on oil and gas drilling in the Ghadames North and Ghadames South areas. The restriction had been in force for 12 years.

Exempt 3: Wellhead crude production mn b/d





Non-Opec supply

Non-Opec crude and condensate output was steady on the month in July, at 51.49mn b/d. Rebounding Canadian supply following shut-ins caused by wildfires offset lower output in Russia and Kazakhstan. The nine non-Opec members of Opec+ reduced output in July by 290,000 b/d — 430,000 b/d under their collective target of 13.39mn b/d. Azerbaijan, Malaysia, Brunei and Russia produced under target, with only South Sudan above quota.

Russia pledged in April to cut output by 500,000 b/d in solidarity with other Opec+ heavyweights. *Argus* estimates that Russia produced at its target level of 9.3mn b/d in July, a reduction of 200,000 b/d from June. At the beginning of July, Russia announced that it would be extending its 500,000 b/d export cut into August, and then outlined plans to scale back this reduction to 300,000 b/d in September. Russian refining runs are expected to fall in September as seasonal maintenance begins, freeing up more crude for export. We have assumed Russia's output quota will remain at 9.3mn b/d through to the end of next year.

Kazakhstan reduced crude output by around 70,000 b/d to 1.51mn b/d in July, with operations affected by a major power outage. Output was 40,000 b/d below its Opec+ quota. Production will remain constrained in August through to mid-September, with maintenance planned at the Chevron-operated 700,000 b/d Tengiz field. Maintenance work is also scheduled at the Eni-operated 400,000 b/d Kashagan field during October.

Azeri output increased slightly in July, but was still 170,000 b/d below the country's 680,000 b/d quota. Operators are trying to stem declines at Azerbaijan's mature fields. BP is part of the AIOC consortium that operates the Azeri-Chirag-Guneshli (ACG) project, where output has been steadily declining from a peak of 820,000 b/d in 2011. ACG produced 350,000 b/d in the first half of this year. BP is looking to increase gas and water injection rates to boost recovery. It is also close to adding a production platform at the field — the Ace (Azeri Central East) unit will add up to 100,000 b/d of capacity, with exploration targeting the underdeveloped eastern side of the ACG field.

US production is poised to rise in 2023 and through 2024, but growth will be dependent on shale operators stepping up their drilling activity and maintaining or even raising

capital expenditure. US crude production has been hovering close to 12.6mn b/d in recent months as shale output growth stagnates. In its latest *Drilling and Productivity Report* (DPR), the EIA says it expects shale oil output across the main plays to fall by a revised 15,000 b/d in August and by 19,000 b/d in September. Production at both the Permian and Eagle

Non-Opec crude a	nd conde	nsate pr	oductio	n	mn b/d
	May 23	Jun 23	Jul 23	Jul 22	±Jul 23/22
US	12.66	12.57	12.59	11.83	0.76
Canada	4.08	4.20	4.50	4.45	0.05
Total North America	16.74	16.77	17.09	16.28	0.81
Mexico	1.91	1.91	1.82	1.80	0.02
Brazil	3.20	3.37	3.35	2.96	0.39
Colombia	0.77	0.77	0.76	0.75	0.01
Ecuador	0.44	0.47	0.47	0.46	0.01
Other Latin America	1.16	1.20	1.17	1.10	0.07
Total Latin America	7.49	7.71	7.57	7.06	0.50
Russia	10.48	10.45	10.20	10.75	-0.55
Azerbaijan	0.61	0.61	0.63	0.66	-0.03
Kazakhstan	1.85	1.86	1.80	1.69	0.11
Other FSU	0.24	0.24	0.24	0.24	-0.00
Total FSU	13.19	13.16	12.87	13.35	-0.48
Oman	1.04	1.04	1.04	1.08	-0.05
Qatar	1.29	1.35	1.35	1.29	0.06
Other Middle East	0.26	0.28	0.27	0.29	-0.02
Total Middle East	2.60	2.67	2.66	2.66	-0.00
China	4.20	4.21	4.25	3.98	0.27
Indonesia	0.61	0.67	0.67	0.59	0.08
India	0.60	0.61	0.65	0.59	0.06
Australia	0.28	0.34	0.34	0.26	0.08
Malaysia	0.48	0.48	0.48	0.45	0.03
Other Asia-Pacific	0.56	0.60	0.59	0.56	0.03
Total Asia-Pacific	6.74	6.91	6.98	6.43	0.55
UK	0.68	0.75	0.75	0.79	-0.04
Norway	1.79	1.82	1.86	1.66	0.20
Other Europe	0.53	0.51	0.52	0.53	-0.01
Total Europe	3.00	3.08	3.13	2.98	0.15
Egypt	0.57	0.56	0.56	0.56	-0.01
Other Africa	0.56	0.66	0.64	0.59	0.05
Total Africa	1.13	1.21	1.19	1.15	0.04
Total	50.89	51.51	51.49	49.91	1.57



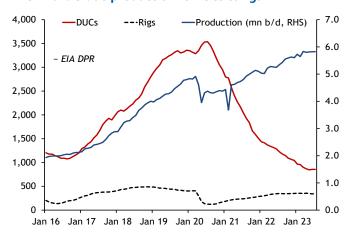
Ford plays is forecast to fall this month and next. The EIA recently lifted its full-year 2023 US crude production forecast by 200,000 b/d to 12.76mn b/d to reflect rising oil prices and recent gains in well productivity rates. To meet this new level, shale producers and or those in the Gulf of Mexico will collectively have to raise their fourth-quarter output by 300,000-400,000 b/d.

Inflationary cost pressures appear to be easing off, and with the forecast tighter market boosting oil prices, shale operators might be more willing to expand drilling activity and output. The latest DPR outlines rising production per rig, but the number of active rigs has been falling. Producers are increasing the length of wells drilled and reducing space between wells to maximise efficiency, reduce costs and improve recovery rates.

Rig rates across the major shale plays have been steadily declining this year. Baker Hughes recorded 525 oil rigs operating in the US in the week ending 11 August, down from 601 a year ago, while the number of oil rigs in the Permian basin is down by 21 year on year, at 322. If the rig count continues to stagnate, well productivity will have to keep rising to offset legacy production declines.

Shale operators have given some indication that they expect higher production rates over the remainder of this year. In their recent earnings calls, publicly listed shale companies suggested that US production will grow toward the end of this year and through 2024. Chevron reported record oil and gas production from its Permian basin assets in the second quarter — up by 11pc year on year to 772,000 b/d of oil equivalent (boe/d). While Chevron expects third-quarter

Permian: Crude production vs DUCs & rigs



production to remain flat, it anticipates a return to growth in the final three months of this year.

ConocoPhillips reported record oil and gas production in the second quarter from its lower 48 assets, which include acreage in the Permian and Eagle Ford basins, and has raised its full-year 2023 output guidance above its previous high to a range of 1.8mn-1.81mn boe/d. ConocoPhillips' chief executive, Ryan Lance, remains upbeat regarding output performance for the second half of 2023.

But the output growth that is forecast in the lower 48 could be curtailed by disruption in the Gulf of Mexico during the upcoming hurricane season. Record high water temperatures in the Atlantic and the ongoing El Nino weather pattern have boosted the chances of disruption. Several forecasters say they see an increased likelihood of a busier than normal Atlantic hurricane season.

The US' National Oceanic and Atmospheric Administration has revised up the chances of a busier than normal storm season to 60pc from 30pc. The latest projection is for 14-21 named storms, of which 6-11 could strengthen into hurricanes. Colorado State University has also overturned its April forecast for a quieter than average storm season, and now sees the potential for a high-risk season.

Meanwhile, Brazil posted record output of 3.37mn b/d in June — up by 5.2pc on the month and 19pc on the year. in Prolific pre-salt fields contributed 2.5mn b/d, almost 74pc of the total. Brazilian output in July fell to 3.35mn b/d, but is expected to grow through 2023 as new floating production, storage and offloading (FPSO) units ramp up.

Crude production in Guyana has outstripped forecasts. Output in June reached 395,000 b/d and averaged 380,000 b/d in the first half of 2023 — double that posted in 2022. Production is expected to rise further this year as ExxonMobil raises output at its Liza project in the Stabroek block. Liza 2 produced 220,000 b/d in June and is expected to reach 250,000 b/d by the year's end, according to ExxonMobil's partner, Hess, thanks to debottlenecking and maintenance. ExxonMobil's Guyana production manager, Mike Ryan, said Stabroek output could rise to 600,000 b/d by mid-2024 as the 220,000 b/d *Prosperity* FPSO is due on line in the fourth quarter of this year. *Prosperity* will receive crude from the Payara project. ExxonMobil is aiming for production of 1.2mn b/d from projects in Guyana by mid-2027.



Inventories

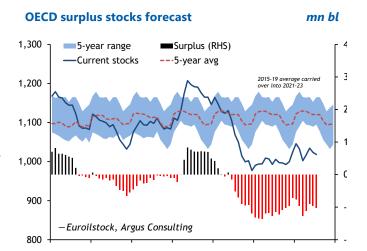
Stocks of crude and refined products held across OECD countries fell by 15mn bl from May to a three-month low of 2.787bn bl in June. The deficit to the 2015-19 average widened by 7mn bl to 161mn bl.

Crude stocks drove June's decline, falling by 9mn bl to a five-month low of 1.077bn bl. This is the second monthly fall in crude inventories and reflects a tightening global balance — mainly the result of reduced supply driven by Opec+ production cuts, since demand growth remains weak.

Product stocks, however, increased in June, albeit by a modest 1mn bl, or 0.1pc. Fuel oil stocks fell by 7mn bl, which was the biggest draw since December 2019. Demand for fuel oil has been steady at Rotterdam, the busiest port in Europe. Combined sales of low-sulphur fuel oil (LSFO) and high-sulphur fuel oil (HSFO) during the second quarter were up 8pc on April-June last year, according to data published by the Port of Rotterdam.

Our forecast global supply and demand balance for the current quarter is 0.6mn b/d, with the deficit to the 2015-19 OECD average to reach an 11-month high of 212mn bl in August. We see this deficit narrowing month on month over the remainder of this year, reaching 167mn bl in December. But Saudi Arabia has said it could further extend its crude production cut beyond September. Were the Saudis' 1mn b/d reduction to be maintained through October, the deficit would continue to narrow month on month, but would stand at 178mn bl in December.

Stocks in key c	ountries*				mn bl
	May 23	Jun 23	Jul 23	Jul 22	±Jul 23/22
Crude					
EU 16	446	438	439	442	-3
US	461	452	442	424	18
Japan	74	78	77	60	17
Total	981	968	958	926	32
Products					
EU 16	589	586	580	564	15
US	799	809	827	791	36
Japan	59	60	60	58	1
Total	1,447	1,455	1,466	1,414	52
*end-month				— Euroils	tock, EIA, Meti

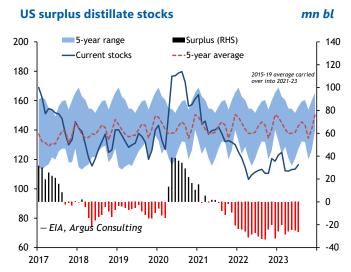


US, EU 15 plus Norway and Japan

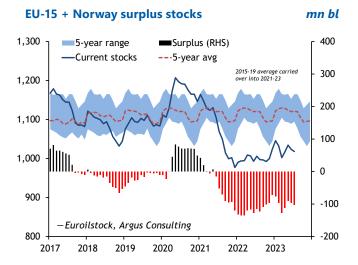
Crude and product stocks in the US, EU 15 plus Norway, and Japan increased by 1.2mn bl in July. Product inventories grew by 11mn bl, outweighing a 9.9mn bl crude draw.

US

Stocks of crude and refined products held in the US increased by 7.9mn bl in July — the fourth consecutive monthly rise. This was driven by product stocks, which rose by 17.8mn bl. 'Other products' — a category in which LPG is one of the main components — dominated the product stock increase, growing by 19.4mn bl. Wide seasonal stock changes for the 'other products' category is normal, as demand for LPG is largely dictated by heating demand.







Middle distillate inventories grew by 3.1mn bl — the third consecutive build — reflecting falling distillate demand in July, which averaged 3.57mn b/d, the lowest monthly average since 2020, according to weekly data published by the EIA. This is being underpinned by the weak industrial environment — the manufacturing purchasing managers' index (PMI) for July was 46.4, according to the Institute for Supply Management's monthly survey, a small increase on June, but still firmly in contraction.

Gasoline stocks fell by 1.5mn bl in July. Despite falling inventories, the deficit to the 2015-19 average narrowed because the draw was smaller than the seasonal average. Gasoline consumption is usually at its highest in summer during the peak driving season. Gasoline consumption was down by 5pc on the month and 7pc down on July 2019. Demand is being eroded by increased electric vehicle penetration and increased fuel efficiency — trends that are expected to gain momentum over the coming years.

US crude stocks fell by 9.9mn bl to 442.3mn bl — the lowest since December 2022. Refinery crude throughputs were up on the month and year, at 16.6mn b/d — the highest since 2019 — according to weekly data published by the EIA. Crude imports and production both increased on the month, but by just 0.1pc and 0.2pc, respectively, according to EIA weekly data — not enough to offset higher refinery runs,

Japan

Combined crude and product stocks in Japan fell by 1.3mn bl on the month. This was the first draw after three consecutive builds, and widened the deficit to the 2015-19 average

to 16.5mn bl. Crude inventories declined by 1mn bl in July, the first fall in four months. Refinery crude runs were up by 8.7pc, or 188,000 b/d, on the month in July, while imports of crude climbed by just 14,000 b/d, according to ship tracking data from Vortexa. Product stocks fell by a modest 0.3mn bl. The biggest change in product stocks was for distillates, which rose by 0.8mn bl from June to 23.6mn bl in July — a six month high.

EU 15 and Norway

Stocks of crude and refined products held across the EU 15 and Norway fell by 5.5mn bl, taking the deficit to the 2015-19 average back over 100mn bl for the first time in three months. The drop in stocks was entirely driven by products, which fell by 6.5mn bl. Refining runs increased on the month in July, but by just 0.5pc to 9.33mn b/d — still significantly down on July last year, when throughputs were running at 9.79mn b/d. This partly reflects the extreme heat in the Mediterranean that has forced refineries in the region to scale back runs for safety reasons and because of power outages. The combination of falling inventories and rising refinery throughputs indicates a tightening in product markets. Demand for gasoline and jet fuel is usually stronger across the summer months.

Stocks of middle distillates — jet fuel and diesel — fell by 2.4mn bl from June. Jet demand in particularly has seen significant growth in recent months, with passenger numbers in northern Europe approaching 2019 levels and even exceeding 2019 levels in some parts of the Mediterranean.

Independent pro	duct stock	:s*			mn bl
	May 23	Jun 23	Jul 23	Jul 22	±Jul 23/22
Singapore					
Light distillates	15.1	14.2	13.7	17.7	-4.0
Middle distillates	8.0	7.9	7.1	7.9	-0.8
Residual	18.9	20.3	22.4	18.0	4.3
Total	42.0	42.4	43.2	43.6	-0.4
Amsterdam-Rotterda	am-Antwerp				
Naphtha	2.5	2.1	2.3	3.5	-1.2
Gasoline	11.4	11.5	11.2	11.7	-0.5
Jet-kerosine	6.7	6.0	5.9	6.5	-0.6
Gasoil	17.1	14.9	15.6	11.1	4.5
Fuel oil	8.1	9.2	8.2	7.4	0.8
Total	45.9	43.7	43.3	40.2	3.1
*end of month		— Singapo	ore governi	ment data, l	nsights Global

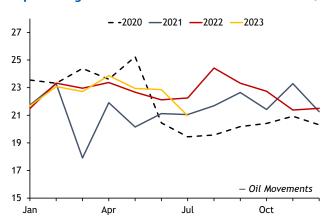


Trade flows

Opec crude liftings dropped below 21mn b/d in July, down by 1.9mn b/d from June and 1.3mn b/d lower on the year, the latest Oil Movements estimates show.

The monthly drop was primarily driven by Saudi Arabia, Kuwait, and Nigeria. As a result of its additional crude production cut of 1mn b/d, Saudi Arabia's loadings fell by almost 400,000 b/d to 6.3mn b/d, according to Vortexa tracking data. Half of the drop is attributed to reduced loadings for China. The cut was first announced in June for July, and later extended for August. On 3 August, Riyadh announced a further extension of the cut into September and said the cut

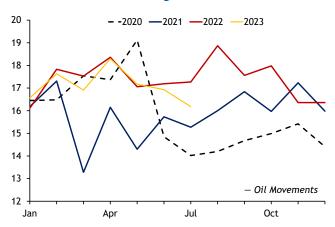
Opec liftings mn b/d



Oil at sea					
	May 23	Jun 23	Jul 23	Jul 22	±Jul 23/22
Liftings					mn b/d
Opec	22.94	22.86	20.96	22.25	-1.29
Mideast Gulf	17.17	16.93	16.18	17.27	-1.09
Eastbound	14.68	14.24	13.50	14.31	-0.81
Westbound	2.49	2.69	2.68	2.96	-0.28
Non-Opec	11.61	12.33	12.27	10.75	1.52
West Africa	3.13	3.47	2.71	2.94	-0.23
All regions	34.56	35.19	33.23	33.00	0.23
Stocks at sea*					mn bl
Opec	517.7	498.8	509.6	476.8	32.8
ME Gulf eastbound	299.1	302.4	309.6	278.1	31.5
ME Gulf westbound	114.8	98.0	107.3	113.3	-6.1
Non-Opec	300.2	290.6	274.4	216.1	58.2
Total	817.9	789.5	784.0	693.0	91.0
*end of month				_	Oil Movements



mn b/d



could be "extended, or extended and deepened" if necessary. The impact of the cut in September, however, could be partly offset by Russia's decision to reduce its export cut from 500,000 b/d this month to 300,000 b/d.

Kuwaiti crude liftings fell by 150,000 b/d on the month to 1.45mn b/d in July — probably the result of an output cut and start-up of the 615,000 b/d al-Zour refinery's third and final 205,000 b/d CDU on 5 July. Kuwait had pledged a production cut of 128,000 b/d from May to the end of the year. Al-Zour is playing an important role in meeting increasing European demand for clean products, so Kuwait will probably keep more crude at home for refining.

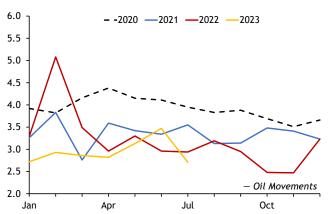
Nigerian loadings down

Crude loadings from Nigeria dropped by 360,000 b/d from a recent peak of 1.56mn b/d in June to around 1.2mn b/d in July, with production down by 13pc, according to upstream regulator NUPRC. Crude supplies to the Forcados oil terminal were reduced from 12 July following the detection of an oil sheen. Investigations into a suspected leak saw July production of Forcados plummet to 91,000 b/d from 230,000 b/d in June, and this was reflected in 60,000 b/d reductions in loadings for both France and Italy. Export operations at the terminal resumed on 13 August, but August crude loadings are scheduled at just 170,000 b/d, down from the previously scheduled 234,000 b/d. Nigerian loadings for Indonesia and India fell by 76,000 b/d and 68,000 b/d, respectively, on the month to around 95,000 b/d in July. But Indian appetite could return, as the Urals price has moved above the cap in recent weeks and seaborne exports of Urals seem to have



Total west Africa liftings

mn b/d



come under pressure. Shipments bound for the US dropped by 115,000 b/d to just 66,000 b/d in July, as refiners on the US Gulf coast appear to have turned to crude stocks at a time of rising run rates.

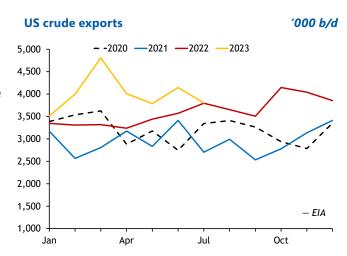
US exports down

Preliminary weekly data from the EIA suggest US crude exports dropped to 3.8mn b/d in July, down by 340,000 b/d from June. This is probably the result of high refinery utilisation, which increased to 93.6pc in July from June's 92.7pc. Vortexa tracking data show that Europe-bound shipments increased further in July — by 190,000 b/d to 2.1mn b/d — while Asia-bound loadings were little changed on the month. Buying interest from Europe was likely to have been underpinned by the production cuts in the Mideast Gulf. US crude liftings for France, the UK and Spain increased by 145,000 b/d, 88,0000 b/d and 60,000 b/d, respectively, while these countries' receipts of Middle Eastern crude dropped by a combined 140,000 b/d.

As well as the US, European refiners have turned to Latin America. Latin American crude loadings for Europe increased by 360,000 b/d to more than 900,000 b/d in July, as liftings of competing grades from the Middle East and Africa dropped. Although Libyan crude exports remained at 1mn b/d in July, instability in the north African country — protests on 13-14 July shut in around 350,000 b/d of Libya's 1.2mn b/d of crude output — is thought to have driven Greek refiner Helleniq Energy to take Unit Gold crude from Guyana instead.

Demand from China also seems to have recovered slightly in July, with crude exports from the US to China rising to 334,000 b/d — up by 20,000 b/d on the month, but still lower

than the recent peak of nearly 1mn b/d in April. Elevated crude imports in recent months, particularly from Russia and Iran, might have contributed to high stocks and led to less interest in US crude. South Korean imports have also been subdued since May, probably as refinery maintenance undermined demand. South Korean refiner SK Energy carried out a heavy work programme at its 840,000 b/d Ulsan plant from late May to early July, with a 260,000 b/d CDU taken offline. And S-Oil carried out maintenance at the 250,000 b/d No 3 CDU at the 580,000 b/d Onsan refinery in June. Hyundai, meanwhile, rescheduled CDU maintenance for early August, affecting 360,000 b/d of capacity.



Russian exports down as Urals exceeds price cap

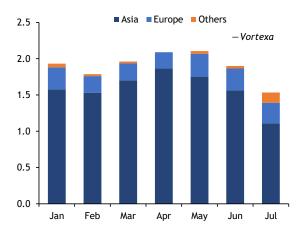
Shipments of Russian crude and products sold at or above G7-led price caps are unable to access financing, insurance or shipping services from G7 and EU countries, where the main providers are based. But the price of Russian Urals has been above the \$60/bl cap since mid-July. This has prompted some European tanker operators to withdraw from Urals trade. Maritime insurance and reinsurance providers are also expected to stop providing coverage for Russian crude cargoes to avoid secondary sanctions.

This new price development, coupled with Russia's 500,000 b/d crude output cut, reduced seaborne Urals exports by around 365,000 b/d to 1.5mn b/d in July — the lowest since December, Vortexa data show. Urals loadings for India dropped by 485,000 b/d on the month to less than 1mn b/d in July for the first since November. This might have been the main reason for renewed Indian interest in ESPO Blend in July. ESPO Blend loadings for India increased to 126,000 b/d in July from zero in June.



Russian Urals seaborne exports

mn b/d



The decline in overall crude exports from Russia is also reflected in a drop in loadings for Turkey — the third-largest recipient of Russian crude since the introduction of the EU embargo. Loadings for Turkey, mostly Urals, dropped by 20pc on the month to 215,000 b/d in July, according to Vortexa estimates. Tatneft remained the largest Russian supplier to Turkey in July, despite its shipments falling by 27pc on the month to 70,000 b/d. Tatneft halted exports for state-owned Tupras' 238,000 b/d Aliaga refinery, but continued steady supplies for Tupras' 227,000 b/d Izmit plant and Azeri state-owned Socar's 200,000 b/d Star refinery.

Independent refineries in Shandong, China, also appear to have been taking less Urals since May, despite being issued new crude import quotas. Urals loadings for Shandong province dropped to just 24,000 b/d in July from June's 57,000 b/d. And Urals liftings for Shandong had dried up completely by mid-July — probably a direct result of the price movement. Overall Chinese imports of Russian seaborne crude fell by 365,000 b/d to 1.36mn b/d in July, largely driven by reduced Urals receipts, while ESPO Blend loadings remained at 750,000 b/d — in line with January-June.

Urals exports in August will probably remain under pressure as a result of the 500,000 b/d crude export cut that Moscow announced in July. But Russian exports could rebound in September, when the export cut will be scaled back to 300,000 b/d, and when maintenance is expected to reduce refinery runs by around 195,000 b/d.

China's crude imports at six-month low

Chinese crude imports fell by almost 1.8mn b/d on the month to 10.29mn b/d in July, reaching their lowest level

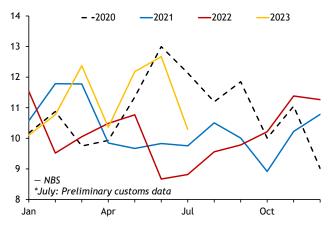
since January, but were up from 8.79mn b/d in July 2022, preliminary customs data show. The monthly drop was mainly attributed to high stocks. Chinese crude stocks had continued to rise in May amid weak domestic demand when cargoes for June and July deliveries were traded. High stocks curtailed Chinese refiners' buying interest at the time.

Chinese independent refiners might have also reduced their intake of discounted ESPO Blend in July, as Indian buying interest resurfaced after a month's hiatus. Apart from reduced loadings from Russia, Chinese buyers also requested lower volumes of Saudi crude in May for loading in June or arrival in July — despite Saudi Aramco reducing its official June prices for buyers in Asia-Pacific in a bid to encourage more eastbound shipments.

Chinese crude imports had rebounded to 11.2mn b/d on 1-15 August, which was only slightly lower than June's three-year high of 11.4mn b/d, according to Vortexa estimates. The rebound during the first two weeks of August was probably supported by firm crude processing in July. Last month's strengthening throughputs — propelled by strong refining margins — are likely to have drawn around 500,000 b/d from storage tanks. And crude runs should stay elevated, supporting imports in the coming months. This is even more likely to be the case, given that refiners' diesel stocks should start retreating as a result of brisk restocking from trading companies and consumers, which are already buying earlier than usual for fear of further price hikes. In addition, refiners are expected to lift naphtha output to meet seasonal petrochemical sector demand in September and October, when activity in the agricultural, construction and industrial spheres typically intensifies.

China crude imports

mn b/d





Argus FundamentalsAugust 202316

Global oil supply															r	nn b/d
	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024	2025
Middle East																
Saudi Arabia	10.14	10.46	10.93	10.61	10.54	10.37	10.15	8.99	9.98	9.87	9.98	9.98	9.98	9.98	9.98	10.44
Iran	2.54	2.55	2.56	2.59	2.56	2.60	2.81	3.04	3.04	2.87	3.04	3.04	3.04	3.04	3.04	3.04
Iraq	4.25	4.43	4.55	4.51	4.44	4.35	4.18	4.24	4.22	4.25	4.22	4.22	4.22	4.22	4.22	4.43
Kuwait	2.61	2.69	2.81	2.71	2.71	2.69	2.58	2.56	2.55	2.59	2.55	2.55	2.55	2.55	2.55	2.68
UAE	2.95	3.04	3.16	3.09	3.06	3.04	2.93	2.88	2.88	2.93	3.22	3.22	3.22	3.22	3.22	3.22
Qatar	1.27	1.29	1.29	1.29	1.28	1.29	1.31	1.35	1.35	1.33	1.35	1.37	1.40	1.40	1.38	1.40
Oman	1.04	1.06	1.09	1.07	1.06	1.06	1.05	1.03	1.03	1.04	1.03	1.03	1.03	1.03	1.03	1.03
Other Middle East	0.27	0.27	0.29	0.25	0.27	0.24	0.27	0.28	0.28	0.27	0.28	0.28	0.28	0.28	0.28	0.29
Total Middle East	25.06	25.79	26.69	26.13	25.92	25.63	25.28	24.37	25.32	25.15	25.66	25.68	25.71	25.71	25.69	26.52
North America																
US	11.51	11.77	12.05	12.30	11.91	12.62	12.63	12.61	12.71	12.64	12.74	12.79	12.90	12.93	12.84	13.42
Canada	4.35	4.24	4.47	4.52	4.39	4.46	4.16	4.57	4.67	4.46	4.73	4.83	4.90	4.90	4.84	4.99
Total North America	15.87	16.01	16.52	16.82	16.30	17.09	16.79	17.18	17.38	17.11	17.47	17.62	17.80	17.83	17.68	18.41
Latin America																
Mexico	1.77	1.78	1.78	1.80	1.78	1.87	1.91	1.79	1.75	1.83	1.75	1.75	1.75	1.75	1.75	1.75
Venezuela	0.70	0.71	0.65	0.70	0.69	0.70	0.77	0.78	0.78	0.76	0.78	0.78	0.78	0.78	0.78	0.78
Brazil	2.98	2.90	3.07	3.14	3.02	3.22	3.24	3.35	3.40	3.30	3.42	3.48	3.57	3.65	3.53	3.84
Colombia	0.74	0.75	0.75	0.77	0.75	0.77	0.77	0.76	0.74	0.76	0.74	0.72	0.71	0.70	0.72	0.68
Ecuador	0.46	0.45	0.47	0.46	0.46	0.43	0.45	0.47	0.49	0.46	0.49	0.47	0.46	0.46	0.47	0.46
Other Latin America	0.87	1.02	1.12	1.15	1.04	1.18	1.18	1.18	1.19	1.18	1.20	1.25	1.41	1.48	1.33	1.50
Total Latin America	7.52	7.61	7.84	8.02	7.75	8.17	8.32	8.33	8.36	8.29	8.38	8.46	8.68	8.82	8.58	9.01
Europe																
UK	0.81	0.74	0.65	0.71	0.73	0.72	0.70	0.73	0.80	0.74	0.80	0.80	0.79	0.78	0.79	0.78
Norway	1.76	1.56	1.71	1.78	1.70	1.81	1.81	1.80	1.84	1.82	1.98	1.87	1.97	2.00	1.95	2.01
Other Europe	0.52	0.54	0.53	0.52	0.53	0.54	0.52	0.52	0.53	0.53	0.54	0.52	0.51	0.50	0.52	0.48
Total Europe	3.10	2.84	2.89	3.01	2.96	3.07	3.03	3.06	3.17	3.08	3.32	3.19	3.26	3.28	3.26	3.27
FSU																
Russia	11.02	10.32	10.64	10.82	10.70	10.88	10.58	10.20	10.20	10.46	10.20	10.20	10.20	10.20	10.20	10.18
Other FSU	2.89	2.61	2.45	2.75	2.68	2.82	2.73	2.80	2.86	2.80	2.74	2.74	2.74	2.73	2.74	3.07
Total FSU	13.91	12.93	13.09	13.57	13.38	13.69	13.32	13.00	13.06	13.27	12.94	12.94	12.94	12.93	12.94	13.25
Africa																
Nigeria	1.47	1.33	1.14	1.23	1.29	1.42	1.24	1.35	1.38	1.35	1.38	1.38	1.38	1.38	1.38	1.38
Libya	1.06	0.75	0.99	1.14	0.98	1.14	1.17	1.05	1.00	1.09	1.00	1.00	1.00	1.00	1.00	1.00
Angola	1.18	1.19	1.15	1.10	1.15	1.06	1.10	1.25	1.28	1.17	1.28	1.28	1.28	1.28	1.28	1.28
Algeria	0.98	1.00	1.03	1.03	1.01	1.02	0.98	0.95	0.95	0.97	0.95	0.95	0.95	0.95	0.95	1.01
Other Africa	1.73	1.72	1.73	1.68	1.72	1.63	1.67	1.72	1.73	1.69	1.77	1.74	1.73	1.72	1.74	1.80
Total Africa	6.42	5.99	6.04	6.19	6.16	6.27	6.16	6.32	6.34	6.27	6.39	6.36	6.35	6.34	6.36	6.47
Asia-Pacific																
China	4.09	4.10	3.98	3.98	4.04	4.19	4.18	4.25	4.25	4.22	4.25	4.25	4.23	4.20	4.23	4.12
Indonesia	0.62	0.61	0.59	0.61	0.61	0.62	0.63	0.67	0.67	0.65	0.67	0.67	0.66	0.65	0.66	0.65
India	0.61	0.63	0.59	0.60	0.61	0.59	0.60	0.65	0.67	0.63	0.68	0.69	0.71	0.72	0.70	0.72
Australia	0.31	0.34	0.28	0.31	0.31	0.29	0.30	0.34	0.34	0.32	0.34	0.34	0.34	0.34	0.34	0.33
Malaysia	0.51	0.50	0.48	0.51	0.50	0.52	0.48	0.48	0.49	0.49	0.50	0.50	0.50	0.50	0.50	0.50
Other Asia-Pacific	0.60	0.58	0.56	0.58	0.58	0.57	0.58	0.61	0.64	0.60	0.64	0.63	0.62	0.61	0.62	0.62
Total Asia-Pacific	6.75	6.76	6.50	6.59	6.65	6.78	6.77	7.01	7.06	6.91	7.08	7.08	7.07	7.02	7.06	6.95
Total	78.63	77.92	79.56	80.33	79.11	80.71	79.67	79.26	80.69	80.08	81.22	81.32	81.80	81.92	81.57	83.87
NGL and other of which	14.13	14.43	14.55	14.47	14.40	14.68	14.98	15.05	14.94	14.91	14.91	15.08	15.26	15.16	15.10	15.41
Opec NGL	5.17	5.17	5.17	5.17	5.17	5.32	5.32	5.32	5.32	5.32	5.46	5.46	5.46	5.46	5.46	5.73
Biofuels	2.51	3.08	3.30	2.89	2.94	2.65	3.21	3.45	3.03	3.09	2.43	3.19	3.53	3.10	3.06	3.14
Processing gains	2.29	2.30	2.33	2.32	2.31	2.31	2.35	2.38	2.37	2.35	2.40	2.40	2.40	2.40	2.40	2.40
Total oil supply	97.56	97.73		100.02	98.76		100.21		101.03	100.43	100.96	101.99	102.99	102.59	102.13	104.82
Opec crude	28.44	28.71	29.54	29.24	28.98	28.91	28.41	27.62	28.58	28.38	28.92	28.92	28.92	28.92	28.92	29.86
Non-Opec crude	50.19	49.22	50.02	51.09	50.13	51.80	51.25	51.64	52.11	51.70	52.30	52.40	52.88	53.00	52.65	54.02



Argus FundamentalsAugust 202317

Global oil demand															n	nn b/d
	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024	2025
OECD																
US	20.23	20.27	20.47	20.17	20.28	20.00	20.56	20.36	20.39	20.33	20.22	20.22	20.68	20.56	20.42	20.42
Canada	2.34	2.30	2.47	2.40	2.38	2.34	2.43	2.52	2.49	2.44	2.44	2.39	2.51	2.48	2.46	2.46
Total North America	22.57	22.57	22.94	22.56	22.66	22.33	22.99	22.88	22.87	22.77	22.66	22.61	23.19	23.04	22.88	22.87
Chile	0.38	0.37	0.36	0.37	0.37	0.38	0.38	0.36	0.36	0.37	0.37	0.38	0.38	0.37	0.37	0.38
Mexico	1.77	2.00	1.97	1.97	1.93	1.89	1.89	1.98	1.98	1.93	1.96	1.98	1.97	1.97	1.97	1.97
Total Latin America	2.31	2.51	2.48	2.49	2.45	2.38	2.40	2.48	2.48	2.44	2.48	2.49	2.47	2.47	2.48	2.48
France	1.55	1.51	1.63	1.47	1.54	1.53	1.52	1.62	1.52	1.55	1.53	1.53	1.60	1.51	1.54	1.53
Germany	2.17	2.17	2.27	2.14	2.19	2.06	2.10	2.19	2.15	2.12	2.05	2.04	2.11	2.07	2.07	2.03
Italy	1.14	1.21	1.25	1.18	1.20	1.13	1.18	1.21	1.18	1.17	1.11	1.16	1.20	1.17	1.16	1.13
Spain	1.25	1.32	1.31	1.28	1.29	1.26	1.27	1.32	1.31	1.29	1.26	1.27	1.31	1.30	1.28	1.27
UK	1.34	1.43	1.41	1.36	1.39	1.40	1.41	1.40	1.38	1.40	1.40	1.42	1.43	1.41	1.42	1.41
Other Europe	5.65	5.69	6.04	5.79	5.79	5.61	5.85	6.01	5.76	5.81	5.51	5.86	6.14	5.87	5.85	5.84
Total Europe	13.10	13.31	13.91	13.23	13.39	12.99	13.33	13.74	13.30	13.34	12.87	13.29	13.79	13.32	13.32	13.21
Australia	1.03	1.07	1.08	1.12	1.08	1.12	1.13	1.11	1.14	1.13	1.15	1.17	1.15	1.18	1.16	1.17
Japan	3.70	3.04	3.20	3.57	3.38	3.74	3.10	3.19	3.54	3.39	3.78	3.07	3.12	3.49	3.36	3.30
New Zealand	0.15	0.14	0.14	0.17	0.15	0.15	0.15	0.15	0.16	0.15	0.17	0.15	0.15	0.17	0.16	0.16
South Korea	2.69	2.45	2.51	2.54	2.55	2.57	2.42	2.52	2.61	2.53	2.58	2.53	2.55	2.64	2.57	2.58
Total Asia-Pacific	7.57	6.70	6.93	7.40	7.15	7.58	6.80	6.97	7.45	7.20	7.68	6.91	6.97	7.47	7.26	7.22
Total Middle East	0.21	0.23	0.24	0.23	0.23	0.23	0.23	0.24	0.23	0.23	0.24	0.23	0.24	0.23	0.24	0.24
Total	45.76	45.33	46.51	45.91	45.88	45.52	45.75	46.31	46.34	45.98	45.93	45.53	46.67	46.54	46.17	46.03
Non-OECD																
China	14.99	14.38	14.09	15.45	14.73	15.41	16.60	15.41	15.60	15.75	16.03	16.24	15.89	16.08	16.06	16.25
India	5.34	5.30	5.02	5.45	5.28	5.63	5.60	5.09	5.54	5.47	5.73	5.80	5.35	5.79	5.67	5.90
Total Asia-Pacific	29.16	28.56	27.70	29.73	28.79	29.86	31.25	29.66	30.13	30.22	31.00	31.35	30.67	31.13	31.04	31.68
FSU	4.58	3.54	4.15	4.11	4.10	4.38	4.23	4.18	4.27	4.26	4.23	4.16	4.51	4.61	4.38	4.52
Europe	0.78	0.77	0.79	0.80	0.78	0.78	0.75	0.82	0.77	0.78	0.67	0.77	0.85	0.79	0.77	0.77
Americas	5.98	6.15	6.34	6.28	6.19	6.16	6.28	6.36	6.35	6.29	6.22	6.40	6.47	6.47	6.39	6.48
Middle East	8.27	8.81	9.19	8.66	8.73	8.60	8.76	9.09	8.73	8.80	8.52	9.00	9.33	8.97	8.95	9.06
Africa	4.29	4.27	4.27	4.41	4.31	4.40	4.36	4.26	4.38	4.35	4.57	4.50	4.40	4.52	4.50	4.59
Total non-OECD	53.06	52.10	52.45	53.98	52.90	54.17	55.63	54.36	54.63	54.70	55.21	56.18	56.23	56.48	56.03	57.11
Global demand	98.82	97.43	98.95	99.89	98.78	99.69	101.38	100.68	100.97	100.68	101.14	101.71	102.89	103.02	102.19	103.14



Argus FundamentalsAugust 202318

Products demand																nn b/d
Products demand	1Q22	2Q22	3Q22	4Q22	2022	1Q23	2Q23	3Q23	4Q23	2023	1Q24	2Q24	3Q24	4Q24	2024	2025
	IQZZ	2Q22	3Q22	4Q22	2022	IQZ3	2Q23	3Q23	4Q23	2023	IQ24	2Q24	3Q24	4Q24	2024	2023
LPG and ethane																
North America	3.79	3.27	3.39	3.38	3.46	3.54	3.35	3.30	3.77	3.49	3.83	3.17	3.27	3.73	3.50	3.49
Latin America	0.38	0.34	0.38	0.39	0.37	0.38	0.36	0.37	0.38	0.37	0.39	0.36	0.37	0.37	0.37	0.37
Europe	1.12	0.93	1.10	0.98	1.03	1.09	1.10	1.07	1.06	1.08	1.11	1.10	1.11	1.09	1.10	1.11
Asia-Pacific	0.92	0.72	0.69	0.78	0.78	0.88	0.71	0.73	0.76	0.77	0.82	0.74	0.74	0.77	0.77	0.75
Total OECD	6.23	5.28	5.57	5.56	5.66	5.91	5.53	5.49	5.98	5.73	6.17	5.39	5.49	5.98	5.76	5.75
China	2.35	2.39	2.44	2.35	2.38	2.39	2.86	2.66	2.83	2.68	2.68	2.83	2.85	3.03	2.85	2.97
India	0.96	0.83	0.91	0.94	0.91	0.94	0.86	0.92	0.98	0.93	1.01	0.93	0.97	1.03	0.98	1.06
Total World	13.38	12.25	12.74	12.68	12.76	13.08	13.09	12.93	13.66	13.19	13.81	13.02	13.24	13.97	13.51	13.79
Naphtha																
North America	0.22	0.20	0.20	0.19	0.20	0.19	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Latin America	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02
Europe	1.15	1.00	0.86	0.83	0.96	0.97	0.85	0.83	0.82	0.87	0.96	0.84	0.85	0.83	0.87	0.86
Asia-Pacific	1.90	1.75	1.87	1.82	1.83	1.91	1.71	1.81	1.90	1.83	1.89	1.75	1.81	1.91	1.84	1.84
Total OECD	3.30	2.99	2.97	2.88	3.04	3.12	2.81	2.88	2.97	2.94	3.09	2.83	2.90	2.99	2.95	2.95
China	1.53	1.36	1.54	1.81	1.56	1.87	2.10	1.69	1.78	1.86	1.93	1.89	1.82	1.93	1.89	1.97
India	0.36	0.27	0.31	0.27	0.30	0.33	0.32	0.31	0.30	0.32	0.31	0.31	0.32	0.31	0.31	0.31
Total World	6.70	6.13	6.28	6.44	6.39	6.76	6.63	6.29	6.47	6.54	6.80	6.47	6.46	6.65	6.59	6.71
Gasoline																
North America	9.21	9.78	9.69	9.55	9.56	9.40	9.98	9.82	9.52	9.68	9.37	9.84	9.97	9.62	9.70	9.68
Latin America	0.82	0.91	0.88	0.87	0.87	0.83	0.84	0.87	0.89	0.86	0.86	0.86	0.87	0.89	0.87	0.87
Europe	1.87	2.06	2.14	2.02	2.02	1.98	2.13	2.10	1.96	2.04	1.85	2.05	2.10	1.96	1.99	1.93
Asia-Pacific	1.27	1.33	1.44	1.42	1.36	1.34	1.36	1.40	1.35	1.36	1.30	1.29	1.38	1.34	1.33	1.29
Total OECD	13.23	14.16	14.24	13.93	13.89	13.61	14.38	14.27	13.81	14.02	13.45	14.12	14.40	13.89	13.97	13.84
China	3.40	2.95	3.05	2.87	3.07	3.29	3.41	3.19	3.16	3.26	3.19	3.15	3.25	3.22	3.21	3.15
India	0.75	0.82	0.79	0.81	0.79	0.82	0.87	0.82	0.85	0.84	0.84	0.89	0.85	0.88	0.87	0.91
Total World	24.74	25.03	25.38	24.98	25.03	25.20	26.14	25.70	25.32	25.59	25.09	25.84	26.25	25.83	25.75	25.81
Jet-kerosine																
North America	1.57	1.74	1.77	1.73	1.70	1.71	1.85	1.89	1.84	1.82	1.80	1.91	1.98	1.90	1.90	1.97
Latin America	0.14	0.14	0.13	0.14	0.13	0.14	0.13	0.14	0.14	0.13	0.14	0.13	0.14	0.14	0.14	0.14
Europe	1.03	1.30	1.49	1.31	1.28	1.25	1.45	1.67	1.42	1.45	1.40	1.59	1.77	1.51	1.57	1.63
Asia-Pacific	0.85	0.48	0.50	0.80	0.66	0.92	0.63	0.62	0.89	0.77	1.11	0.70	0.69	0.99	0.87	0.90
Total OECD	3.60	3.68	3.92	4.00	3.80	4.03	4.09	4.36	4.32	4.20	4.47	4.37	4.62	4.57	4.51	4.67
China	0.56	0.29	0.48	0.34	0.42	0.60	0.79	0.74	0.72	0.71	0.87	0.88	0.91	0.89	0.89	0.95
India	0.16	0.17	0.16	0.17	0.16	0.18	0.18	0.19	0.20	0.19	0.21	0.21	0.20	0.21	0.21	0.22
Total World	5.90	5.64	6.12	6.18	5.96	6.83	6.91	7.21	7.19	7.04	7.74	7.59	7.99	7.95	7.82	8.18
Diesel/gasoil																
North America	4.74	4.42	4.41	4.53	4.52	4.60	4.38	4.25	4.40	4.41	4.54	4.32	4.32	4.45	4.41	4.38
Latin America	0.57	0.71	0.68	0.67	0.66	0.63	0.64	0.67	0.67	0.65	0.65	0.67	0.65	0.65	0.66	0.66
Europe	6.11	6.04	6.29	6.24	6.17	5.92	5.94	6.10	6.23	6.05	5.77	5.79	5.98	6.10	5.91	5.80
Asia-Pacific	1.84	1.74	1.79	1.88	1.81	1.83	1.78	1.77	1.89	1.82	1.83	1.78	1.75	1.87	1.81	1.80
Total OECD	13.32	12.97	13.23	13.38	13.23	13.04	12.79	12.85	13.26	12.98	12.86	12.62	12.76	13.14	12.84	12.70
China	3.67	3.48	3.43	4.16	3.69	3.85	4.37	3.77	3.76	3.94	3.64	3.99	3.98	3.98	3.90	3.86
India	1.73	1.83	1.57	1.84	1.74	1.84	1.98	1.60	1.82	1.81	1.85	1.96	1.65	1.89	1.84	1.89
Total World	27.92	27.33	27.50	28.68	27.86	27.99	28.39	27.53	28.21	28.03	27.58	28.06	27.99	28.66	28.07	28.10
Fuel oil																
North America	0.42	0.34	0.42	0.33	0.38	0.33	0.21	0.34	0.34	0.31	0.31	0.29	0.33	0.29	0.30	0.30
Latin America	0.17	0.19	0.19	0.19	0.19	0.18	0.20	0.20	0.18	0.19	0.17	0.19	0.21	0.19	0.19	0.18
Europe	0.74	0.78	0.79	0.76	0.77	0.75	0.74	0.76	0.74	0.75	0.76	0.74	0.74	0.72	0.74	0.74
Asia-Pacific	0.52	0.45	0.47	0.50	0.48	0.53	0.42	0.45	0.48	0.47	0.55	0.43	0.42	0.46	0.47	0.46
Total OECD	1.86	1.78	1.88	1.79	1.83	1.80	1.59	1.76	1.76	1.73	1.81	1.67	1.71	1.66	1.71	1.69
China	0.67	0.77	0.75	0.92	0.78	1.01	1.20	0.73	0.72	0.91	0.98	0.98	0.83	0.82	0.90	0.90
India	0.12	0.11	0.12	0.13	0.12	0.13	0.12	0.12	0.11	0.12	0.11	0.10	0.11	0.10	0.11	0.10
Total World	6.16	6.36	6.62	6.54	6.42	6.51	6.55	6.27	6.28	6.40	6.33	6.32	6.32	6.28	6.31	6.26



Singapore: Refinery runs '000 b/d													
	Jul 22	Aug	Sep	Oct	Nov	Dec	Jan 23	Feb	Mar	Apr	May	Jun	Jul
Shell	240	240	240	230	230	230	230	230	230	230	230	230	230
SRC	255	255	255	250	250	250	250	245	245	245	240	240	240
ExxonMobil	540	540	540	530	530	530	530	520	520	520	515	515	515
Total	1,035	1,035	1,035	1,010	1,010	1,010	1,010	995	995	995	980	980	980

— Argus survey



Argus Fundamentals is published by Argus Media group

Registered office Lacon House, 84 Theobald's Road, London, WC1X 8NL

London, WC1X 8NL Tel: +44 20 7780 4200

ISSN: 0957-039X

Copyright notice

Copyright © 2023 Argus Media group All rights reserved

All intellectual property rights in this publication and the information published herein are the exclusive property of Argus and/or its licensors (including exchanges) and may only be used under licence from Argus. Without limiting the foregoing, by accessing this publication you agree that you will not copy or reproduce or use any part of its contents (including, but not limited to, single prices or any other individual items of data) in any form or for any purpose whatsoever except under valid licence from Argus. Further, your access to and use of data from exchanges may be subject to additional fees and/or execution of a separate agreement, whether directly with the exchanges or through Argus.

Trademark notice

ARGUS, the ARGUS logo, ARGUS MEDIA, INTEGER, ARGUS FUNDAMENTALS, other ARGUS publication titles and ARGUS index names are trademarks of Argus Media Limited.

Visit www.argusmedia.com/Ft/trademarks for more information.

Disclaimer

The data and other information published herein (the "Data") are provided on an "as is" basis. Argus and its licensors (including exchanges) make no warranties, express or implied, as to the accuracy, adequacy, timeliness, or completeness of the Data or fitness for any particular purpose. Argus and its licensors (including exchanges) shall not be liable for any loss, claims or damage arising from any party's reliance on the Data and disclaim any and all liability related to or arising out of use of the Data to the full extent permissible by law.

All personal contact information is held and used in accordance with Argus Media's Privacy Policy https://www.argusmedia.com/en/privacy-policy

Publisher Adrian Binks

Chief operating officer Matthew Burkley

Global compliance officer Vladas Stankevicius

Chief commercial officer Jo Loudiadis

President, Oil

SVP Consulting services Lloyd Thomas

Head of forecasting Francis Osborne

Senior Analyst Martha Tallas Tel: +44 20 7780 4200 fundamentals@argusmedia.com Customer support and sales:

support@argusmedia.com sales@argusmedia.com

London, Tel: +44 20 7780 4200 Houston, Tel: +1 713 968 0000 Singapore, Tel: +65 6496 9966



