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RESEARCH

24 March 2025

Commodities

The Oil Manual - Chartbook



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Global

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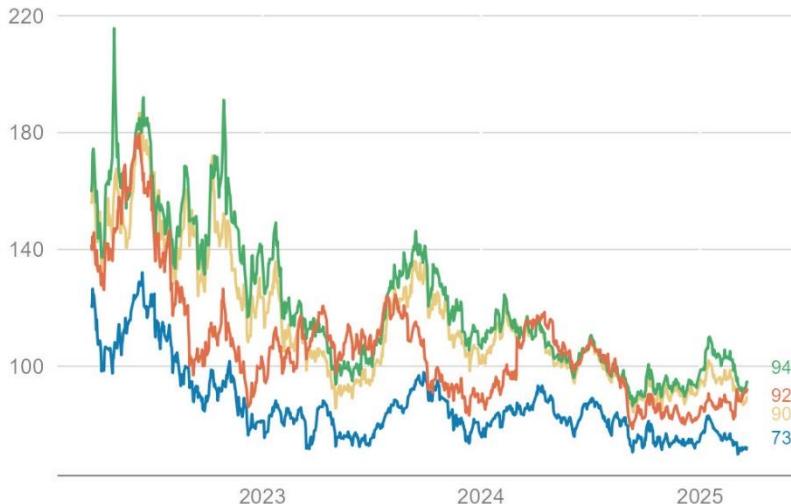
Bottom-line

Soft Fundamentals Ahead but Possible Price Support from Geopolitical Risks

Crude oil and oil products prices

\$/bbl

Dated Brent ARA Gasoil NYH Diesel NYH Gasoline



Source: Platts, Bloomberg, Morgan Stanley Research

Bottom line:

- Tariffs and counter-tariffs have the potential to weigh on the oil-intensive part of the economy, which creates uncertainty over demand. In addition, there are signs that non-OPEC supply is recovering from its '2024 flatspot' and OPEC's production quota is rising from April onwards as well. In our base case, we foresee a surplus – albeit modest – in the balance of the year.
- Still, geopolitical risks are arguably on the rise again and oil prices are already close to their 100-year low vs gold, possibly providing price support. Our modelling assumption is that Iran's production declines ~0.5 mb/d over the coming 12 months, but there is considerable uncertainty around this.

Key drivers:

- We lower our demand growth assumption for 2025 from 1.0 to 0.9 mb/d, staying towards the bottom-end of the consensus range. Global GDP growth is below trend, population growth is slowing, China's oil demand is under pressure and uncertainty created by trade tariffs are all likely to weigh on demand growth as well.
- Non-OPEC supply likely to increase 1.3 mb/d in 2025, unchanged on our previous estimate, driven by the US, Canada, Brazil, Guyana, Argentina as well as global biofuels and NGLs
- We had expected OPEC to extend its production quota once again, but that did not materialise. That said, incorporating the recently updated schedule for compensatory cuts, our forecast for OPEC supply is only 0.1 mb/d higher in 2H25 than 2H24
- Combined this still leaves our balance in a surplus of 0.6 mb/d in 2H25. There is upside risk to that estimate from Libya, Kazakhstan and Iraq, where our supply estimates are still cautious, as well as from demand due to trade tensions. On the other hand, downside risk comes from production in Iran as well as possibly gas-to-oil switching in case gas prices rise from here on.
- At the moment, the Brent spot price is already relatively low compared to calendar spreads, and in turn, calendar spreads are relatively low compared to inventories. That suggests that for now, oil prices already discount part of the anticipated weakness ahead, limiting downside near-term. Still, we see inventories building which eventually likely drives Brent to ~\$67.5/bbl later this year.

For more detail, see: [The Oil Manual – Tariffs and OPEC](#)

Demand & Prices

The strong correlation between oil prices and the performance of cyclical-vs-defensives stocks suggests it has mostly been demand concerns that have weighed on oil prices

Oil price vs cyclicals/defensives index

Since Dec 2023

— Cyclicals vs defensives index (MSZZCYDE Index) — Brent oil price

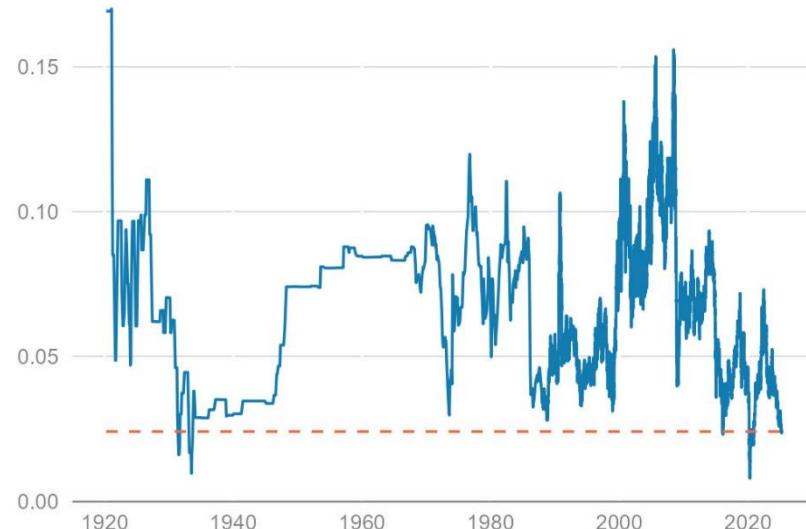


Source: Bloomberg, Morgan Stanley Research

That said, outside covid, crude oil has never been cheaper relative to gold since the early 1930s; the oil/gold ratio is currently >60% below its 100-year average

Oil/Gold ratio

Since 1920 (troy ounce/barrel)



Source: Bloomberg, Platts, Rapidan Energy, Morgan Stanley Research

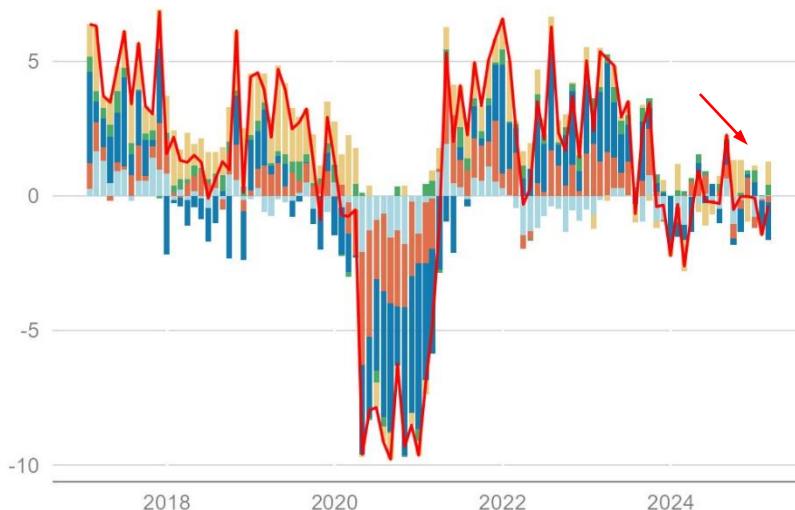
Demand

Global seaborne energy imports suggest stagnating global energy demand; seaborne crude imports into Europe weak versus seasonal pattern

Seaborne energy arrivals

Global, year-on-year change (mboe/d)

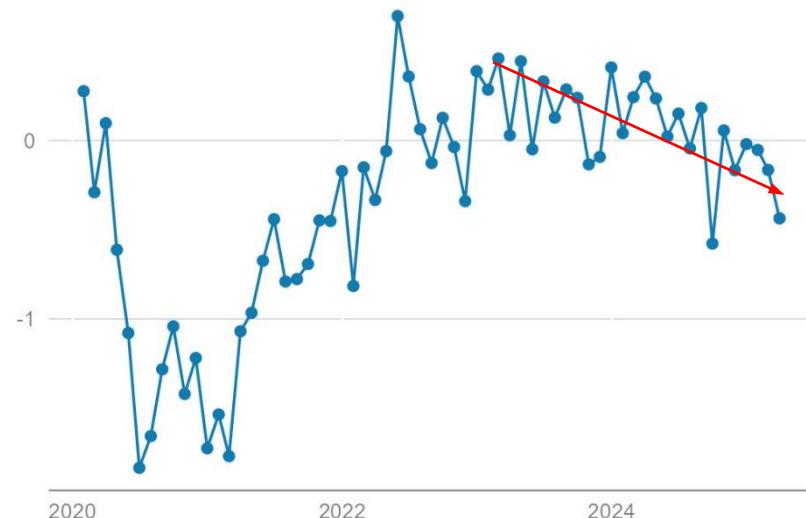
— Total ■ LNG ■ LPG ■ Crude ■ Motor fuel ■ Other products



Source: Vortexa, Morgan Stanley Research

Seaborne crude oil arrivals - Europe

Change vs seasonal average from 2016-23 (mb/d)



Note: analysis based on EU + Norway + UK
Source: Vortexa, Morgan Stanley Research

Demand

'Consensus' sees oil demand growing 1.1 kb/d this year, only slightly lower than the long-term historical trend of ~1.2 mb/d per year

Consensus oil demand growth

2025 vs 2024, average across selected forecasters (kb/d)

Region	LPG/ ethane	Naphtha	Gasoline	Jet/ kerosene	Gasoil/ diesel	Fuel oil	Other oil	Total liquids
North America	45	-15	15	15	-25	-5	20	50
China	185	95	0	75	-10	-80	-10	250
India	35	10	60	15	65	0	15	200
Other Asia	20	20	20	85	50	5	5	205
Europe	30	-25	15	40	-20	-50	0	-10
Middle East	-45	45	40	30	40	25	20	150
FSU	10	15	15	10	0	-5	-15	25
Latin America	35	0	30	10	40	0	-5	110
Africa	35	0	35	5	35	5	-5	110
World	345	135	230	285	180	-110	25	1,100

Source: Argus, Energy Aspects, S&P Global Platts, Morgan Stanley Research

Petchem feedstock
(LPG/ethane) and jet
fuel drive majority of
demand growth

Asia remains key
source of growth,
together with Middle
East and LatAm

Demand

However, small downwards revisions are starting to come through; since December, the consensus demand estimate has dropped ~75 kb/d

Rewvisions to 2025 oil demand growth forecasts

Change in forecast since December, average across forecasters (kb/d)

Region	LPG/ ethane	Naphtha	Gasoline	Jet/ kerosene	Gasoil/ diesel	Fuel oil	Other oil	Total liquids
North America	-70	0	35	0	-15	5	20	-30
China	20	-10	-10	-20	0	-20	10	-30
India	15	5	15	5	10	-5	-25	20
Other Asia	0	-15	-20	5	25	-10	10	-10
Europe	-5	0	10	0	25	-15	15	30
Middle East	-80	40	10	-5	-20	-15	40	-30
FSU	-10	0	0	0	0	5	-5	-10
Latin America	15	-5	-10	0	-5	5	-35	-30
Africa	30	0	0	0	-5	5	-5	20
World	-85	20	30	-15	10	-220	195	-75

Source: S&P Global Platts, Energy Aspects, Argus, Morgan Stanley Research

Demand

For 2026, consensus sees demand growth slowing to ~840 kb/d, down 60 kb/d from last month's consensus estimate

Consensus oil demand growth

2026 vs 2025, average across selected forecasters (kb/d)

Region	LPG/ ethane	Naphtha	Gasoline	Jet/ kerosene	Gasoil/ diesel	Fuel oil	Other oil	Total liquids
North America	35	5	-30	30	-30	-5	-20	-10
China	130	105	-70	45	-75	-15	15	135
India	45	20	55	10	55	0	25	215
Other Asia	30	60	30	60	45	-10	-35	180
Europe	20	-15	5	30	-70	-10	0	-40
Middle East	55	0	45	30	30	10	5	180
FSU	10	-5	5	5	-10	0	5	5
Latin America	5	0	50	15	35	-5	-5	90
Africa	-15	0	40	10	35	0	10	80
World	310	165	130	235	15	-30	15	840

Source: Argus, Energy Aspects, S&P Global Platts, Morgan Stanley Research

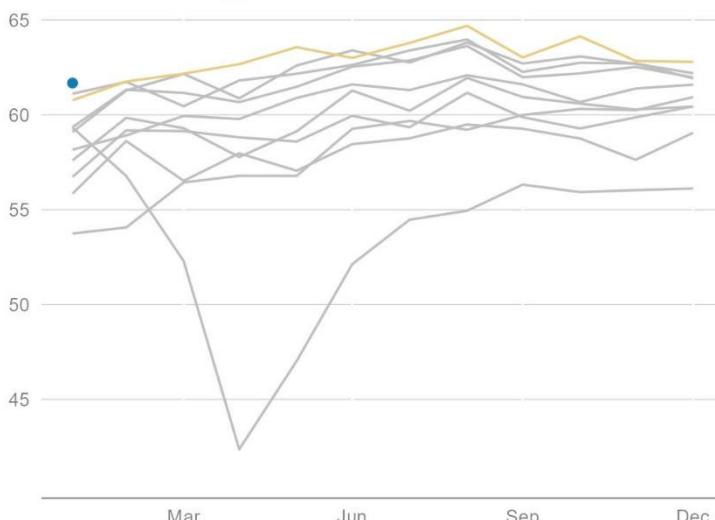
Demand

Demand for products with a positive crack spread rose ~700 kb/d last year; seasonally, the market is trading the foothills of the seasonal upswing in demand

Demand for products with positive crack spread

Global consumption of gasoline, gasoil/diesel and jet fuel

— 2015-2023 — 2024 ● 2025

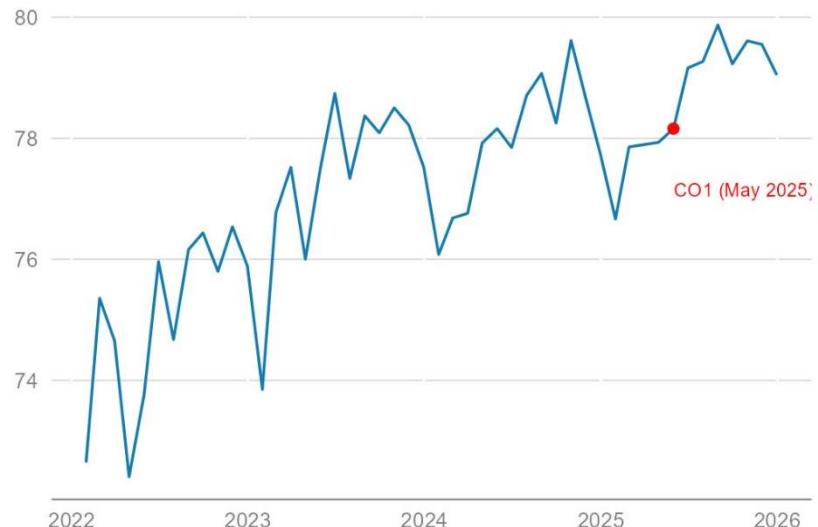


Note: average assessment across three sources

Source: IEA, Energy Aspects, S&P Global Commodities Insights, Morgan Stanley Research

Key refined product demand

Sum of naphtha, gasoline, jet/kero, gasoil and fuel oil (mb/d)



Note: chart shows average estimate, both historic and forecast, across three sources

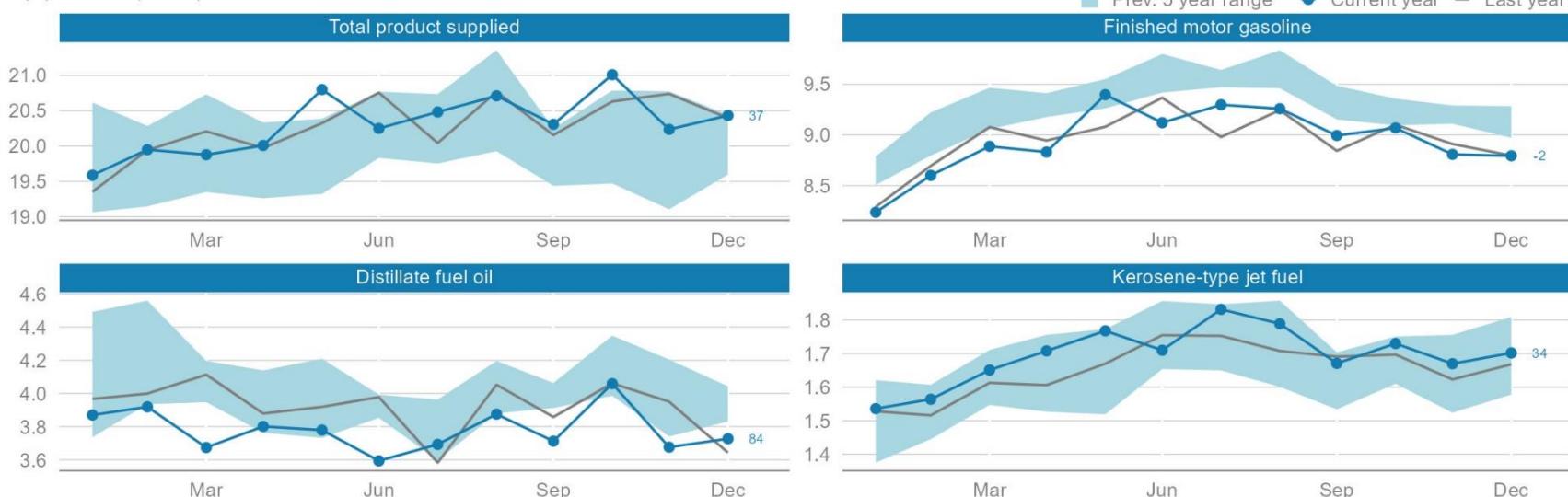
Source: S&P Global Platts, Energy Aspects, Argus, Morgan Stanley Research

Demand

US total liquids demand was broadly stable year-on-year in December; demand for gasoline and diesel remained below pre-covid levels

US implied oil demand

By product (mb/d)



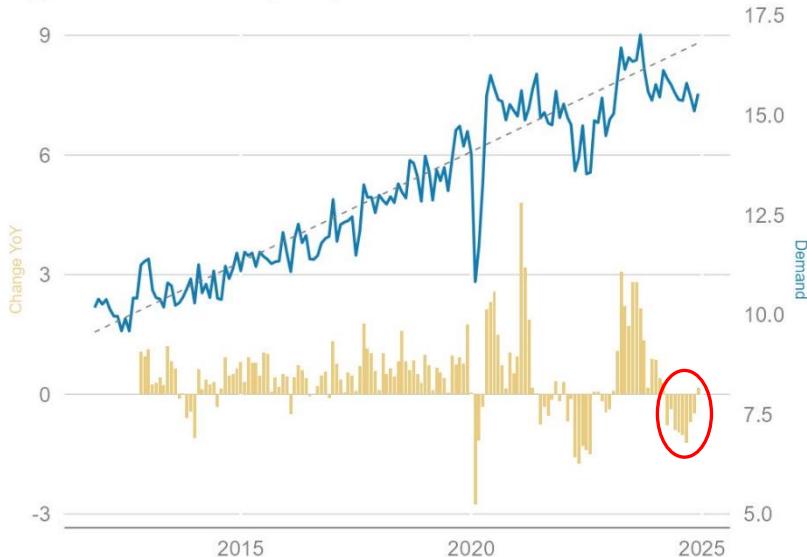
Note: figures in chart show year-on-year change; 5-year range based on 2015-19
Source: EIA Petroleum Supply Monthly, Morgan Stanley Research

Demand

China's oil demand appears to be stabilizing; a simple calculation of net oil imports + production + change in stocks does not suggest much pick-up in Jan/Feb

China

Apparent oil demand (mb/d)



Source: Argus, Morgan Stanley Research

China

Net oil imports + crude production + Δcrude inventories (mb/d)



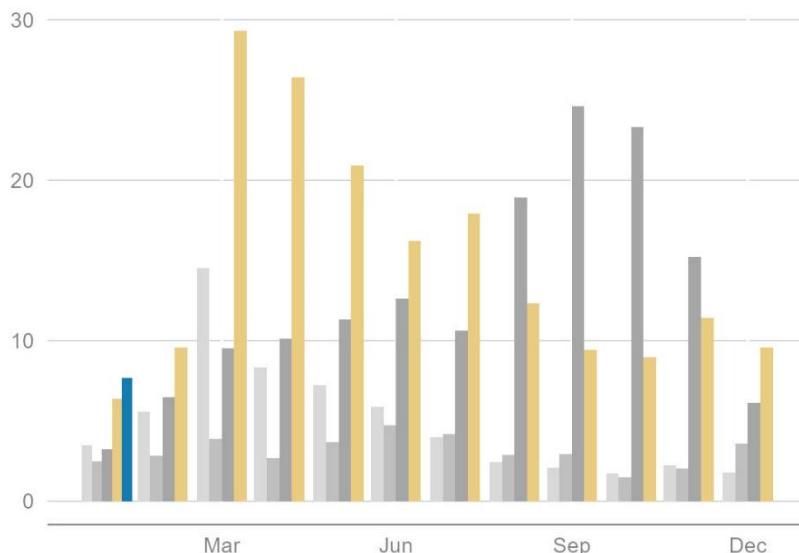
Source: Company data, NBS, Argus, Vortexa, Morgan Stanley Research

Demand

LNG trucking has eroded significant diesel consumption in 2024, although sales have fallen back in recent months; NEVs touched ~50% of new car sales last year

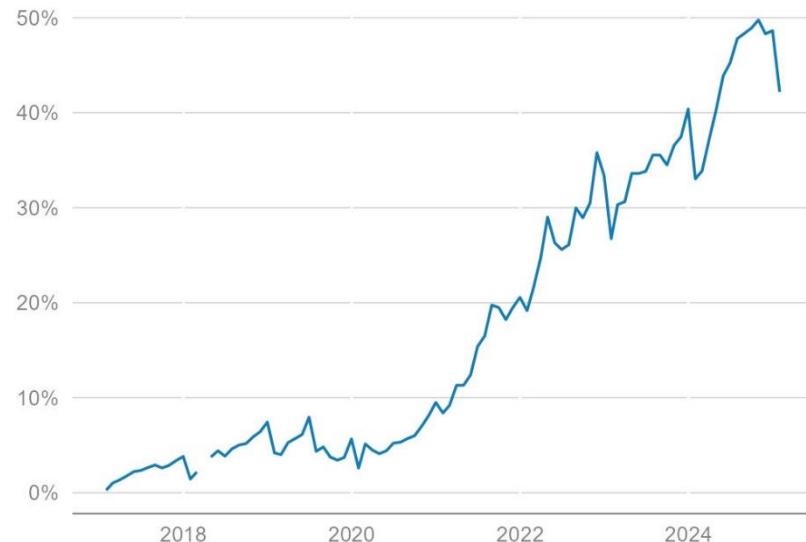
LNG heavy duty truck sales - China

Thousand units per month



China New Energy Vehicle Sales

As share total passenger car sales (%)



Source: CVworld, Morgan Stanley Research

Source: China Automotive Tech and Research Center, Morgan Stanley Research

Demand

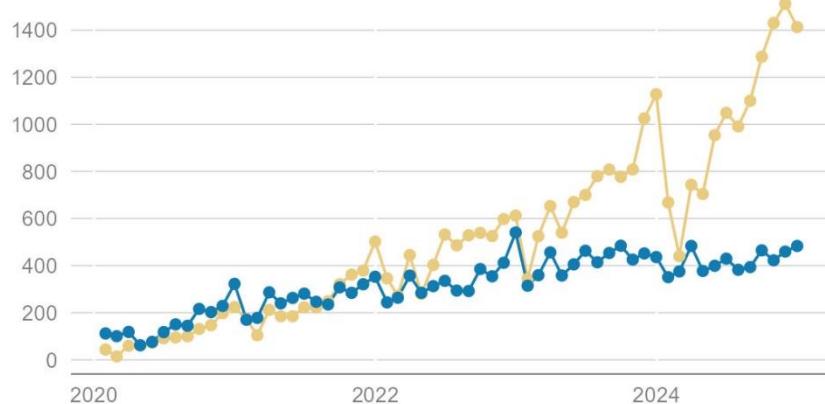
Outside China, EV sales are close-to-stagnant

Global plug-in EV sales

Total sales

in thousands of units per month

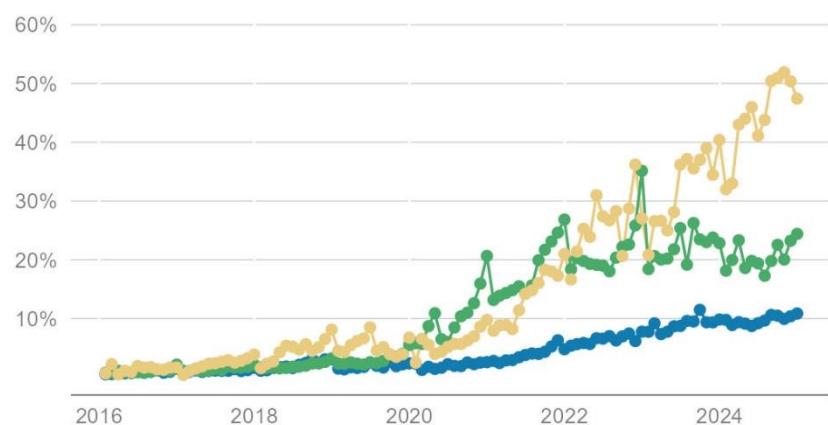
◆ China ● Rest of World



Market share

% of total light-duty vehicle sales (%)

◆ China ● EU-28 ● United States



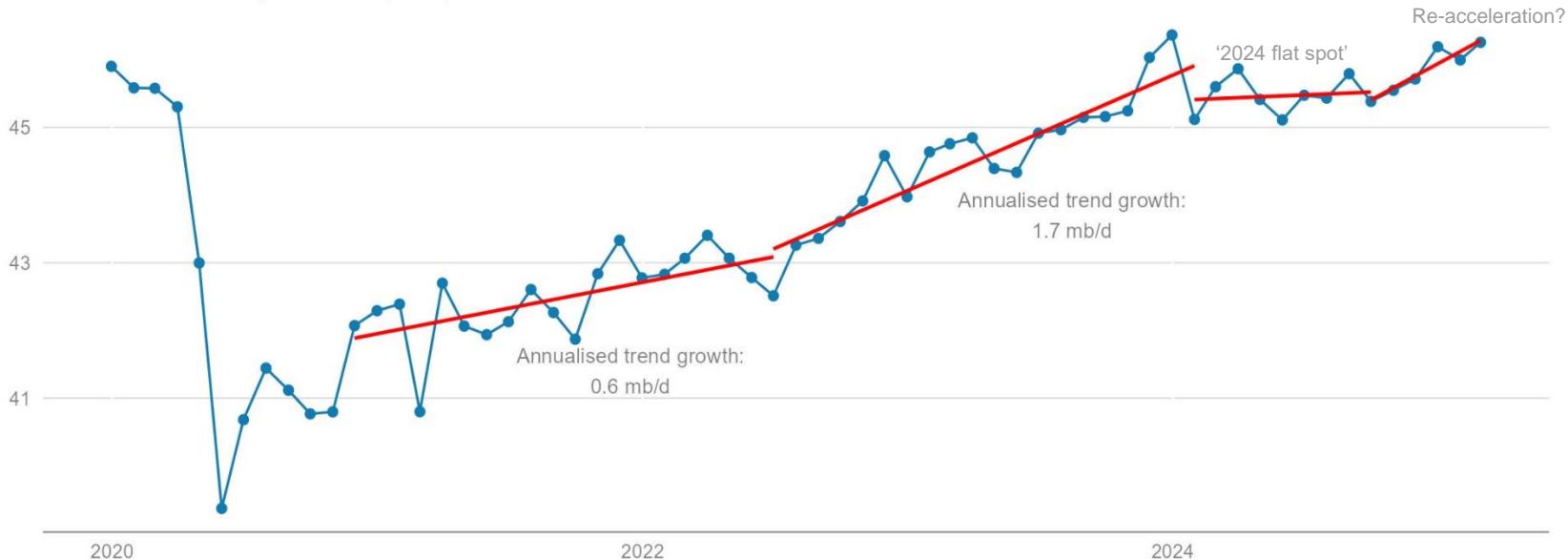
Source: S&P Global, Morgan Stanley Research

Non-Opec supply

After a 'flat spot' during most of 2024, non-OPEC non-Russia production has shown a re-acceleration again in the last few months

Non-OPEC non-Russia

Crude and condensate production (mb/d)



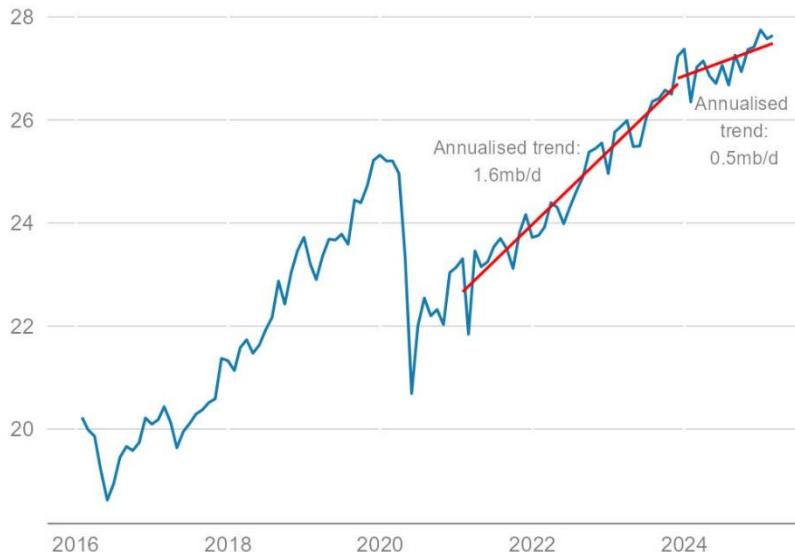
Source: IEA, Morgan Stanley Research

Non-Opec supply

Still, growth in the 'growers' has slowed, whilst decline in the 'decliners' has accelerated over the last 12 months

Production of top 7 non-OPEC growing countries

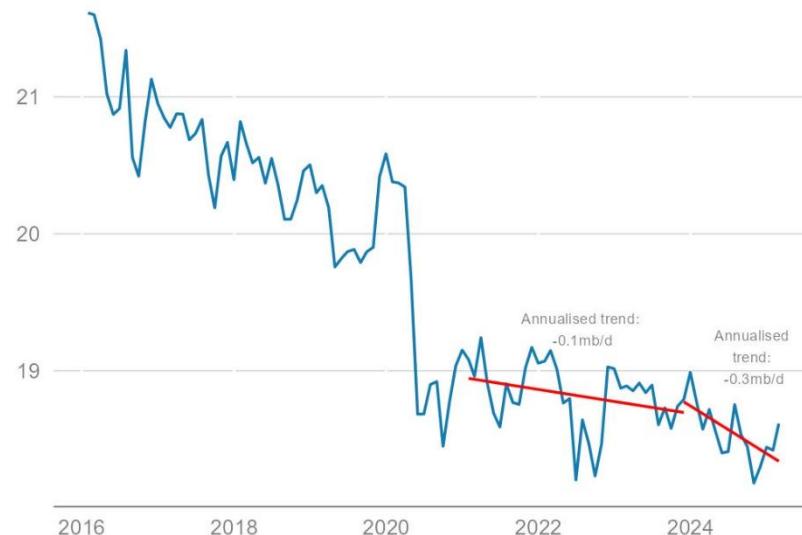
Crude and condensate only, not including NGLs (mb/d)



Source: IEA, Morgan Stanley Research

Production of non-OPEC ex. Russia and top growers

Crude and condensate only, not including NGLs (mb/d)



Source: IEA, Morgan Stanley Research

Non-Opec supply

In 2024, non-OPEC crude + condensate supply disappointed significantly, coming in ~1 mb/d below the expectation at the start of the year...

Consensus production growth forecast for 2024, at different forecast dates

For crude oil and condensate, average of selected forecasters (kb/d)

	Month when forecast was made													
	Dec 2023	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Chg YTD
Non-OPEC total	895	1,120	1,120	990	805	610	595	440	390	325	260	225	165	-955
Brazil	280	245	245	225	215	150	130	100	90	50	15	0	-30	-275
United States	325	560	520	520	405	405	360	325	315	320	280	290	300	-260
Russia	-30	-105	-120	-245	-270	-250	-230	-265	-260	-280	-310	-320	-315	-210
Mexico	-25	-5	-10	-30	-35	-65	-65	-85	-85	-90	-90	-90	-105	-100
South Sudan	-10	0	0	-5	-15	-20	-35	-45	-55	-55	-65	-70	-70	-70
Other	125	30	35	35	35	40	70	55	55	70	100	100	100	70
Angola	5	-25	-30	-20	-20	-25	-20	-15	-10	5	30	35	35	60
United Kingdom	0	-5	0	-15	-20	-65	-35	-35	-40	-40	-50	-55	-60	-55
Azerbaijan	5	15	-5	-5	-10	-15	-15	-20	-15	-20	-20	-20	-20	-40
Norway	70	15	15	25	-5	-20	-15	-20	-30	-30	-15	-15	-20	-35
Oman	-10	-20	-20	-35	-45	-45	-45	-50	-50	-50	-55	-55	-55	-35
Guyana	220	200	235	240	240	225	225	225	225	220	225	225	230	30
Niger	0	0	0	30	30	30	30	15	15	20	25	25	25	25
Australia	-5	15	20	20	15	10	10	10	5	5	0	-5	-5	-25
Ghana	15	25	25	25	25	20	20	5	5	5	5	5	0	-25

Note: consensus defined as average of IEA, Energy Aspects and Platts forecast

Source: IEA, S&P Global Platts, Energy Aspects, Morgan Stanley Research

Non-Opec supply

...and in recent months, consensus estimates for non-OPEC supply growth in 2025 have also started to see some downwards revisions

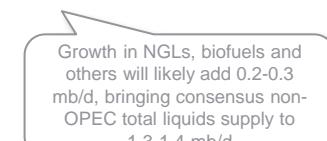
Consensus production growth forecast for 2025, at different forecast dates

For crude oil and condensate, average of selected forecasters (kb/d)

	Month when forecast was made												Chg 6 months
	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	
Non-OPEC total	1,190	1,255	1,325	1,325	1,385	1,390	1,290	1,360	1,325	1,155	1,135	1,120	-275
Mexico	0	-15	-15	-15	-20	-20	-25	-30	-65	-105	-105	-140	-120
Russia	-20	-35	-5	20	15	20	25	5	5	-30	-75	-80	-100
United States	530	495	515	430	425	455	420	425	415	445	450	400	-55
Kazakhstan	95	90	95	105	105	95	95	110	115	80	90	145	50
Norway	100	100	95	95	105	100	85	100	85	70	55	50	-50
Brazil	160	260	255	275	300	290	280	275	290	255	245	240	-45
South Sudan	25	20	35	45	55	55	40	45	20	5	0	10	-45
Argentina	45	55	55	55	60	60	70	80	85	90	95	90	25
Other	75	105	85	80	75	65	90	90	80	75	85	90	25
Malaysia	-50	-30	-35	-30	-30	-25	-10	-5	-5	-10	-5	-5	20
Guyana	110	75	75	75	80	80	70	65	70	70	70	65	-15
Angola	-55	-45	-50	-50	-60	-55	-70	-50	-50	-55	-55	-40	15
Indonesia	-35	-25	-25	-25	-25	-20	-20	-20	-20	-20	-20	-10	15
Bahrain	0	5	0	0	5	5	5	5	10	10	15	15	10
Denmark	10	10	10	10	10	10	5	5	0	0	0	0	-10

Note: consensus defined as average of IEA, Energy Aspects and Platts forecast

Source: IEA, S&P Global Platts, Energy Aspects, Morgan Stanley Research



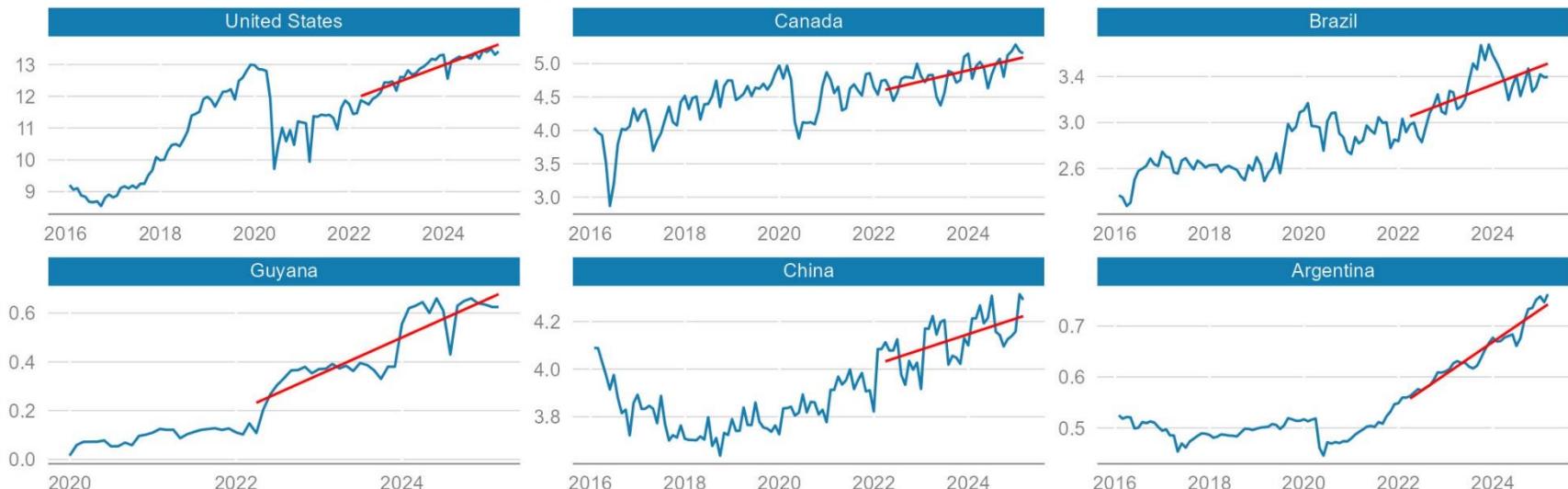
Growth in NGLs, biofuels and others will likely add 0.2-0.3 mb/d, bringing consensus non-OPEC total liquids supply to 1.3-1.4 mb/d

Non-OPEC supply

Supply growth has been driven by six key countries....

Production from selected non-OPEC producers

Based on crude and condensate only; by highest production growth (mb/d)



Note: red line highlights trend over last 2 years

Source: IEA, Morgan Stanley Research

Non-Opec supply

...but there is a much longer tail of smaller producers where production is increasingly in-decline

Production from selected producers

Based on crude and condensate only; by highest production decline (mb/d)



Note: red line highlights trend over last 2 years

Source: IEA, Morgan Stanley Research

Non-Opec supply

Looking ahead, several ‘bottom-up’ modelers still see non-OPEC adding ~4 mb/d by 2027, although we would argue that risks to these estimates are to the downside

Non-OPEC oil production forecasts

Growth/(decline) between 2024 and 2027 (kb/d)

Country	Woodmac	Rystad	Platts	Average
United States	2,336	635	661	1,211
Brazil	1,352	1,017	511	960
Guyana	518	344	517	460
Canada	209	366	539	371
Kazakhstan	313	305	307	308
Argentina	361	312	134	269
Russia	387	257	-335	103
Mexico	-618	-336	73	-293
Other non-OPEC	-696	-397	-302	-465
Total crude	4,162	2,503	2,105	2,924
NGL	778	610	959	782
Other Liquids	197	155	239	197
Total oil liquids	5,137	3,268	3,303	3,903

Note: Total for Woodmac calculated using the average for ‘other liquids’ of Rystad and Platts

Source: Wood Mackenzie, S&P Global Platts, Rystad, Morgan Stanley Research

Non-OPEC production growth forecasts

Growth/(decline) in 2025 (kb/d)

Country	Woodmac	Platts	Rystad	Average
United States	948	435	331	571
Brazil	484	200	314	333
Canada	96	294	186	192
Kazakhstan	247	79	166	164
Argentina	118	75	115	102
Other	472	254	324	350
Egypt	-5	-40	-4	-16
Colombia	-33	3	-23	-18
Vietnam	-17	-25	-19	-20
Ecuador	-51	0	-21	-24
Russia	30	-62	-302	-111
Mexico	-196	-160	-125	-161
Crude/condensate	2,094	1,050	944	1,363
NGL	211	379	186	259
Other	NA	149	89	119
Total liquids	2,305	1,578	1,219	1,701

Source: Wood Mackenzie, S&P Global Platts, Rystad, Morgan Stanley Research

Non-OPEC production growth forecasts

Growth/(decline) in 2026 (kb/d)

Country	Woodmac	Platts	Rystad	Average
United States	1,101	169	211	494
Brazil	505	161	525	397
Guyana	200	241	168	203
Kazakhstan	17	167	139	108
Canada	43	193	83	106
Other	52	31	370	151
Malaysia	-22	-26	-34	-27
Colombia	-46	-7	-33	-29
United Kingdom	-51	-7	-29	-29
Egypt	-42	-17	-36	-32
Norway	-86	-28	4	-37
Mexico	-183	-13	-107	-101
Crude/condensate	1,488	863	1,262	1,204
NGL	229	337	184	250
Other	NA	155	19	87
Total liquids	1,717	1,355	1,464	1,512

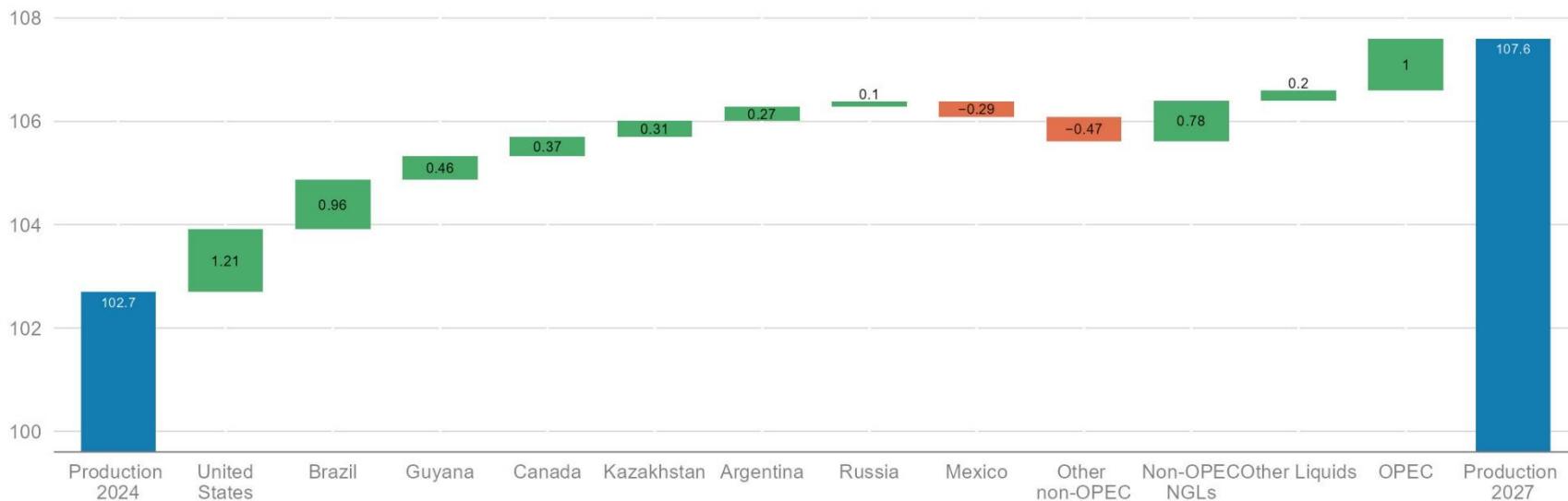
Source: Wood Mackenzie, S&P Global Platts, Rystad, Morgan Stanley Research

Balance

Assuming the average of several forecasts for non-OPEC, and 1 mb/d supply growth for OPEC, supply can reach ~108 mb/d in 2027, which would likely overshoot demand considerably

Potential oil supply

Based on forecasts from Woodmac, Platts and Rystad, taking average for non-OPEC and simply 1 mb/d for OPEC (mb/d)

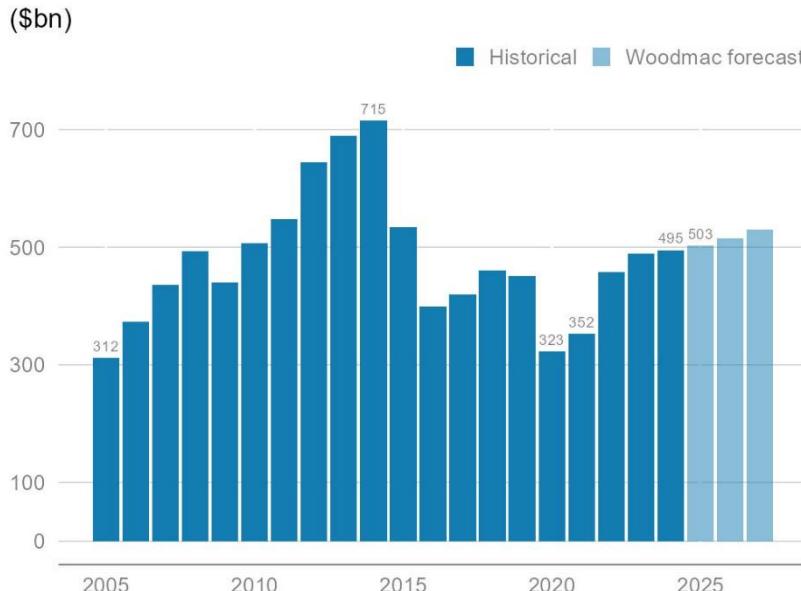


Source: Wood Mackenzie, S&P Global Platts, Rystad, Morgan Stanley Research

Investment

By now, capex has recovered to well over \$500bn, and with a median of ~20.5%, prospective IRRs appear attractive

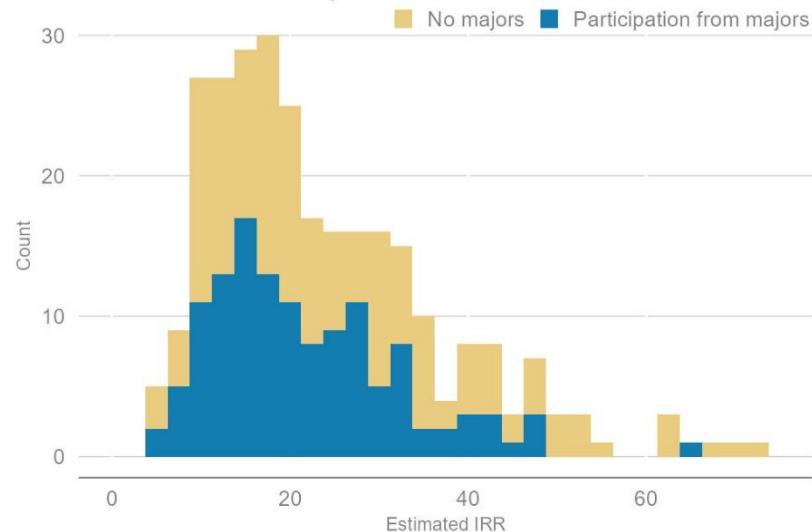
Global oil & gas capex



Source: Wood Mackenzie, Morgan Stanley Research

Distribution of upstream IRRs

Based on 293 upcoming projects approved, justified and/or economic to develop



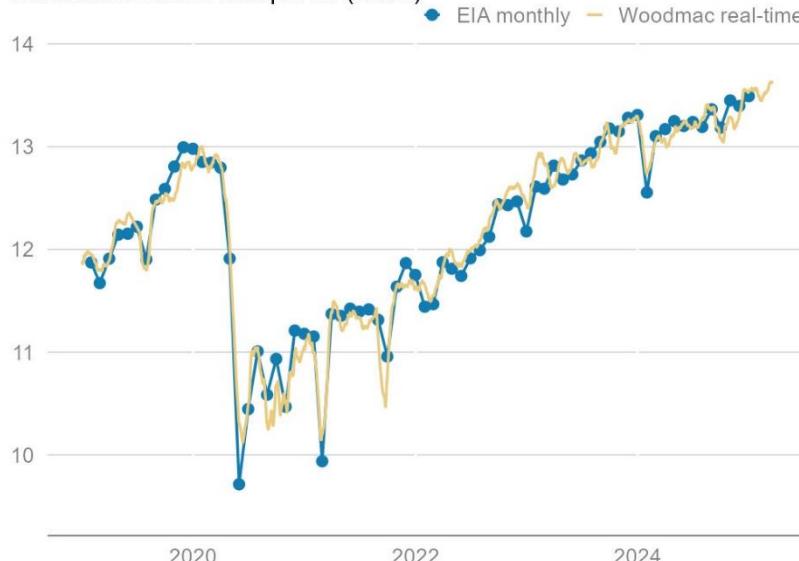
Source: Wood Mackenzie, Morgan Stanley Research

Non-Opec supply

US production continues to grow, albeit at a far slower rate than on average over the last decade

US crude + condensate production

Different sources compared (mb/d)



Source: DOE/EIA, Wood Mackenzie, Morgan Stanley Research

US oil production forecast by Wood Mackenzie

On different forecast dates (mb/d)



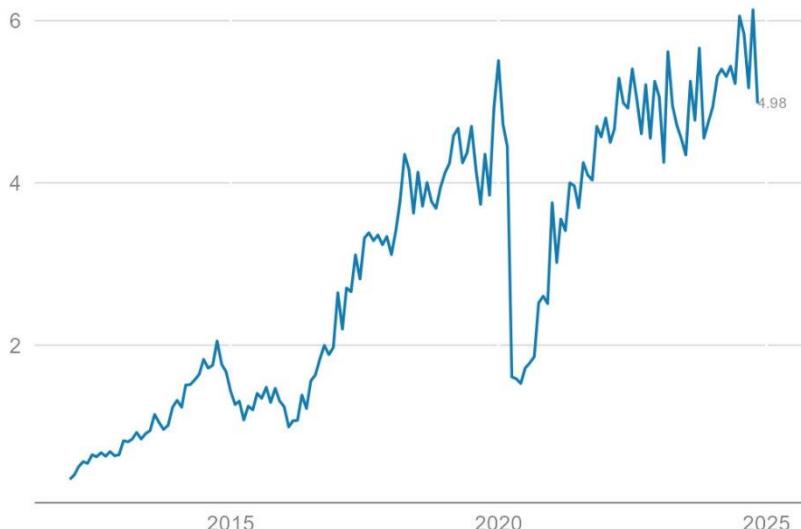
Source: Wood Mackenzie, Morgan Stanley Research

Non-Opec supply

Total lateral length drilled in the Permian appears to have had a burst in late 2024; that said, the number of started frac operations is still trending down

Permian - total lateral length of wells by spud month

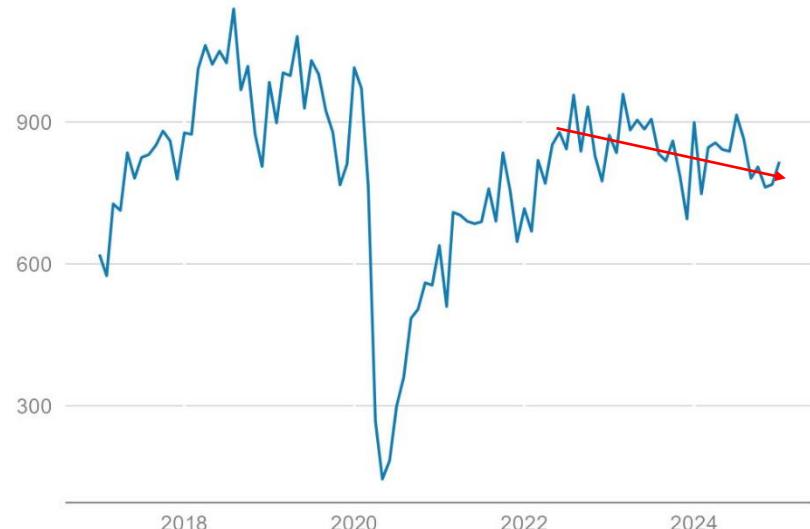
Monthly data to Nov 2024 in million feet



Source: Rystad Energy, Morgan Stanley Research

Started frac operations

In Permian, Bakken, Eagle Ford and Niobrara (to Jan 2025)



Source: Rystad Energy, Morgan Stanley

Non-Opec supply

The median break-even oil price in US shale is still ~\$50/bbl; however, the distribution around this average is very wide; with WTI at ~\$70/bbl, approximately 20% of wells are likely NPV negative

US Shale - median break-even oil price

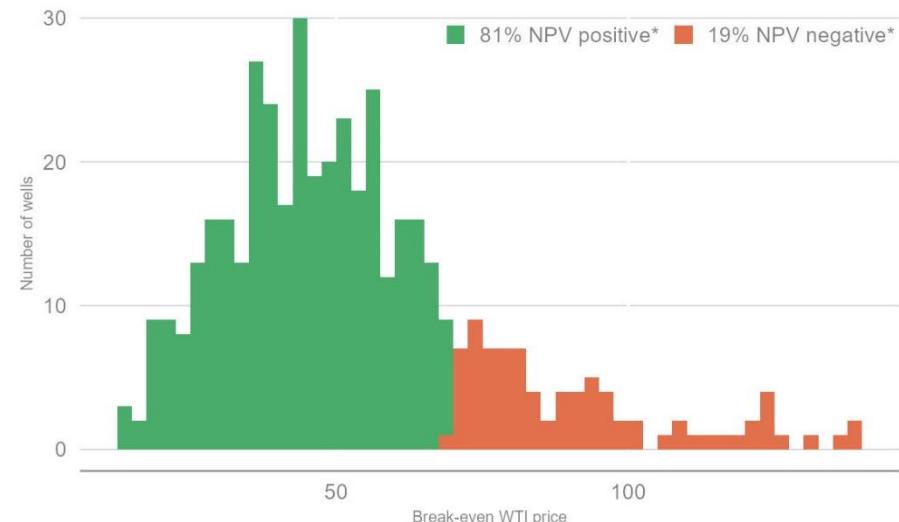
WTI-equivalent, half-cycle break-even price (\$/bbl)



Note: calc requires minimum of 4 months of production data, so latest data point is for Nov 2024
Source: Rystad Energy, Morgan Stanley Research

Distribution of full-cycle break-even oil price

WTI eq. for horizontal wells in oil-focussed basins, start-up in Nov 2024

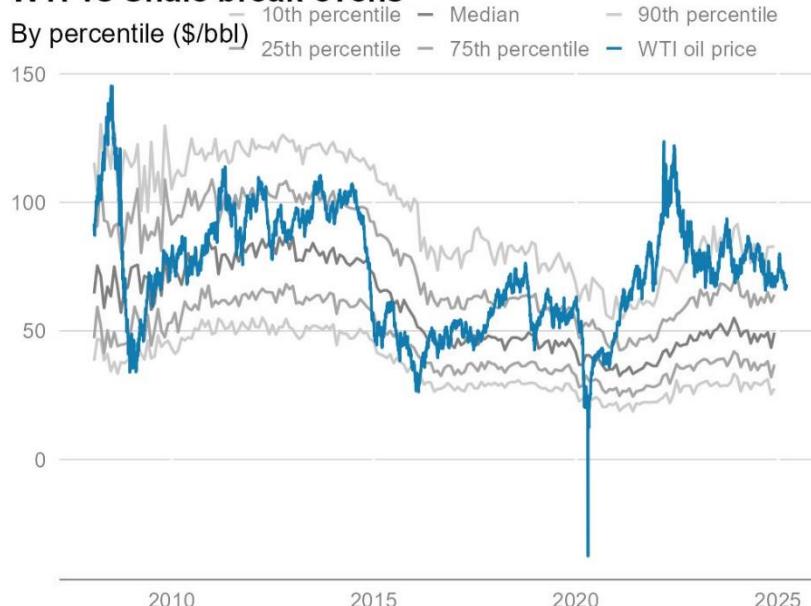


* assuming the average WTI price during the start-up month of \$69.5/bbl were to last from then on
Source: Rystad, Morgan Stanley Research

Non-Opec supply

We can express WTI oil prices as a percentile within the monthly distribution of break-evens; this possibly hints at a floor around the 75th percentile, or \$60-65/bbl for WTI

WTI vs Shale break-evens



Source: Rystad Energy, Platts, Morgan Stanley Research

WTI crude oil price

Expressed as percentile shale break-even (%)

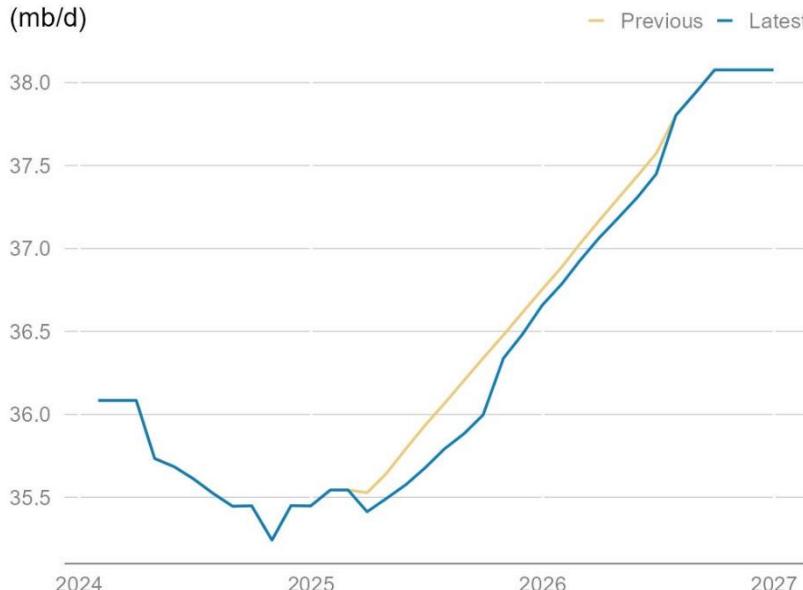


Source: Rystad Energy, Morgan Stanley Research

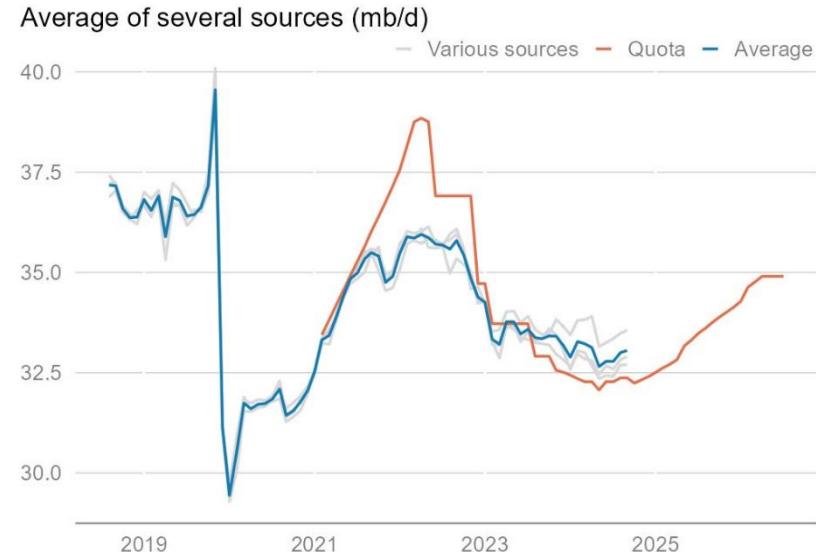
Opec supply

With updated compensation plans announced last week, OPEC's production quota has come down modestly again

OPEC Quota Changes



OPEC 9+3 crude oil production



Note: OPEC 9+3 consists of the 9 formal members of OPEC and the 3 non-OPEC countries that have agreed to additional voluntary cuts (i.e. Russia, Kazakhstan and Oman)

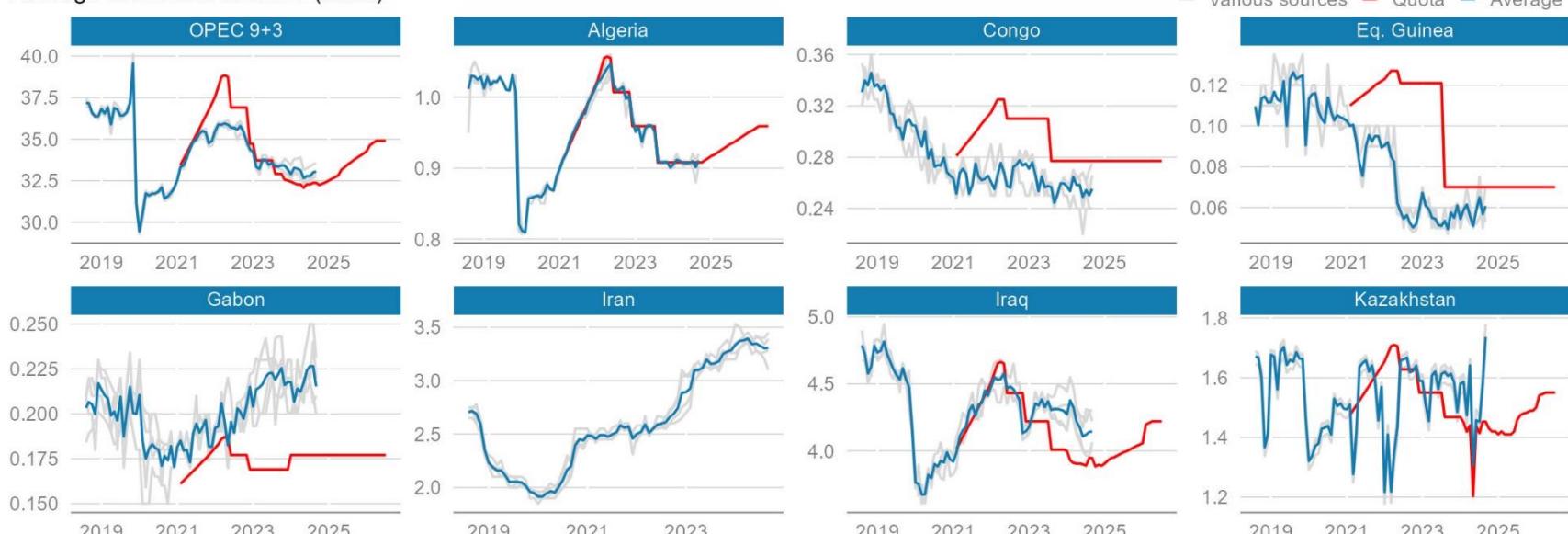
Source: S&P Global Platts, IEA, Energy Aspects, EIA/DOE, Morgan Stanley Research

Opec supply

Various OPEC countries are showing differing levels of adherence to their quota; estimates vary across data sources for Iraq's production...

Crude oil production from key OPEC+ countries

Average of several sources (mb/d)



Note: OPEC 9+3 consists of the 9 formal members of OPEC and the 3 non-OPEC countries that have agreed to additional voluntary cuts (i.e. Russia, Kazakhstan and Oman)
Source: S&P Global Platts, IEA, Energy Aspects, EIA/DOE, Morgan Stanley Research

Opec supply

....as well as production for the UAE

Crude oil production from key OPEC+ countries

Average of several sources (mb/d)



Note: OPEC 9+3 consists of the 9 formal members of OPEC and the 3 non-OPEC countries that have agreed to additional voluntary cuts (i.e. Russia, Kazakhstan and Oman)
Source: S&P Global Platts, IEA, Energy Aspects, EIA/DOE, Morgan Stanley Research

Opec supply

As a result of steady production cuts, OPEC's market share has declined over time; also, spare capacity is high compared to history

OPEC market share

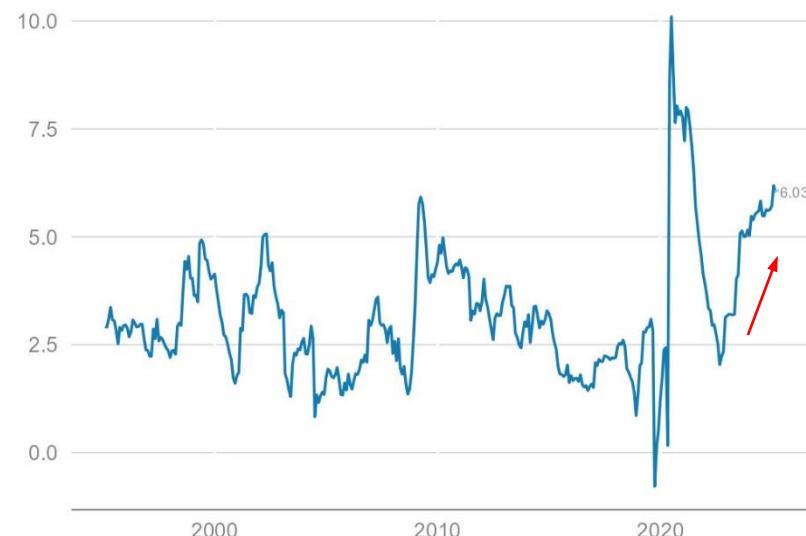
Of global oil liquids production (%)



Note: analysis based on crude oil, condensate, NGLs, biofuels and other non-conventional sources of oil liquids; chart reflects current OPEC membership throughout
Source: IEA, IE Statistical Review, Morgan Stanley Research

OPEC+ spare capacity

Data to Feb 2025 (mb/d)



Source: S&P Global Commodities Insights, Morgan Stanley Research

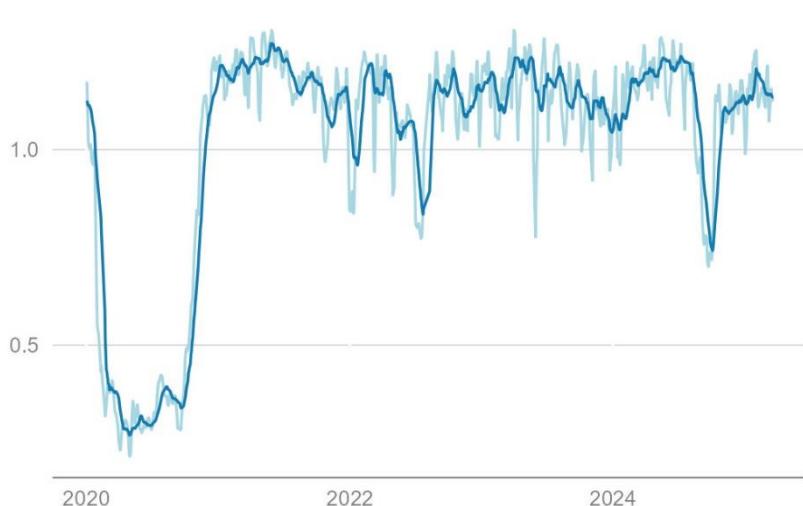
Opec supply

Judging by seaborne exports, Libya's crude production has grown strongly

Libya

High frequency oil production estimate (mb/d)

— 5 day — 30 day moving average

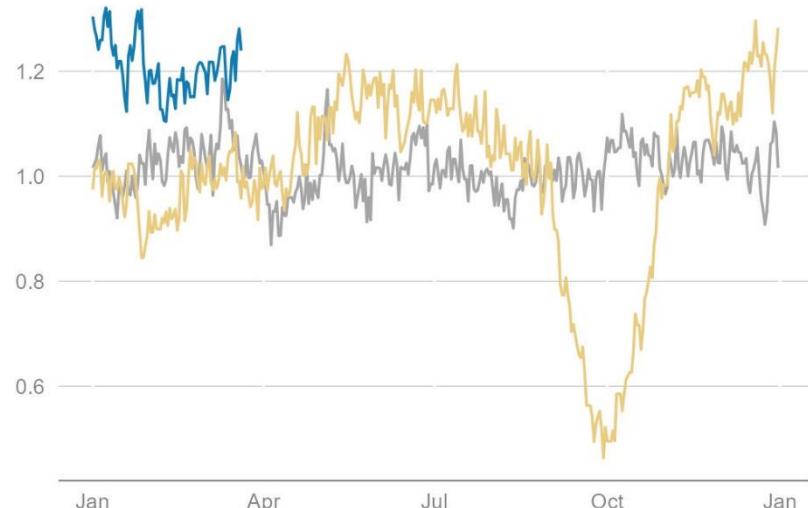


Source: Wood Mackenzie, Morgan Stanley Research

Libya

Seaborne crude oil exports (mb/d)

— 2025 — 2024 — 2023



Source: Vortexa, Morgan Stanley Research

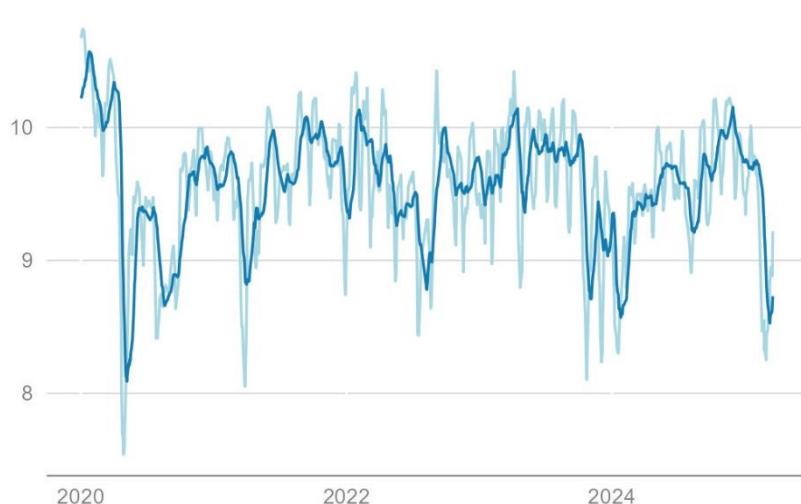
Opec supply

Saudi Arabia's production and exports appear to have declined again recently

Saudi Arabia

High frequency oil production estimate (mb/d)

— 5 day — 30 day moving average

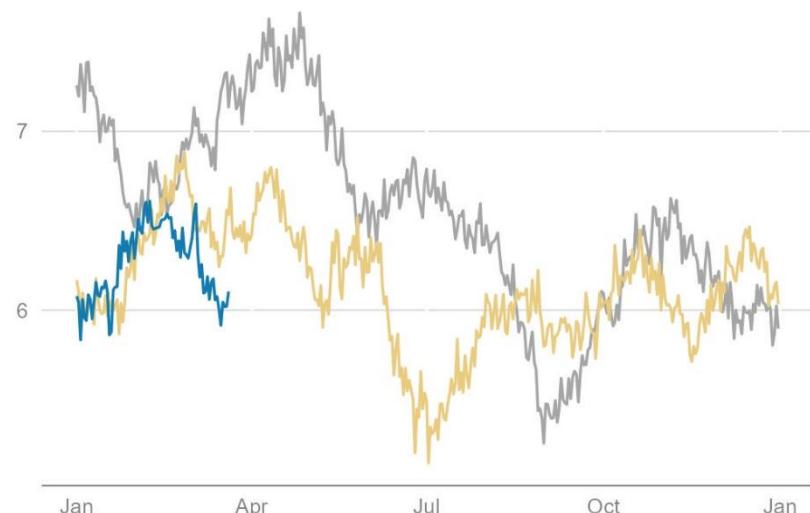


Source: Wood Mackenzie, Morgan Stanley Research

Saudi Arabia

Seaborne crude oil exports (mb/d)

— 2025 — 2024 — 2023



Source: Vortexa, Morgan Stanley Research

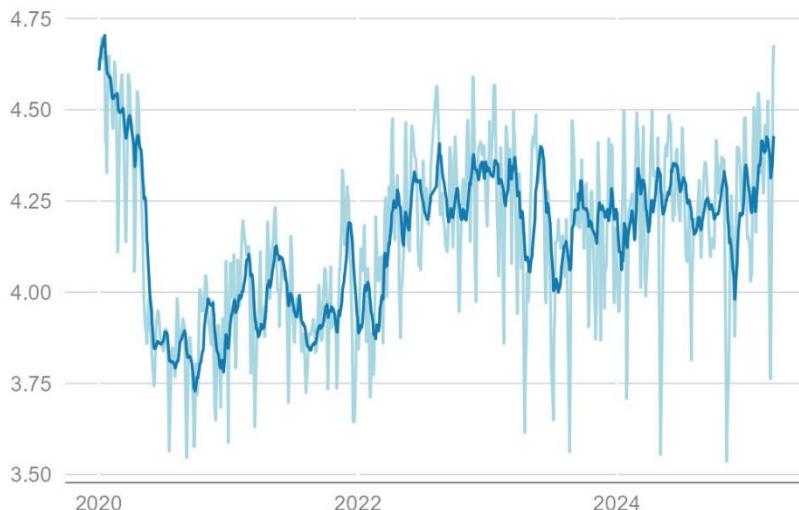
Opec supply

After declining in late 2024, Iraq's production seems to have increased sharply recently

Iraq

High frequency oil production estimate (mb/d)

— 5 day — 30 day moving average

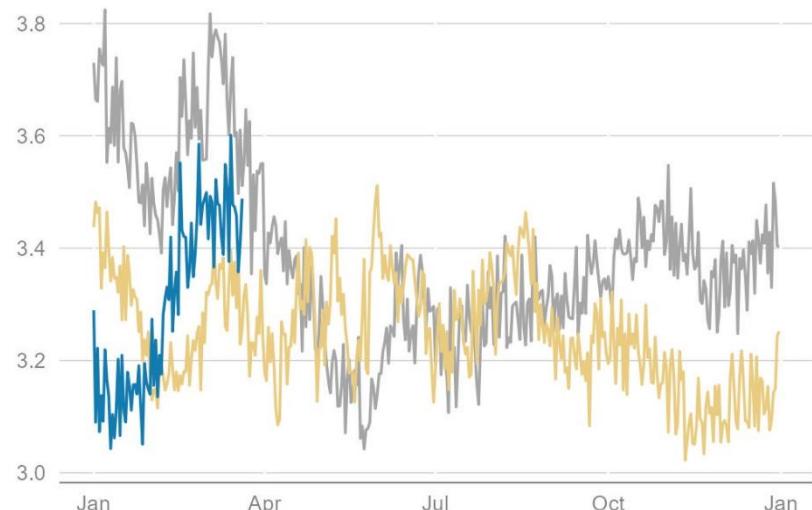


Source: Wood Mackenzie, Morgan Stanley Research

Iraq

Seaborne crude oil exports (mb/d)

— 2025 — 2024 — 2023



Source: Vortexa, Morgan Stanley Research

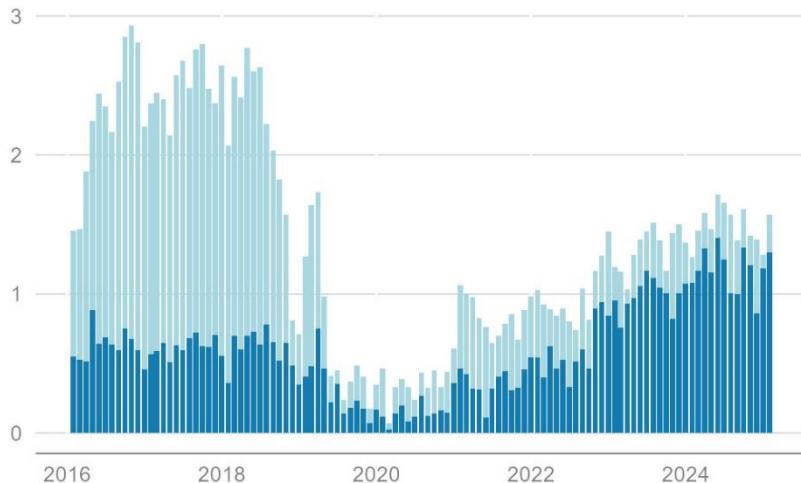
Opec supply

Iran's exports are mostly going to China, and remain close to 1.5 mb/d

Seaborne crude oil exports

From Iran, by destination (mb/d)

■ Other ■ China



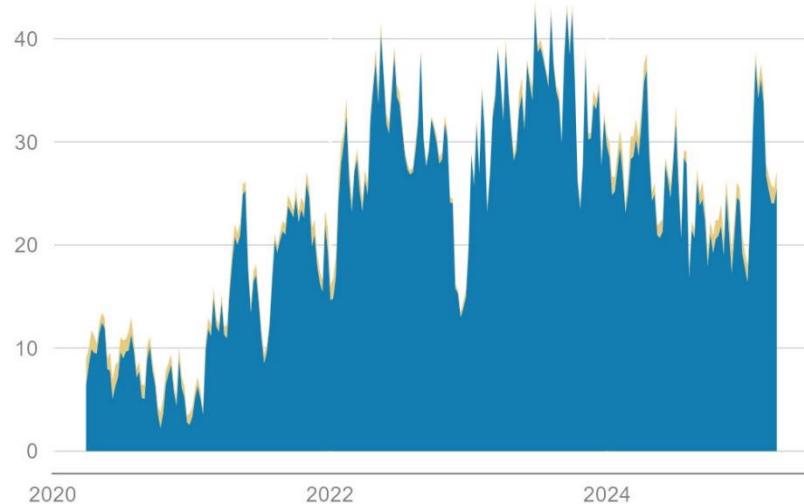
Note: data to Jan 2025

Source: Vortexa, Morgan Stanley Research

Floating storage

Of oil originating from Iran (mln bbl)

■ Products ■ Crude



Source: Vortexa, Morgan Stanley Research

Seaborne Exports

Judging by seaborne exports, non-OPEC production picked up again in February, whilst OPEC is keeping growth in-check

Non-OPEC: Seaborne crude oil exports

(mb/d)

Origin	Level			Change			
	Feb 2025	Month earlier	Prev. 3 month average	Year earlier	MoM	From 3 month average	YoY
Russia	4.89	4.65	4.60	4.95	0.24	0.29	-0.06
United States	3.88	3.75	3.75	4.30	0.13	0.14	-0.42
Norway	1.71	1.60	1.60	1.70	0.10	0.11	0.01
Brazil	1.61	1.34	1.44	1.60	0.27	0.17	0.01
Angola	1.02	0.92	1.00	1.12	0.10	0.03	-0.10
Mexico	0.88	0.65	0.85	1.05	0.24	0.03	-0.17
Oman	0.86	0.72	0.87	0.86	0.14	0.00	0.00
Egypt	0.77	0.93	0.75	1.10	-0.16	0.02	-0.33
Qatar	0.73	0.66	0.69	0.83	0.07	0.03	-0.10
Canada	0.61	0.73	0.68	0.36	-0.12	-0.07	0.25
Guyana	0.56	0.64	0.60	0.63	-0.08	-0.04	-0.07
Other	3.53	3.80	3.89	3.89	-0.27	-0.37	-0.36
Total	21.05	20.39	20.73	22.39	0.66	0.32	-1.34

Source: Vortexa, Morgan Stanley Research

OPEC: Seaborne crude oil exports

(mb/d)

Origin	Level			Change			
	Feb 2025	Month earlier	Prev. 3 month average	Year earlier	MoM	From 3 month average	YoY
Saudi Arabia	6.42	6.34	6.20	6.57	0.07	0.21	-0.15
Iraq	3.50	3.14	3.15	3.28	0.35	0.34	0.21
UAE	2.83	2.82	2.90	3.01	0.01	-0.06	-0.18
Kuwait	1.33	1.47	1.44	1.22	-0.15	-0.11	0.11
Nigeria	1.27	1.26	1.30	1.38	0.01	-0.03	-0.11
Iran	1.21	1.56	1.41	1.46	-0.35	-0.20	-0.24
Libya	1.17	1.18	1.19	0.98	-0.01	-0.02	0.19
Venezuela	0.73	0.76	0.76	0.61	-0.03	-0.03	0.12
Algeria	0.53	0.37	0.46	0.42	0.16	0.07	0.10
Congo	0.24	0.25	0.22	0.17	-0.01	0.02	0.08
Gabon	0.19	0.25	0.24	0.24	-0.07	-0.05	-0.05
Equatorial Guinea	0.09	0.02	0.08	0.04	0.07	0.01	0.06
Total	19.51	19.44	19.36	19.37	0.07	0.16	0.15

Source: Vortexa, Morgan Stanley Research

Balance

Inventories have risen less so far this year than our S/D estimates suggests; still, we foresee a modest surplus during the rest of 2025

Liquids balance

	2022	2023	1Q24	2Q24	3Q24	4Q24	2024	1Q25	2025	3Q25	4Q25	2025	2026	2024	2025	2026	y/y change
Demand	99.9	102.0	101.3	102.8	103.8	103.6	102.9	102.6	103.3	104.8	104.5	103.8	104.5	0.8	0.9	0.7	
OECD	45.6	45.7	44.8	45.6	46.2	46.1	45.7	45.3	45.2	46.1	46.0	45.7	45.6	-	0.0	-	0.0
Non-OECD	54.3	56.4	56.5	57.2	57.6	57.6	57.2	57.3	58.1	58.7	58.5	58.2	58.9	0.8	0.9	0.8	
Non-OPEC supply	67.0	69.4	69.5	70.3	70.6	70.8	70.3	70.5	71.5	72.1	72.2	71.6	72.5	0.9	1.3	0.9	
USA	17.9	19.4	19.4	20.2	20.3	20.7	20.2	20.2	20.6	20.7	20.8	20.6	21.0	0.7	0.4	0.4	
Russia	11.1	11.0	10.8	10.8	10.6	10.6	10.7	10.6	10.5	10.5	10.5	10.5	10.5	-	0.2	-	0.0
OPEC NGLs/condensate	5.3	5.4	5.4	5.5	5.5	5.4	5.4	5.5	5.6	5.6	5.7	5.6	5.7	0.0	0.1	0.1	
Call on OPEC crude	27.6	27.2	26.4	27.0	27.7	27.4	27.1	26.7	26.2	27.0	26.6	26.6	26.3	-	0.1	-	0.5
OPEC crude	27.7	27.4	26.9	27.4	27.5	27.2	27.3	27.4	27.3	27.4	27.5	27.4	28.1	-	0.2	0.2	0.6
Implied balance	0.1	0.2	0.5	0.4	0.2	0.2	0.1	0.7	1.1	0.4	0.9	0.8	1.7	-	0.1	0.7	1.0
Misc to balance	0.2	-	0.6	0.2	0.3	-	1.7	0.4	-	0.2	-	0.6	-	-	0.2	-	0.0
Stock change	0.3	-	0.3	0.8	0.7	-	1.9	0.2	-	0.1	1.1	0.4	0.9	0.6	1.7	0.3	0.7

Price forecast - Brent (\$/bbl)

Period	Bear	Base	Bull
1Q25	55.0	75.0	95.0
2Q25	55.0	70.0	95.0
3Q25	55.0	67.5	95.0
4Q25	55.0	67.5	95.0
2026	55.0	70.0	95.0

Price forecast - WTI (\$/bbl)

Period	Bear	Base	Bull
1Q25	50.0	71.0	90.0
2Q25	50.0	66.0	90.0
3Q25	50.0	63.5	90.0
4Q25	50.0	63.5	90.0
2026	50.0	66.0	90.0

Crude and condensate balance

	2022	2023	1Q24	2Q24	3Q24	4Q24	2024	1Q25	2025	3Q25	4Q25	2025	2026	2024	2025	2026	y/y change
Demand	81.8	83.0	83.3	83.0	83.8	83.3	83.4	83.3	83.3	84.9	83.8	83.8	84.3	0.4	0.5	0.5	
Refinery runs	81.1	82.2	82.7	82.5	83.0	82.9	82.8	82.8	82.6	84.0	83.2	83.1	83.6	0.6	0.4	0.5	
Direct burn	0.7	0.8	0.6	0.5	0.8	0.4	0.6	0.6	0.7	0.9	0.6	0.7	0.7	-	0.2	0.1	-0.0
Non-OPEC supply	51.8	53.3	53.7	53.3	53.3	53.7	53.5	54.1	54.3	54.6	55.0	54.5	55.2	0.2	1.0	0.6	
USA	12.0	12.9	12.9	13.2	13.2	13.4	13.2	13.4	13.5	13.5	13.6	13.5	13.7	0.3	0.3	0.2	
Russia	10.7	10.6	10.5	10.4	10.2	10.3	10.3	10.2	10.2	10.2	10.2	10.2	10.2	-	0.3	-0.1	0.0
OPEC supply	29.6	29.4	29.0	29.4	29.6	29.3	29.3	29.6	29.6	29.7	29.8	29.7	30.4	-	0.1	0.4	0.7
Crude	27.7	27.4	26.9	27.4	27.5	27.2	27.3	27.4	27.3	27.4	27.5	27.4	28.1	-	0.2	0.2	0.6
Condensate	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	0.1	0.2	0.0	
Implied balance	-	0.4	-	0.2	-	0.6	-	0.2	-	0.3	-	0.5	-	1.0	0.4	1.2	-
Misc to balance	0.5	-	0.2	1.1	0.8	-	1.1	0.4	0.3	0.3	0.2	0.1	0.2	0.1	0.5	-	0.1
Stock change	0.1	-	0.4	0.4	0.6	-	2.0	0.1	-	0.2	0.7	1.2	0.6	1.3	0.2	0.8	0.8

Source: IEA, S&P Global, Argus, Energy Aspects, Wood Mackenzie, Rystad, Vortexa, Morgan Stanley Research

Inventories

Total oil in ‘tanks and tankers’ drew in January, but started to build in February and that appears to have continued so far in March

Observable crude oil inventories

(million bbl)

	Level	Average daily change						
		Current	-4 wks	-13 wks	-26 wks	Feb	Jan	Dec
Commercial								
United States	438.8	0.31	0.24	0.14	0.36	0.37	-0.40	
Japan	69.7	0.30	0.02	-0.01	-0.25	0.24	0.02	
ARA region	52.8	0.08	-0.01	-0.02	0.25	-0.26	0.13	
Other OECD	557.4	-0.32	0.05	-0.04	0.24	0.40	-0.43	
China	862.2	0.41	-0.36	-0.23	-0.93	-0.62	0.20	
Other non-OECD	1,093.8	0.60	0.13	0.03	0.42	-0.52	-0.47	
Floating storage	66.9	-0.17	0.09	0.05	0.10	0.57	-0.46	
Oil-in-transit	1,089.4	1.48	0.85	0.39	1.32	-0.49	0.32	
Sub-total	—	4,231.0	2.7	1.0	0.3	1.5	-0.3	-1.1
SPR								
United States	395.9	0.02	0.03	0.08	0.01	0.05	0.06	
Japan	265.7	-0.13	0.06	-0.01	0.08	0.00	0.00	
ARA region	1.0	0.00	0.00	0.00	0.00	0.00	0.00	
Other OECD	267.9	0.00	-0.02	0.00	0.00	0.00	-0.06	
China	188.3	0.11	-0.02	-0.01	0.04	-0.20	0.01	
Sub-total	—	1,118.8	0.0	0.0	0.1	0.1	-0.2	0.0
Total	—	5,349.8	2.7	1.1	0.4	1.6	-0.5	-1.1

Source: IEA, EIA/DOE, PJK, IE, Genscape, PAJ, Platts, Vortexa, Morgan Stanley Research

Observable oil products inventories

(million bbl)

	Level	Average daily change						
		Current	-4 wks	-13 wks	-26 wks	Feb	Jan	Dec
On land								
Light ends	464.8	-0.28	0.27	0.21	-0.21	0.87	0.80	
Middle distillates	726.5	-0.47	0.12	-0.10	-0.01	0.25	0.29	
Fuel oil & resid	142.5	-0.01	-0.06	-0.01	-0.01	-0.07	0.34	
Other/not specified	504.8	-0.05	-0.61	-0.56	-0.60	-1.36	-0.72	
Sub-total	—	1,838.58	-0.81	-0.28	-0.46	-0.83	-0.31	0.71
At sea								
Light ends	187.8	-0.42	-0.02	0.07	0.56	-0.23	0.20	
Middle distillates	344.3	0.16	0.16	-0.05	0.03	-0.27	0.92	
Fuel oil & resid	128.7	-0.19	0.01	0.06	0.28	-0.22	0.44	
Other/not specified	147.7	0.21	-0.05	0.02	-0.23	-0.18	0.21	
Sub-total	—	808.56	-0.24	0.10	0.10	0.64	-0.90	1.77
Total	—	2,647.14	-1.05	-0.18	-0.36	-0.19	-1.21	2.48

Source: IEA, EIA/DOE, PJK, IE, Genscape, PAJ, Platts, Vortexa, Morgan Stanley Research

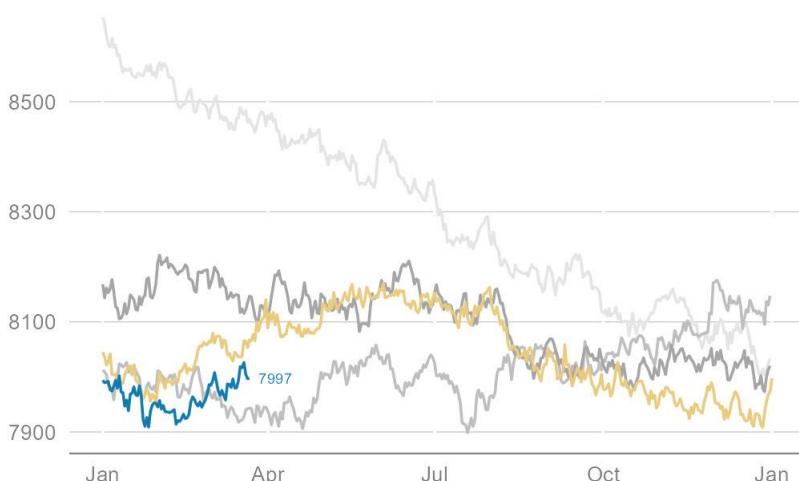
Inventories

Commercial OECD inventories on land-only are a key driver of calendar spreads, and these inventories have been broadly stable so far this year

Observable crude oil and oil products inventories

On land, at sea and in-transit (mln bbl)

— 2021 — 2022 — 2023 — 2024 — 2025



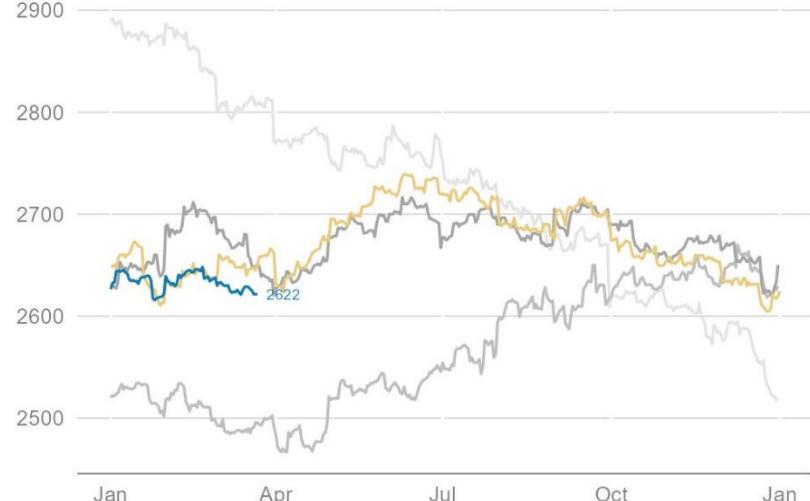
Note: Inventories include SPR

Source: IEA, EIA/DOE, PJK, IE, Genscape, PAJ, Platts, Vortexa, Morgan Stanley Research

OECD commercial oil inventories

Total oil, on land only (mln bbl)

— 2021 — 2022 — 2023 — 2024 — 2025



Source: IEA, EIA/DOE, PJK, PAJ, Platts, Vortexa, Morgan Stanley Research

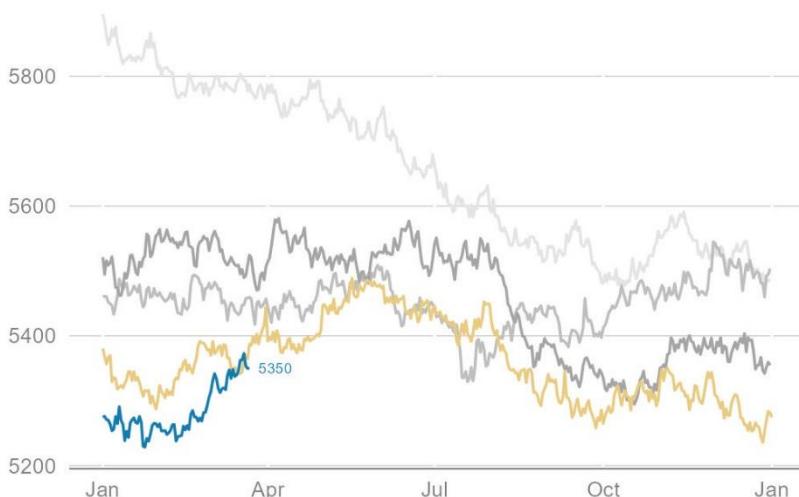
Inventories

Inventories for crude oil and oil products have recently shown divergent trends, which can partly be explained by seasonal refinery maintenance

Observable crude oil inventories

On land, at sea and in-transit (mln bbl)

— 2021 — 2022 — 2023 — 2024 — 2025

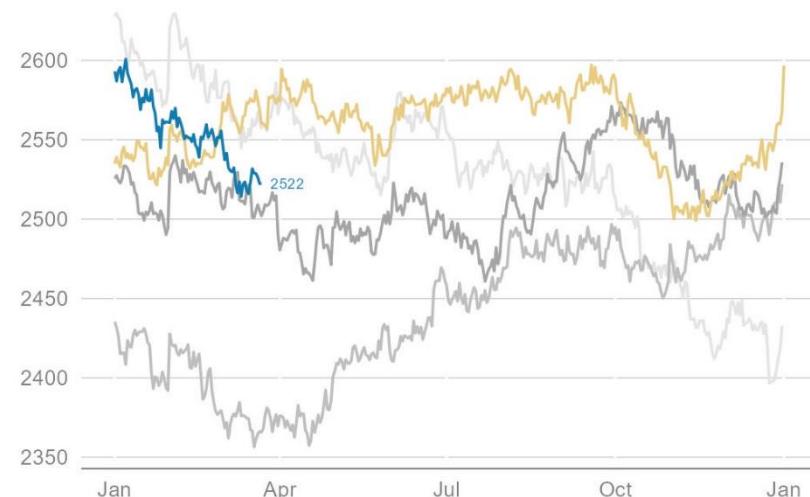


Source: IEA, EIA/DOE, PJK, IE, Genscape, PAJ, Platts, Vortexa, Morgan Stanley Research

Observable refined oil products inventories

On land, at sea and in-transit (mln bbl)

— 2021 — 2022 — 2023 — 2024 — 2025



Source: IEA, EIA/DOE, PJK, IE, PAJ, Platts, Morgan Stanley Research

Morgan Stanley

Refining & Oil Products

Refining

Refining margins saw strength in February, but that has mostly been reversed

Cracking netback margin



Note: chart shows average margin that can be realised from the 5 most profitable crudes at any time in each particular location/configuration combination
Source: S&P Global Platts, Morgan Stanley Research

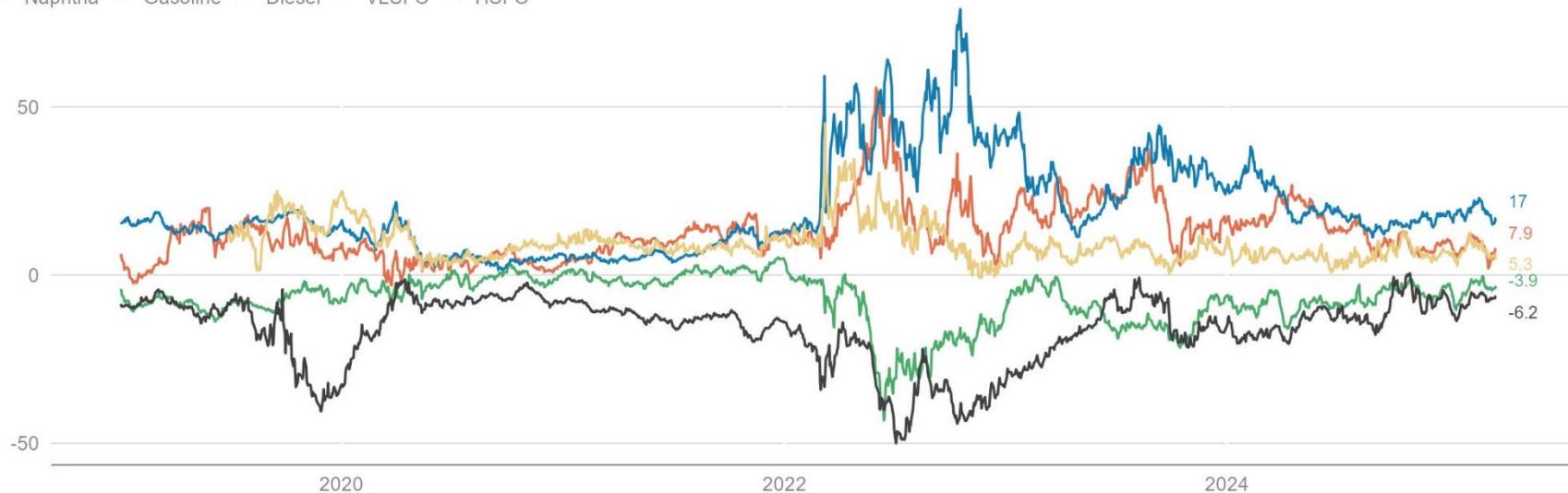
Refining

Support for refining margins has recently come mostly from fuel oil and naphtha; diesel remains robust whilst gasoline cracks have trended sideways

Refined product crack spreads

vs Dated Brent; basis: Antwerp-Rotterdam-Amsterdam (\$/bbl)

— Naphtha — Gasoline — Diesel — VLSFO — HSFO

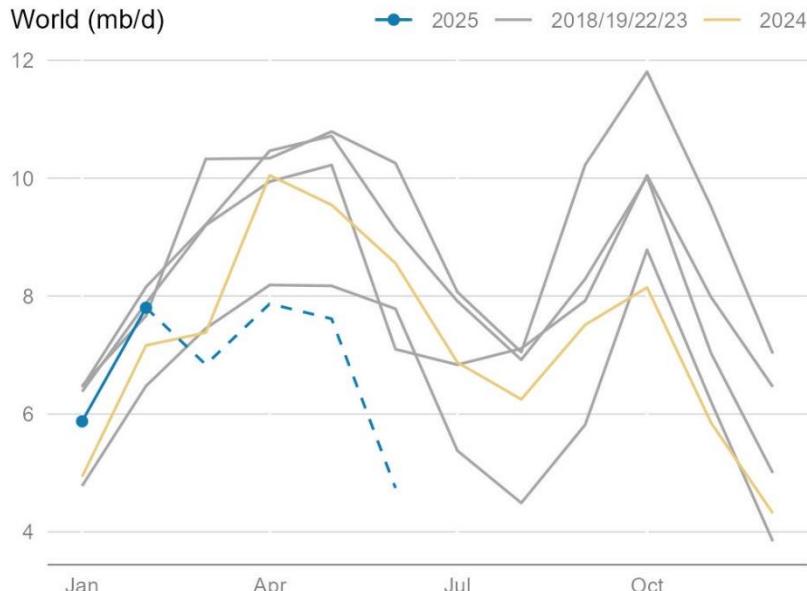


Source: Platts, Morgan Stanley

Refining

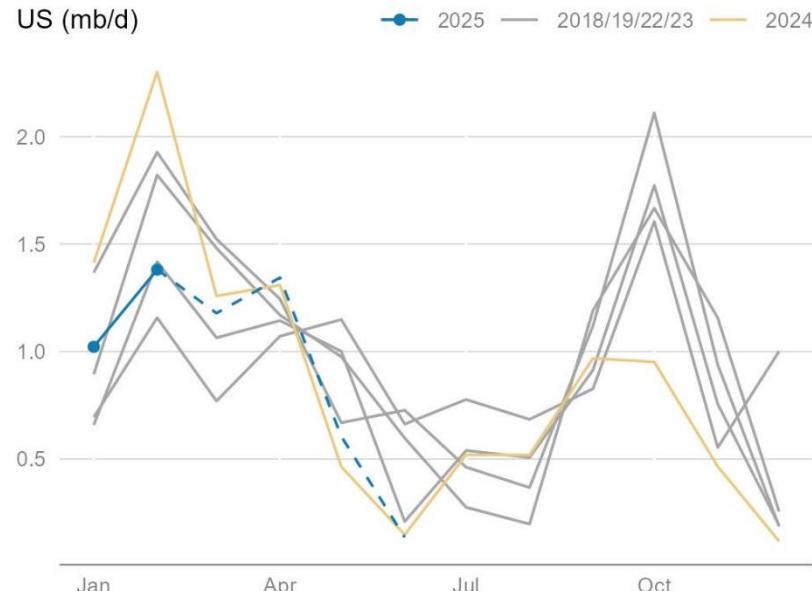
Refinery outages were broadly normal in January and February, and will likely peak around April after which crude demand will likely rise to meet summer demand

Refinery outages



Source: IIR, Morgan Stanley Research

Refinery outages



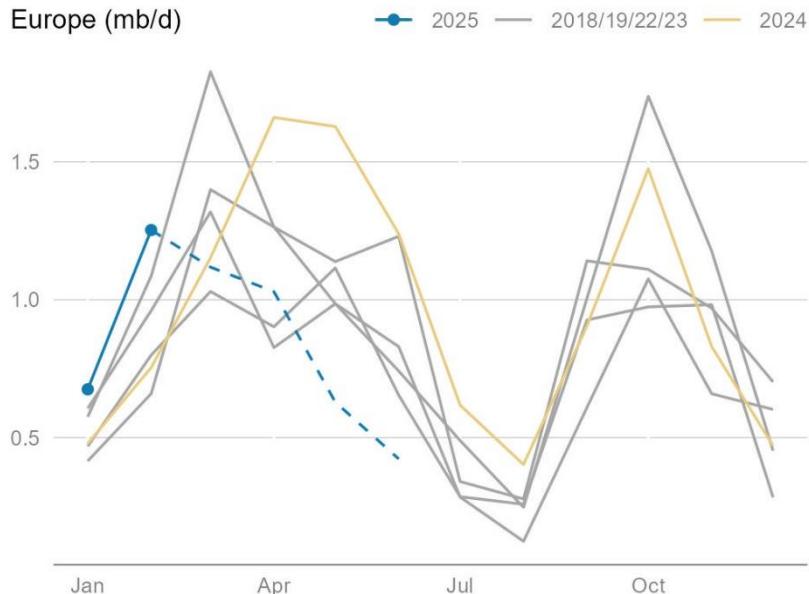
Source: IIR, Morgan Stanley Research

Refining

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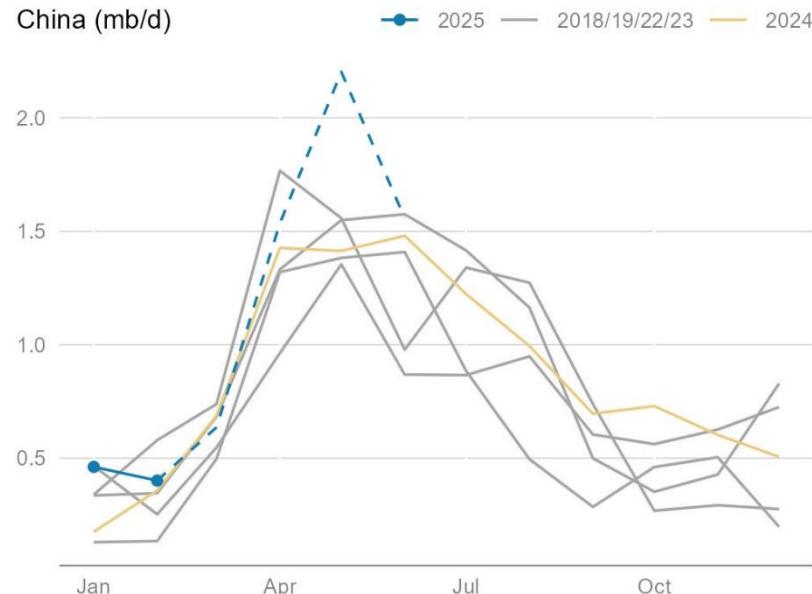
Refinery outages

Europe (mb/d)



Refinery outages

China (mb/d)



Source: IIR, Morgan Stanley Research

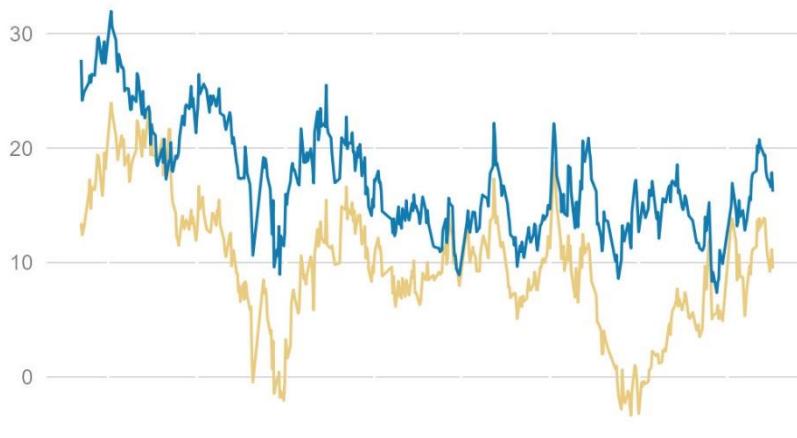
Refining

Margins in China have recovered sharply in the latter part of 2024 and early 2025; refinery runs increased marginally year-on-year in Jan/Feb...

China

Bohai Bay product crack spreads, excl. tax, \$/bbl

— Gasoline — Gasoil/diesel



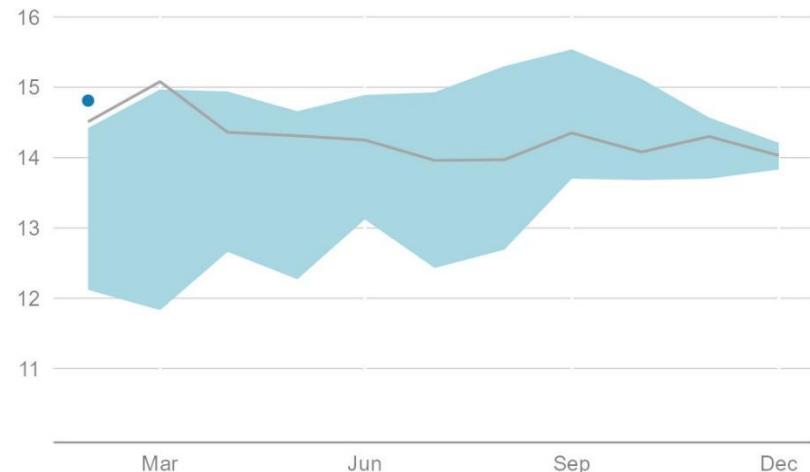
May 2023 Aug 2023 Nov 2023 Feb 2024 May 2024 Aug 2024 Nov 2024 Feb 2025

Source: Argus, Morgan Stanley Research

China refinery throughput

(mb/d)

■ 5 Year range — Current year — Last year



Note: Data for Jan and Feb is usually reported on a combined basis; first data point in the chart shows average of these two months

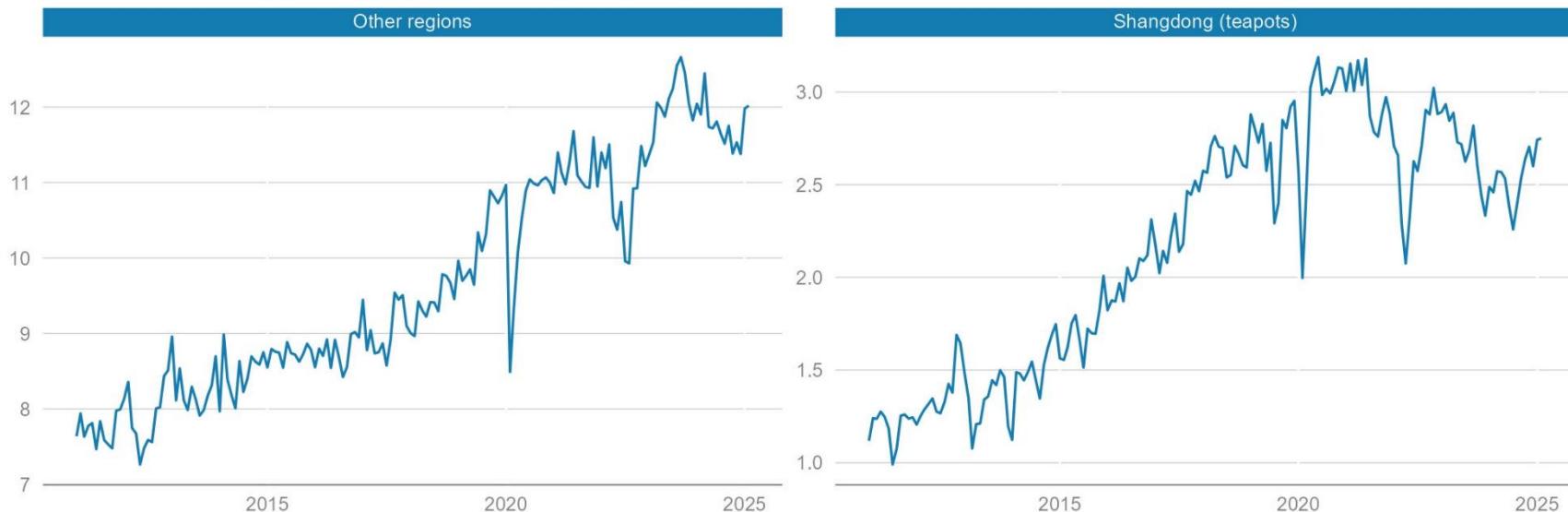
Source: National Bureau of Statistics, Morgan Stanley Research

Refining

Runs in China have increased recently in both the Shangdong area, where most 'teapots' are located, as well as in other regions

China - Refinery runs

Split between Shandong (for teapots) and other regions (mb/d)



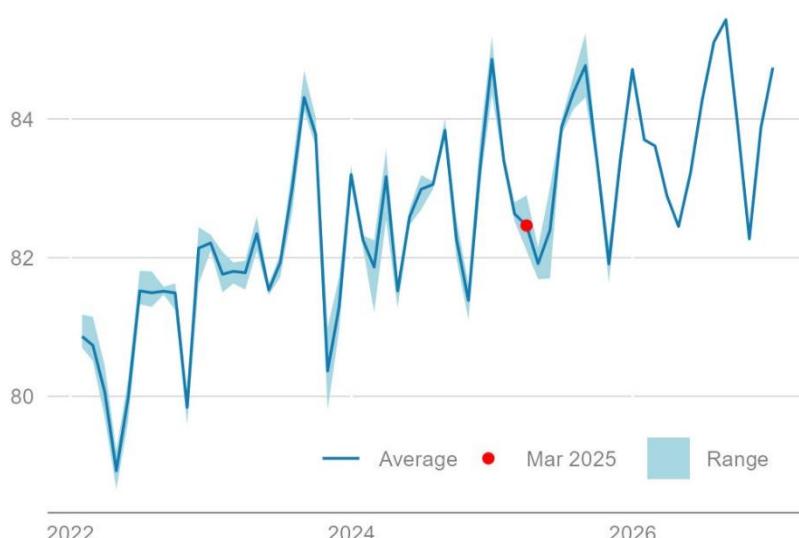
Source: Argus, Morgan Stanley Research

Refining

Refinery runs are likely to bottom in April, after which seasonal support kicks in; still, revisions to consensus estimates for refinery runs have been negative near-term but positive for later this year

Global refinery runs

Average across forecasters (mb/d)



Source: IEA, Energy Aspects, S&P Global, Morgan Stanley Research

Global refinery runs - consensus revisions

By forecast date (mb/d)



Source: S&P Global Platts, Energy Aspects, IEA, Morgan Stanley Research

Refining

Consensus estimates for global refinery runs for May has fallen by ~320 kb/d recently, but estimates for runs by September have seen marginal upwards revisions

Global refinery throughput

Revisions to consensus forecast (mb/d)

Period	Month when forecast was made								Revision M/M	Change Y/Y M/M
	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025		
October 2024	82.54	82.09	81.23	81.32	81.25	81.47	81.39	81.38	-0.01	1.02
November 2024	83.58	83.37	82.97	82.93	82.95	83.17	83.28	83.28	0.00	1.99
December 2024	84.96	84.92	84.27	84.28	84.22	84.36	84.43	84.86	0.43	1.66
January 2025	83.66	83.94	83.59	83.60	83.61	83.65	83.36	83.40	0.03	1.14
February 2025	82.56	82.64	82.77	82.94	82.97	82.73	82.64	82.63	-0.01	0.77
March 2025	82.70	82.69	82.92	82.81	82.67	82.87	82.44	82.46	0.03	-0.71
April 2025	81.98	81.78	81.89	82.30	81.87	81.91	81.91	81.91	0.01	0.39
May 2025	82.64	82.61	82.65	82.93	82.83	82.76	82.72	82.40	-0.32	-0.19
June 2025	83.57	83.40	83.80	83.88	83.86	83.82	83.81	83.88	0.06	0.89
July 2025	84.49	84.12	83.91	84.36	84.35	84.30	84.33	84.38	0.05	1.32
August 2025	85.09	84.40	84.02	84.72	84.72	84.55	84.68	84.77	0.09	0.93
September 2025	83.94	83.56	83.07	83.57	83.45	83.22	83.29	83.41	0.12	1.14

Note: consensus defined as average of IEA, Energy Aspects and Platts forecast

Source: IEA, S&P Global Platts, Energy Aspects, Morgan Stanley Research

Refining

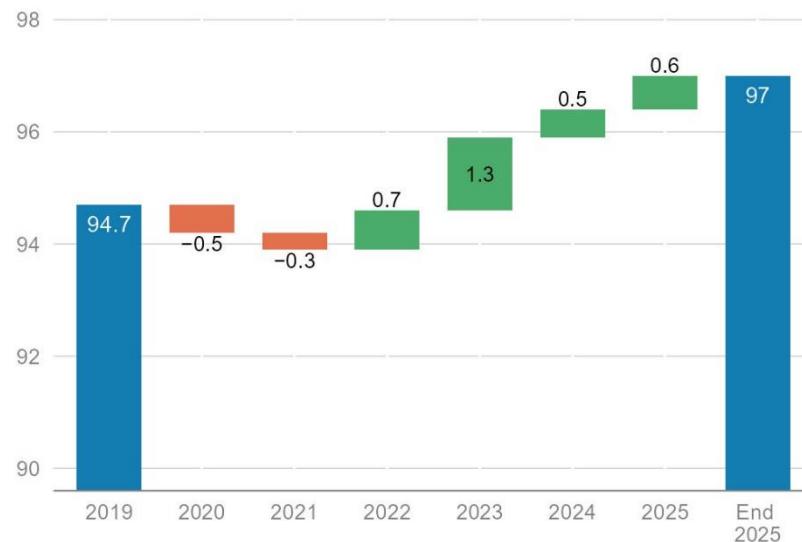
Refinery closure announcements are stacking up; despite this, refining capacity will still likely grow ~0.6 mb/d between end-2024 and end-2025

Refinery capacity closures		
In 2025 (kb/d)		
Country	Refinery	Capacity
Americas		
U.S.A.	Houston Refinery (Houston Refining)	121
U.S.A.	Los Angeles Refinery - Carson (P66)	133
Sub-total	—	254
Asia		
Bahrain	Sirrah Refinery	69
China	Dalian Refinery (PetroChina Dalian)	200
China	Ningbo (Daxie) Refinery	40
China	Qingdao Refinery (Sinopec Qingdao Petrochemical)	100
Sub-total	—	409
Europe		
Germany	Gelsenkirchen Scholven Refinery	70
Germany	Rheinland Wesseling Refinery (South)	140
Russia	Orsk Refinery	95
United Kingdom	Grangemouth Refinery	150
Sub-total	—	455
Total	—	1,118

Source: IIR, Morgan Stanley Research

Global refining capacity

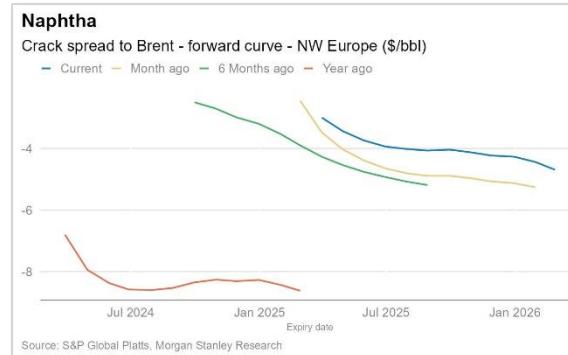
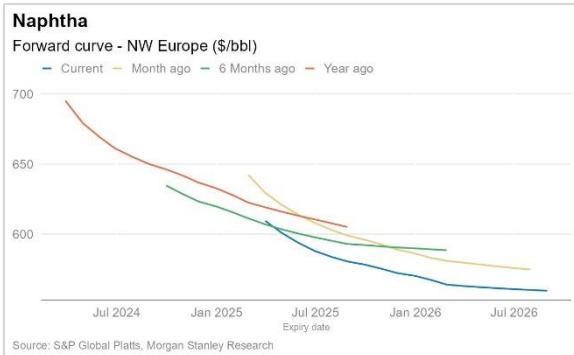
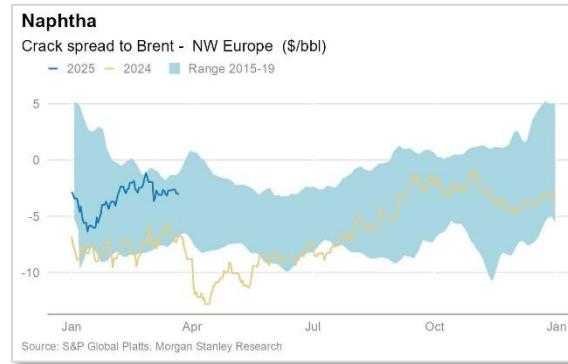
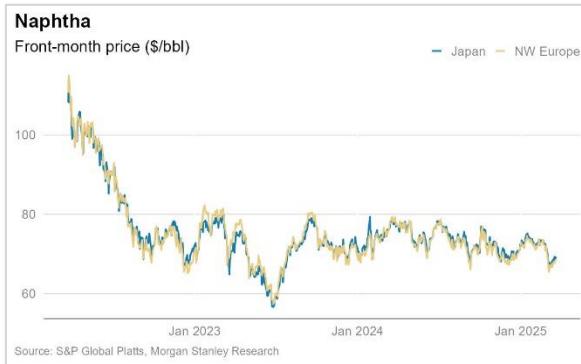
Based on atmospheric distillation, at year-end (mb/d)



Source: IIR, Morgan Stanley Research

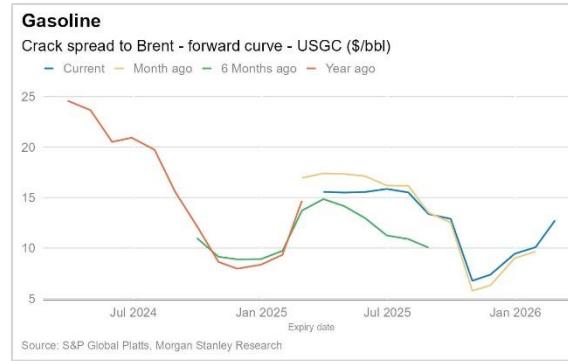
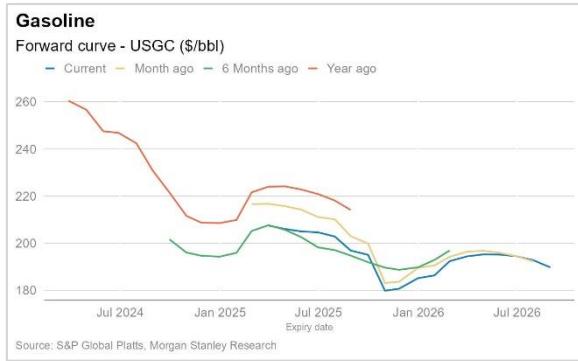
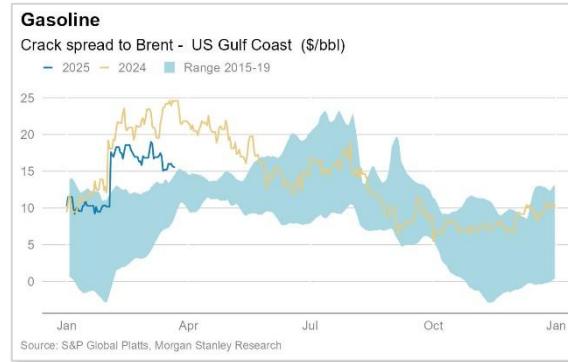
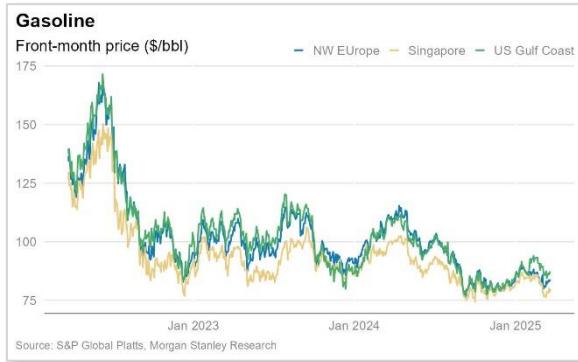
Oil products - Naphtha

Naphtha cracks are back within their historical range, although higher year-on-year



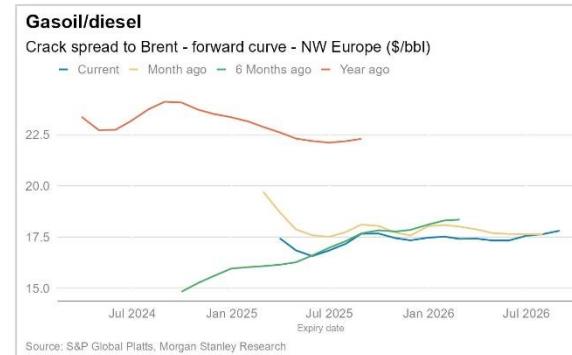
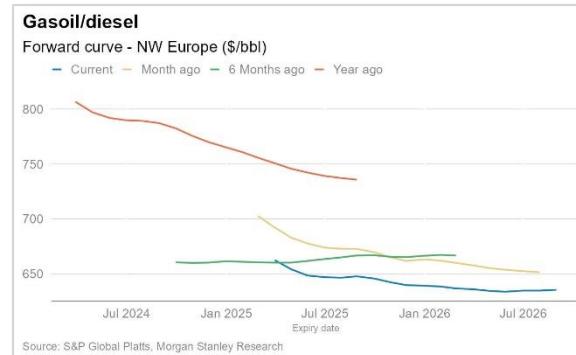
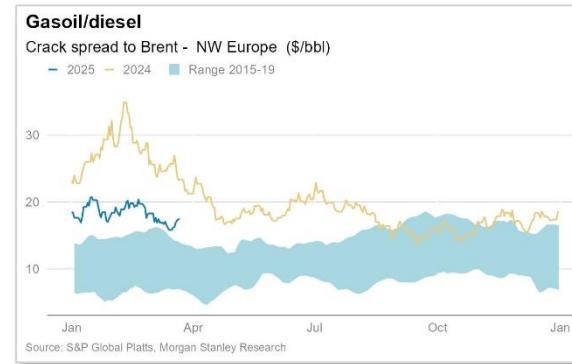
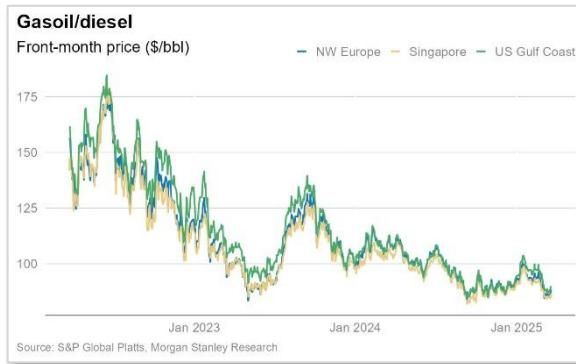
Oil products - Gasoline

Gasoline cracks are also close to last year's level



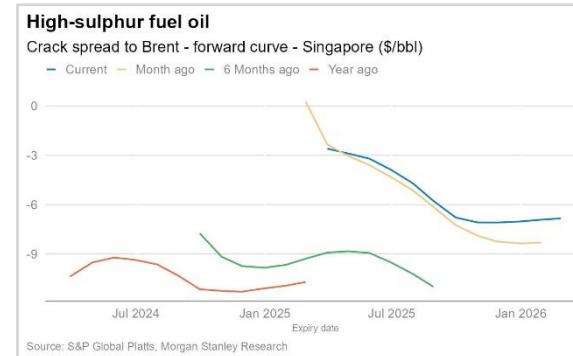
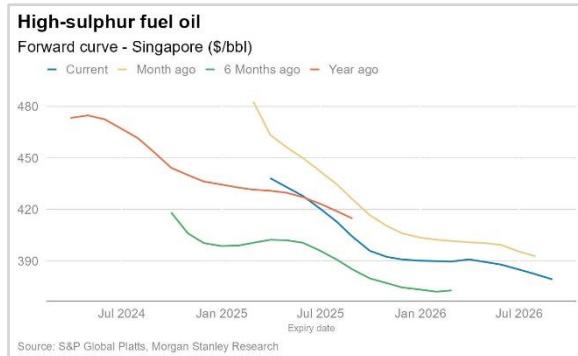
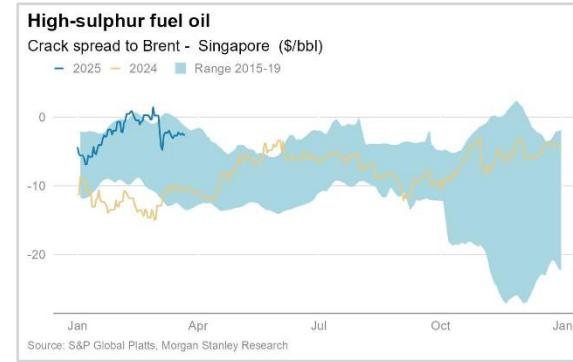
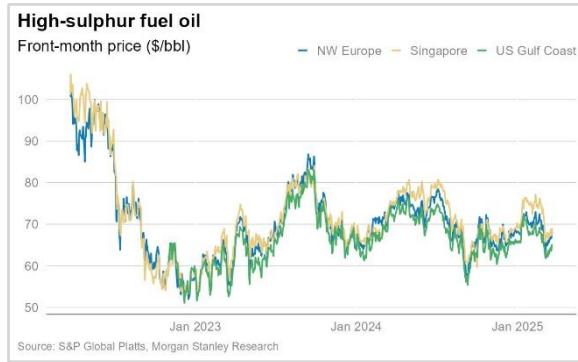
Oil products - Gasoil/Diesel

Gasoil cracks are down year-on-year but still above the historical range; structure remains in contango



Oil products – High-Sulphur Fuel oil

Fuel oil has benefitted from supply disruptions; 5 years after the start of IMO 2020, prices are relatively robust and crack spreads are close to historical highs



Inventories

Inventories of light distillates – gasoline and naphtha – are relatively high in the US, ARA region and Singapore

Inventories

Light distillate (million bbl)



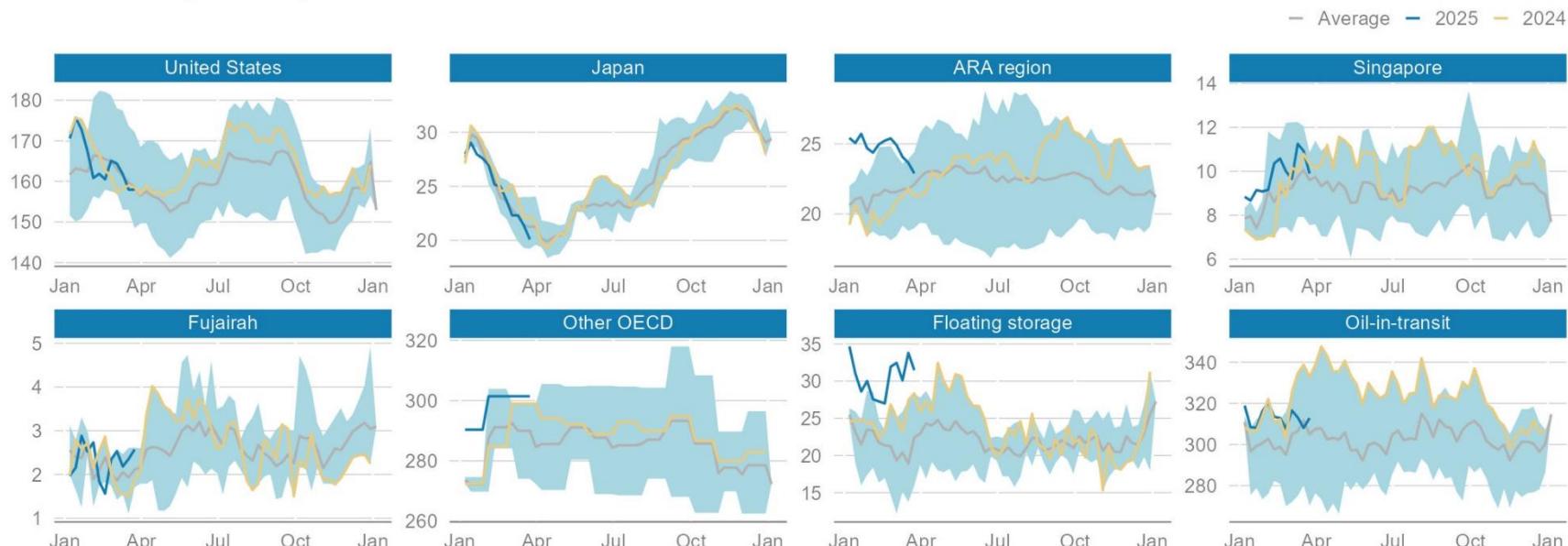
Source: IEA, EIA/DOE, PJK, IE, PAJ, Platts, Morgan Stanley Research

Inventories

Middle distillate inventories were high in the ARA region but have recently started to trend towards normal levels

Inventories

Middle distillate (million bbl)



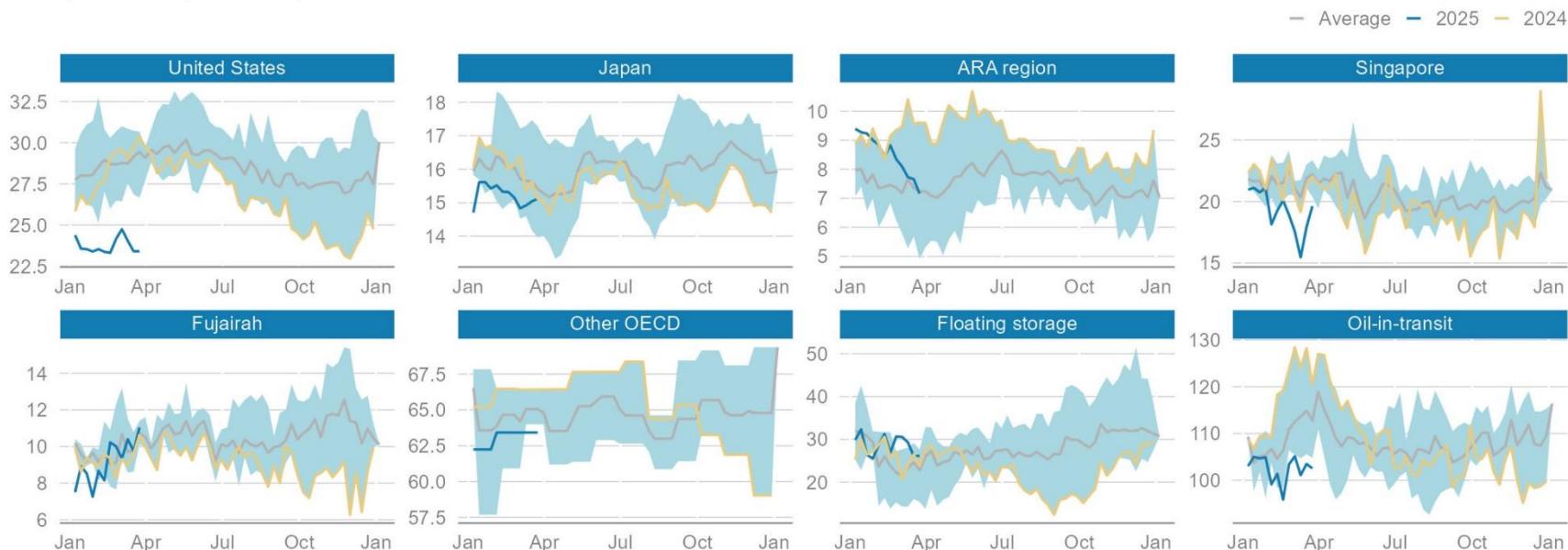
Source: IEA, EIA/DOE, PJK, IE, PAJ, Platts, Morgan Stanley Research

Inventories

Fuel oil inventories are low in several key locations, now also down year-on-year in ARA

Inventories

Heavy distillate (million bbl)



Source: IEA, EIA/DOE, PJK, IE, PAJ, Platts, Morgan Stanley Research

Morgan Stanley

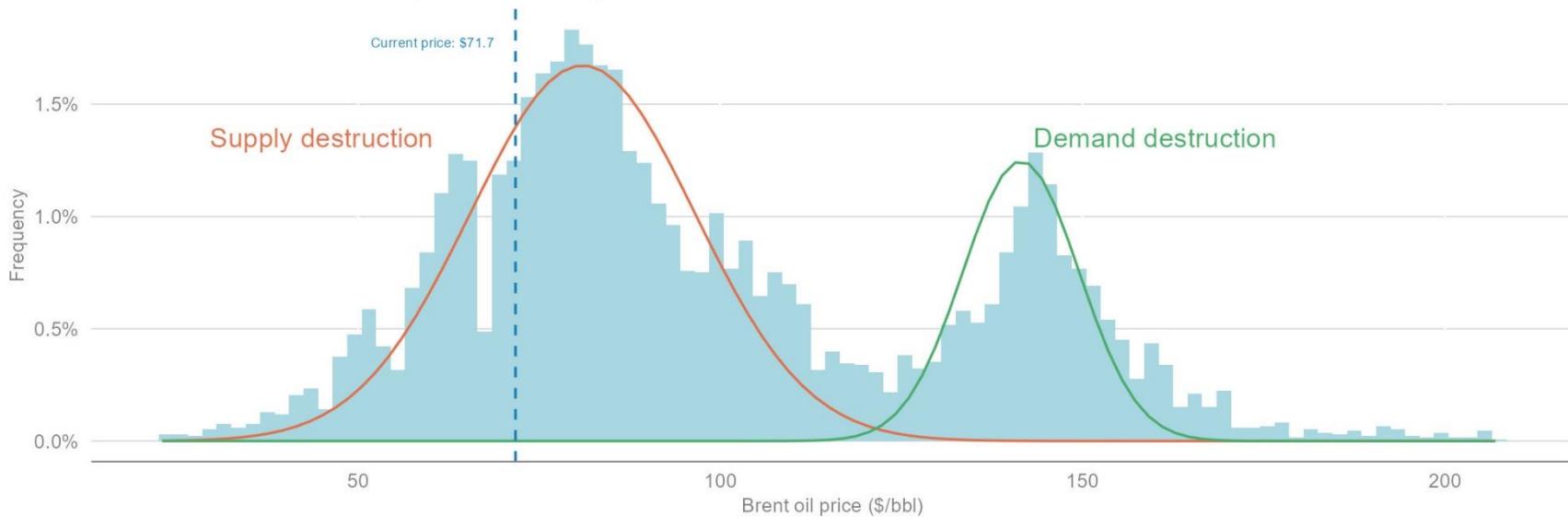
Prices

Prices

The historical distribution of real-terms oil price has been bi-modal, arguably describing two regimes: one of demand-destruction, and one of supply destruction

Distribution of inflation-adjusted oil prices

Based on Brent crude oil since 2007 (in 2024 US\$/bbl)



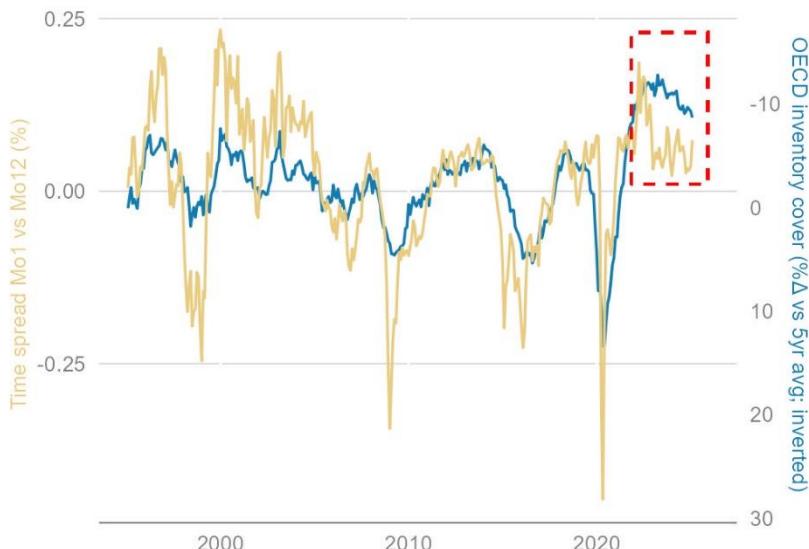
Source: Platts, Bloomberg, Morgan Stanley Research

Prices

Brent calendar are overwhelmingly driven by *commercial* OECD inventories, i.e. excluding SPR

OECD inventories vs Brent time spreads

Including SPR - 1995-2023



Source: IEA, Platts, Bloomberg, Morgan Stanley Research

OECD inventories vs Brent time spreads

Commercial stocks only (i.e. excl. SPR) - 1995-2023



Source: IEA, Platts, Bloomberg, Morgan Stanley Research

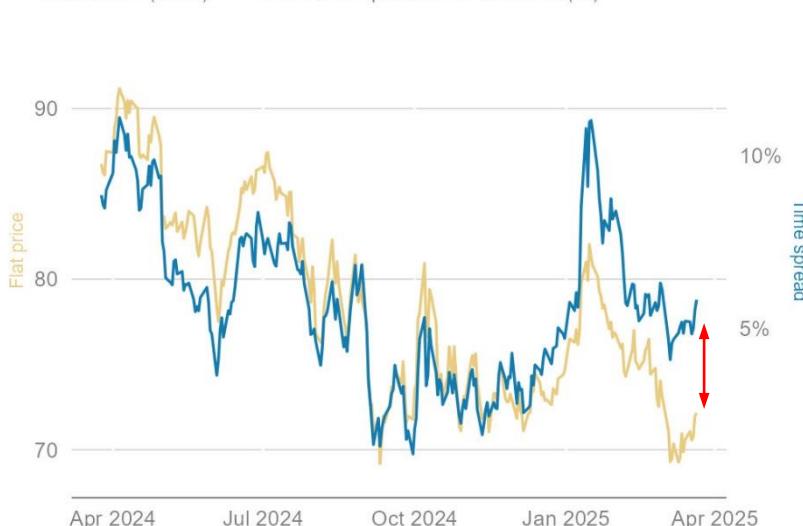
Prices

At the moment, flat price appears low compared to where calendar spreads are, probably already discounting some anticipated weakness later this year

Brent time spread vs flat price

Last 12 months

Brent Mo1 (\$/bbl) — Brent time spread Mo1 vs Mo12 (%)

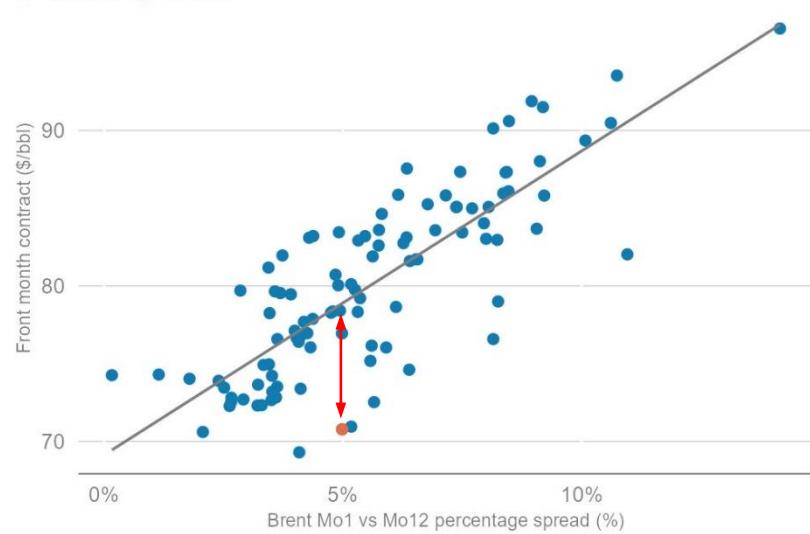


Source: Bloomberg, Morgan Stanley Research

Brent time spread vs flat price

Weekly data, last 2 years

● current ● historic



Source: Bloomberg, Morgan Stanley Research

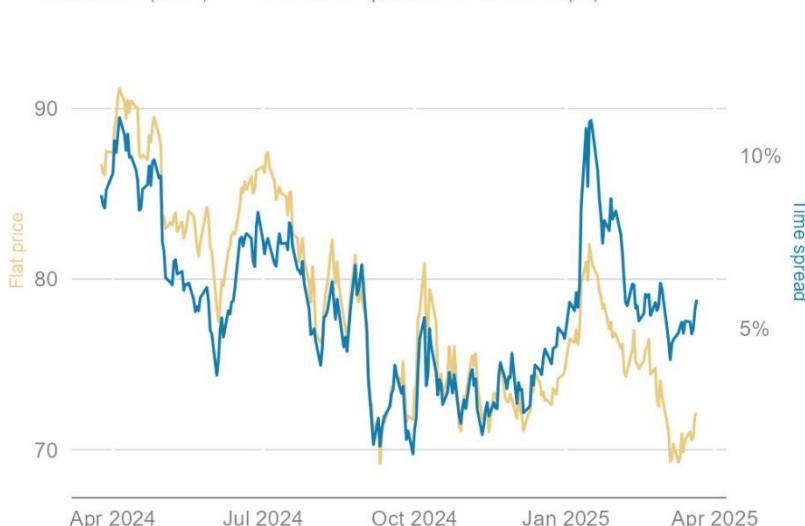
Prices

The flat price-vs-time spread relationship can be characterised by a slope and an intercept

Brent time spread vs flat price

Last 12 months

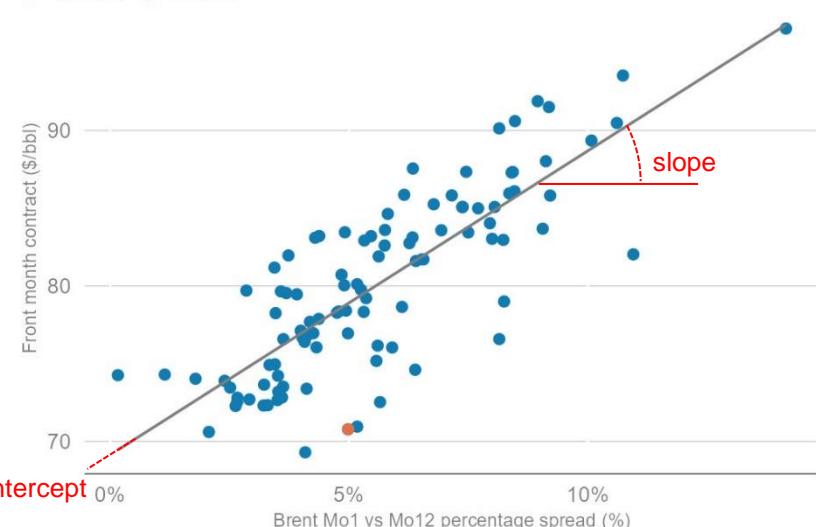
Brent Mo1 (\$/bbl) — Brent time spread Mo1 vs Mo12 (%)



Brent time spread vs flat price

Weekly data, last 2 years

current (orange dot) historic (blue dots)



Source: Bloomberg, Morgan Stanley Research

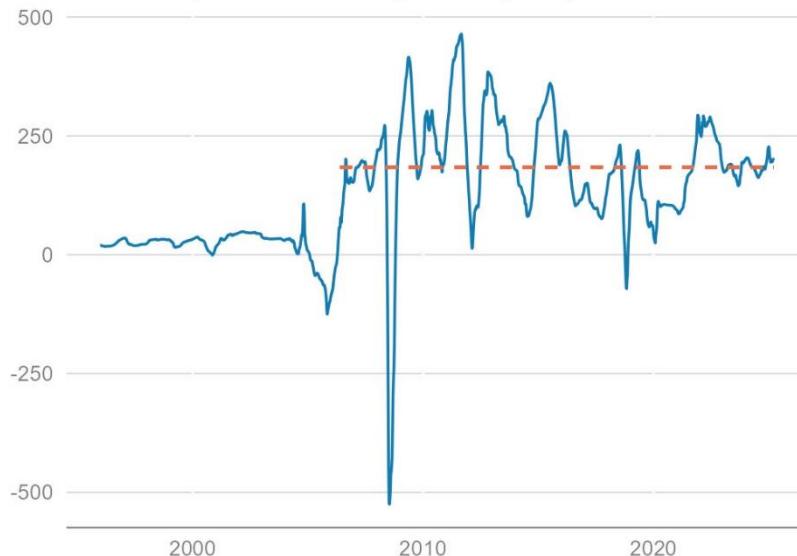
Source: Bloomberg, Morgan Stanley Research

Prices

The slope of this relationship over the last two years has been close to the historical average; the intercept appears to be correlated with industry cost

Slope of the time spread-vs-flat price regression

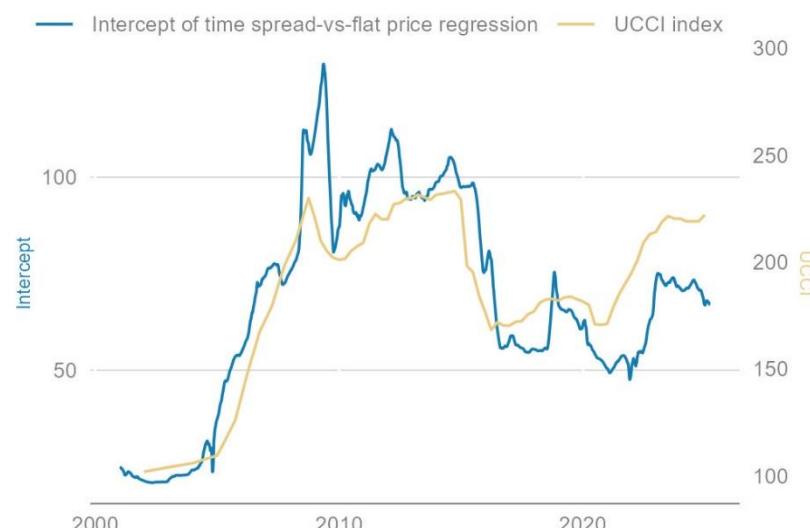
Based on rolling last-52 week regression (\$/bbl)



Source: Bloomberg, Morgan Stanley Research

Intercept vs Upstream Capital Cost Index

Last 20 years



Source: S&P Global, Bloomberg, IEA, Morgan Stanley Research

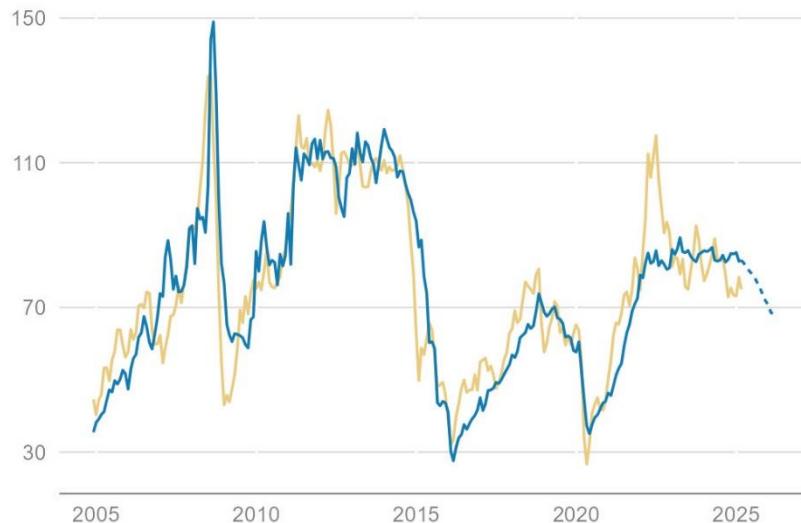
Prices

A mechanical application of this model to observed commercial OECD inventories explains a meaningful share of the variability in flat price, usually within +/- \$10/bbl

Brent crude oil price

Monthly average (\$/bbl)

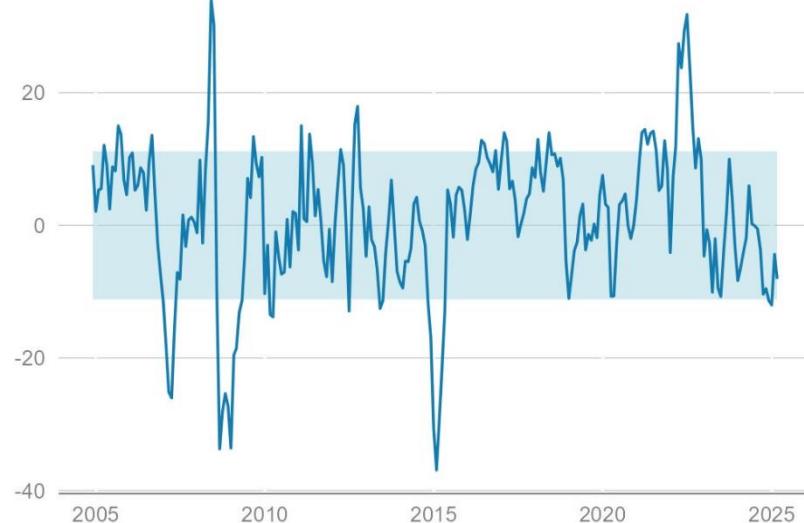
Actual — Modelled/forecast



Source: IEA, Bloomberg, Kpler, Morgan Stanley Research

Actual minus modelled Brent price

\$/bbl

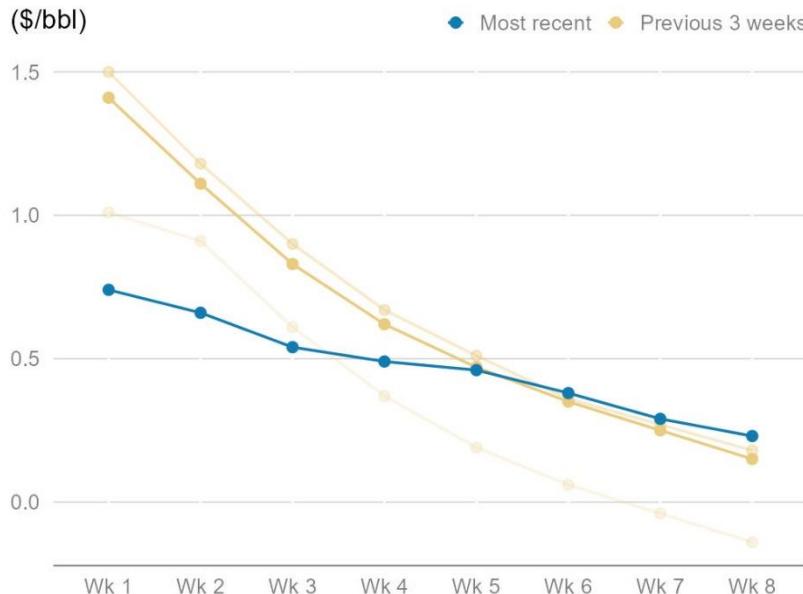


Source: Morgan Stanley Research

Prices

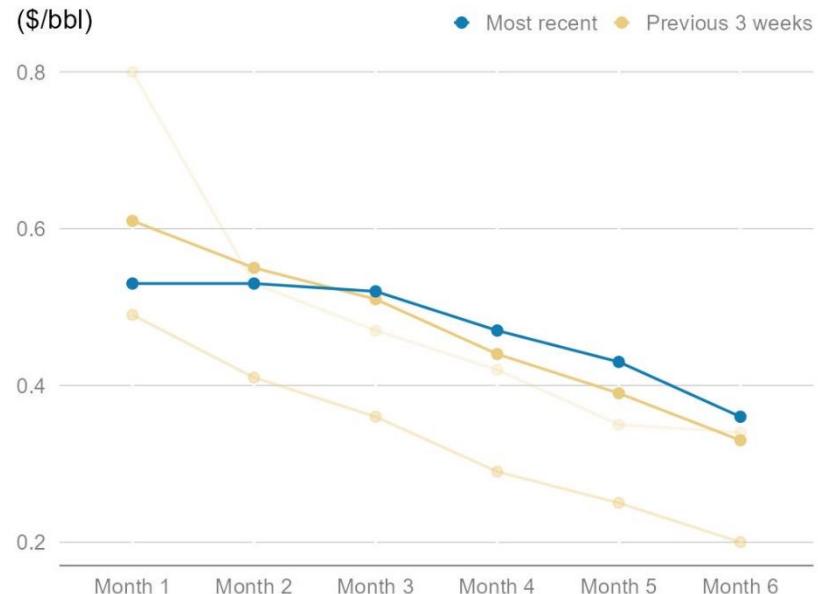
Over the last few weeks, the structure of the CFD curve has weakened and DFLs have fallen, pointing towards a short-term weakening of physical oil markets

Brent CFD curve



Source: S&P Global Platts, Morgan Stanley Research

Brent DFL curve



Source: S&P Global Platts, Morgan Stanley Research

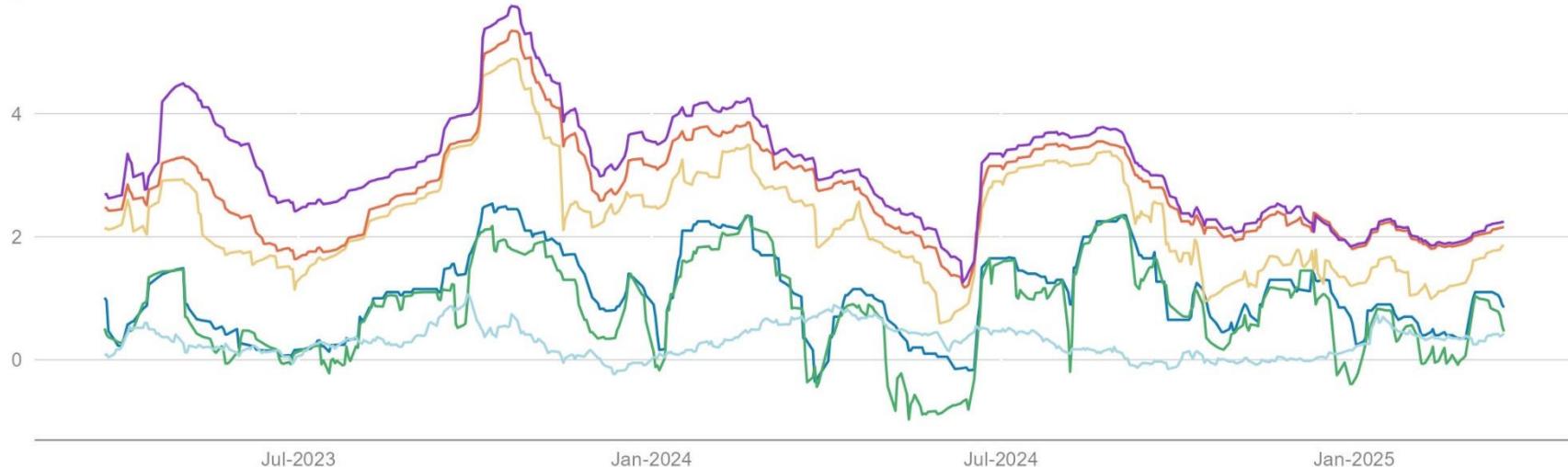
Prices

Physical diffs remain close to historical averages

North sea

Differential to forward Dated Brent (\$/bbl)

BNB Ekofisk Forties Oseberg Troll WTI Midland FOB N'Sea



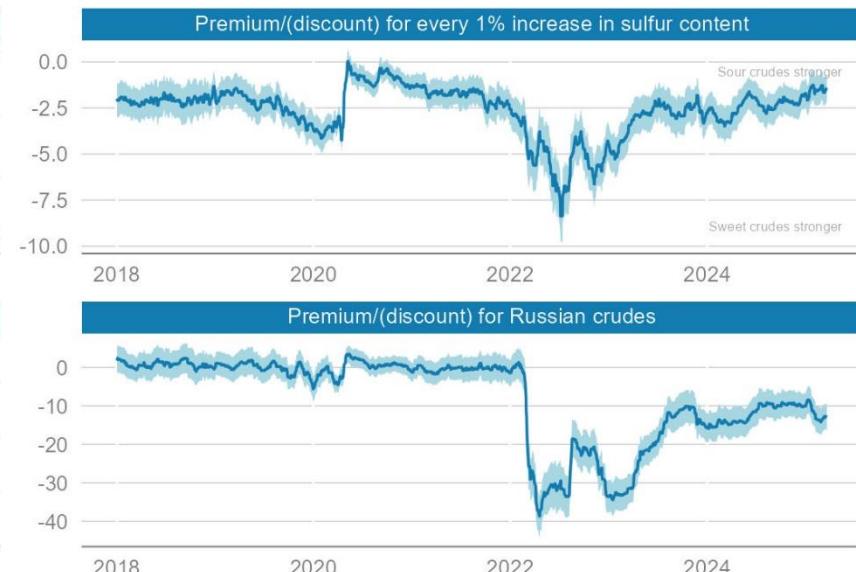
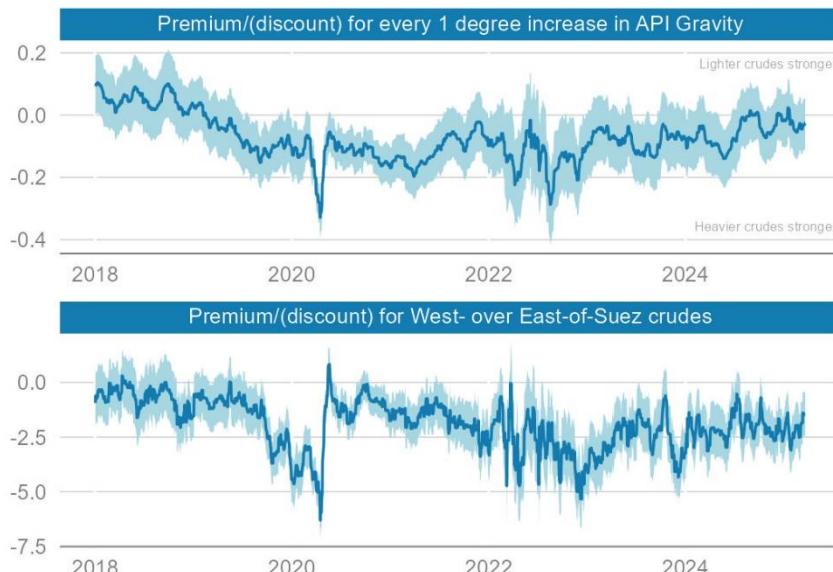
Source: S&P Global Platts, Morgan Stanley Research

Crude quality differentials

Sour crudes are trading relatively strongly; the discount for Russian crudes has widened again

Crude oil pricing

Depending on quality and location (\$/bbl)



Note: analysis based on weekly regression across 95 seaborne crudes

Source: Platts, Morgan Stanley Research

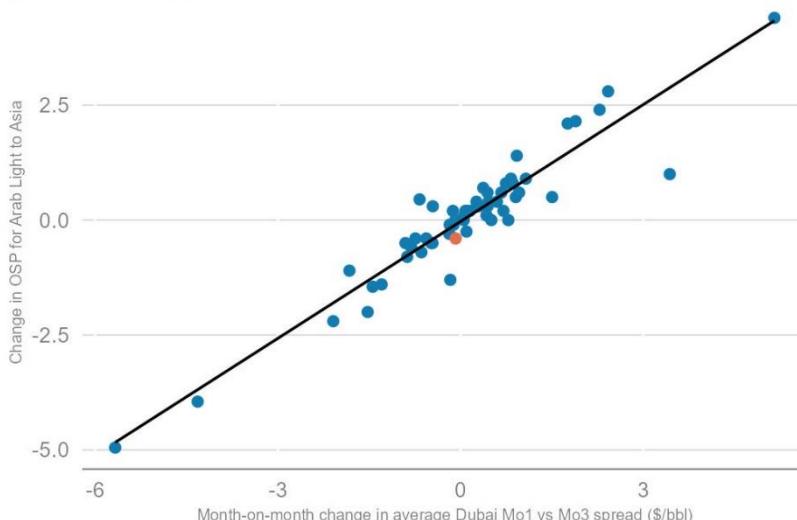
Prices

Saudi Arabia's OSP for April declined slightly more than expected; nevertheless, Chinese refineries nominated less crude for April than for March

Saudi Arabia OSP vs Change in Dubai structure

Monthly since start of 2000

● Last month ● Other



Saudi Arabia OSP - Actual vs Market expectation

For Arab Light to Asia (\$/bbl)

— Bloomberg survey 1-2 weeks before announcement — Actual



Source: S&P Global Platts, Bloomberg, Morgan Stanley Research

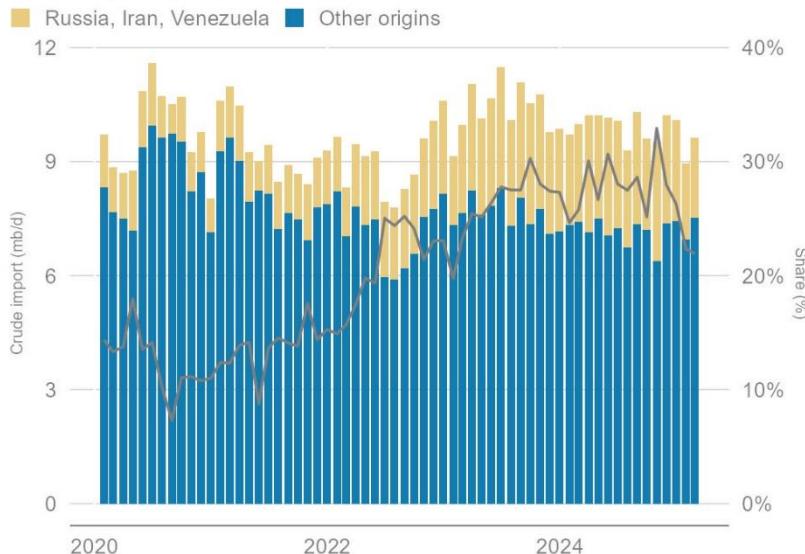
Source: Bloomberg, Morgan Stanley Research

Prices

China's imports of crude from Russia, Iran and Venezuela declined in January, also driving ESPO crude down; however, February saw a partial reversal of this decline

Crude oil imports

China, split by origin

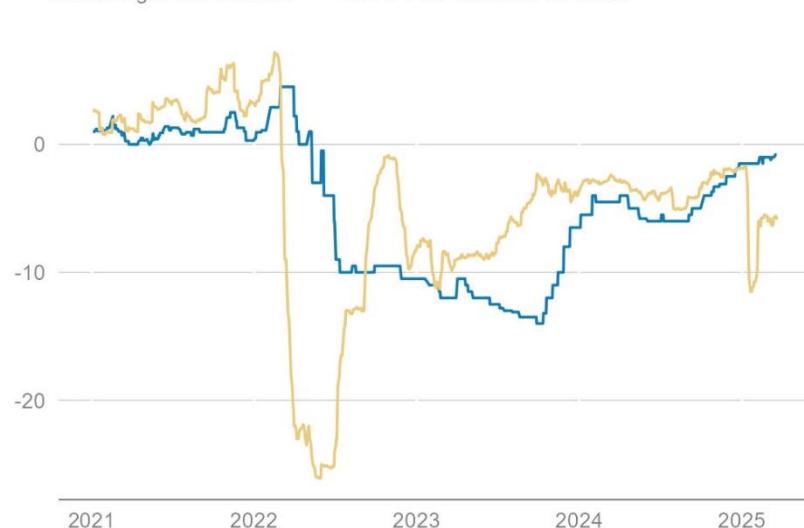


Source: Vortexa, Morgan Stanley Research

Crude oil price differentials

\$/bbl

Iranian Light vs ICE Brent ESPO FOB Kuzmino vs Dubai



Source: Argus, S&P Global Platts, Morgan Stanley Research

Positioning

Speculative length continued to come down last week, partially in crude oil but especially in refined products, possibly suggesting that speculators expect OPEC to manage the market but fearing demand weakness

Commitment of Traders - Speculative positioning

Managed money and Other reportables; report date: 18 March 2025 (thousand lots)

Future	Exchg.	Position			Change			Z-score	
		Long	Short	Net	1 week	3 months	1 Year	Net pos.	1 wk chg
Brent	ICE	454.7	428.1	26.6	8.4	-78.4	-11.4	0.4	0.3
Brent	NYMEX	24.1	23.8	0.3	0.8	29.1	21.5	2.9	0.1
WTI	ICE	100.7	87.3	13.5	1.5	18.7	-34.8	-0.4	0.1
WTI	NYMEX	315.6	129.4	186.2	-8.1	-32.6	-104.8	-1.4	-0.3
Total crude		895.2	668.6	226.6	2.6	-63.2	-129.4	-0.3	0.1
RBOB	NYMEX	90.9	53.2	37.7	19.1	-19.9	-32.4	-0.8	3.3
ULSD	NYMEX	44.7	61.8	-17.1	-16.8	-26.1	-29.9	-2.0	-3.3
Gasoil	ICE	75.1	282.4	-207.2	-18.4	-50.9	-122.7	-2.1	-1.8
Total products		210.8	397.4	-186.6	-16.0	-96.9	-185.0	-2.4	-1.1
Total oil		1,106.0	1,066.0	40.0	-13.4	-160.1	-314.4	-1.2	-0.2

Note: Z-scores calculated relative to 3-year trailing history

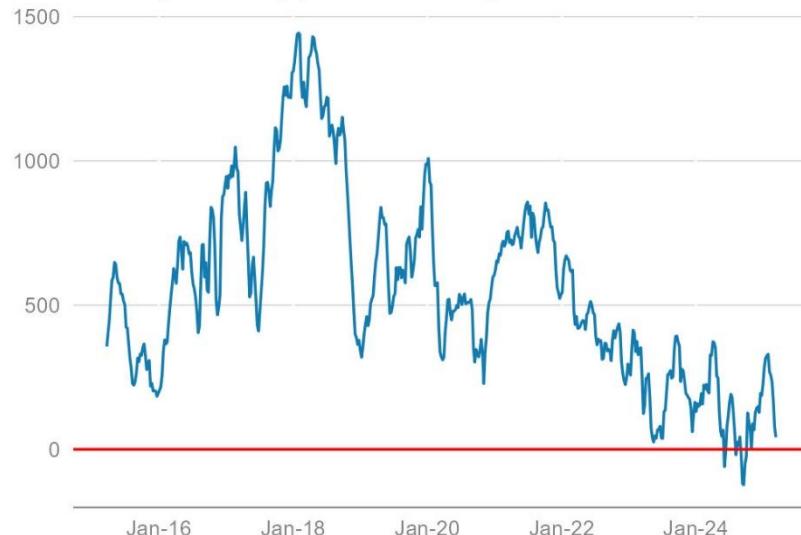
Source: CFTC, ICE, Morgan Stanley Research

Positioning

Speculative length has been declining recent weeks, approaching the zero level when combining all oil contracts

Commitment of Traders

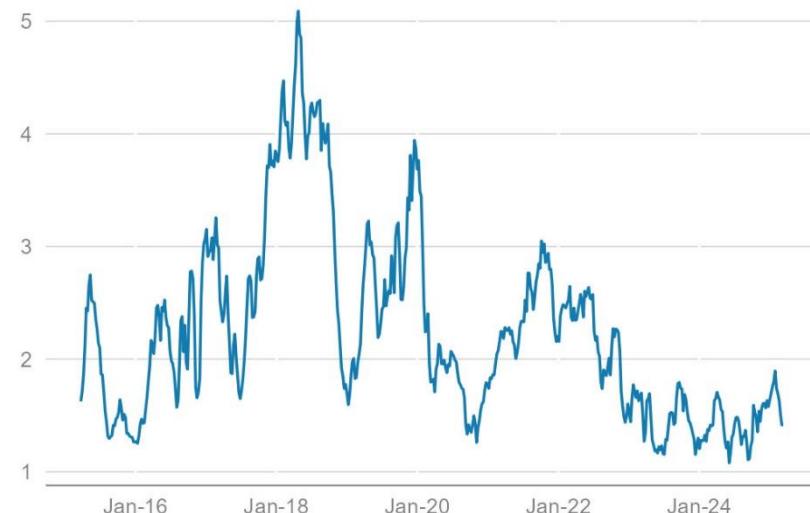
Total oil, net positioning (no. of contracts)



Note: based on Managed Money and Other Reportables in CO, CL, XB, QS and HO contracts
Source: CFTC Commitment of Traders Data, Morgan Stanley Research

Commitment of Traders - Brent and WTI

Long/short ratio



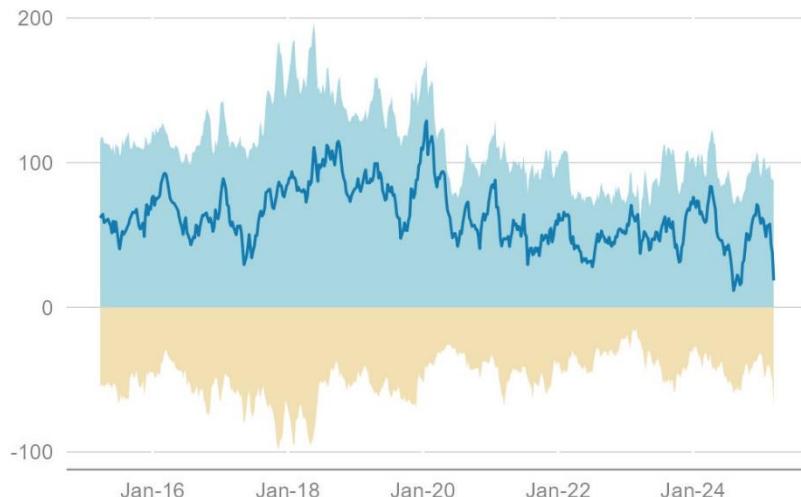
Note: chart shows ratio of long to short contract, based on Managed Money and Other Reportables
Source: CFTC Commitment of Traders Data, Morgan Stanley Research

Positioning

'Managed money' exposure to gasoil remains low

Gasoline - NY Harbour RBOB

COT report - Managed money and Other reportables
(number of contracts)



Note: light blue = long positions, yellow = short position, dark blue = net position
Source: CFTC, Morgan Stanley Research

Gasoil and Heating Oil

COT report - Managed money and Other reportables
(number of contracts)



Note: light blue = long positions, yellow = short position, dark blue = net position
Source: CFTC, Morgan Stanley Research

Morgan Stanley

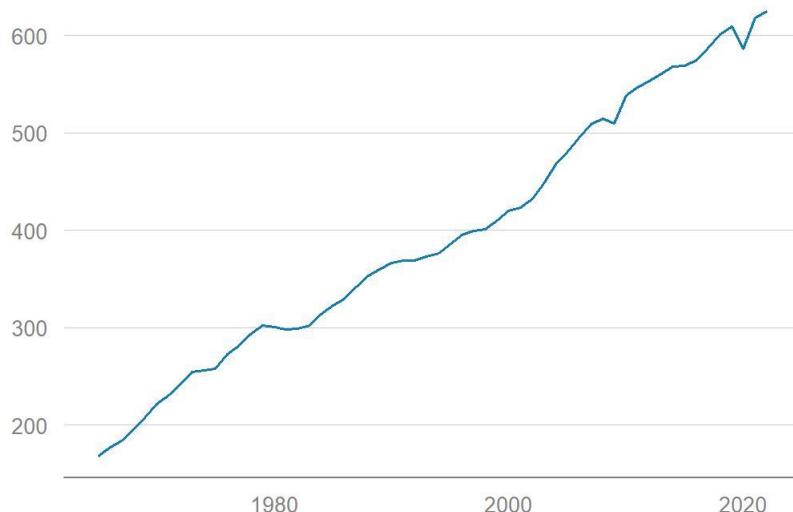
Long term

Long term

Energy demand continues its relentless path higher, driven by growing population...

Global total energy supply

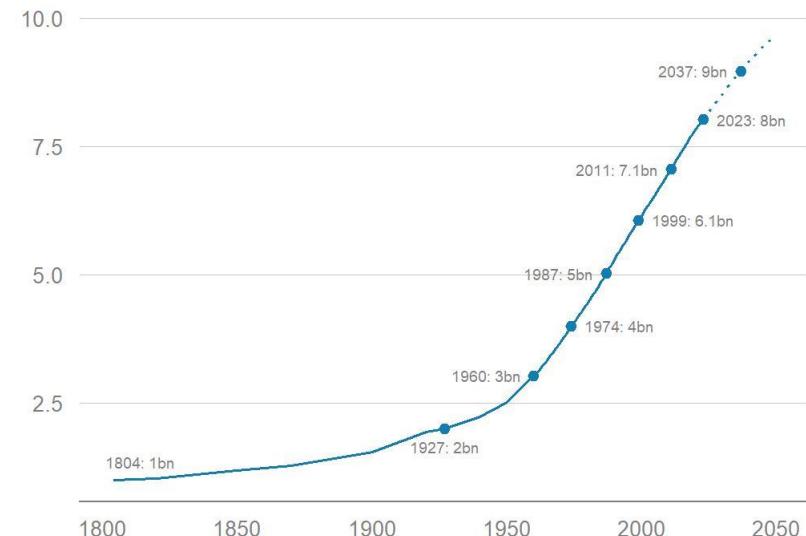
1965-2022 (EJ)



Source: IEA, Morgan Stanley Research

Global population

billions



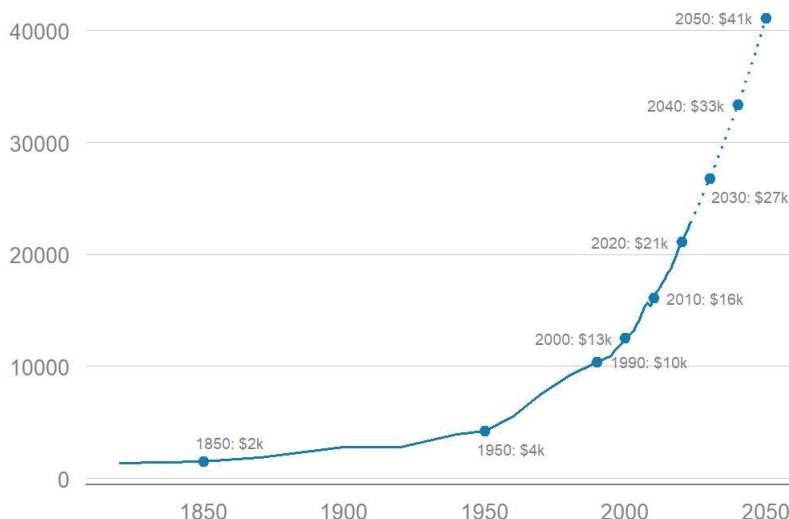
Source: The Maddison Project, World Bank, Morgan Stanley Research

Long term

...and rising average wealth levels

Global GDP per capita

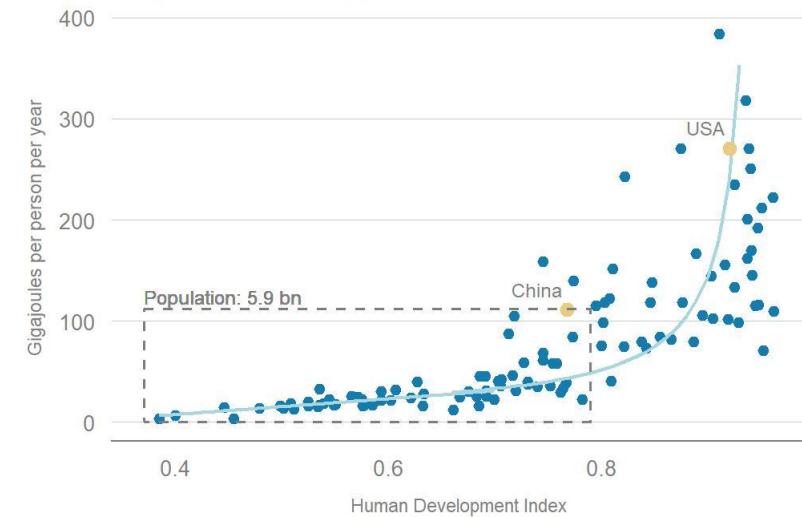
Volume in USD, at constant 2010 purchasing power parities



Source: The Maddison Project, OECD, Morgan Stanley Research

Human Development Index vs Energy consumption

Every dot represents a country



Note: Based on latest available data which is either 2020 or 2021

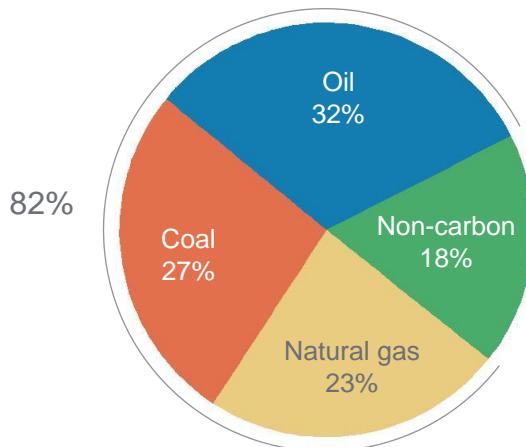
Source: United Nations, IEA, Morgan Stanley Research

Long term

Oil, gas and coal still meet most of global energy demand; slowly shrinking share has so far been offset by total market growth

Primary energy supply

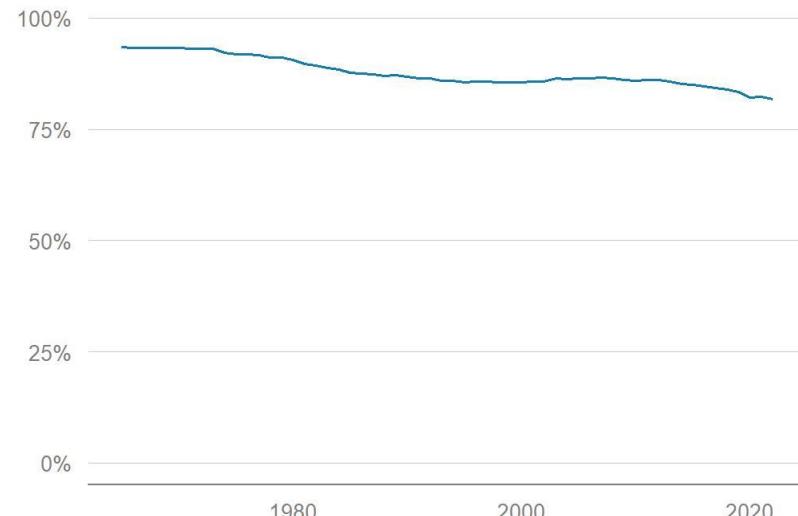
2022 (%)



Source: Energy Institute, Morgan Stanley Research

Share of fossil fuels

(%)



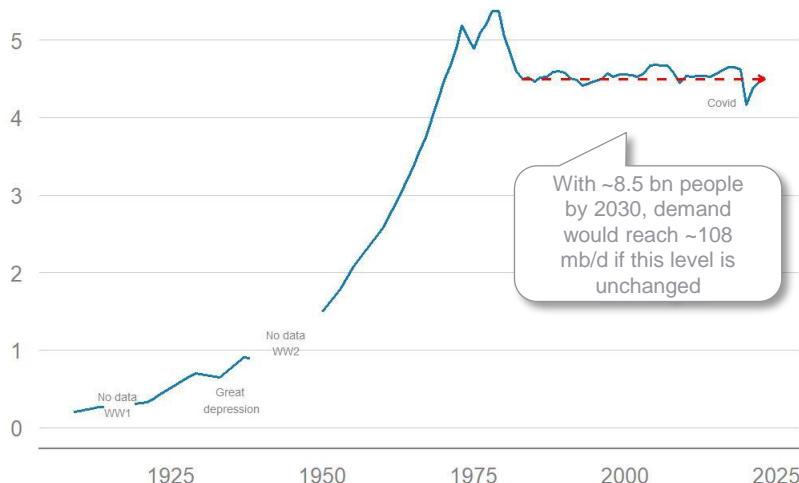
Source: Energy Institute, Morgan Stanley Research

Long term

Two top-down models still suggest well over 100 mb/d of demand by 2030

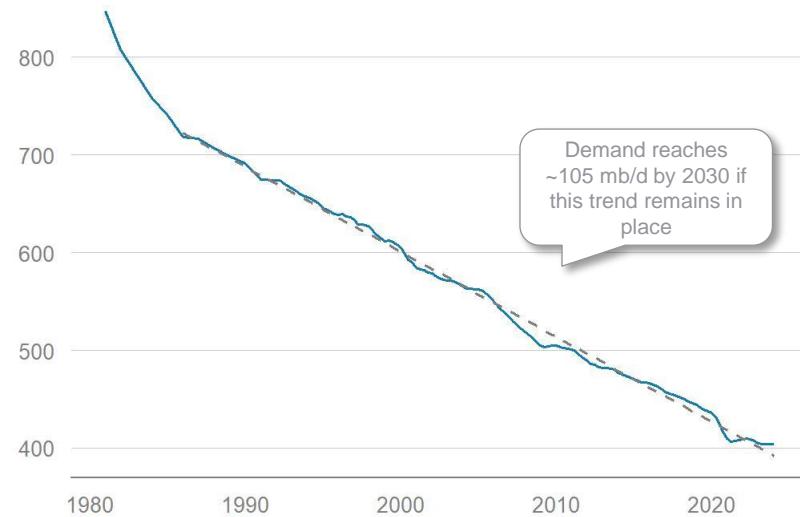
Global oil consumption per capita

(barrels per person per year)



Oil intensity of GDP

Barrels of oil consumed per \$1m of global GDP (bbl)



Source: IEA, 'Energy in the World' (Joel Darmstadter et al.),
'The Age of Energy' (Harold F. Williamson et al.), Morgan Stanley Research

Source: Oxford Economics, IEA, BP Statistical Review, Morgan Stanley

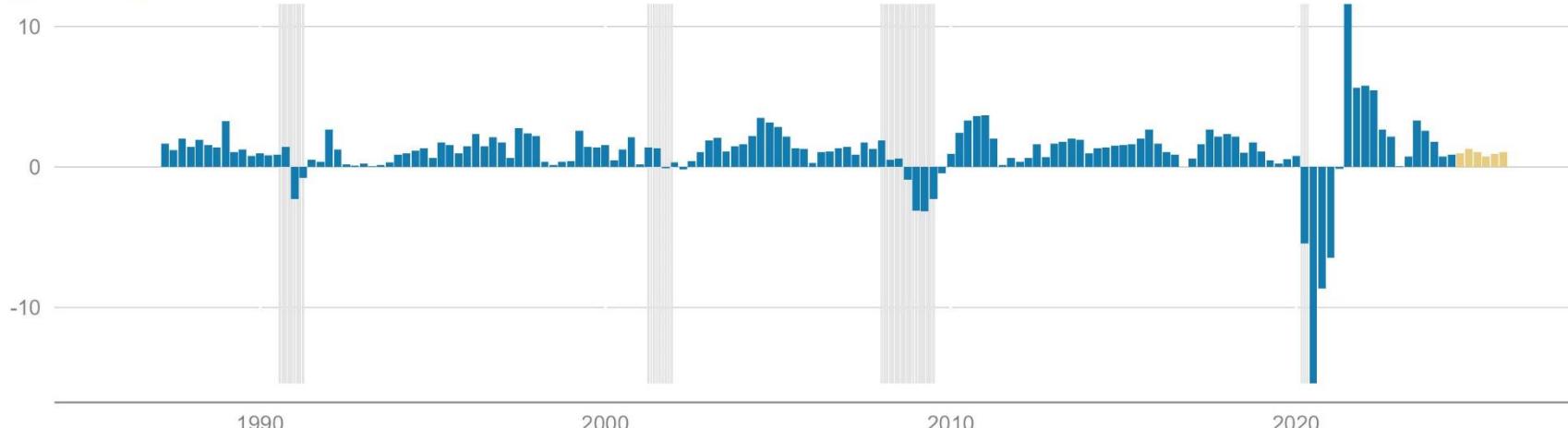
Demand

Comment

Oil demand and recessions

Change in global oil consumption (yoY; mb/d) and US recessions

■ Historic ■ IEA forecast



Source: IEA, Morgan Stanley Research

OECD inventories during US recessions (million barrels)				
Recession period	Months	Inventories		
		Start	End	Change
Jul 1990-Mar 1991	9	3,720	3,703	-17
Mar 2001-Nov 2001	9	3,818	3,975	158
Dec 2007-Jun 2009	19	4,107	4,329	222
Feb 2020-Apr 2020	3	4,459	4,672	213

Source: IEA, Morgan Stanley Research

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(as of February 28, 2025)

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Stock Rating	Other Material Investment							
	Coverage Universe		Investment Banking Clients (IBC)			Services Clients (MISC)		
	Category	Count	Total	Count	Total IBC	Rating Category	Count	Total Other MISC
Overweight/Buy	1496	39%	378	45%	25%		695	40%
Equal-weight/Hold	1694	45%	370	45%	22%		810	47%
Not-Rated/Hold	3	0%	0	0%	0%		0	0%
Underweight/Sell	601	16%	83	10%	14%		230	13%
Total	3,794		831				1735	

Data include common stock and ADRs currently assigned ratings. Investment Banking Clients are companies from whom Morgan Stanley received investment banking compensation in the last 12 months. Due to rounding off of decimals, the percentages provided in the "% of total" column may not add up to exactly 100 percent.

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