ICE Oil Markets: effective risk management for an interconnected world

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ICE Brent: the global crude benchmark

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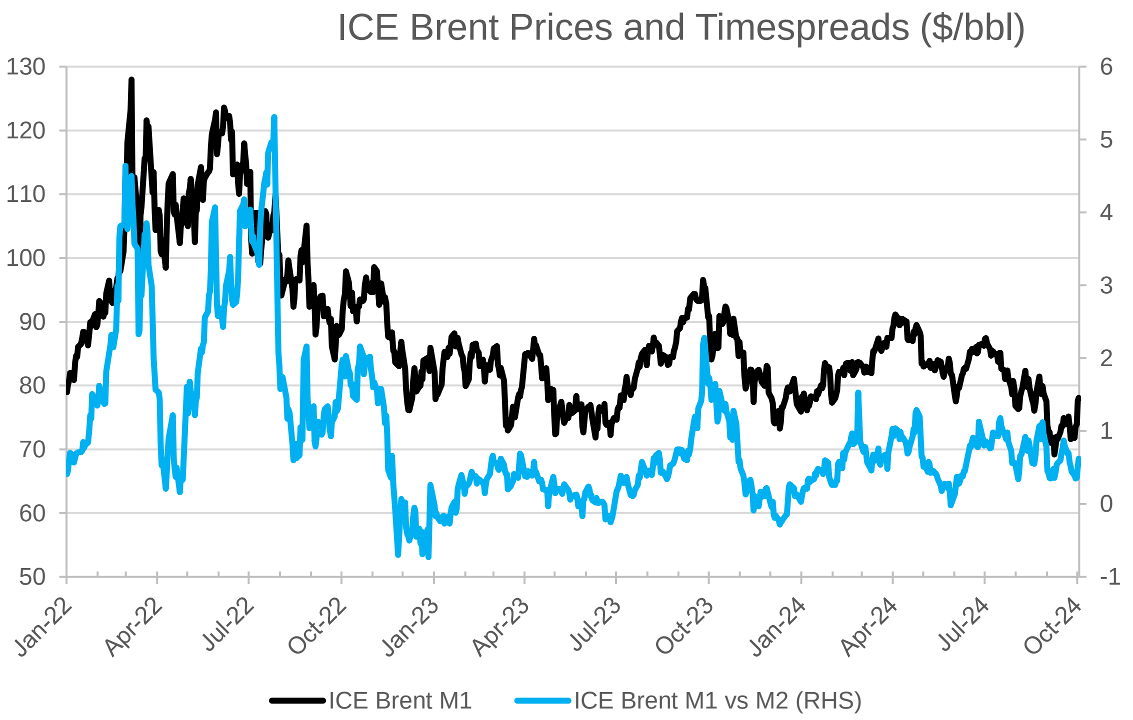
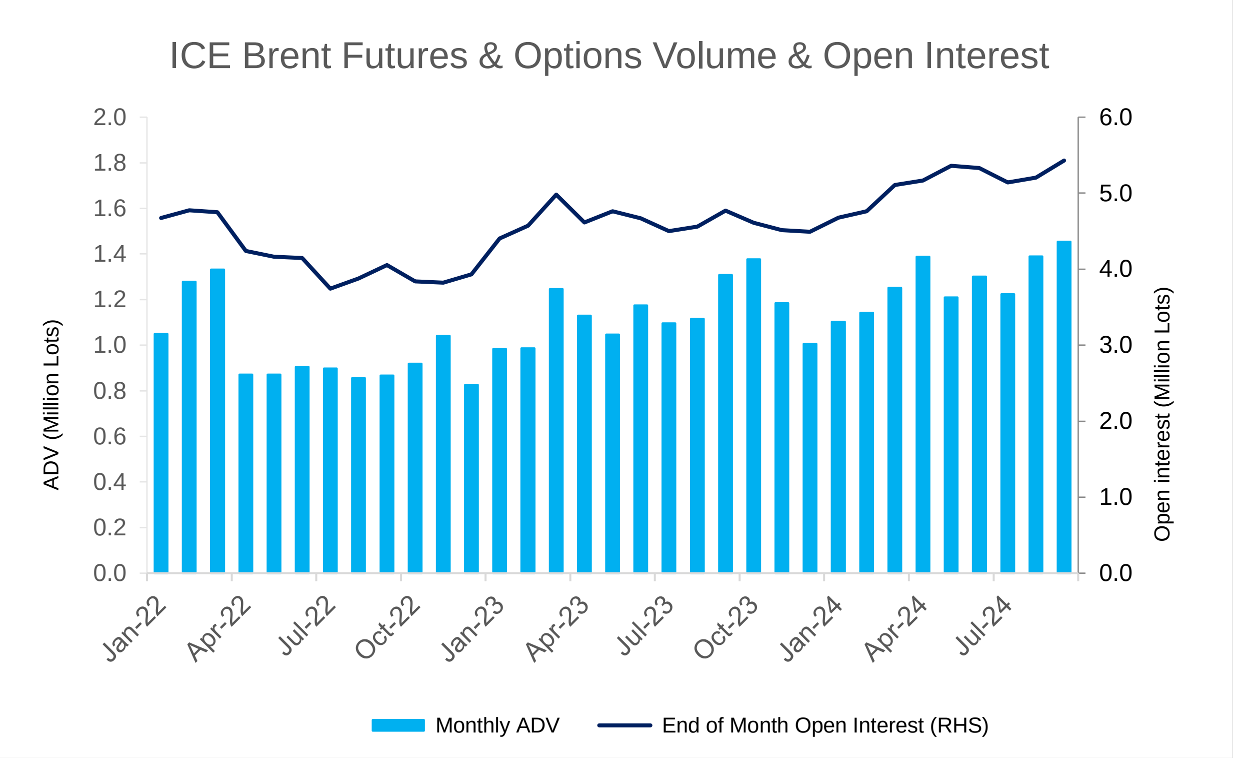
Around 75% of the world's traded crude prices off Brent (directly and indirectly)



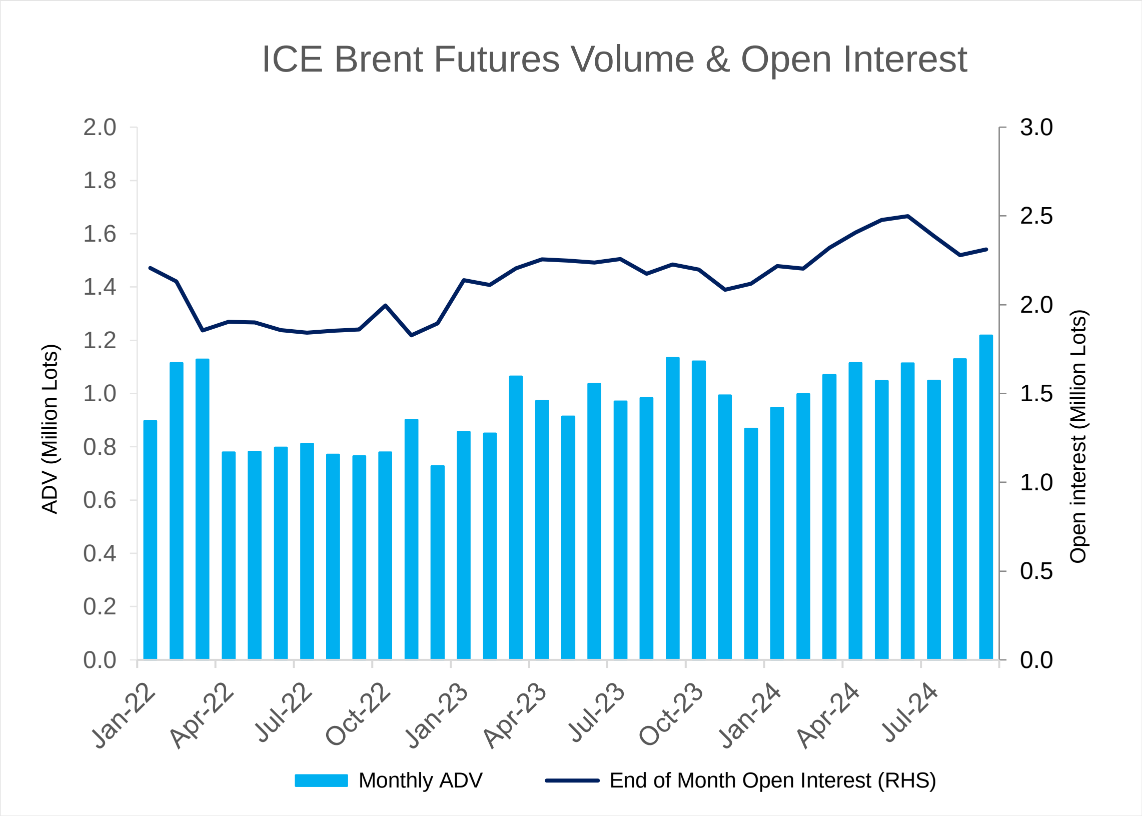
Source: ICE

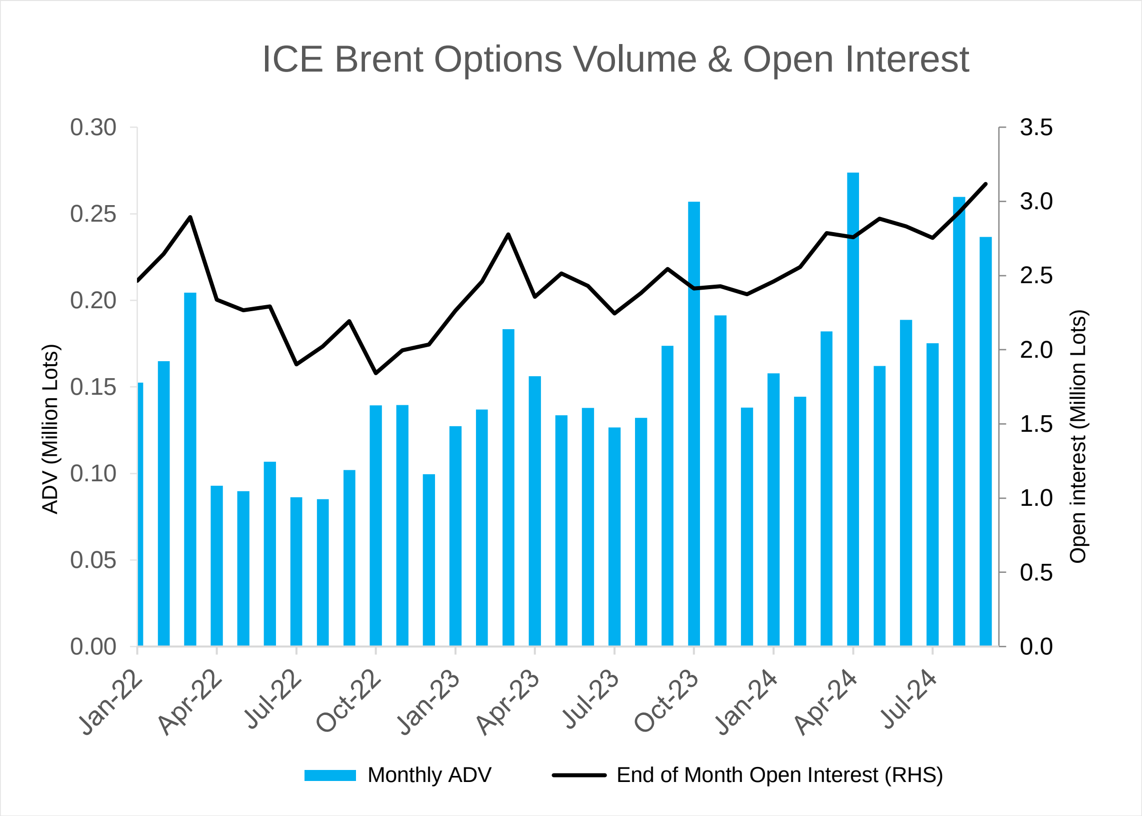


- In 2023, outright prices, volatility, and exchange margins all eased and normalized compared to the previous year. In 2024, normal market conditions continued. As a result, trading activity continued to grow this year. Record highs in futures & options open interest in Oct. 2024.
- Greater resilience of ICE Brent vs. NYMEX WTI:
  - A global vs. a regional benchmark, reflecting global vs. regional oil market fundamentals.
  - Brent is waterborne, with flexible logistics/storage. In contrast, WTI is landlocked, with logistics/storage constraints at Cushing.

ICE Brent: the global crude benchmark

Trading activity growth in 2024 for both futures and options, with options growth faster

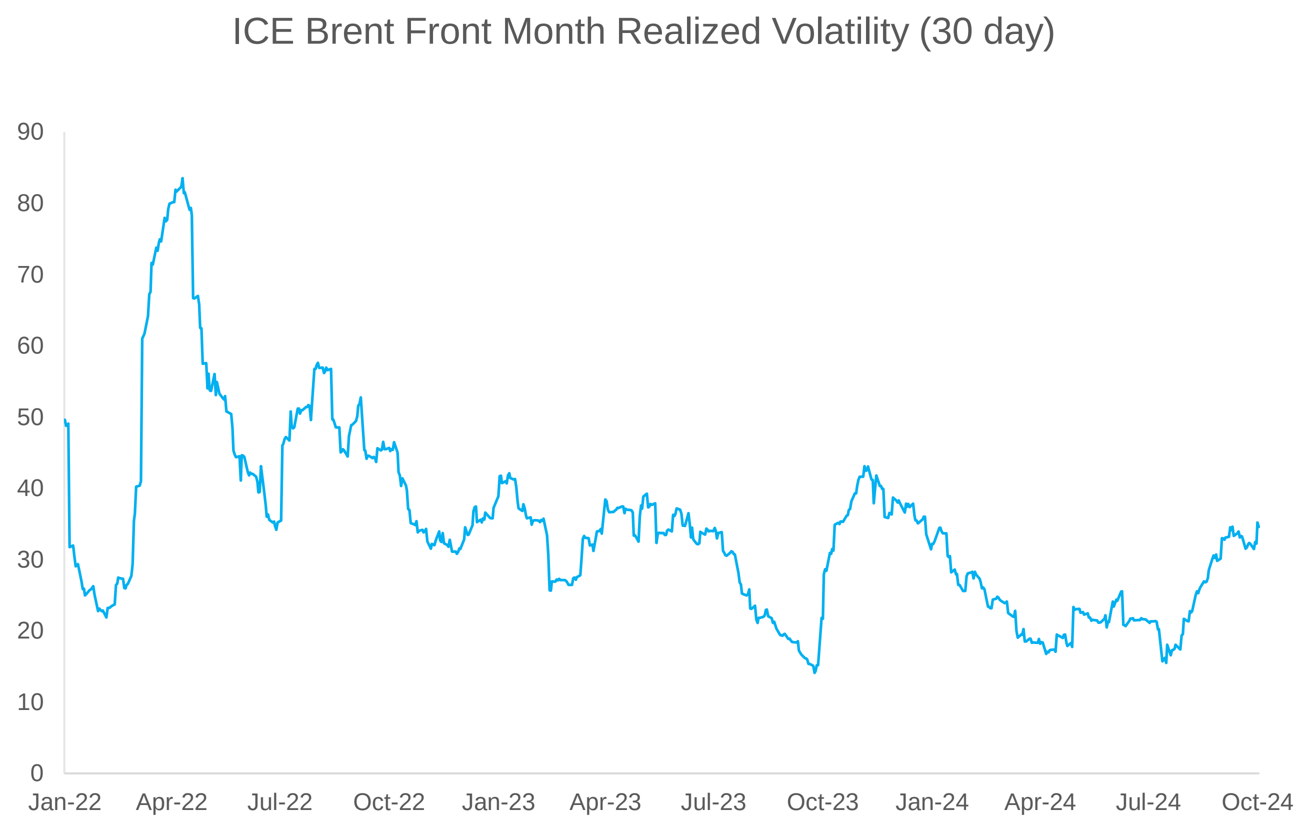




Source: ICE

ICE Brent: the global crude benchmark

Volatility falling and relatively low for much of 2024, until recently. Long term avg. approx. 30%.



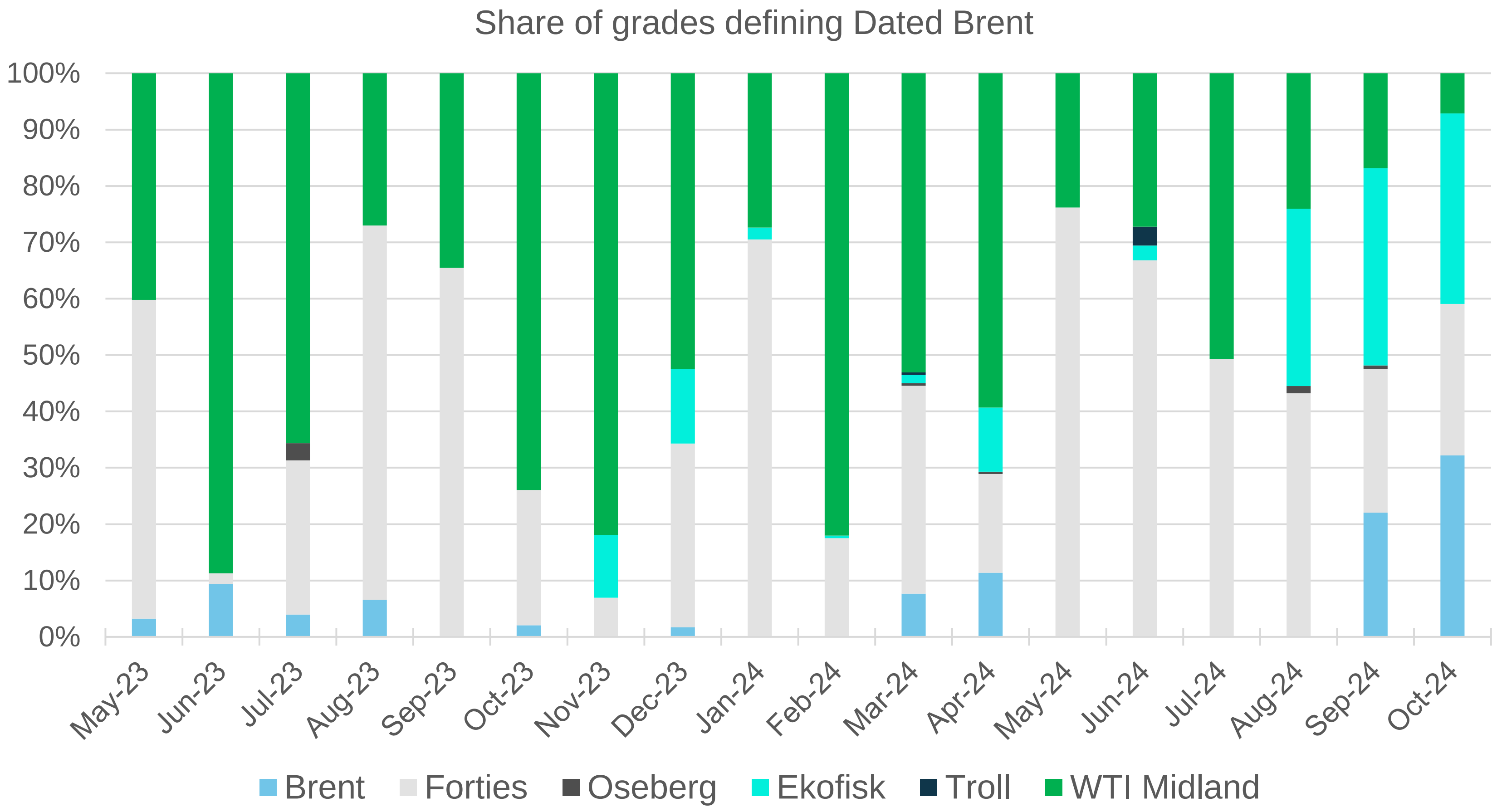
Source: ICE

ICE Brent key points

- ICE Brent is the global crude benchmark. Around 75% of the world’s physically traded crude (approximately 45-50 Mb/d) prices off Brent (directly and indirectly).
- In a highly interconnected global oil market for crude oil and refined products, ICE Brent is at the center of the global crude complex.
- Commercial participants want to manage their risks and investors want to take risks.
- In 2024, oil market risks and wildcards are as important as ever:
  - Fundamentals: Chinese demand and OPEC+ supply
  - Geopolitical risks to supply and shipping: focus on the Middle East
  - Swings in investor flows: managed money net length currently at very low levels (upside risk)
- ICE Brent reflects all of the above global price drivers.

The addition of Midland to the Brent complex: smooth and successful

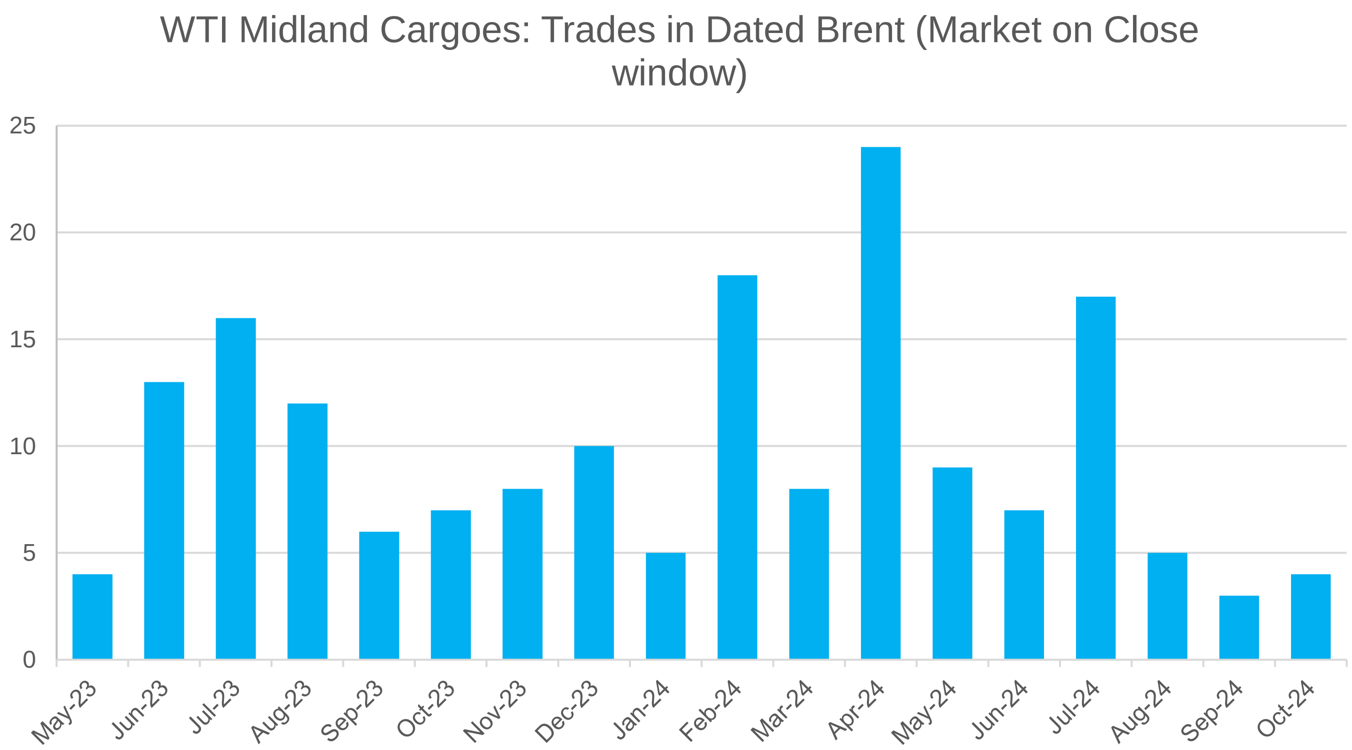
The addition of Midland WTI to the Brent Complex: smooth and successful. Impact on pricing similar to expectations.



Source: S&P Global Commodity Insights. Data through mid-October 2024.

- Pricing: from May 2023 through September 2024, Midland WTI was the most competitive grade that set the price of Dated Brent 49% of the time. This has been broadly similar to expectations of 50-60%.

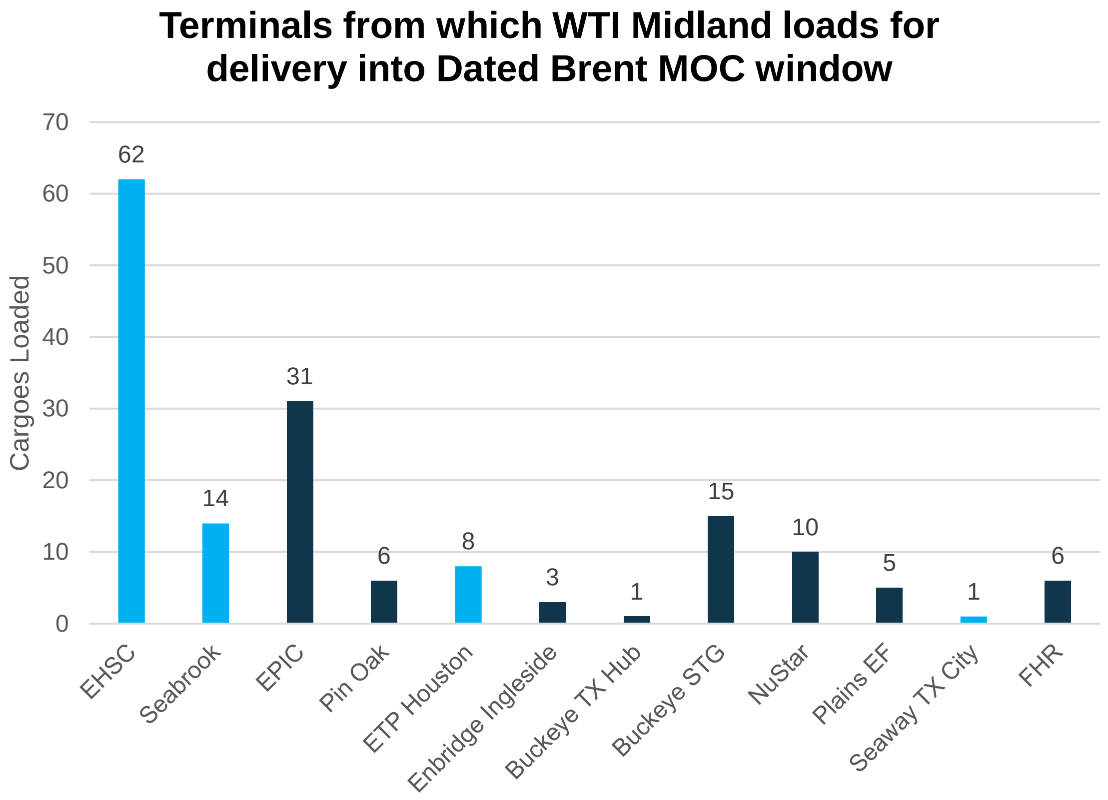
The addition of Midland WTI to the Brent Complex: smooth and successful. Impact on physical volumes similar to expectations.



Source: Platts Crude Oil Marketwire. Data assembled by ICE. Data through October 2024.

- Volumes: from June 2023 through Oct. 2024, an average of 10 cargoes of Midland per month traded in the Dated Brent MOC window.
- Before Midland WTI was added, less than 10 cargoes of BFOET (the old basket) traded per month. With Midland, volumes have approximately doubled. Again, this has been broadly similar to expectations.
- Midland WTI is <u>not</u> WTI Cushing. Midland is literally a different crude grade, with different quality, origin, and pricing location.
- The same Midland WTI crude deliverable against the ICE HOU contract is deliverable into the Brent complex.

More than half of Midland WTI cargoes delivered into the Platts Dated Brent Market on Close window load at Houston terminals. Only EHSC and Seabrook guarantee the quality of Midland crude.



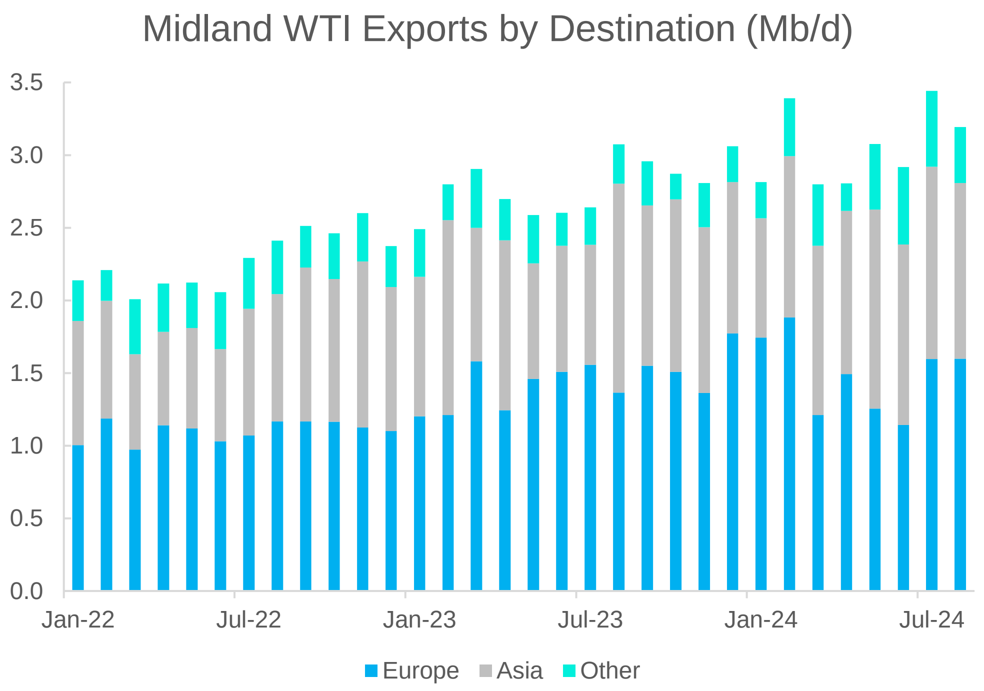
Note: Houston terminals in blue. Source: S&P Global Commodity Insights. Data through mid-October 2024.

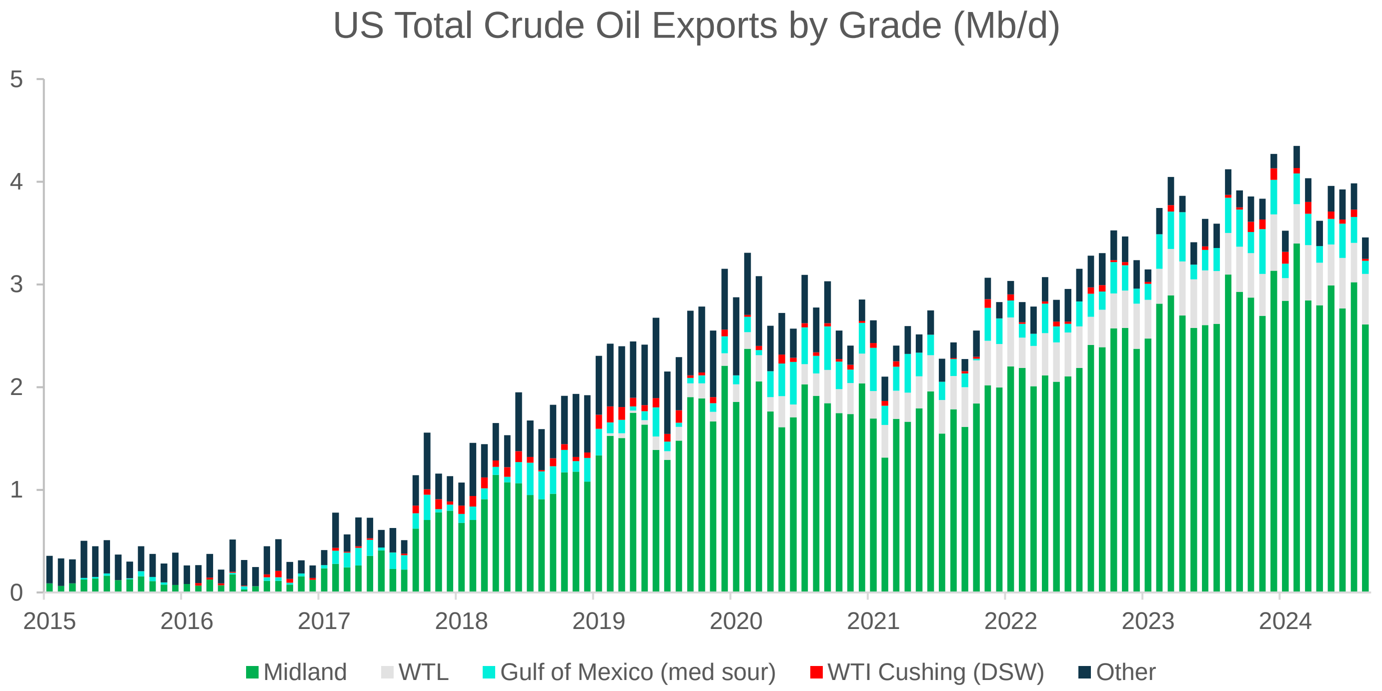
- From Platts performance tracking. Physical performance is reviewed against published parameters.
- All 12 Platts-approved terminals have delivered Midland into Dated Brent. As of mid-October, 52% of 162 cargoes have loaded from Houston.
- Of Houston loadings, most have been from Enterprise EHSC and ONEOK (former Magellan) Seabrook terminals. These are the only terminals that guarantee the quality of Midland crude.

ICE Midland WTI (HOU) Futures: physically deliverable crude futures for the USGC

Midland WTI: driving growth in U.S. crude production and exports

Exports of Midland act as a key swing supply between Atlantic Basin and Asia



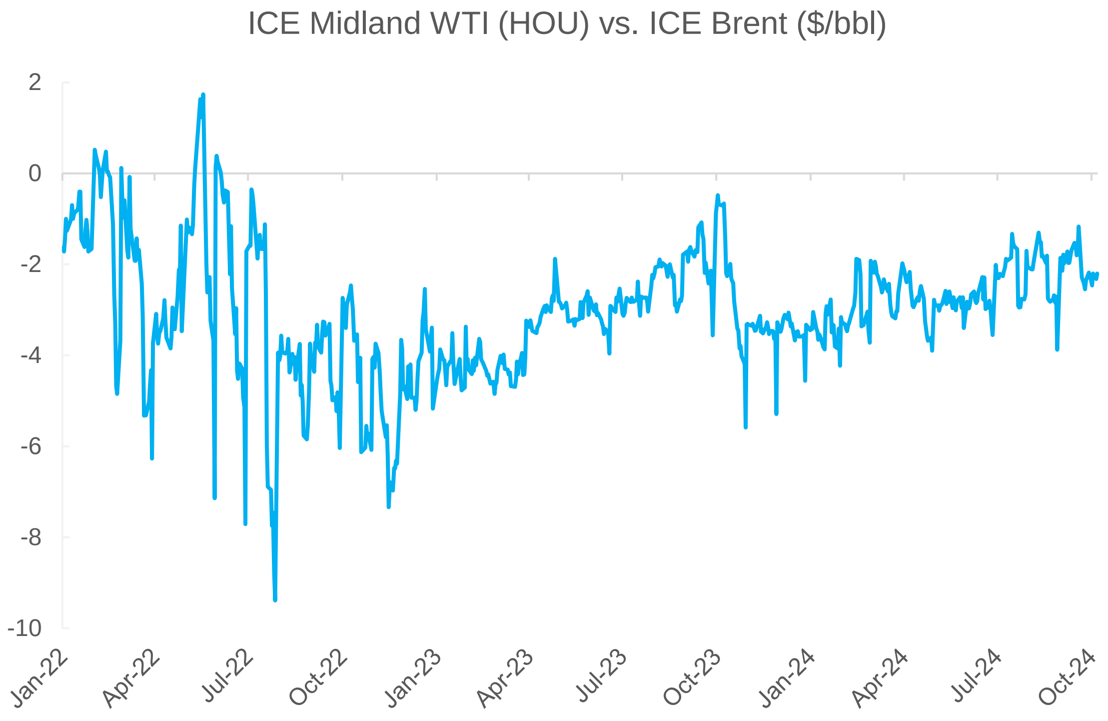


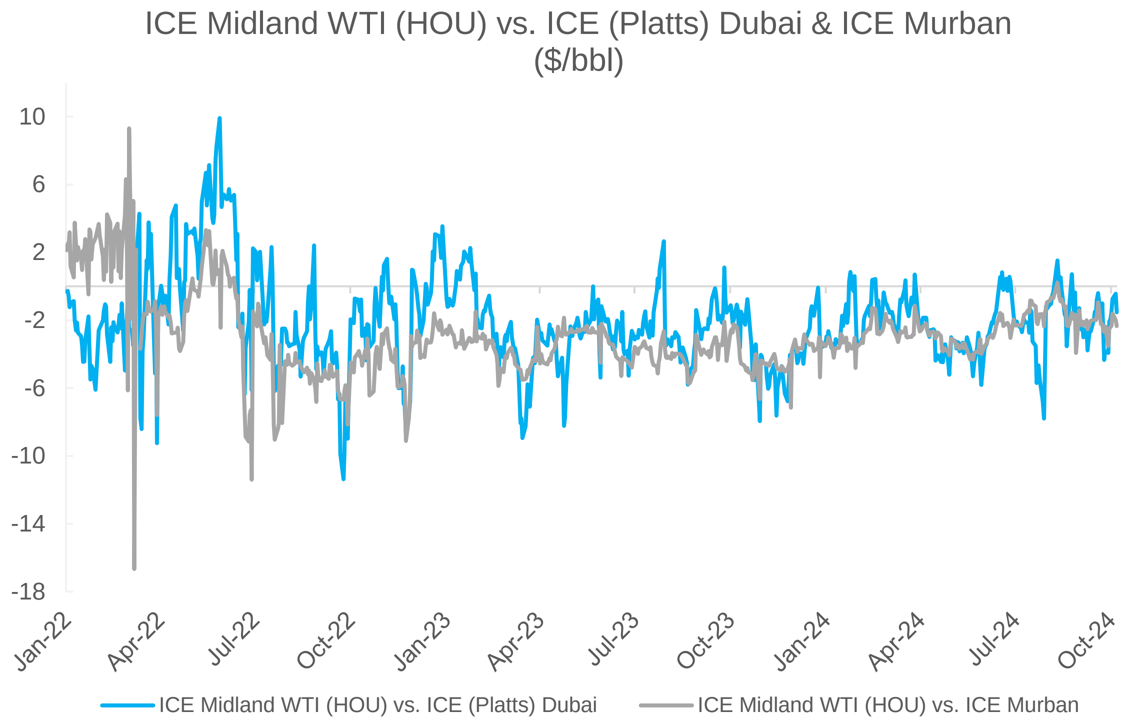
Source: Kpler and ICE

- The Permian Basin/Midland dominates U.S. crude production and exports. Total U.S. output 13.3 Mb/d. Permian Basin output 6.3 Mb/d.
- Driven by the Permian Basin, U.S. crude is forecast to grow. According to US EIA: US +0.29 Mb/d in 2024, +0.32 Mb/d in 2025.
- U.S. crude exports should increase broadly in line with output, because U.S. refiners are usually maxed out in processing light sweet crude
- Out of a total 4.1 Mb/d of U.S. crude exports in 2024 (to date), Midland WTI has accounted for over two-thirds
- Due to shale and the Permian Basin, the U.S. market has evolved and is now centered on the U.S. Gulf Coast, not Cushing. Crude flows directly from the Permian Basin to the USGC. Permian crude mainly bypasses Cushing altogether.

Midland WTI exports price off Brent to Europe or Dubai/Murban to Asia.

Midland WTI is a different crude grade than WTI Cushing: origin, quality, pricing location, storage capacity.





Source: ICE

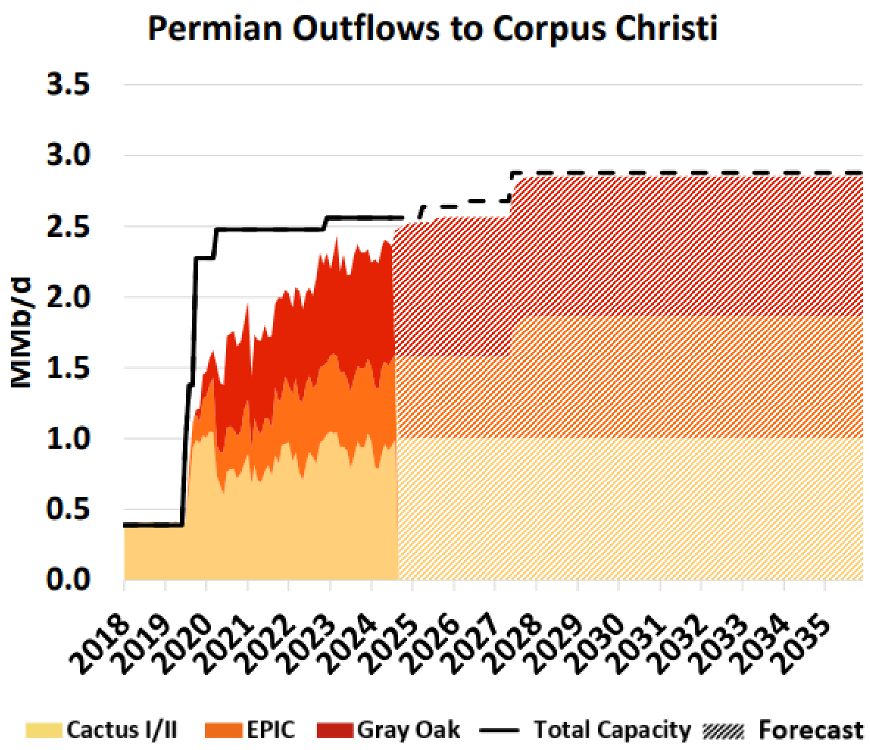
- HOU is a physically deliverable futures contract for Midland-origin / Midland-quality crude priced in Houston, on the US Gulf Coast.
- Houston has evolved from MEH to both MEH and ECHO. ONEOK (former Magellan) & Enterprise combined infrastructure includes substantial direct-from-Permian supply capacity (2.8 Mb/d), storage capacity (60 Mb/150 Mb Houston), and access to domestic & export refinery demand.
- The same Midland WTI crude deliverable against HOU is deliverable into Brent complex. HOU is tradeable vs. Dated Brent and ICE Brent.

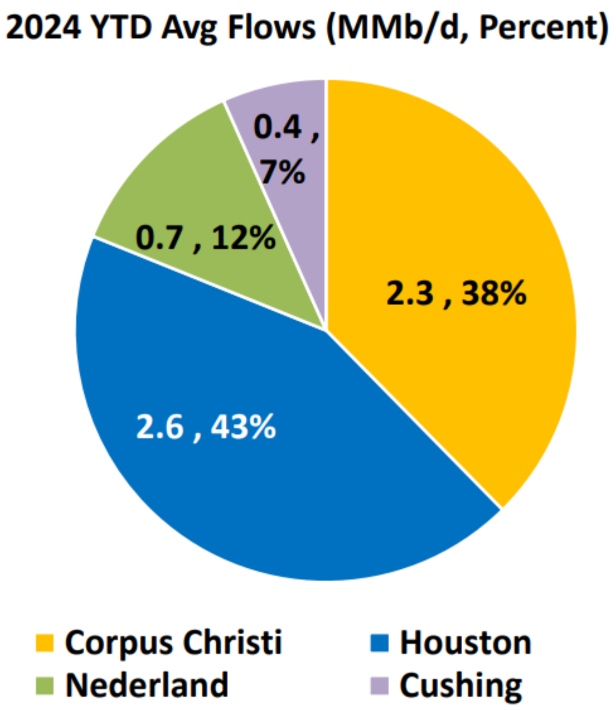
How to hedge price exposure to Midland crude at Houston?
Key USGC crude price differentials drive exports & hedging

- Currently (for exports to Asia):
  - A) ICE Midland WTI (HOU) vs. WTI Cushing
  - B) WTI Cushing vs. Dubai/Murban
  - C) ICE Midland WTI (HOU) vs. Dubai/Murban
- Trader does A and B. The WTI Cushing legs cancel, and trader is left with C.
- A better way: Trader simply does C.
- HOU offers a more direct, more efficient (simpler) and more cost-effective way for producers, refiners, and traders to hedge USGC exposure. Also minimize unnecessary exposure to Cushing logistics/storage constraints and WTI Cushing price volatility.
- Margin offsets as high as 97% when clearing HOU alongside other positions on ICE Clear Europe (including ICE Brent, ICE Dubai (Platts), ICE Murban and ICE Gasoil).

What About Corpus Christi?

- Why does Midland-Corpus consistently have around a $0.20/ bbl premium to Midland-Houston?
- Simple answer: There is not enough crude oil.
- Current export capacity at Corpus docks: 3.5 Mb/d
- Current Permian outflows to Corpus: 2.3 Mb/d
- Corpus has an excessive amount of dock capacity compared to crude availability.
- Every counterparty with a “take or pay” contract at the dock is fighting for the same crude barrels, so prices get bid up.





Source: RBN

How to hedge price exposure to Midland crude at Corpus Christi?

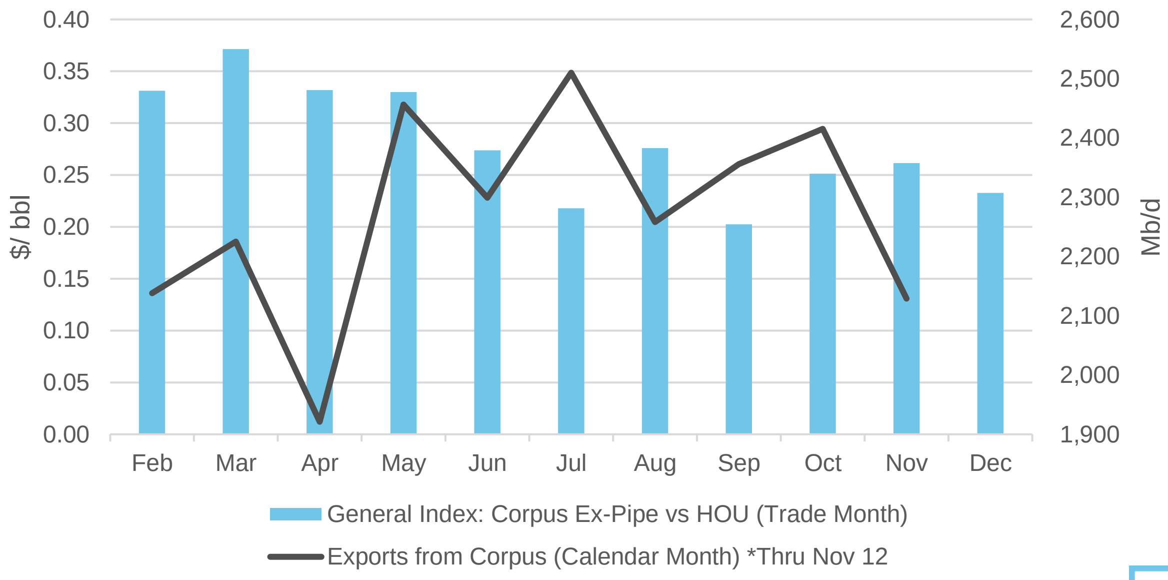
- Current industry standard has the Corpus ex-pipe market trading as a differential to MEH.
  - This is the market pricing a diff to a diff. Corpus > Houston > Cushing
  - Needlessly complicated – an unnecessary layer for pricing

- General Index has begun to assess Corpus to HOU
  - This eliminates all exposure to Cushing. Corpus > Houston.
  - Minimize unnecessary exposure to Cushing logistics/storage constraints and WTI Cushing price volatility.

- Once crude goes across the dock, all Midland barrels are the same. Corpus needs to compete with Houston for pricing exports.

- HOU EFPs allow you to take and make delivery across any dock, including those in Corpus.

Corpus Ex-Pipe vs. HOU and Corpus Crude Exports (2024)



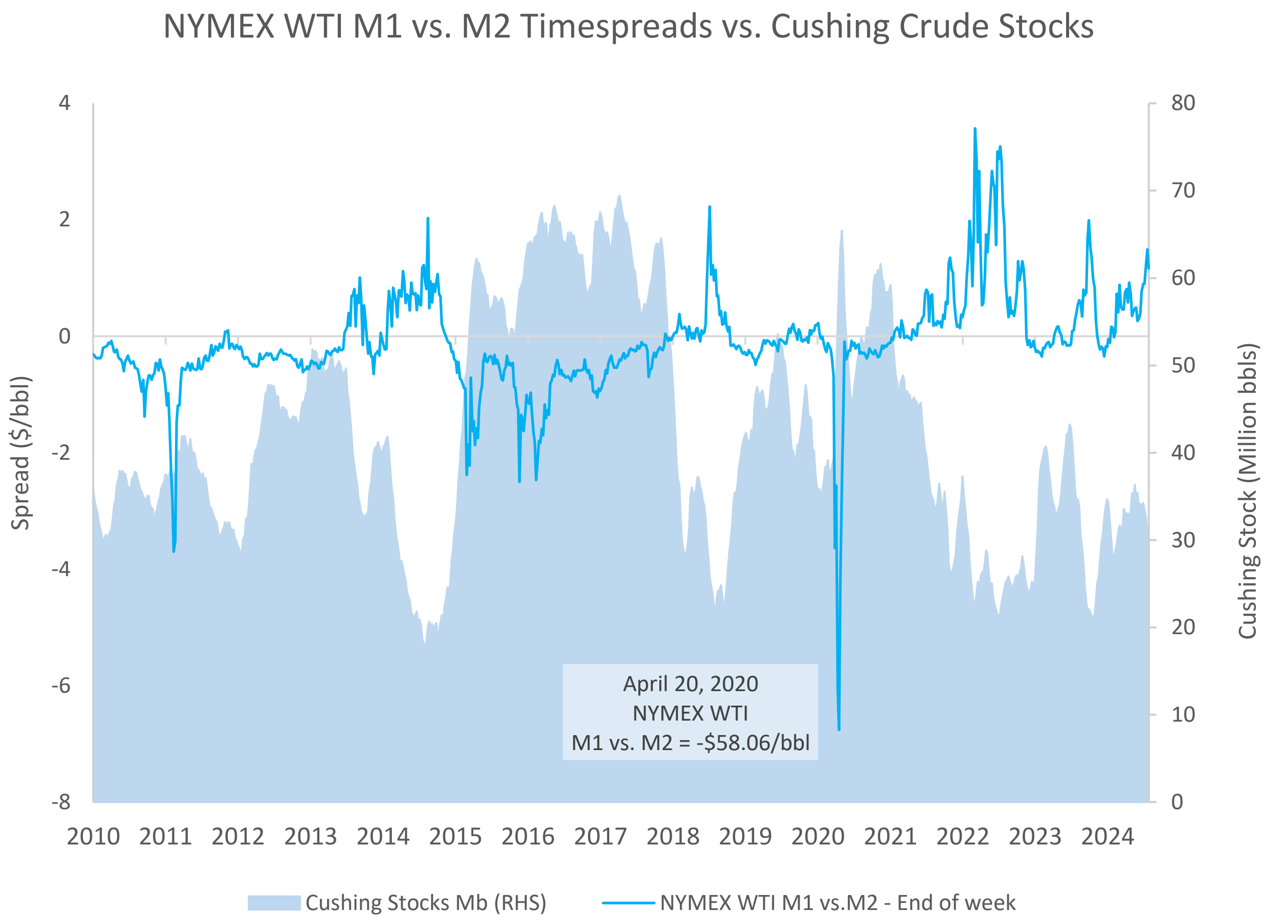
Source: General Index and Kpler

New pricing for US crude markets vs. ICE Midland WTI (HOU) futures -- from General Index (GX)

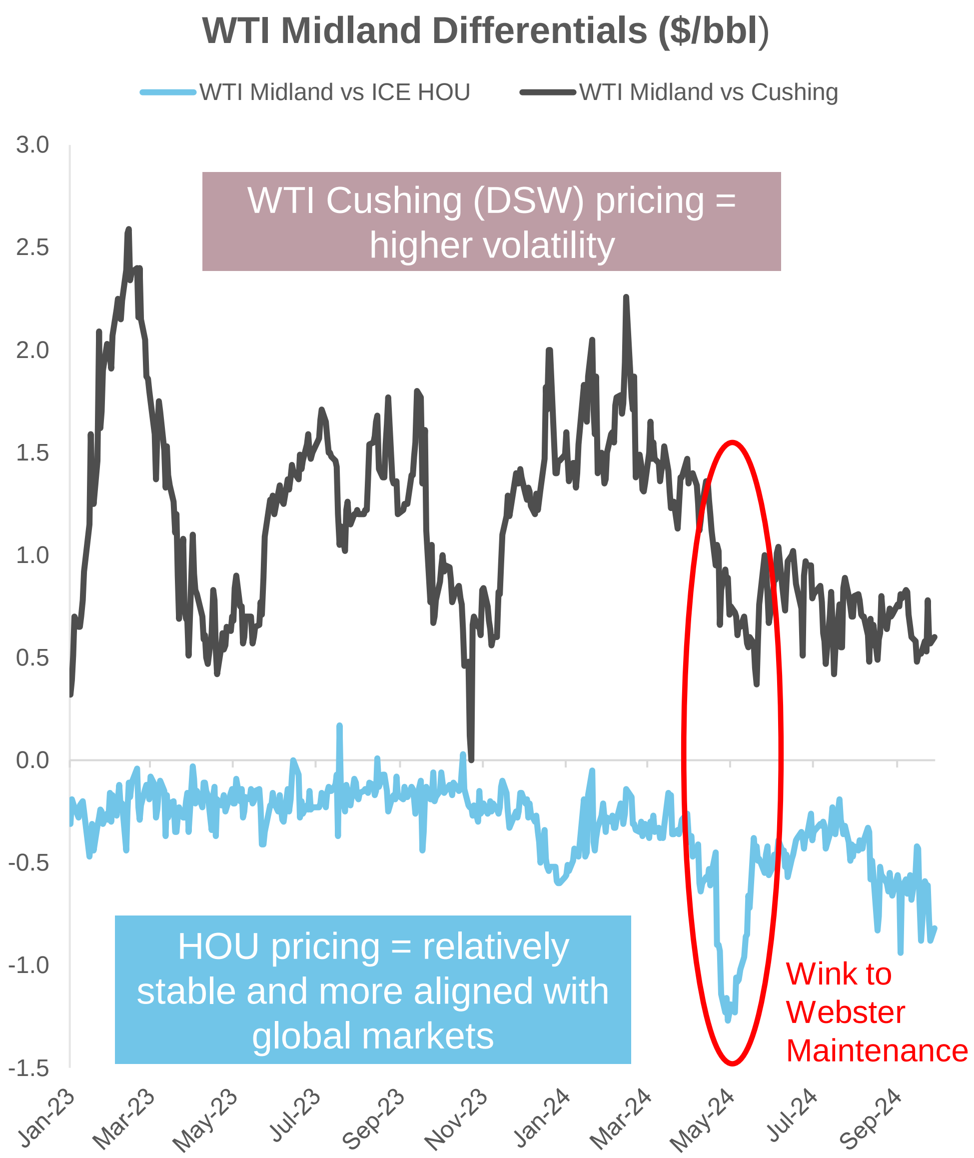
ICE HOU Markets	Basis	Delivery	VWA Diff	Change	VWA Outright	Change	MTD Diff	IMAVG Diff
Houston/Texas Gulf Coast								
WTI East Houston	ICE HOU	Dec	0.02	+0.02	73.56	+0.71	0.00	0.01
Canadian Sour	ICE HOO	Dec	-5.66	-0.08	67.38	+0.64	-5.85	-5.77
Bakken	HOO + CM1	Dec	0.22	+0.01	73.70	+0.68	0.12	0.17
SGC	ICE HOU	Dec	-1.51	+0.39	72.03	+1.08	-1.97	-1.77
Corpus Christi	ICE HOU	Dec	0.23	-0.02	73.77	+0.67	0.27	0.25
Corpus Christi ex GO	ICE HOU	Dec	0.23	-0.02	73.77	+0.67	0.27	0.25
Corpus Christi ex Epic	ICE HOU	Dec	0.23	-0.02	73.77	+0.67	0.26	0.25
Midland								
WTI	ICE HOU	Dec	-0.48	-0.01	73.06	+0.68	-0.51	-0.49
WTS	ICE HOU	Dec	-1.88	+0.09	71.66	+0.78	-1.68	-1.77
WTL	ICE HOU	Dec	-0.83	-0.01	72.71	+0.68	-0.97	-0.91
Louisiana/Gulf of Mexico								
Mars	ICE HOU	Dec	-2.27	-0.31	71.27	+0.38	-2.26	-2.26
Poseidon	ICE HOU	Dec	-2.50	-0.34	71.04	+0.35	-2.49	-2.49
Thunder Horse	ICE HOU	Dec	-0.71	-0.02	72.83	+0.67	-0.78	-0.75
WTI St. James	ICE HOU	Dec	1.21	-0.02	74.75	+0.67	0.88	1.02
LLS	ICE HOU	Dec	0.72	-0.02	74.26	+0.67	0.61	0.66
HLS	ICE HOU	Dec	-0.68	-0.12	72.86	+0.57	-0.85	-0.78
Bonito	ICE HOU	Dec	-1.97	-0.31	71.57	+0.38	-1.89	-1.92
Cushing								
Canadian Sour	ICE HOO	Dec	-6.61	-0.05	66.43	+0.67	-6.74	-6.68
WTI ex-Basin	ICE HOU	Dec	-0.03	-0.05	73.51	+0.64	0.01	-0.01
Bakken Light Sweet	ICE HOU	Dec	-0.83	-0.02	72.71	+0.67	-0.90	-0.87

Source: General Index

Swings in Cushing crude stocks drive NYMEX WTI (Cushing) price volatility

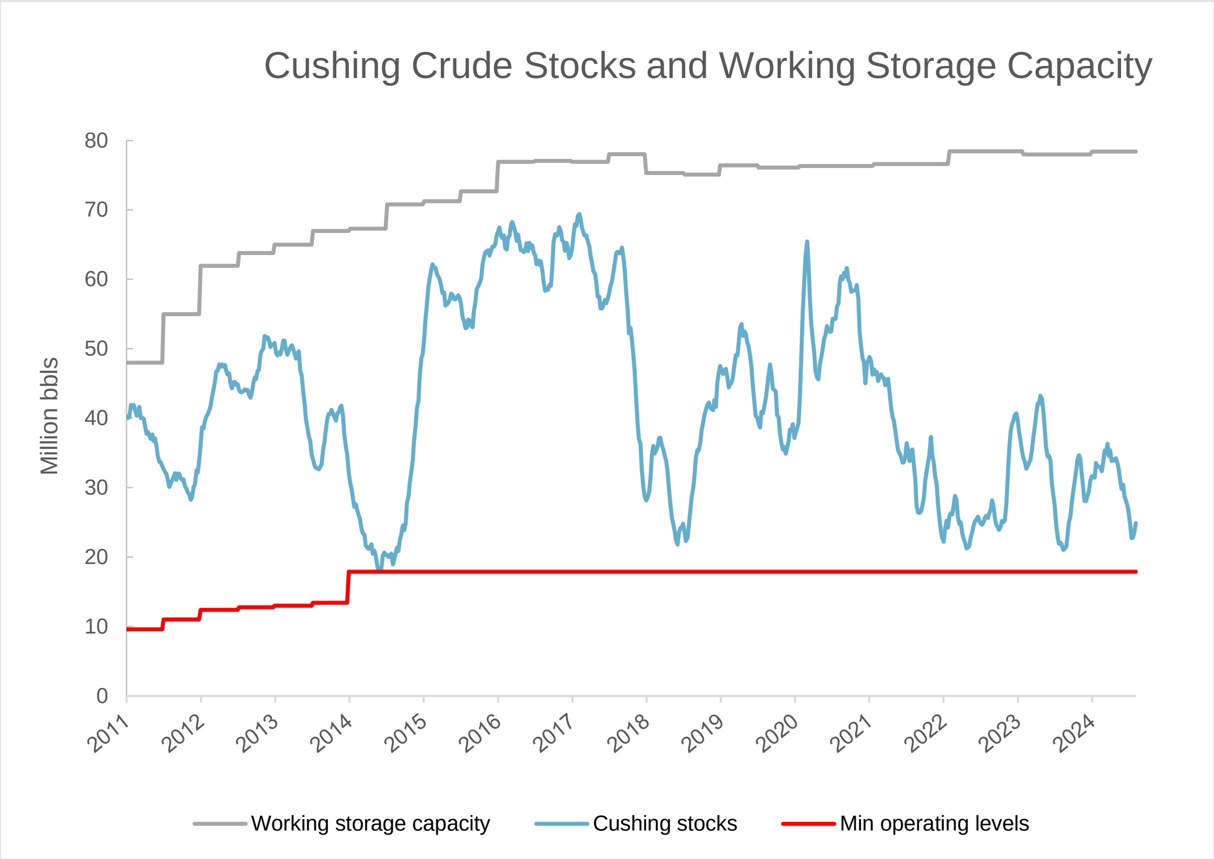


Source: ICE and US EIA



Source: ICE and General Index

Swings in Cushing crude stocks drive NYMEX WTI (Cushing) price volatility (continued)



Source: ICE and US EIA

- Swings in Cushing crude stocks near operational minimums and maximums have been happening for a long time -- 10 years
- More recent pattern: very low/tight Cushing crude stocks during summer 2022, summer 2023, summer 2024

ICE Midland WTI (HOU) crude quality specs further aligned w Platts

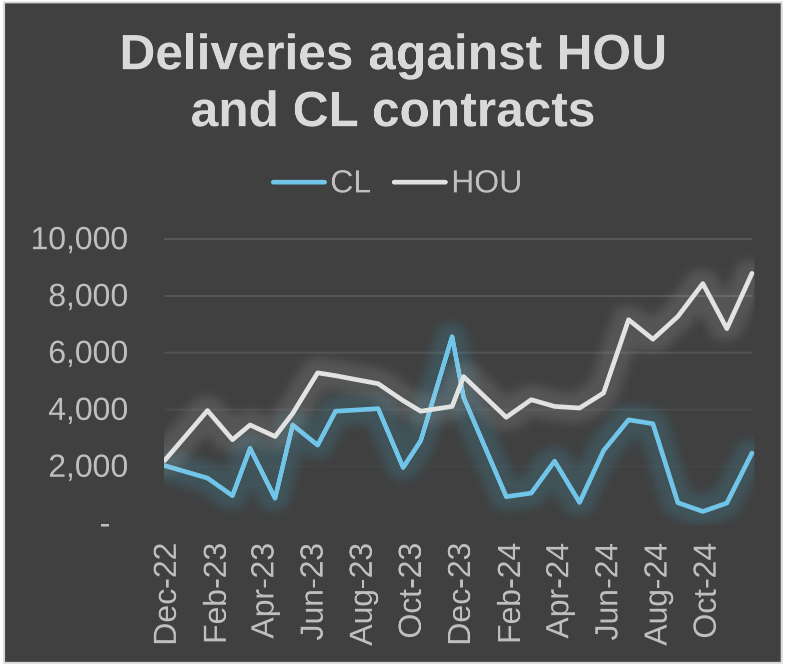
- As announced on Feb. 28, 2024, HOU spec further aligned with Platts WTI Midland spec as included in Dated Brent
- A tight and robust spec, ICE contract rules and oversight, and ONEOK and Enterprise's strict/proven quality programs aim to protect and give confidence to buyers and sellers regarding quality. History on ONEOK and Enterprise websites.
- HOU ratability guarantee for deliveries against the contract: On day 1 of the calendar month, oil must start being delivered. Physical supply risk management – quality, volumes, and delivery schedule – is crucial for all refiners and exporters.

ICE Midland WTI (HOU) Specifications

PARAMETER	UNITS	MIN	MAX
API Gravity	˚API, 60˚F	40	44
Sulfur Content	% (m/m)		0.2
Mercaptans	ppm Wt		75
RVP	PSI		9.5
BS&W	% (v/v)		1
Nickel	ppm Wt		2
Vanadium	ppm Wt		2
Iron	ppm Wt		10

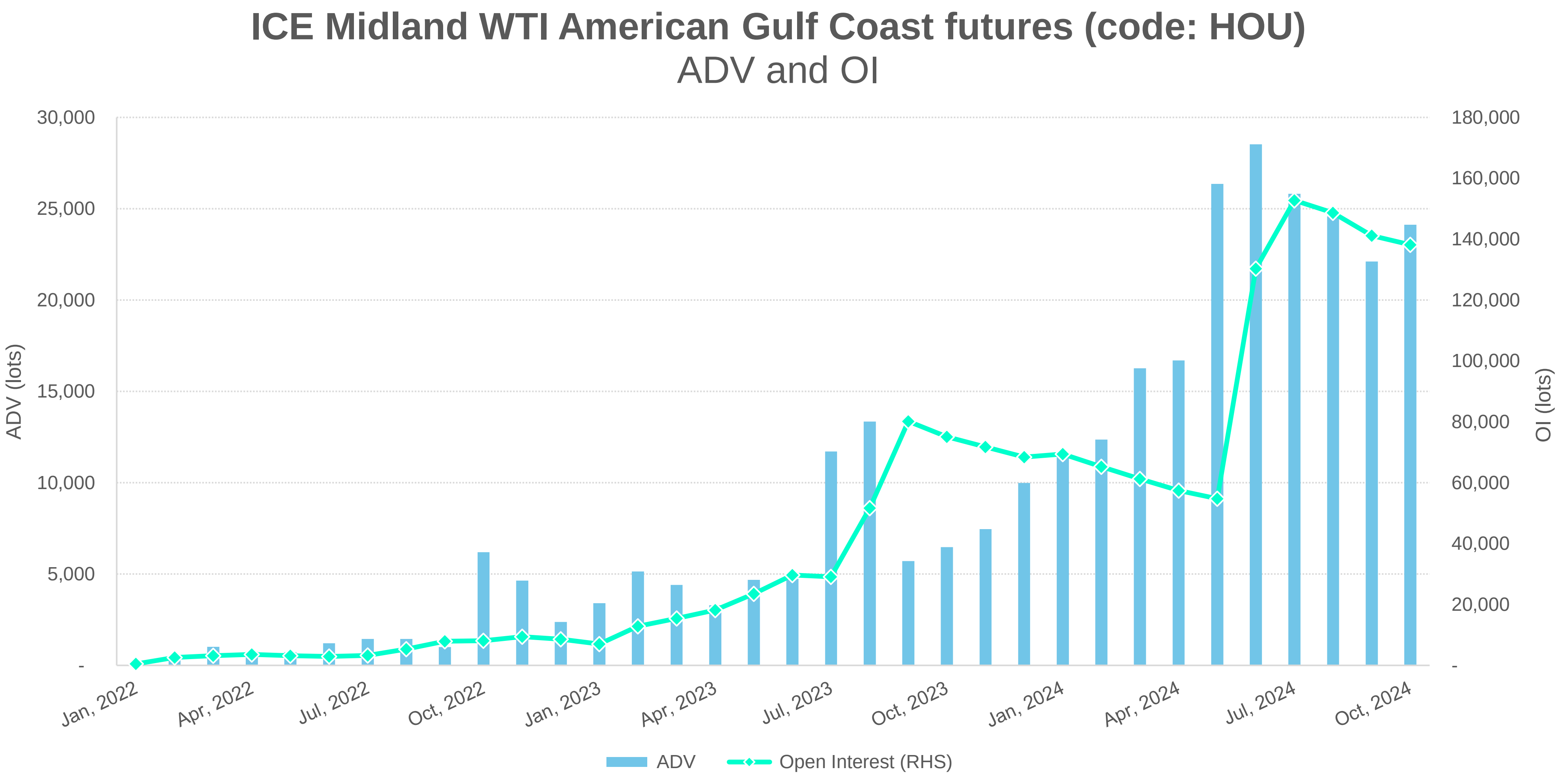
NYMEX WTI (CL) Specifications

PARAMETER	UNITS	MIN	MAX
API Gravity	˚API, 60˚F	37	42
Sulfur Content	% (m/m)		0.42
Mercaptans	ppm Wt		N/A
RVP	PSI		9.5
BS&W	% (v/v)		1
Nickel	ppm Wt		8
Vanadium	ppm Wt		15
Iron	ppm Wt		N/A



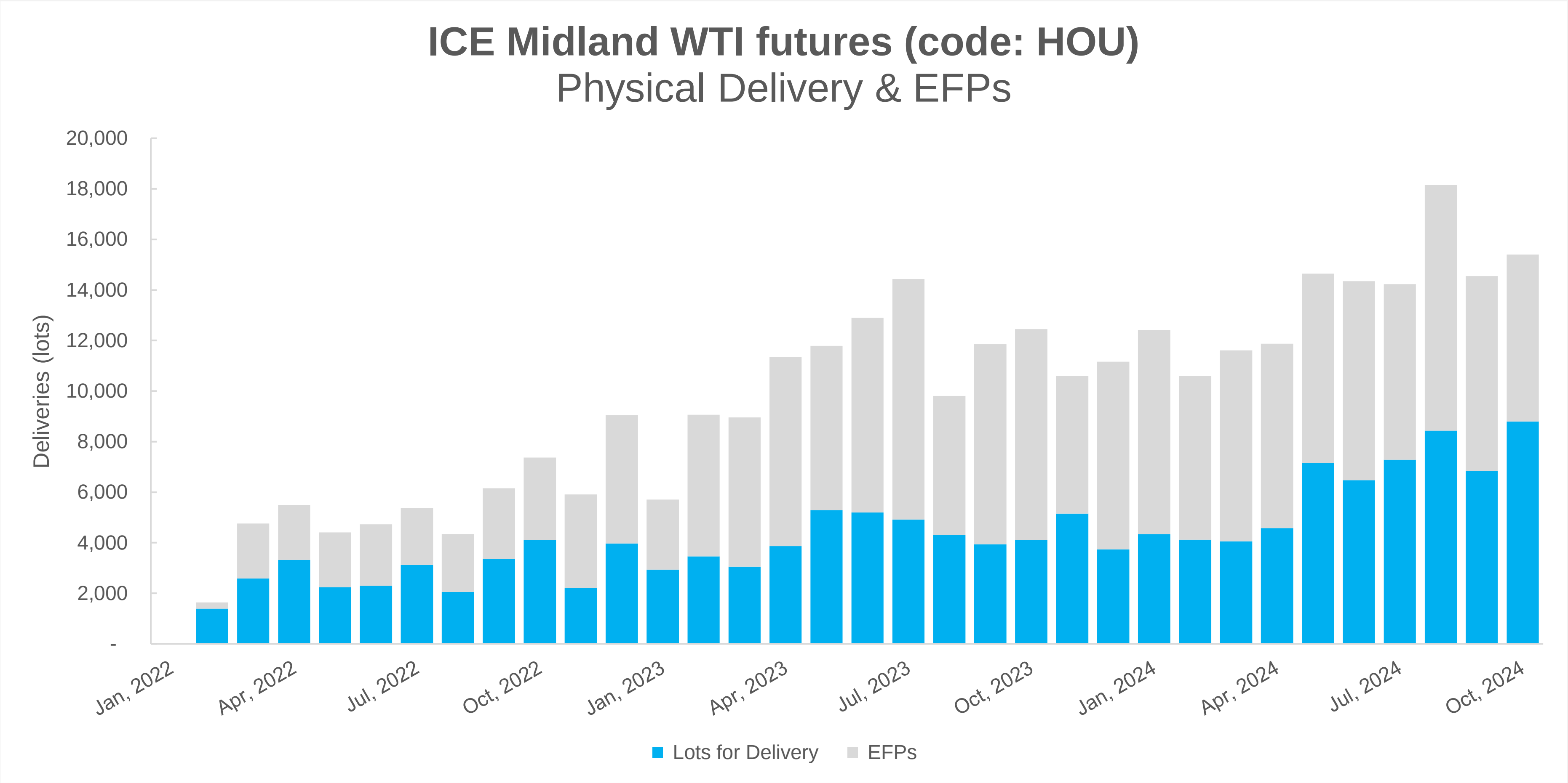
Source: ICE, NYMEX, and S&P Global Commodity Insights

ICE Midland WTI (HOU): trading activity (ADV/Open Interest) gaining momentum



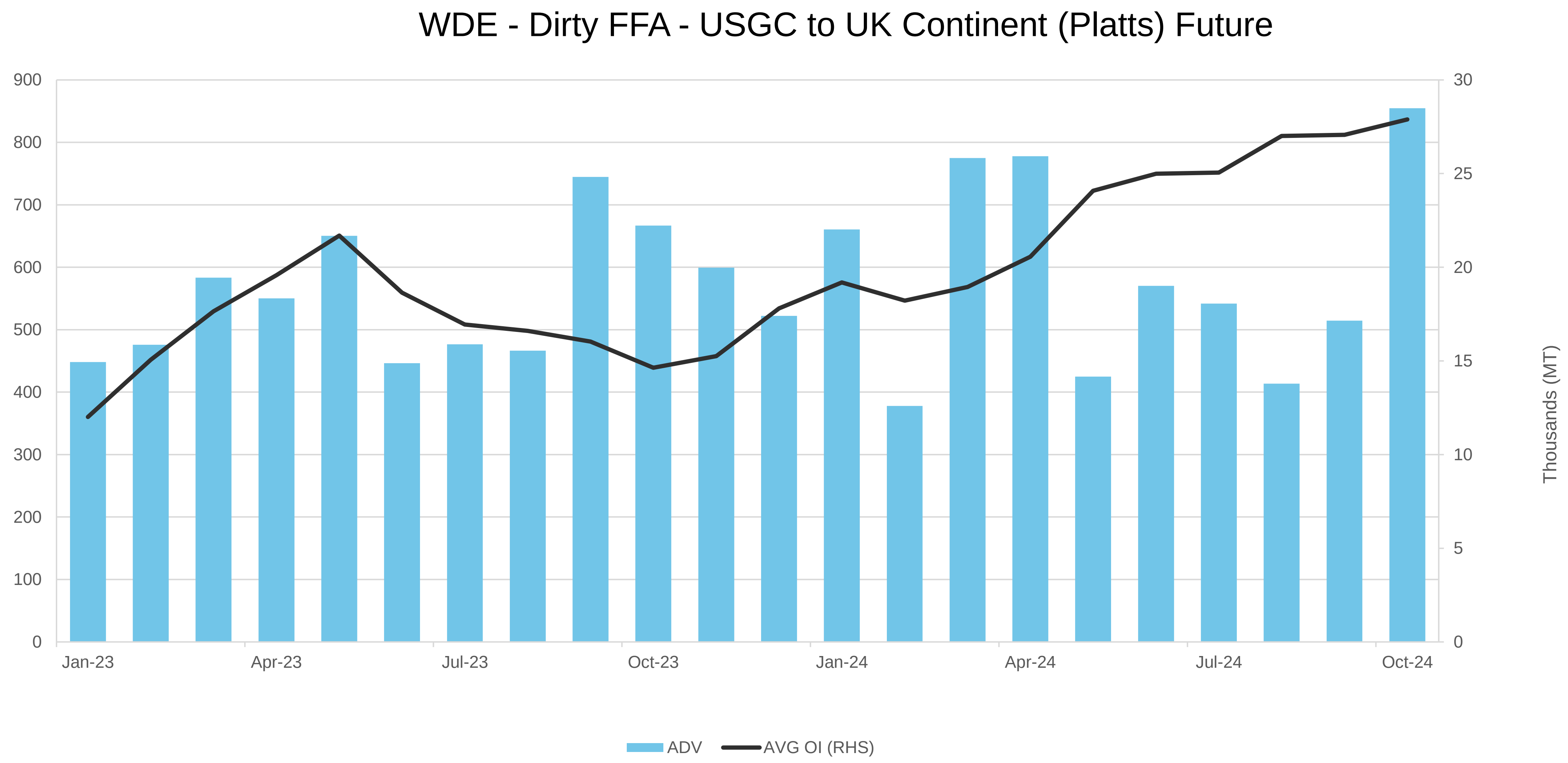
Source: ICE

ICE Midland WTI (HOU): physical deliveries & EFPs also gaining momentum



Source: ICE

ICE Dirty Freight – USGC to UKC Aframax Volume and OI



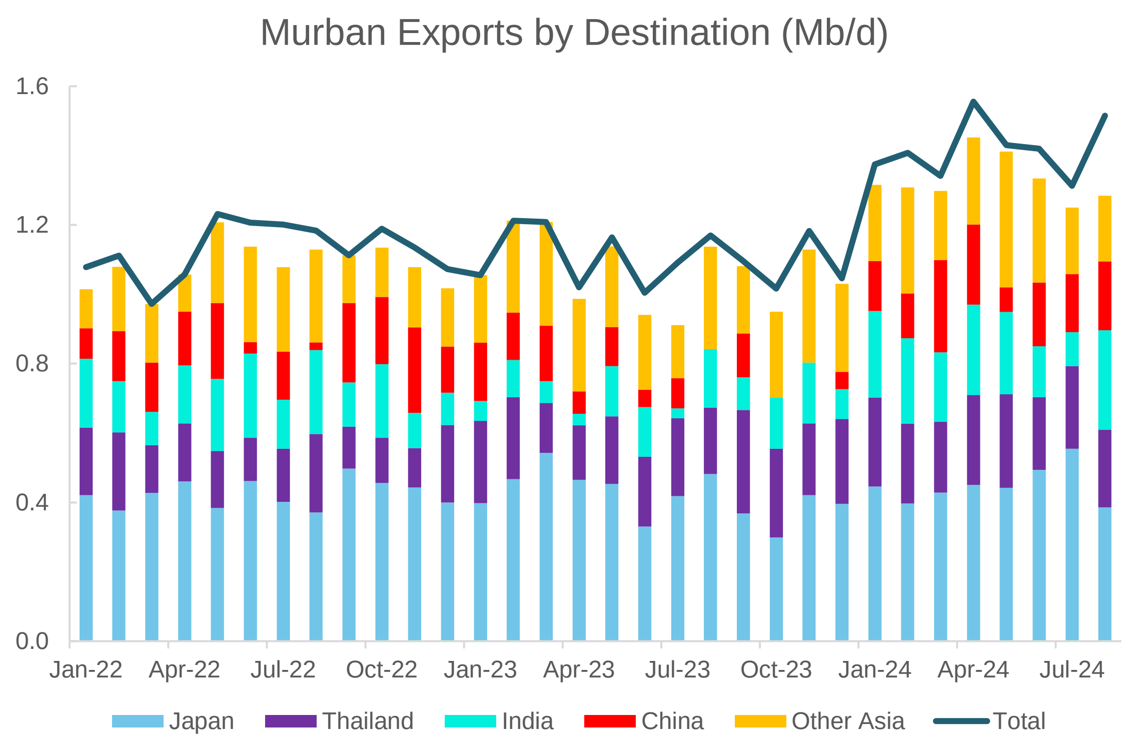
 Source: ICE

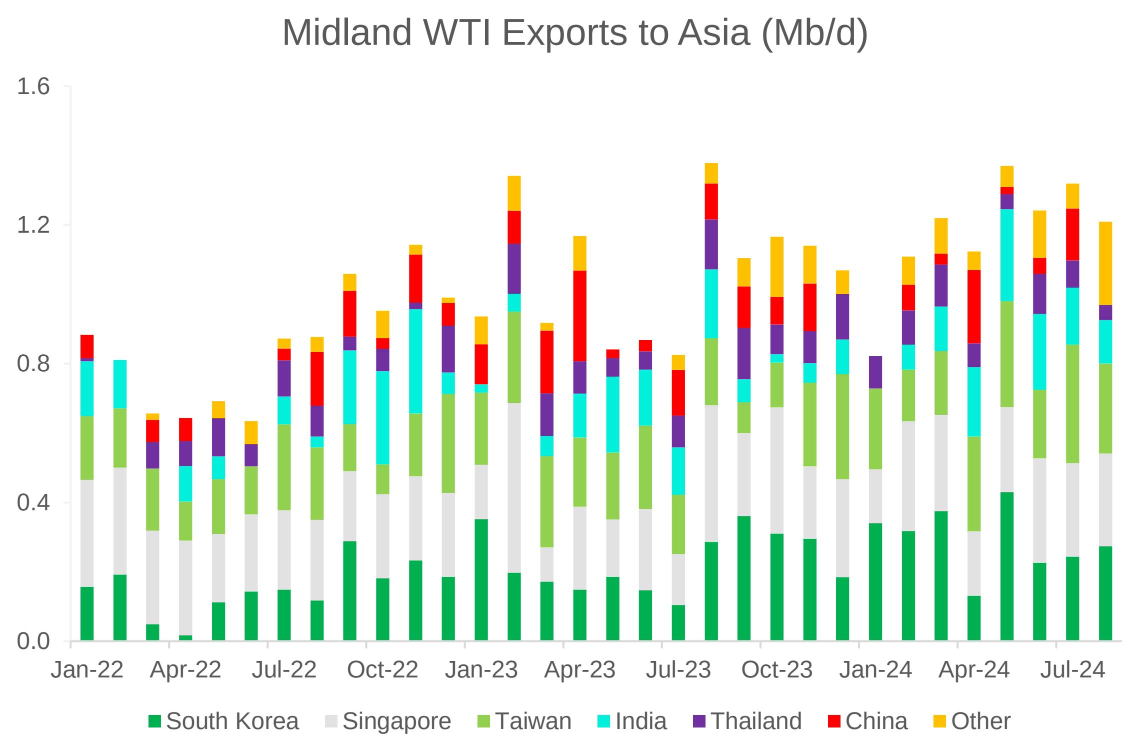
ICE Midland WTI (HOU) key points: effective management of price risk and physical supply risk

- **Price risk management:**
- HOU offers a more direct, more efficient (simpler) and more cost-effective way for producers, refiners, and traders to hedge USGC exposure. Also a way to minimize unnecessary exposure to Cushing logistics/storage constraints.
- Once Midland WTI hits the water, it prices off Brent (to Europe) or Dubai/Murban (to Asia). It can be used to hedge exports to both regions.
- Midland exposure can be hedged via HOU in both Houston and Corpus Christi
- **Physical supply risk management:**
- US physical market participants experience occasional problems with Midland crude supply.
  - Exporters can receive off-spec Midland WTI at USGC terminals.
  - Refiners can unexpectedly receive non-ratable volumes of Midland WTI from suppliers (i.e., supply cuts).
- Going to expiry in the HOU contract results in guaranteed physical delivery of on-spec and ratably delivered Midland WTI crude that can be run in US domestic refineries or exported to European and Asian refiners.
- Volumes are received as planned: on-spec and at the agreed volumes and delivery timeframe

ICE Murban (ADM) Futures: a light sour crude benchmark for the Middle East

Murban exports go almost entirely to Asia. Midland WTI is a competing grade.

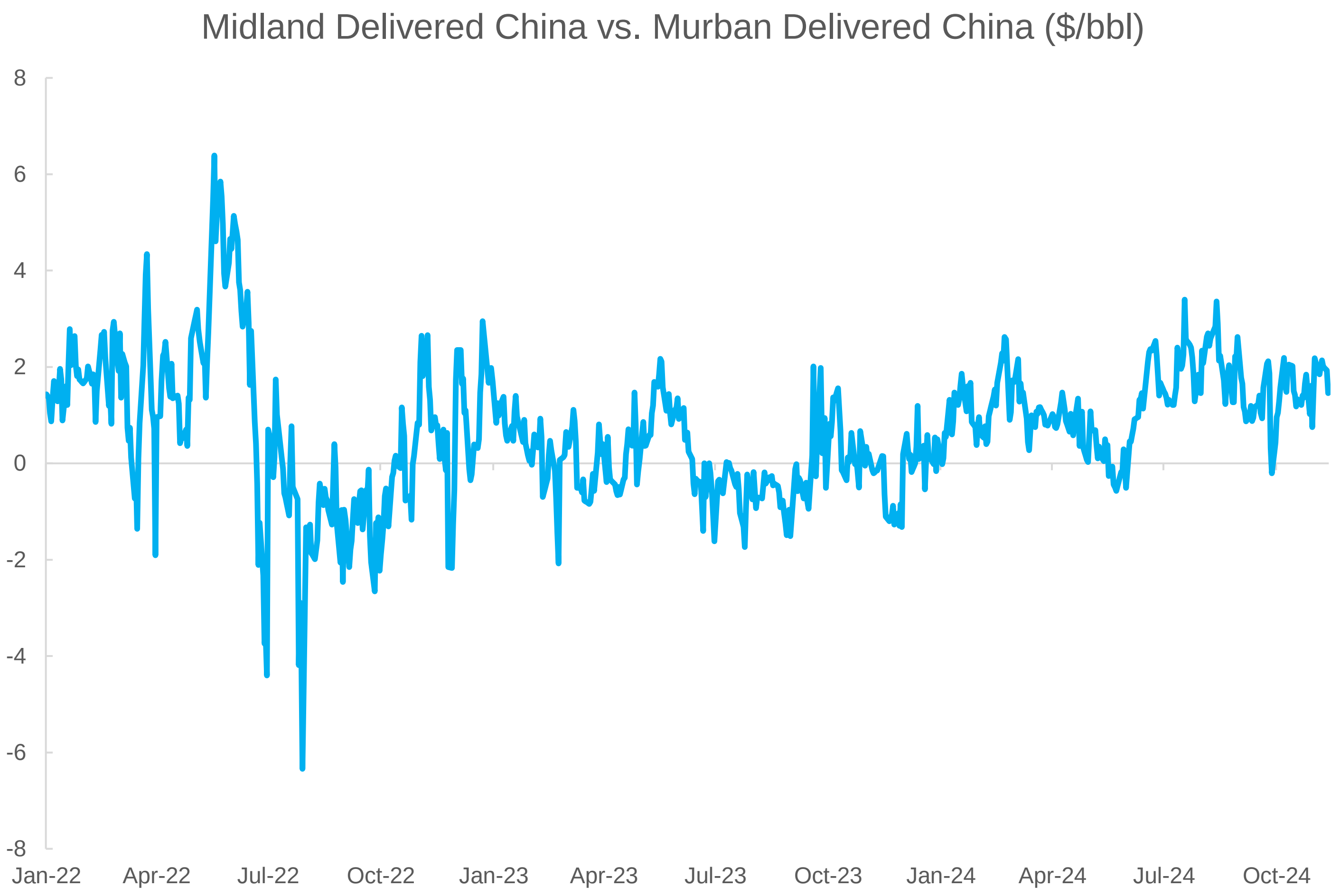




Source: Kpler and ICE

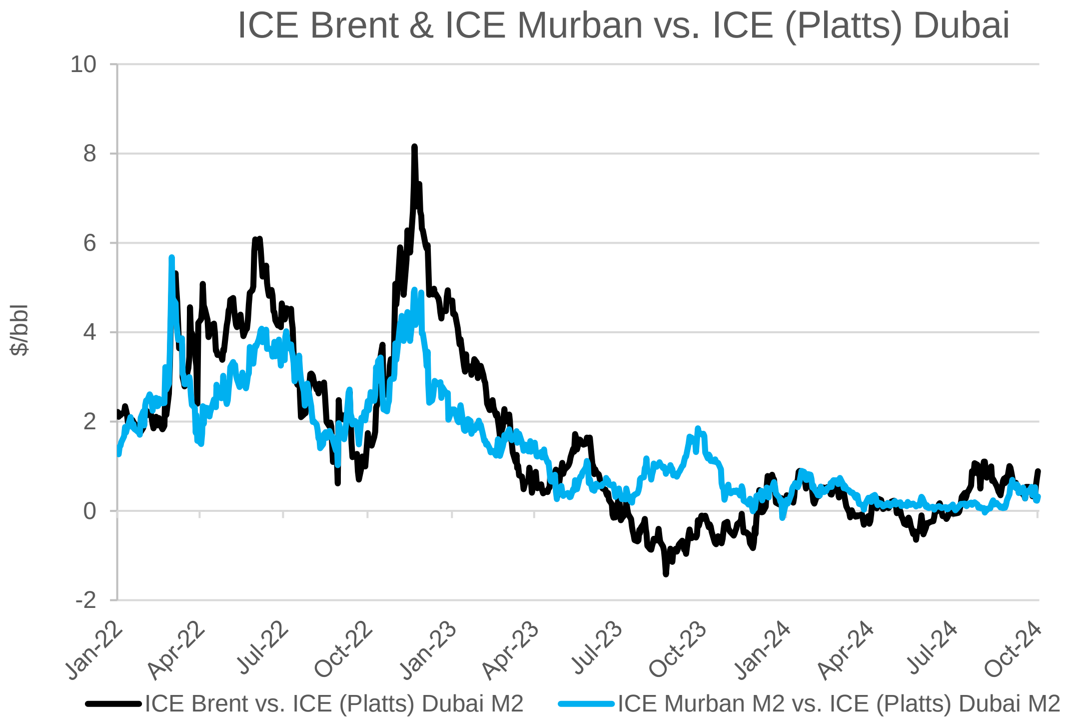
- Murban crude exports approximately 1.4 – 1.5 Mb/d, up from 1.1 – 1.2 Mb/d. Due to Ruwais upgrading project completion.
  - Flows almost entirely to Asian countries (around 95%). Competition from Midland WTI.
- Murban crude production around 1.7 – 1.8 Mb/d.
- ADNOC plans to increase production and exports over the next few years.

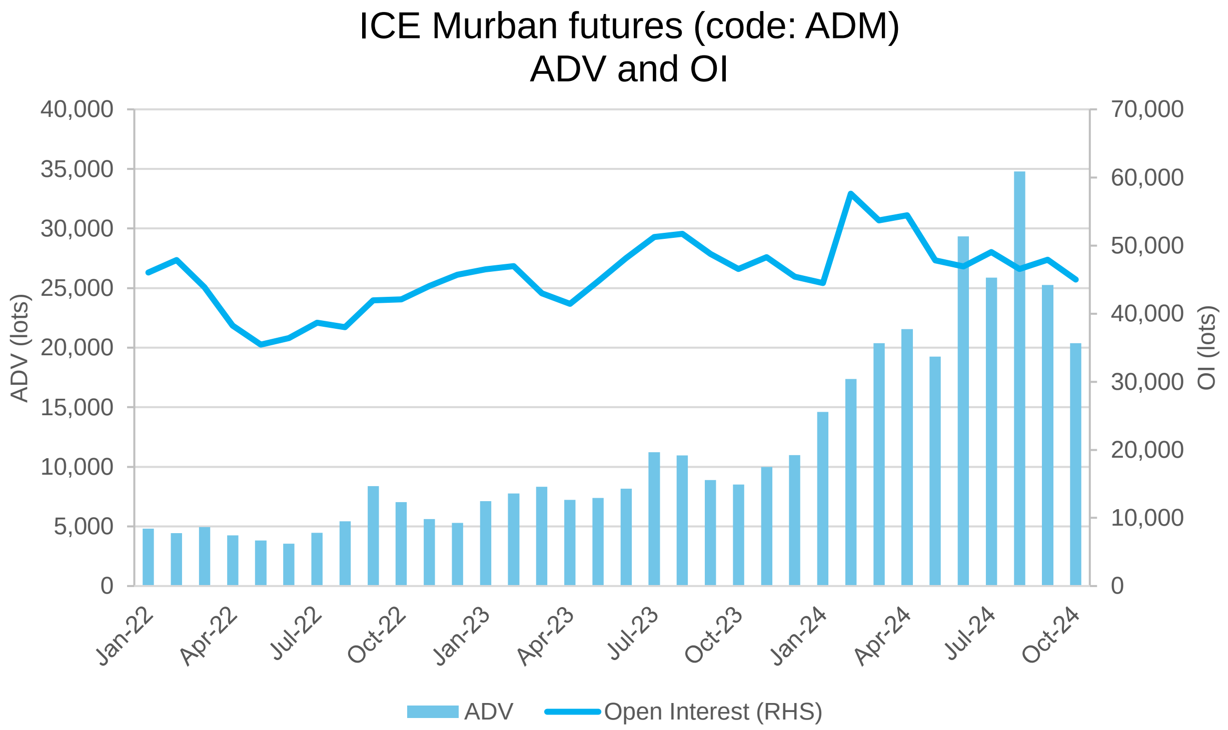
A key crude differential for the Midland vs. Murban competition in Asia



Source: Platts, ICE

ICE Murban: trading activity (ADV & Open Interest) building quickly

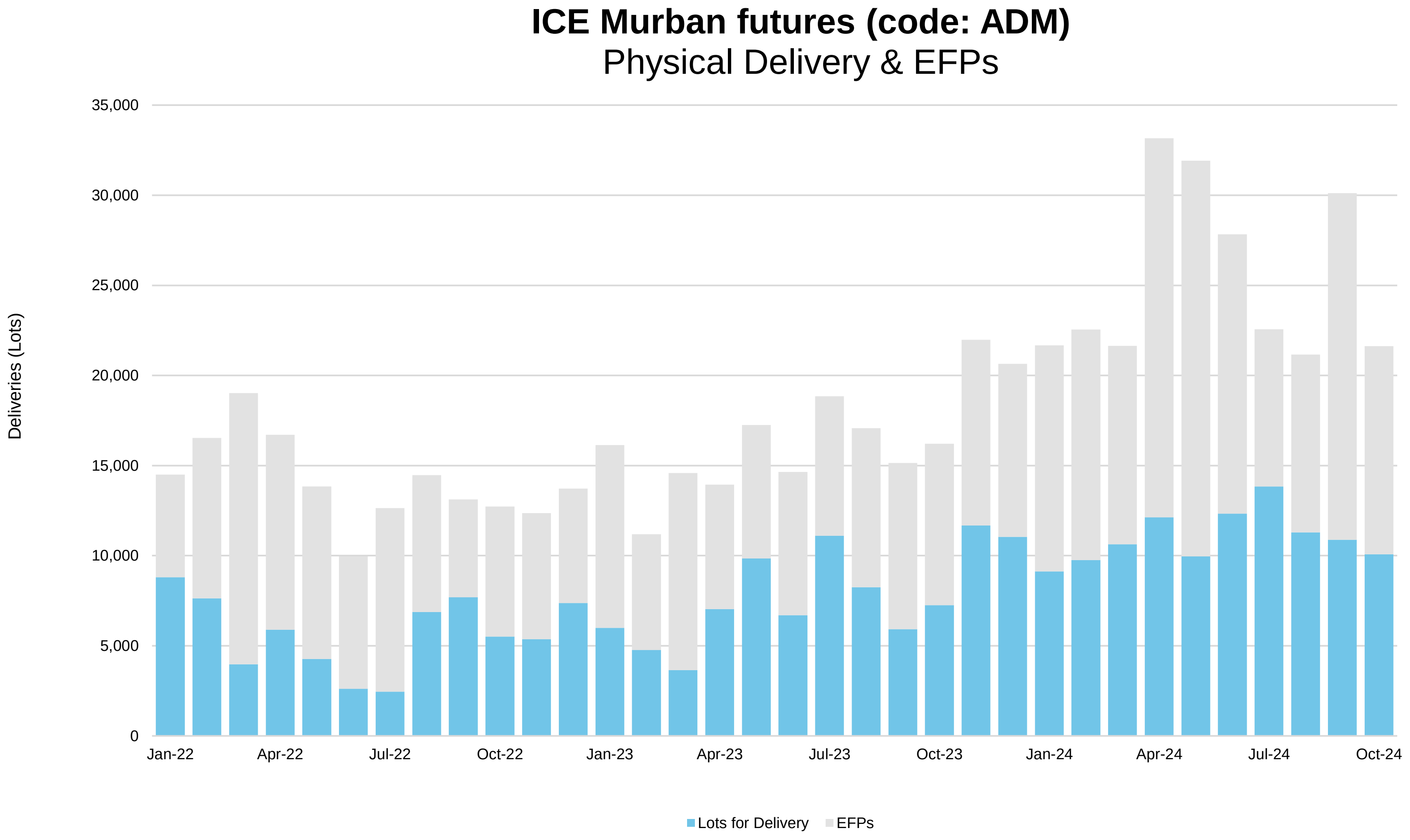




Source: ICE

- Successful launch in March 2021. Trading activity gathering pace, as the contract continues to become more established in the market.
- Fundamentals supporting the physically deliverable ICE Murban contract include: high physical volumes, transparent export plans, high crude quality, diverse groups of sellers and buyers, strong terminal/port infrastructure, and ample crude storage at Fujairah.
- Two key reforms made to physical pricing and trading: transparent market-driven pricing and no more destination and resale restrictions

ICE Murban (ADM): physical deliveries & EFPs also building quickly



Source: ICE

ICE Murban key points

- Murban crude exports growth in 2024
  - ADNOC Ruwais refinery (837 kb/d) upgrading/crude flexibility project completed 1Q24.
  - Allows higher runs of heavier crude such as Upper Zakum and lower runs of Murban
  - Result in lower exports of Upper Zakum and higher exports of Murban

- In 2024, unusually narrow Murban vs. Dubai differential (weak or negative quality premium).
  - Downward pressure on Murban from higher exports and strong flows to Asia of competing Midland WTI
  - Support for Dubai from OPEC+ cuts and lower exports of Upper Zakum

- Relatively inexpensive Murban vs. other grades has created hedging opportunities
  - The Murban vs. Midland differential can be hedged using ICE Murban (ADM) vs. ICE Midland WTI (HOU).
  - There has been market demand from Asian refiners and traders to trade this spread.
  - This differential is offered on the screen and is actively trading.

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Thank You

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November 2024

Oil buffeted by Geopolitics, Energy Transition, and Trump 2.0: Brent on a spiky downward channel to $60 into 2025?

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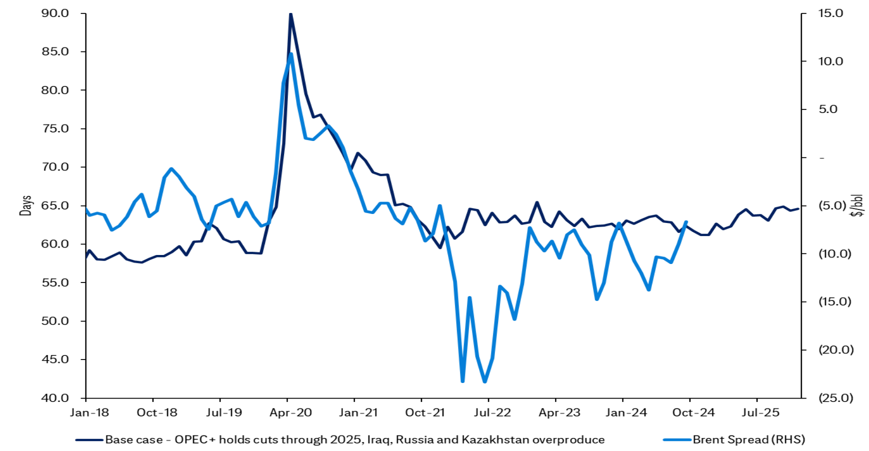
Oil prices could fall to $60 in 2025, but the path could be choppy

Citi oil price forecasts vs. futures* ($/bbl)

Total commercial oil inventories (on-land + floating) in days of forward demand cover vs. Brent 1-12m (inverted)



Citi oil price outlook vs. futures prices* ($/bbl, 2024-26E)

Citi Oil Price Deck		Price targets		Quarterly forecasts								Annual Forecasts		
	Prob	0-3M	6-12M	1Q24A	2Q24A	3Q24A	4Q24F	1Q25F	2Q25F	3Q25F	4Q25F	2024F	2025F	2026F
Brent base case (new)	**70%**	**70**	**60**	**82**	**85**	**79**	**70**	**65**	**60**	**60**	**55**	**79**	**60**	**65**
Brent (old)	*60%*	*74*	*60*				*74*	*65*	*60*	*60*	*55*	*80*	*60*	*65*
Brent Futures							76	75	74	74	73	76	74	72
Brent base case vs futures							-8%	-13%	-19%	-19%	-25%	4%	-19%	-10%
Brent Bear Case	20%						60	55	50	50	45	76	50	50
Brent Bull Case	10%						120	120	100	78	78	89	92	80
Brent Expected Value (EV)							**73**	**69**	**62**	**60**	**55**	**83**	**61**	**64**
Brent EV vs futures							-4%	-9%	-17%	-19%	-25%	9%	-17%	-12%
WTI (new)	**70%**	**68**	**56**	**77**	**81**	**75**	**67**	**61**	**56**	**56**	**51**	**75**	**56**	**62**
WTI (old)		71	*56*				*70*	*61*	*56*	*56*	*51*	*75*	*57*	*62*
WTI Futures							69	68	68	67	67	69	67	66
WTI base case vs futures							-2%	-10%	-17%	-17%	-24%	9%	-17%	-6%
Brent-WTI	**70%**	**4**	**4**	**5**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**4**	**3**

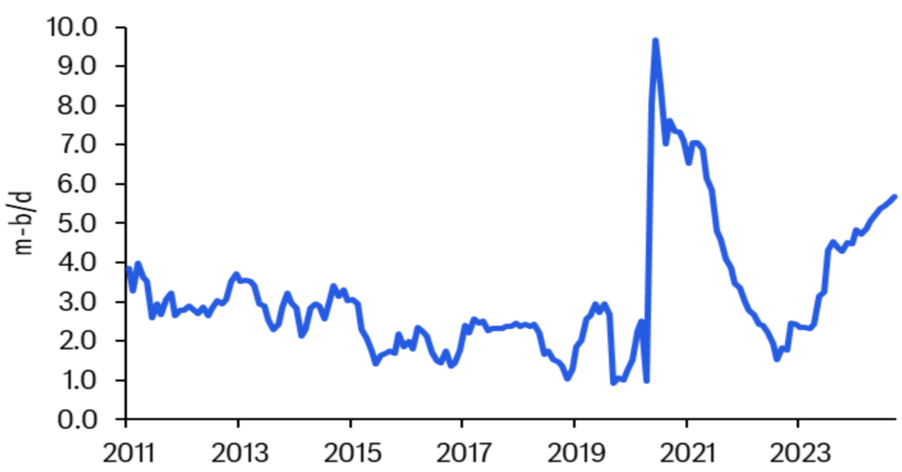
Source: Bloomberg, Citi Research estimates * as of Oct 27, 2024.

Note: Futures trading involves substantial risk of loss.

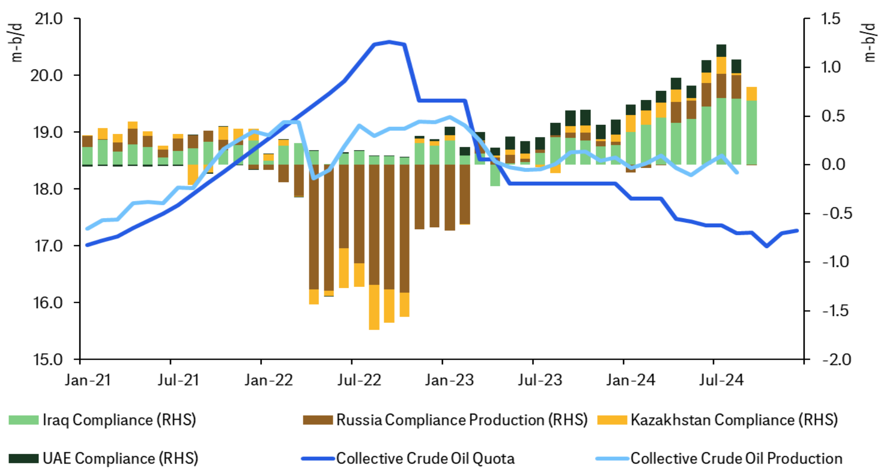
OPEC+ holds plenty of spare capacity, looking for room to reenter market

OPEC+ may continue to postpone the return of 2.2-m b/d of voluntary cuts. The UAE gets 0.3-m b/d baseline boost. UAE/Russia have been growing production capacity, likely prefer to unwind cuts sooner. Fiscal breakeven oil prices still high for Saudi Arabia, as its proceeds with megaprojects for its Vision 2030. Saudi/UAE nat gas ambitions could free up oil for export, loosen LNG markets too.

OPEC spare capacity has risen to ~6-m b/d



Quotas, production, compliance of selected OPEC+ producers



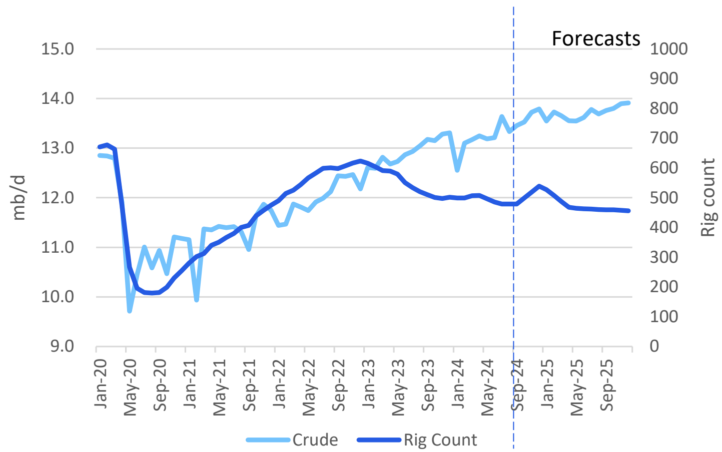
Global oil balances under various demand (y-axis) and supply scenarios (x-axis)

	Libya and Iran disruptions; OPEC+ witholds supply	Libya and Iran disruptions; OPEC+ orderly adds supply	OPEC+ holds cuts through 2025, Iraq and Kazakhstan fully comply	OPEC+ holds cuts through 2025, Iraq and Kazakhstan overproduce	**Base case - OPEC+ holds cuts through 2025, Iraq, Russia and Kazakhstan overproduce**	OPEC+ tapers, Iraq fully complies	OPEC+ tapers, Iraq overproduces
Bull case - Stronger GDP lifts oil demand 1.1	-1.6	-0.5	-0.2	0.4	0.9	0.9	1.4
Base case 0.9	-1.4	-0.3	0.0	0.6	**1.1**	1.1	1.6
Bear case - Tariffs lower oil demand 0.6	-1.1	0.1	0.3	0.9	1.4	1.5	1.9

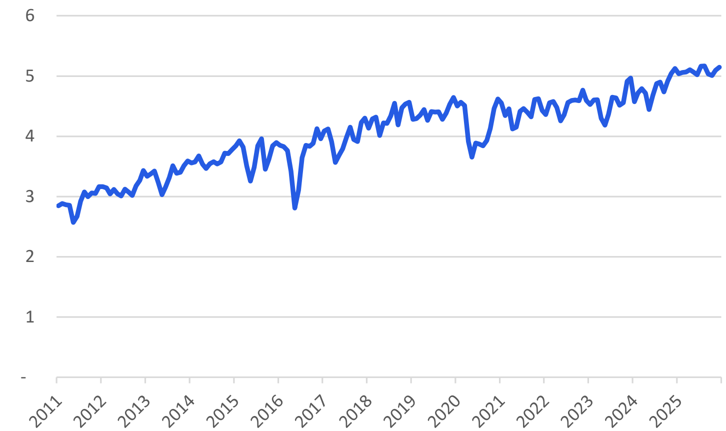
Source:, Citi Research

Non-OPEC+ supply remains robust, set to outpace decelerating demand

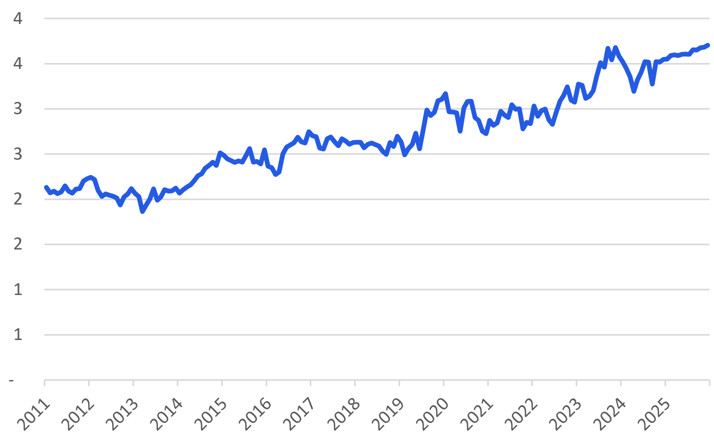
US crude oil production (m b/d, 2011-2025E) rising with productivity gains, even as rig counts moved lower



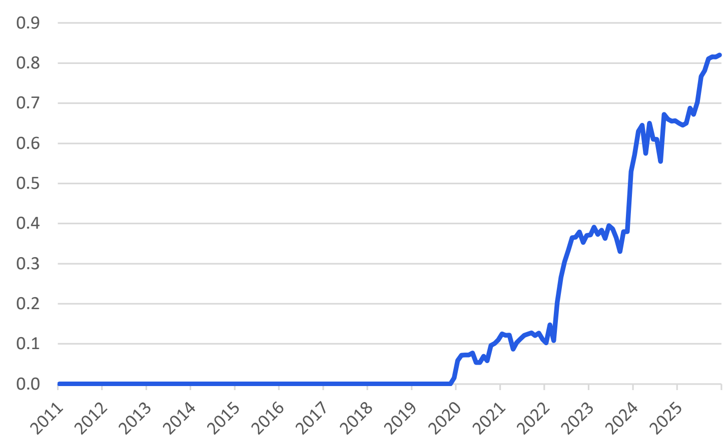
Canadian crude oil production (m b/d, 2011-2025E) growing by~0.1-m b/d per year, helped by TMX pipeline



Brazilian crude oil production (m b/d, 2011-2025E) should continue toward 5-m b/d level by 2030, after weak 2024



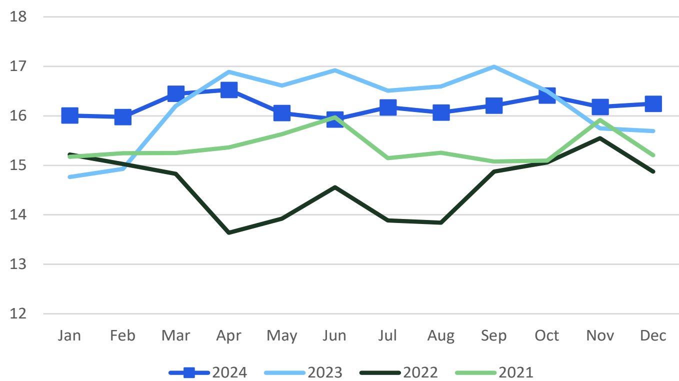
Guyana's crude oil production (m b/d, 2011-2025E) proceeds as project execution continues



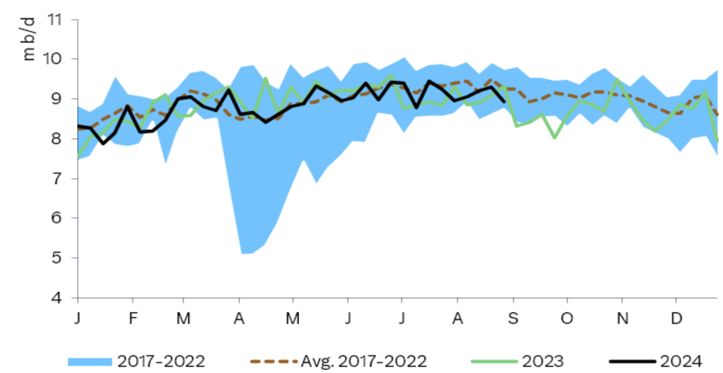
Oil demand decelerating on economic risks, trade tariffs, energy transition

Oil demand is decoupling from GDP growth on path to peak oil demand before 2030. China stimulus plans have disappointed markets so far, but should provide support in time. Still this is unlikely to support oil demand. EV displacement continues, for some 0.3-0.4-m b/d per year, driving sub-1-m b/d growth. US trade tariff risks present further oil/diesel demand downside risks.

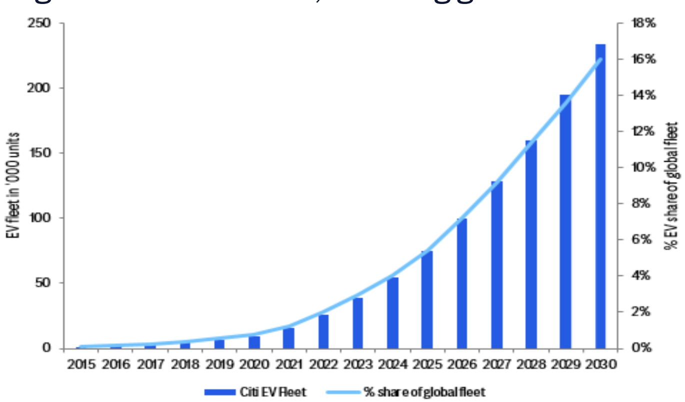
Chinese oil demand (below, m b/d, 2021-24E) has been particularly weak this year, with limited support from economic stimulus plans, risks from trade tariffs



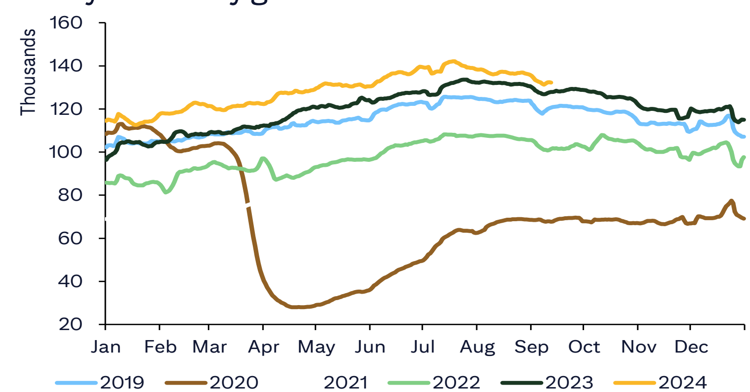
US gasoline demand (below) has also disappointed this driving season, on efficiency/fuel switching



Global passenger EV fleet continues to rise—although US/Eur uptake hit an air pocket, Chinese EVs are surging, nearing 50% of auto sales, blunting gasoline demand



Daily commercial flights (7DMA) – continued growth above 2019 levels has driven jet fuel demand growth, partially offset by efficiency gains

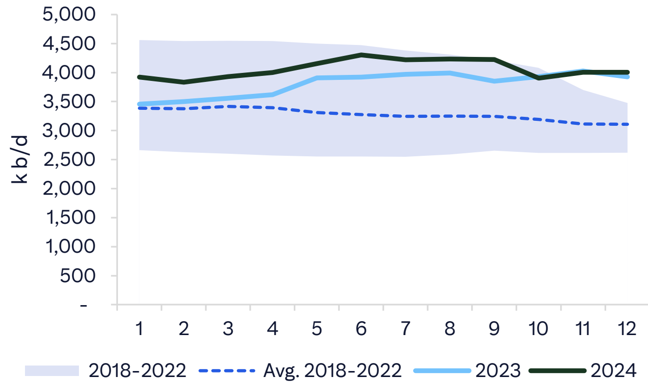


Source: FlightRadar, BNEF, EIA, Citi Research estimates

Trump 2.0, geopolitics, weather remain wildcards

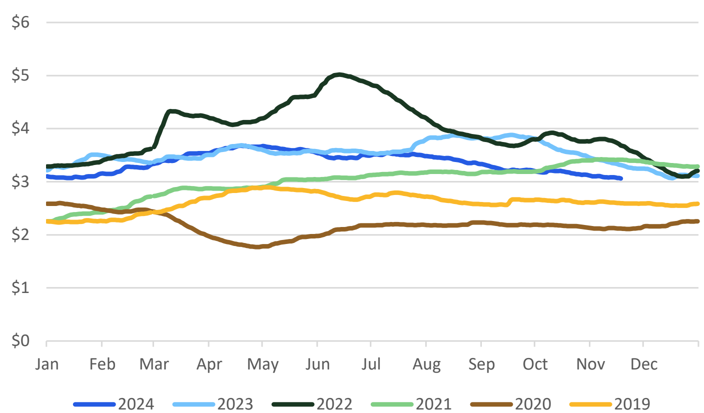
Israel, Iran, Red Sea risks led to redirected oil flows around Cape of Good Hope. Russia-Ukraine conflict and subsequent US/EU bans redirected crude oil and refined product flows. Oil on water rose as shippers took longer routes. Meanwhile, weather risks have varied impacts. Trump wildcards include Iran talks, trade tariffs, pro-fossil fuel policy, OPEC+ relations, IRA/EV stances, “buy American”.

Mideast geopolitical conflict has spread to West Bank, Lebanon, and Iran, but Iran’s oil exports (below) have remained unaffected, with still a limited risk of impact

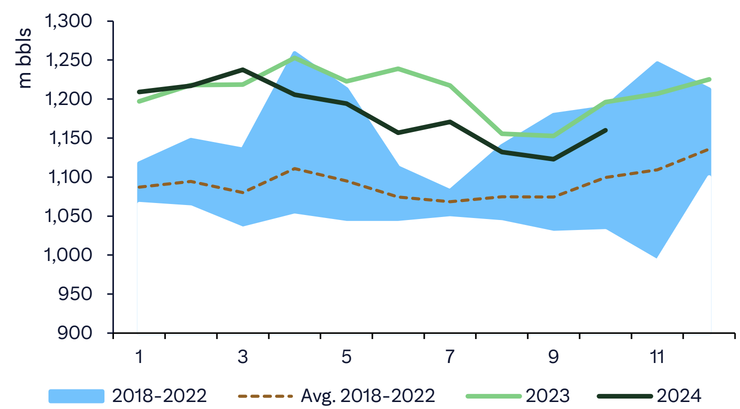


Libyan oil production (below, m b/d) and exports are hit by Haftar’s blockade, as negotiations continue over Central Bank pick; for now we assume this returns in early 2025

US retail gasoline prices fell from $5 in 2022 to $3 today, could ease further, but could rise on blanket 10% tariffs too

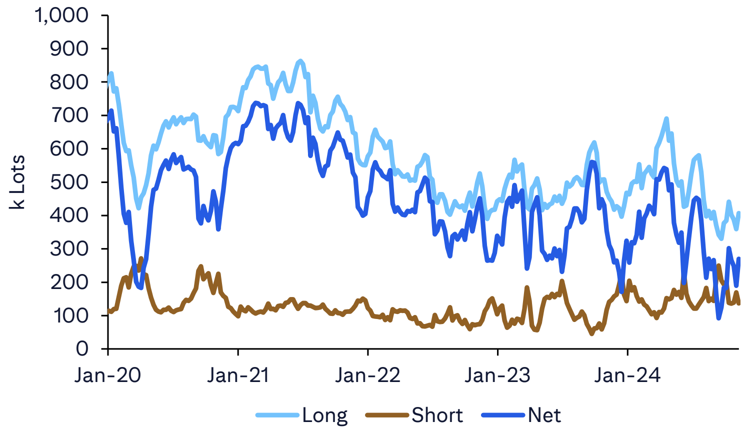


Oil-in-transit (below) rose on shipping risks from 2022, could ease further if geopolitics cool in Mideast, E Eur

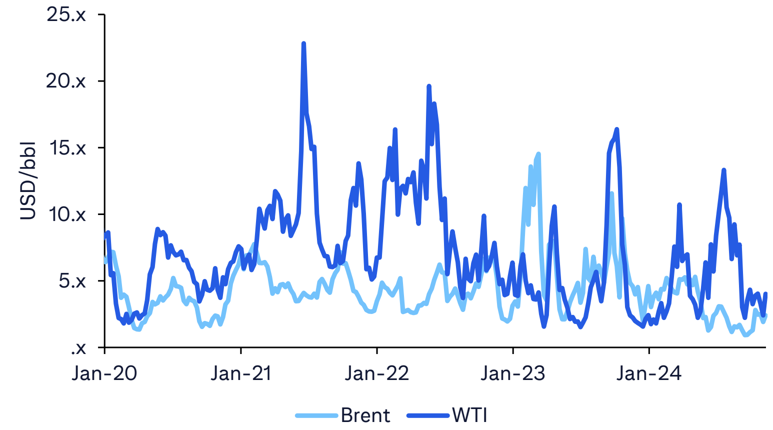


Financial flows remain on the historically shorter end for money managers

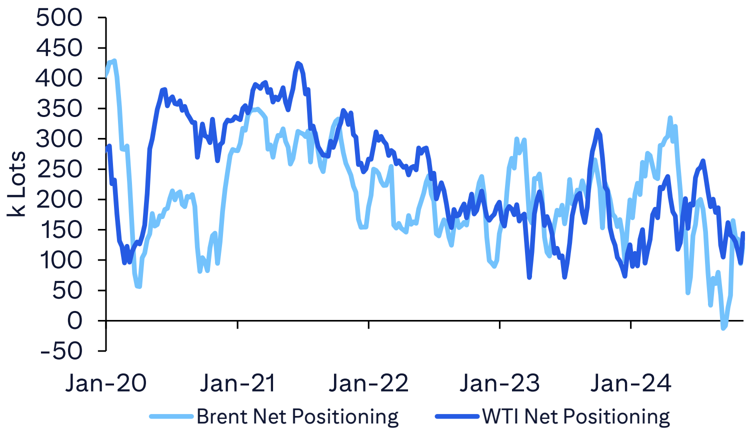
Money manager positioning in ICE Brent (gross long, gross short, net)



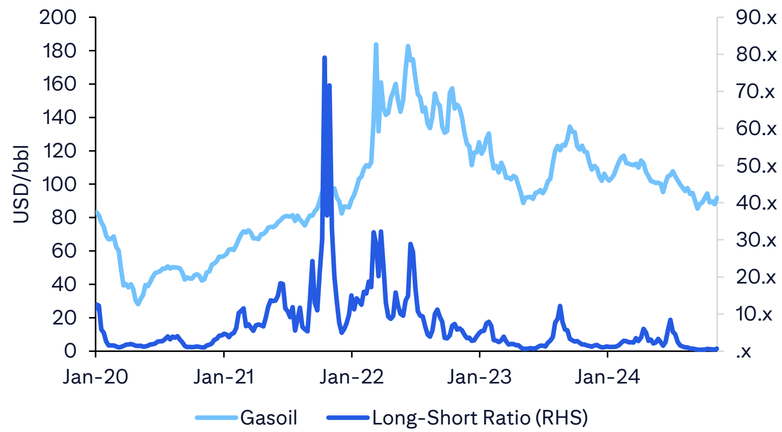
Long/short ratio for ICE Brent and NYMEX WTI



Money manager net positions for ICE Brent and NYMEX WTI



ICE gasoil price vs. money manager long/short ratio



Source: Bloomberg, CFTC

Global oil balances – Base case: OPEC+ extends cuts through 2025 with Russia, Kazakhstan and Iraq still lagging on compliance

Balances																		
Demand	**1Q23**	**2Q23**	**3Q23**	**4Q23**	**1Q24**	**2Q24**	**3Q24**	**4Q24**	**1Q25**	**2Q25**	**3Q25**	**4Q25**	**2023**	**2024**	**2025**	**'23**	**'24**	**'25**
US	19.8	20.4	20.3	20.6	19.8	20.4	20.7	20.7	20.3	20.4	20.6	20.7	20.3	20.4	20.5	0.2	0.1	0.1
Other OECD Americas	4.5	4.6	4.8	4.5	4.6	4.7	4.9	4.8	4.7	4.8	5.0	4.8	4.6	4.7	4.8	0.0	0.1	0.1
OECD Europe	13.1	13.6	13.7	13.4	12.8	13.6	13.7	13.1	13.0	13.2	13.7	12.9	13.5	13.3	13.2	-0.1	-0.2	-0.1
OECD Asia	7.7	6.9	7.0	7.4	7.5	7.0	7.2	7.6	7.7	7.1	7.2	7.6	7.2	7.3	7.4	-0.1	0.1	0.1
OECD Demand	**45.1**	**45.4**	**45.8**	**45.9**	**44.8**	**45.6**	**46.4**	**46.1**	**45.7**	**45.5**	**46.4**	**46.0**	**45.6**	**45.7**	**45.9**	**0.1**	**0.2**	**0.2**
China (Real)	15.3	16.8	16.7	16.0	16.1	16.2	16.2	16.3	16.2	16.4	16.3	16.2	16.2	16.2	16.3	1.6	0.0	0.1
India	5.2	5.2	4.9	5.1	5.4	5.4	5.1	5.5	5.6	5.6	5.4	5.7	5.1	5.3	5.6	0.2	0.2	0.2
Other Non-OECD Asia	9.6	9.4	9.4	9.6	10.0	9.7	9.5	9.9	10.1	9.8	9.7	10.1	9.5	9.8	9.9	0.2	0.3	0.1
Africa	4.4	4.2	4.3	4.3	4.5	4.4	4.1	4.2	4.2	4.3	4.2	4.3	4.3	4.3	4.2	0.1	0.0	-0.1
Non-OECD Europe	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.0	0.0	-0.1
FSU	4.3	4.3	4.5	4.5	4.3	4.2	4.4	4.4	4.3	4.2	4.5	4.5	4.4	4.3	4.4	0.0	0.0	0.1
Latam	7.1	7.1	7.3	7.2	7.1	7.3	7.4	7.3	7.3	7.3	7.5	7.5	7.2	7.3	7.4	0.3	0.1	0.1
Middle East	9.2	8.6	9.1	9.2	9.4	9.1	9.4	9.1	9.5	9.2	9.7	9.4	9.0	9.2	9.4	0.2	0.2	0.2
Non-OECD Demand	**55.8**	**56.3**	**57.0**	**56.7**	**57.6**	**56.9**	**56.9**	**57.5**	**57.8**	**57.5**	**58.2**	**58.4**	**56.5**	**57.2**	**58.0**	**2.6**	**0.8**	**0.8**
Total Oil Demand	**100.9**	**101.7**	**102.8**	**102.6**	**102.4**	**102.5**	**103.2**	**103.6**	**103.5**	**103.0**	**104.6**	**104.4**	**102.0**	**103.0**	**103.9**	**2.7**	**0.9**	**0.9**
Supply	**1Q23**	**2Q23**	**3Q23**	**4Q23**	**1Q24**	**2Q24**	**3Q24**	**4Q24**	**1Q25**	**2Q25**	**3Q25**	**4Q25**	**2023**	**2024**	**2025**	**'23**	**'24**	**'25**
USA	12.7	12.8	13.1	13.2	12.9	13.2	13.5	13.7	13.6	13.6	13.7	13.9	12.9	13.3	13.7	1.0	0.4	0.4
Canada	4.6	4.3	4.6	4.8	4.7	4.6	4.8	5.0	5.0	5.0	5.1	5.1	4.6	4.8	5.1	0.0	0.2	0.3
Mexico	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	0.1	-0.1	0.0
Norway	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.9	0.1	0.0	0.1
Russia	10.9	10.6	10.5	10.6	10.5	10.3	10.2	10.4	10.6	10.6	10.6	10.6	10.6	10.4	10.6	-0.1	-0.2	0.2
Azerbaijan	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	-0.1	0.0	0.0
Kazakhstan	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.8	2.0	2.0	2.0	2.0	1.89	1.86	2.0	0.1	0.0	0.1
China	4.3	4.3	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.3	4.3	0.1	0.1	0.0
Qatar	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0
Uganda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	3.2	3.2	3.5	3.6	3.4	3.3	3.4	3.5	3.6	3.6	3.6	3.7	3.4	3.4	3.6	0.4	0.0	0.2
Colombia	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0
Argentina	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.6	0.7	0.8	0.1	0.1	0.1
Guyana	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.4	0.6	0.7	0.1	0.2	0.1
Non-OPEC Crude Oil & Condensates	**52.3**	**51.7**	**52.1**	**53.1**	**52.6**	**52.3**	**52.8**	**53.7**	**53.8**	**53.9**	**54.2**	**54.6**	**52.3**	**52.8**	**54.1**	**1.6**	**0.5**	**1.3**
Non-OPEC NGLs	3.2	3.2	3.1	3.3	3.4	3.2	2.9	3.3	3.2	3.4	3.4	3.4	3.2	3.2	3.3	-0.1	0.0	0.1
USA NGLs	6.1	6.4	6.6	6.7	6.5	7.0	7.3	7.0	7.0	7.0	7.0	7.1	6.5	6.9	7.0	0.5	0.5	0.1
Non-OPEC Oil	**61.6**	**61.3**	**61.9**	**63.1**	**62.5**	**62.5**	**62.9**	**63.9**	**64.0**	**64.3**	**64.6**	**65.0**	**62.0**	**63.0**	**64.5**	**2.1**	**1.0**	**1.5**
Algeria	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.1	0.0	-0.1	0.0
Angola	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.0	1.1	1.1	1.1	0.0	0.0	-0.1
Congo	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0
Equatorial Guinea	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Gabon	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0
Iraq	4.6	4.3	4.5	4.5	4.4	4.5	4.6	4.5	4.6	4.6	4.6	4.6	4.4	4.5	4.6	-0.2	0.1	0.1
Kuwait	2.8	2.7	2.7	2.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.7	2.5	2.5	-0.1	-0.2	0.0
Nigeria	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.6	0.1	0.1	0.1
Saudi Arabia	10.7	10.3	9.2	9.1	9.2	9.1	9.1	9.2	9.2	9.2	9.2	9.2	9.8	9.1	9.2	-1.0	-0.7	0.0
UAE	3.4	3.4	3.3	3.4	3.3	3.4	3.4	3.2	3.3	3.5	3.6	3.7	3.4	3.3	3.5	0.0	0.0	0.2
Iran	3.5	3.8	3.9	4.0	3.9	4.2	4.2	4.0	4.0	4.0	4.0	4.0	3.8	4.1	4.0	0.5	0.3	-0.1
Libya	1.2	1.2	1.2	1.2	1.2	1.2	0.9	0.7	1.2	1.2	1.2	1.2	1.2	1.0	1.2	0.2	-0.2	0.3
Venezuela	0.8	0.8	0.8	0.8	0.9	0.9	1.0	0.9	0.9	1.0	1.0	1.1	0.8	0.9	1.0	0.1	0.1	0.1
OPEC Crude Oil & Condensates	**31.3**	**30.8**	**29.9**	**29.9**	**29.7**	**30.1**	**30.1**	**29.4**	**30.2**	**30.4**	**30.5**	**30.6**	**30.5**	**29.8**	**30.4**	**-0.6**	**-0.7**	**0.6**
OPEC NGLs	3.4	3.4	3.5	3.6	3.6	3.6	3.7	3.8	3.7	3.7	3.7	3.7	3.5	3.7	3.7	0.1	0.2	0.0
OPEC Oil	**34.7**	**34.2**	**33.4**	**33.5**	**33.3**	**33.7**	**33.8**	**33.2**	**33.9**	**34.1**	**34.3**	**34.3**	**34.0**	**33.5**	**34.2**	**-0.5**	**-0.4**	**0.6**
Canada - Non Conventional	1.2	1.1	1.3	1.3	1.3	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.3	0.1	0.0	0.0
Rest of the World - Non Conventional	3.4	4.0	4.4	4.0	3.6	4.2	4.5	4.1	3.7	4.3	4.7	4.2	4.0	4.1	4.2	0.3	0.1	0.1
Processing Gains	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	0.1	0.0
Total Oil Supply	**102.1**	**101.9**	**102.0**	**103.0**	**101.8**	**102.9**	**103.6**	**103.7**	**104.0**	**105.1**	**105.9**	**106.0**	**102.3**	**103.0**	**105.3**	**1.9**	**0.7**	**2.3**
US SPR	0.0	-0.3	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1			
China SPR/CPR	0.0	0.5	-0.3	0.1	-0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1			
Other SPR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Demand from Infrastructure	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1			
Demand for Lost Oil	**0.1**	**0.4**	**-0.2**	**0.2**	**-0.2**	**0.4**	**0.1**	**0.2**	**0.3**	**0.2**	**0.2**	**0.3**	**0.1**	**0.1**	**0.2**			
Implied Oil Stock Changes	1.1	-0.2	-0.6	0.2	-0.4	0.0	0.3	-0.2	0.2	1.9	1.2	1.2	0.1	-0.1	1.1			
Visible Oil Stock Changes	0.3	0.7	-1.0	0.2	1.0	-0.5							0.0					
Error Term	-0.8	0.8	-0.4	0.0	1.4	-0.5	-0.7	-0.2	0.9	-0.2	-0.3	-0.4	-0.1	0.0	0.0			
Expected Stock Changes	**0.3**	**0.7**	**-1.0**	**0.2**	**1.0**	**-0.5**	**-0.4**	**-0.4**	**1.1**	**1.7**	**0.9**	**0.8**	**0.0**	**-0.1**	**1.1**			

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Source: Citi Research estimates   * m b/d, as of Sep'24

Alternative scenario: OPEC+ proceeds with unwind, Iraq still lags on compliance rate

Balances																		
Demand	**1Q23**	**2Q23**	**3Q23**	**4Q23**	**1Q24**	**2Q24**	**3Q24**	**4Q24**	**1Q25**	**2Q25**	**3Q25**	**4Q25**	**2023**	**2024**	**2025**	**'23**	**'24**	**'25**
US	19.8	20.4	20.3	20.6	19.8	20.4	20.7	20.7	20.3	20.4	20.6	20.7	20.3	20.4	20.5	0.2	0.1	0.1
Other OECD Americas	4.5	4.6	4.8	4.5	4.6	4.7	4.9	4.8	4.7	4.8	5.0	4.8	4.6	4.7	4.8	0.0	0.1	0.1
OECD Europe	13.1	13.6	13.7	13.4	12.8	13.6	13.7	13.1	13.0	13.2	13.7	12.9	13.5	13.3	13.2	-0.1	-0.2	-0.1
OECD Asia	7.7	6.9	7.0	7.4	7.5	7.0	7.2	7.6	7.7	7.1	7.2	7.6	7.2	7.3	7.4	-0.1	0.1	0.1
OECD Demand	**45.1**	**45.4**	**45.8**	**45.9**	**44.8**	**45.6**	**46.4**	**46.1**	**45.7**	**45.5**	**46.4**	**46.0**	**45.6**	**45.7**	**45.9**	**0.1**	**0.2**	**0.2**
China (Real)	15.3	16.8	16.7	16.0	16.1	16.2	16.2	16.3	16.2	16.4	16.3	16.2	16.2	16.2	16.3	1.6	0.0	0.1
India	5.2	5.2	4.9	5.1	5.4	5.4	5.1	5.5	5.6	5.6	5.4	5.7	5.1	5.3	5.6	0.2	0.2	0.2
Other Non-OECD Asia	9.6	9.4	9.4	9.6	10.0	9.7	9.5	9.9	10.1	9.8	9.7	10.1	9.5	9.8	9.9	0.2	0.3	0.1
Africa	4.4	4.2	4.3	4.3	4.5	4.4	4.1	4.2	4.2	4.3	4.2	4.3	4.3	4.3	4.2	0.1	0.0	-0.1
Non-OECD Europe	0.8	0.8	0.9	0.8	0.7	0.8	0.8	0.7	0.6	0.7	0.8	0.7	0.8	0.8	0.7	0.0	0.0	-0.1
FSU	4.3	4.3	4.5	4.5	4.3	4.2	4.4	4.4	4.3	4.2	4.5	4.5	4.4	4.3	4.4	0.0	0.0	0.1
Latam	7.1	7.1	7.3	7.2	7.1	7.3	7.4	7.3	7.3	7.3	7.5	7.5	7.2	7.3	7.4	0.3	0.1	0.1
Middle East	9.2	8.6	9.1	9.2	9.4	9.1	9.4	9.1	9.5	9.2	9.7	9.4	9.0	9.2	9.4	0.2	0.2	0.2
Non-OECD Demand	**55.8**	**56.3**	**57.0**	**56.7**	**57.6**	**56.9**	**56.9**	**57.5**	**57.8**	**57.5**	**58.2**	**58.4**	**56.5**	**57.2**	**58.0**	**2.6**	**0.8**	**0.8**
Total Oil Demand	**100.9**	**101.7**	**102.8**	**102.6**	**102.4**	**102.5**	**103.2**	**103.6**	**103.5**	**103.0**	**104.6**	**104.4**	**102.0**	**103.0**	**103.9**	**2.7**	**0.9**	**0.9**
Supply	**1Q23**	**2Q23**	**3Q23**	**4Q23**	**1Q24**	**2Q24**	**3Q24**	**4Q24**	**1Q25**	**2Q25**	**3Q25**	**4Q25**	**2023**	**2024**	**2025**	**'23**	**'24**	**'25**
USA	12.7	12.8	13.1	13.2	12.9	13.2	13.5	13.7	13.6	13.6	13.7	13.9	12.9	13.3	13.7	1.0	0.4	0.4
Canada	4.6	4.3	4.6	4.8	4.7	4.6	4.8	5.0	5.0	5.0	5.1	5.1	4.6	4.8	5.1	0.0	0.2	0.3
Mexico	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	0.1	-0.1	0.0
Norway	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.9	0.1	0.0	0.1
Russia	10.9	10.6	10.5	10.6	10.5	10.3	10.2	10.0	10.1	10.3	10.4	10.5	10.6	10.3	10.3	-0.1	-0.3	0.0
Azerbaijan	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	-0.1	0.0	0.0
Kazakhstan	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.6	1.7	1.8	1.8	1.8	1.9	1.81	1.8	0.1	-0.1	0.0
China	4.3	4.3	4.1	4.1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2	4.3	4.3	0.1	0.1	0.0
Qatar	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0	0.0	0.0
Uganda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	3.2	3.2	3.5	3.6	3.4	3.3	3.4	3.5	3.6	3.6	3.6	3.7	3.4	3.4	3.6	0.4	0.0	0.2
Colombia	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.0	0.0	0.0
Argentina	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.6	0.7	0.8	0.1	0.1	0.1
Guyana	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.7	0.6	0.7	0.8	0.8	0.4	0.6	0.7	0.1	0.2	0.1
Non-OPEC Crude Oil & Condensates	**52.3**	**51.7**	**52.1**	**53.1**	**52.6**	**52.3**	**52.8**	**53.1**	**53.4**	**53.6**	**54.0**	**54.5**	**52.3**	**52.7**	**53.9**	**1.6**	**0.4**	**1.2**
Non-OPEC NGLs	3.2	3.2	3.1	3.3	3.4	3.2	2.9	3.3	3.2	3.4	3.4	3.4	3.2	3.2	3.3	-0.1	0.0	0.1
USA NGLs	6.1	6.4	6.6	6.7	6.5	7.0	7.3	7.0	7.0	7.0	7.0	7.1	6.5	6.9	7.0	0.5	0.5	0.1
Non-OPEC Oil	**61.6**	**61.3**	**61.9**	**63.1**	**62.5**	**62.5**	**62.9**	**63.3**	**63.5**	**64.0**	**64.4**	**64.9**	**62.0**	**62.8**	**64.2**	**2.1**	**0.8**	**1.4**
Algeria	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.1	0.0	-0.1	0.0
Angola	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.0	1.1	1.1	1.1	0.0	0.0	-0.1
Congo	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.0	0.0
Equatorial Guinea	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Gabon	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0
Iraq	4.6	4.3	4.5	4.5	4.4	4.5	4.6	4.5	4.6	4.6	4.6	4.6	4.4	4.5	4.6	-0.2	0.1	0.1
Kuwait	2.8	2.7	2.7	2.7	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.7	2.5	2.6	-0.1	-0.2	0.1
Nigeria	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.6	0.1	0.1	0.1
Saudi Arabia	10.7	10.3	9.2	9.1	9.2	9.1	9.1	9.2	9.4	9.7	9.9	10.1	9.8	9.2	9.8	-1.0	-0.7	0.6
UAE	3.4	3.4	3.3	3.4	3.3	3.4	3.4	3.3	3.3	3.5	3.6	3.7	3.4	3.3	3.5	0.0	0.0	0.2
Iran	3.5	3.8	3.9	4.0	3.9	4.2	4.2	4.0	4.0	4.0	4.0	4.0	3.8	4.1	4.0	0.5	0.3	-0.1
Libya	1.2	1.2	1.2	1.2	1.2	1.2	0.9	0.7	1.2	1.2	1.2	1.2	1.2	1.0	1.2	0.2	-0.2	0.3
Venezuela	0.8	0.8	0.8	0.8	0.9	0.9	1.0	0.9	0.9	1.0	1.0	1.1	0.8	0.9	1.0	0.1	0.1	0.1
OPEC Crude Oil & Condensates	**31.3**	**30.8**	**29.9**	**29.9**	**29.7**	**30.1**	**30.1**	**29.5**	**30.5**	**31.0**	**31.4**	**31.8**	**30.5**	**29.9**	**31.2**	**-0.6**	**-0.6**	**1.3**
OPEC NGLs	3.4	3.4	3.5	3.6	3.6	3.6	3.7	3.8	3.7	3.7	3.7	3.7	3.5	3.7	3.7	0.1	0.2	0.0
OPEC Oil	**34.7**	**34.2**	**33.4**	**33.5**	**33.3**	**33.7**	**33.8**	**33.3**	**34.2**	**34.7**	**35.1**	**35.5**	**34.0**	**33.5**	**34.9**	**-0.5**	**-0.4**	**1.3**
Canada - Non Conventional	1.2	1.1	1.3	1.3	1.3	1.1	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.3	0.1	0.0	0.0
Rest of the World - Non Conventional	3.4	4.0	4.4	4.0	3.6	4.2	4.5	4.1	3.7	4.3	4.7	4.2	4.0	4.1	4.2	0.3	0.1	0.1
Processing Gains	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	0.0	0.1	0.0
Total Oil Supply	**102.1**	**101.9**	**102.0**	**103.0**	**101.8**	**102.9**	**103.6**	**103.2**	**103.9**	**105.4**	**106.6**	**107.0**	**102.3**	**102.9**	**105.8**	**1.9**	**0.6**	**2.9**
US SPR	-0.1	-0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	-0.1	0.1	0.1			
China SPR/CPR	0.0	0.5	-0.3	0.1	-0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1			
Other SPR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Demand from Infrastructure	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1			
Demand for Lost Oil	**0.0**	**0.4**	**-0.2**	**0.2**	**-0.2**	**0.4**	**0.1**	**0.2**	**0.3**	**0.2**	**0.2**	**0.3**	**0.1**	**0.1**	**0.2**			
Implied Oil Stock Changes	1.2	-0.2	-0.6	0.3	-0.4	0.0	0.3	-0.7	0.1	2.2	1.9	2.3	0.2	-0.2	1.6			
Visible Oil Stock Changes	0.3	0.7	-1.0	0.2	1.0	-0.5							0.0					
Error Term	-0.9	0.9	-0.4	-0.1	1.4	-0.5	-0.7	-0.2	0.9	-0.2	-0.3	-0.4	-0.1	0.0	0.0			
Expected Stock Changes	**0.3**	**0.7**	**-1.0**	**0.2**	**1.0**	**-0.5**	**-0.3**	**-0.9**	**1.0**	**2.0**	**1.6**	**1.9**	**0.0**	**-0.2**	**1.6**			

Source: Citi Research estimates * m b/d, as of Sep'24

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Appendix A-1

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