Citi Research

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Flagship

3Q'25 Commodities Market Outlook

Gold's 'last hurrah', ME escalation, bullish EUAs, and structurally bullish aluminium

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1. i. Executive summary, price forecasts, and conviction ideas

3Q'25 macroeconomic outlook – not great, but the Trump 'put' is real

- **The macroeconomic outlook over the coming 1-2 quarters is very difficult to predict at the present time, as evidenced by the world's record spending on gold - ~0.5% of GDP, the highest in ~50 years of data - as a hedge against global growth and equity downside.**
  - On the bearish side, high US interest rates continue to constrain US and global growth, and the US continues to very gradually slow down (as it has done since 2022 when interest rates rose to 15–20-year highs), and the impact of tariffs (effective likely to be around 15% eventually) is about to flow through to higher US inflation and weaker employment data during 2H'25, keeping the Fed on hold until September. Geopolitical risks are also extremely high at present considering the ongoing Iran/Israel conflict. Though limited oil production or exports have been impacted to date, risks remain high. Meanwhile US tariffs are likely to be deflationary for ex-US economies. N.B. It is our view that even if the Supreme court does not allow the tariffs, they will be subsequently implemented via Section 122, then S.301s.
  - On the more bullish side, we see the US OBBBA (One Big Beautiful Bill Act) passing before the July 4 recess in our base case (if not before the August recess), and we see it as net stimulatory for US and global growth and risk sentiment as the bill is stimulatory for the first 3-4 years. Much of the US tariff burden could fall on exporters and be re-distributed to low-middle income US workers. We see the OBBBA substantively reducing the downside risks to US growth and thus, once it passes, it should be a net bearish factor for GOLD.
  - Unlike many, we are not overly concerned about the US budget deficit over the next 2-3 years should the OBBBA pass near its current form. The bond market remains stable and it well aware of the bill. Further, our economists see the BBB and tariffs as broadly net -neutral for the US budget for the next few years. Further, US government interest costs fell in 1Q'25 for the first time in 5 years, after by rising $200-300bn pa over each of the past 3 years, owing to recent Fed cuts (reducing fears about an 'ever-widening' deficit owing to rising debt service costs).
- **Looking further ahead, we see the risks surrounding global growth as skewed to the upside for 2026, and as such we are looking to sell gold rallies (since most of the rally has been driven by growth and equity concerns, NOT central bank buying), and buy aluminium (sub-$2.5/kt) and copper (sub $9k/t). What's so bullish about 2026?**
  - First, the OBBBA should underpin US manufacturing and consumption growth in 2H'25 and particularly in 2026.
  - Second, the Fed has a significant amount of room to cut once tariffs pass through the system, or if growth slows by more than expected. Slowing US growth over the coming quarters should drive substantial Fed cuts, at least to neutral, which should result in an eventual improvement in global growth sentiment, since it has been the main factor holding back growth for the past 3 years.
  - Third, we strongly believe that President Trump cares about US popularity, GDP, and geopolitical success, and thus the Trump put exists, particularly as the US November 2026 mid-terms come into focus towards the end of this year and into 2026. The existence of the Trump growth and popularity "put" and timing of the mid-terms means he may dial back his policies or use innovative new ideas to raise growth.
  - Finally, other bullish factors include European defence stimulus to pick up in 2026 and fact that the polarisation of US/China could ultimately be bullish for China growth as China finds new export markets and stimulates investments in AI/Datacentres/Decarbonisation/Robotics (humanoid and drones) to offset US export weakness. Additionally, China's dominance of rare earth and magnet markets may help to mitigate downside risks in US trade relations.

Conviction and notable commodities views for 3Q'25 and beyond

1. **GOLD is set to consolidate around $3,100-$3,500/oz over the coming quarter, but our work suggests that we may have already seen the highs.** Indeed, in this piece we release the next level of our fundamental framework for GOLD prices, which shows that the gold market deficit should peak during the 3Q'25, and the market should fundamentally weaken thereafter, driven by lower investment demand. Our work suggests that gold returns to ~$2,500-$2,700/oz by the 2H'26, ~20-25% below 2H'26 average forward prices, and we strongly recommend producers take insurance against downside in prices from current levels. Declining investment demand from the 4Q'25 (from all time highs), can come from any modest improvement in global growth confidence as the stimulatory US budget (in its first 4 years) passes and starts to take affect, as President Trump's trade and other economic policies become less bearish as the US mid-terms come into sight, and as the Fed cuts towards neutral (please see slide 7 and 36 to 47 for details).

2. **We expect EUAs to potentially hit €95/t by year-end, nearly a 30% upside compared to current spot prices of around €74/t.** EU ETS balances appear to be tighter than early estimates as low wind output and normalized hydro output are lifting the call on fossil fuels, ahead of seasonal power demand increase and compliance deadline approaching end of Sep'25. 3Q'25 auction schedule would be seasonally higher, but the supply of allowances keeps shrinking on declining EU ETS cap huge MSR intakes, which would lead to large 2026-2027 deficits. Funds interest firm, albeit light at just 17k lots vs. Jan'25 highs of 60k lots when EUAs at €85/t; still, investment funds may remain reluctant to fully re-engage until the final auction calendar is published by the end of Jul'25. (Please see slides 95-99 and the full note, here).

3. **We are very bullish on LME ALUMINIUM on a 6–18-month view and see any dips as strong long-term buying opportunities.** Aluminium is highly leveraged to an uptick in global growth and sentiment. We see upside of 20% in our base case and 40% in our bull case by 2026/27. Aluminium is heavily exposed to AI/datacentres, Humanoid/other robots (inc. drones), and decarbonization-related demand. Aluminium has very limited supply growth, with China effectively ex-growth given competition for power from the same future-facing sectors which are driving aluminium demand (aluminium supply is highly power intensive), and given China's capacity cap. We are also very bullish COPPER on this timeframe, but it is likely to have a period of weakness post Section 232 clarity (driven by USA de-stocking), and a scrap response is more likely once prices rally (copper scrap is more fungible than aluminium scrap). It is extremely likely that over the next 6-18 months we get a rerun of the Jan 2023 and Jan-April 2024 copper and aluminium bull markets (both were FOMO economic recovery trades, with the latter also driven by AI/datacentre bullish sentiment), but even more bullish, that the world actually does recover and we get underlying deficits in these markets by 2H'26. (please see slides 122-131).

4. **We expect a COPPER 25% Section 232 US import levy to be announced and imposed in 3Q'25.** Our base case is Comex copper rises to a to 20% premium to LME (1-yr forward) post-announcement, at a discount to the tariff rate. We think the results of copper's Section 232 are likely to be provided at least as early as the Section 232 on 51 critical minerals (preliminary results for the Critical Mineral S232 report is due from President Trump's on July 14 , and final assessment is due latest October 19). **We see a strong case for tariffs of at least 25% (50% is plausible but would most likely be undermined by exemptions) on this basis also for Comex PLATINUM (CME could rise by $200/oz on this alone), ZINC, NICKEL, TIN (would support US premiums), and also URANIUM (should impact UxC pricing), alongside most of the other metals deemed critical.** (Please see slide 10).

Citi commodity price forecasts and outlook

			Price Targets				Quarterly Forecasts								Annual Forecasts				LT Price
		Spot*	0-3M	%chg vs spot	6-12M	%chg vs spot	Q1 2025	Q2 2025E	Q3 2025E	Q4 2025E	Q1 2026E	Q2 2026E	Q3 2026E	Q4 2026E	2025E	%chg vs spot	2026E	%chg vs spot	
Energy																			
ICE Brent	USD/bbl	73	**70**	-5%	**65**	-11%	75	67	66	63	65	65	65	65	68	-7%	65	-11%	70
NYMEX WTI	USD/bbl	72	**68**	-6%	**62**	-14%	72	63	63	60	62	62	62	62	65	-10%	62	-14%	67
Henry Hub Natural Gas	USD/MMBtu	3.7	**3.8**	3%	**5.3**	44%	3.9	3.5	3.8	4.3	4.7	5.0	5.3	5.0	3.9	6%	5.0	36%	3.9
JKM LNG	USD/MMBtu	13.4	**12.8**	-4%	**10.2**	-24%	14.0	12.2	12.8	12.6	12.3	10.3	10.2	10.4	12.9	-4%	10.8	-19%	6.0
TTF Natural Gas	USD/MMBtu	12.9	**12.5**	-3%	**9.4**	-27%	14.4	11.8	12.5	12.0	11.5	9.6	9.4	9.6	12.7	-1%	10.0	-22%	5.0
EUA Carbon	EUR/t	75	**57.0**	-24%	**85.0**	14%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	75	0%	115	54%	N/A
Precious Metals																			
Gold	USD/t. oz	3415	**3300**	-3%	**2800**	-18%	2858	3300	3200	3000	2,900	2,800	2,700	2,600	3,100	-9%	2,750	-19%	2,200
Silver	USD/t. oz	36.4	**38.0**	4%	**40.0**	10%	31.9	34.0	37.0	38.0	38.0	37.0	36.0	36.0	35.2	-3%	36.8	1%	25.0
Platinum	USD/t. oz	1268	**1150**	-9%	**1200**	-5%	969	1050	1100	1125	1,150	1,175	1,200	1,225	1,060	-16%	1,190	-6%	1,000
Palladium	USD/t. oz	1048	**950**	-9%	**900**	-14%	961	1000	975	950	925	925	900	900	970	-7%	915	-13%	800
Industrial and Other Metals																			
LME Copper	USD/MT	9719	**8800**	-9%	**9500**	-2%	9336	9500	9200	9000	9,000	10,000	10,000	11,000	9,250	-5%	10,000	3%	10,000
LME Aluminum	USD/MT	2503	**2450**	-2%	**2650**	6%	2624	2430	2450	2550	2,600	2,650	2,800	3,000	2,510	0%	2,765	10%	3,000
LME Lead	USD/MT	1965	**1900**	-3%	**2000**	2%	1969	1950	1950	1950	2,000	2,000	2,000	2,000	1,950	-1%	2,000	2%	2,000
LME Zinc	USD/MT	2601	**2500**	-4%	**2700**	4%	2837	2600	2600	2600	2,600	2,700	2,700	2,800	2,650	2%	2,700	4%	2,700
LME Nickel	USD/MT	14938	**14000**	-6%	**16000**	7%	15571	15500	15000	15000	16,000	16,000	16,000	16,000	15,250	2%	16,000	7%	17,000
CME Lithium Hydroxide	USD/MT	8260	**7000**	-15%	**8750**	6%	9600	8600	7500	8000	8,250	8,750	8,750	9,250	8,400	2%	8,800	7%	20,000
Uranium	USD/lb	70	**73**	5%	**77**	10%	69	70	80	82	100	100	100	100	75	8%	100	43%	63
Bulk Commodities																			
Iron Ore (TSI)	USD/MT	95	**90**	-5%	**85**	-11%	103	98	95	95	90	90	85	85	98	3%	88	-7%	85
Thermal Coal (Newc 6K)	USD/MT	106	**105**	-1%	**105**	-1%	108	100	105	110	110	105	105	110	106	0%	108	1%	100
Coking Coal (Aus PHCC)	USD/MT	181	**170**	-6%	**200**	11%	185	186	180	190	200	195	190	195	185	2%	195	8%	200
Agriculture																			
CBOT Corn	USd/bu	440	**450**	2%	**460**	5%	474	463	450	450	460	460	460	460	459	4%	460	5%	N/A
CBOT Soybeans	USd/bu	1075	**1075**	0%	**1100**	2%	1027	1036	1075	1075	1100	1100	1125	1125	1,053	-2%	1,113	4%	N/A
CBOT Wheat	USd/bu	538	**550**	2%	**525**	-2%	556	545	525	525	500	500	500	500	534	-1%	500	-7%	N/A
ICE Sugar	USd/lb	16.1	**18.0**	12%	**19.0**	18%	19.4	17.7	18.0	18.0	19.0	20.0	21.0	21.0	18.3	14%	21.0	31%	N/A
ICE Coffee	USd/lb	346	**375**	8%	**350**	1%	376	375	370	350	340	330	325	310	368	6%	326	-6%	N/A
ICE Cocoa	USD/MT	9679	**8500**	-12%	**7000**	-28%	9668	8700	8000	7500	7000	6500	6500	6000	8,467	-13%	6,500	-33%	N/A

Commodity price outlook – 0-3-month horizon**

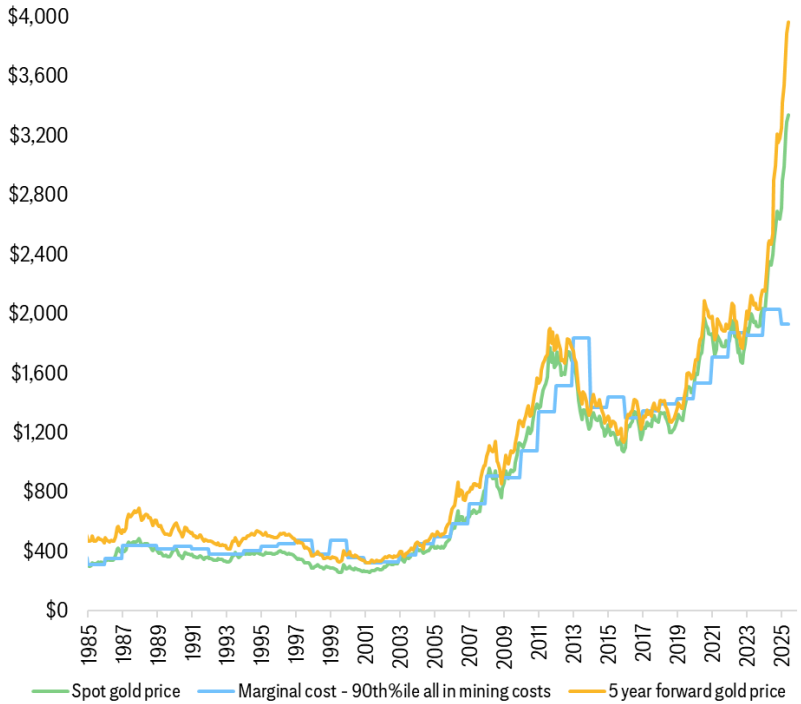
	Bullish	Neutral-to-bullish	Neutral	Neutral-to-bearish	Bearish
Energy	EUA Carbon		Uranium, Asia LNG, EU Gas, US Gas	Brent, WTI	
Industrial Metals			Aluminium, Lead	Zinc, Nickel	Copper, Tin
Battery Metals					Lithium Hydroxide
Precious Metals		Silver	Gold	Platinum	Palladium
Bulks			Iron Ore, Thermal Coal, Coking Coal		
Agriculture			Wheat, Cocoa, Coffee, Sugar	Corn, Soybean	

Source: Citi Research, *spot as of 6/13/2025, ** as of June 2025, intended as a directional forecast on a 0-3m basis, subject to revision, Bloomberg

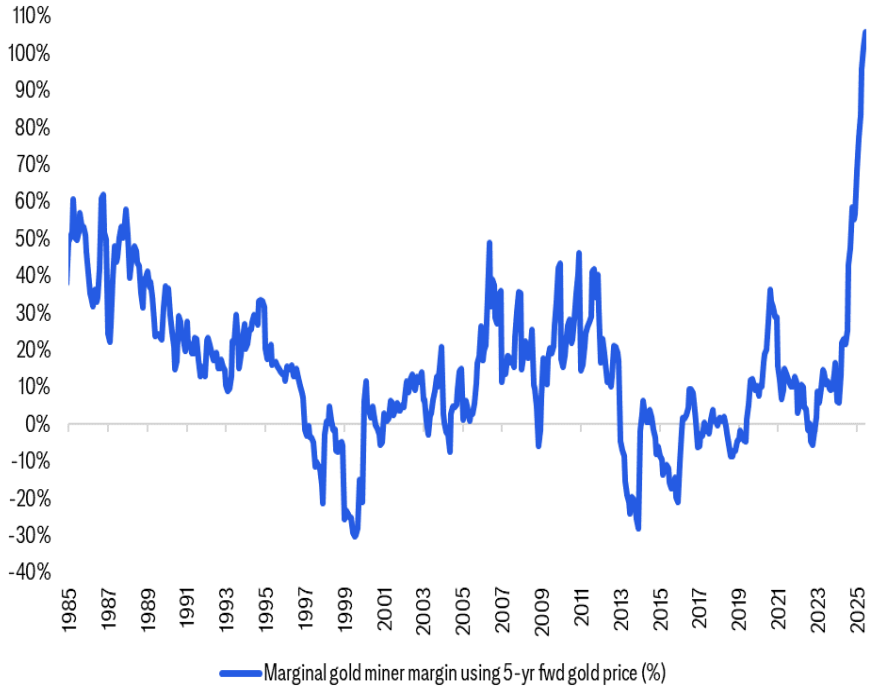
Gold already at $4,000/oz using 5yr fwds, ~50-yr high implied miner margins

Gold demand is firing on all cylinders at present, with ~0.5% of world GDP currently being spent on gold, the highest in half a century of data. Gold's rally from $2,600/oz to $3,300/oz over the year to date has mostly reflected increased investment demand (non-central bank), as capital has looked to hedge against tariff, Fed policy, and geopolitical related downside risks to global growth and equities, alongside demand for gold to hedge against USD and CNY debasement concerns (related to US budget deficits and the trade war respectively). This fear/hedging related investment demand, together with resilient jewellery consumption (as income growth continues in India and China), has seen gold reach all-time record highs in nominal and real terms. Gold prices have disconnected from miners' margins, and we are seeing half century high producer margins at current spot and forward gold prices.

Gold prices have rallied to record levels in nominal and real terms, and have disconnected from the marginal cost of mining production



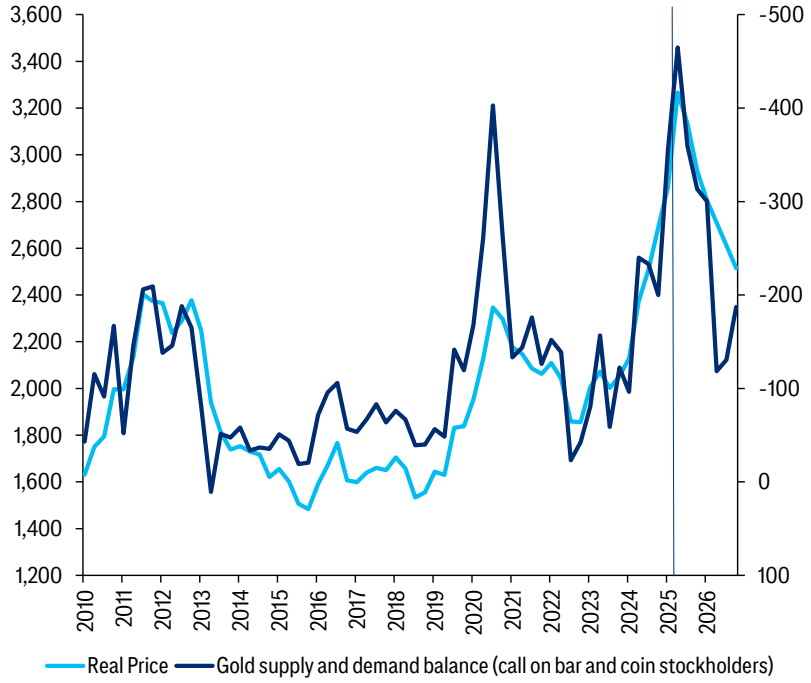
High-cost gold miners margins are at half century highs, with 5-year forward prices of $4000/oz, a massive ~$2,000/oz higher than marginal production costs



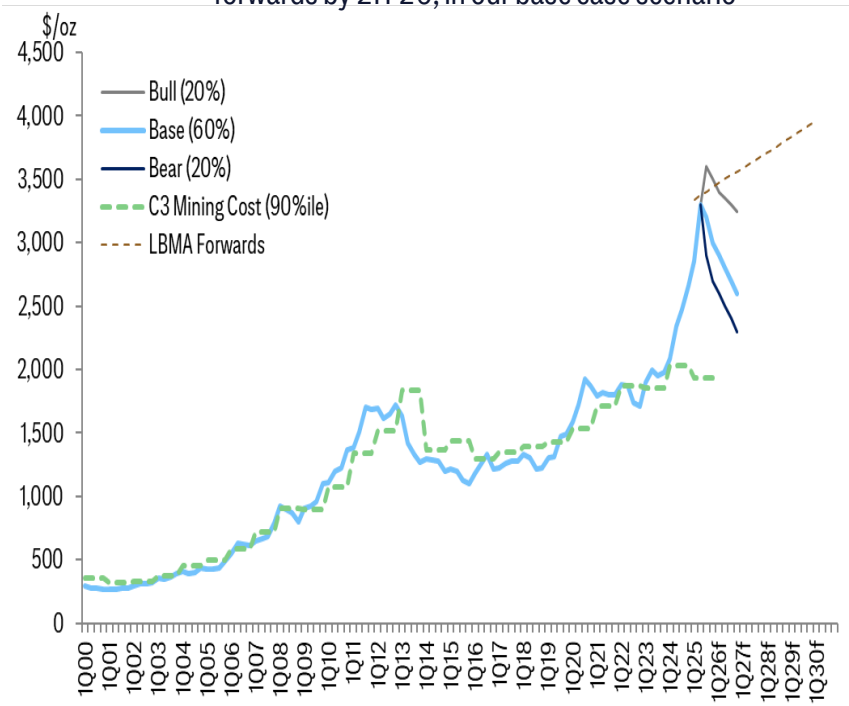
Gold set to fall>20% in late 2025 and 2026 on improving growth outlook

We see investment demand for gold abating in late 2025 and 2026, as ultimately, we see the President Trump popularity and US growth 'put' kicking in, especially as the US mid-terms come into focus. In the near term, trade deals (UK, China, eventually Japan, India, Europe, etc) and the passing of the (net stimulatory) Big Beautiful Bill in July should improve growth sentiment and stop gold moving much higher. Indeed, we do not see a bond vigilante moment during 2025/2026 as the BBB delta is largely funded by tariff revenues. Further, over the next 6-9 months we see a lot of scope for the Fed to cut from restrictive policy to neutral, bolstering growth sentiment in the US and globally (and mechanically lowering gold forward prices which are tied to interest rates – each 1% decline in interest rates lowers 5 year forward by~$200/oz). We recommend gold producers use the extraordinary strength in long-dated gold prices to insure against downside below $3,600-3,700/oz (the avg forward price over the next 5 years).

Our (new) gold supply and demand balance work suggests that the call on bar and coin stockholders will decline sharply in 2026, with prices falling commensurately



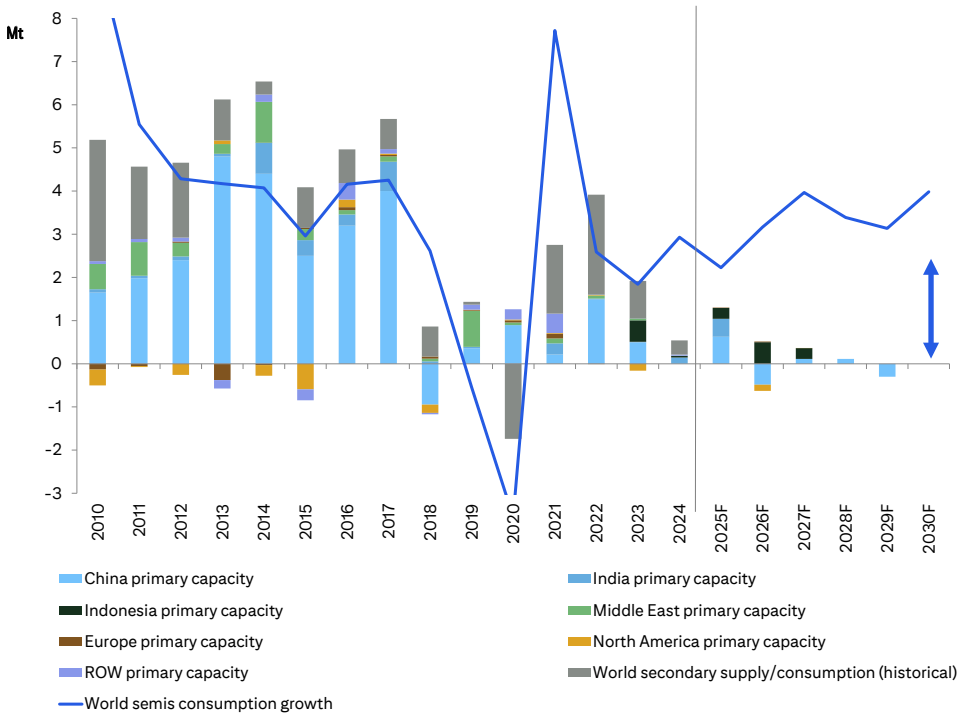
After having been bullish for much of the past two years, we now see gold prices falling by 20-25% compared to the forwards by 2H'26, in our base case scenario



Aluminium – as structurally bullish as copper, ~20-40% long-term upside

We are increasingly bullish on aluminium over the medium to long term and strongly recommend consumer hedging around current levels over a 1-5 year tenor, perhaps gradually building a position over the next 6 months. Put simply, current prices are too low to incentivize sufficient supply to meet demand over the next 1-5 years, such that we would run out of aluminium if prices stayed where they are (chart below). At current prices of around $2,500/t we see practically no supply growth to demand over the next 5 years (chart left), which would leave us with unsustainable deficits over the next 5 years. We don't know exactly how high prices need to go to incentivize the 15-20mt of supply growth we need by 2030, but we suspect they need to be north of $3,000/oz for a sustained period (~20% higher than spot/forwards). At much higher prices Indonesia and scrap might fill some of the gap, but if it doesn't, we would need to go to demand destruction prices in the vicinity of $4,000/t (~+60%).

What aluminium price will be enough to fill the supply shortfall over the next 1-5 years?



Aluminium is future facing on the demand side, and power constrained on the supply side

- **Robots (humanoid, dogs, drones, industrial robots etc, with 20-25kg aluminium per humanoid robot), AI/Datacentres and drones could be massive new demand drivers for aluminium**, especially taking a longer-term view. These demand segments will compete for the very same power that the energy intensive aluminium smelters need to grow supply.
- **Asset allocators may move to increase the share of aluminium in their portfolios over the coming years**, and be joined by strong (macro, commodity and other) fund/investor buying once growth sentiment turns higher in late 2025/2026. And we saw what that did for copper over the past few years (i.e. how copper boomed during Jan-April 2024).
- **Genuine deficits, stockouts, and backwardation are much more likely in aluminium than copper**, since aluminium scrap is far less able to respond to higher prices than copper (due to technical constraints).

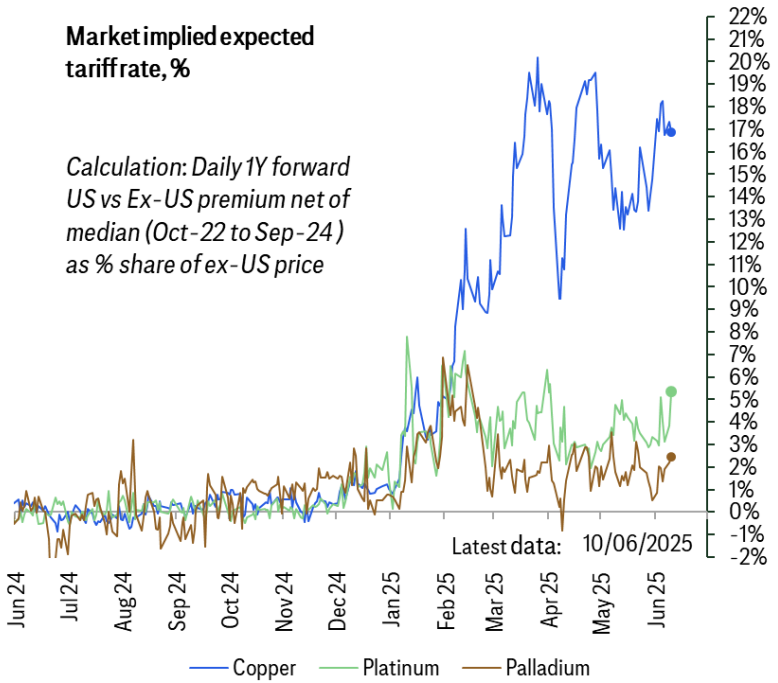
Section 232 tariffs pose underappreciated risks for Cu, Pd, Pt, Zn, Ni, Sn, Li

With reciprocal tariffs subject to likely extended bi-lateral negotiations and legal challenges, there may be more focus on fast-tracking, imposing, and sustaining S232 tariffs on copper and critical minerals (alongside pharmaceuticals, semiconductors, lumber etc. in addition to existing aluminium and steel and autos S232 tariffs).

- We think a 25% rate will be lasting for metal S232s. While 50% is in place for aluminium and steel (and is plausible but unlikely for copper and critical minerals) the higher rate is likely to be eroded through tariff negotiations and exemptions.
- S232 tariff clarity is likely to see copper flat pricing and physical tightness unwind as US copper import frontloading ends. This could come mid-July when an interim Critical Mineral S232 report is due, with a 25% tariff in 3Q'25 our base case.
- Metals in-scope of the Critical Minerals 232 investigation are likely underpricing tariff risks (we highlight platinum).

Metal S232 Summary	Steel and Aluminium	Copper	Critical Minerals (inc. Pd, Pt, Zn, Ni, Sn, Li)
US import tariff rate	50% except UK at 25% – Metal and derivative products, scrap excluded	TBC pending investigation (25% is our base case, 50% is plausible but unlikely)	TBC pending investigation (25%-50% most likely). Exact metals targeted from initial list of 51 TBC
Key dates	Hike to 50% implemented 4-Jun	Final report due 22-Nov (But we see tariff implemented 3Q'25)	Interim report due 14-Jul, Final report due 19-Oct
Where is tariff priced?	Aluminium MWP (physical premium), Steel US HRC	COMEX Copper. Visible in premium over LME	Nymex for Pt/Pd, US physical premiums for base metals.
Citi View on Implications	MWP vulnerable to future softening of 50% levy through granting of exemptions/quotas	Physical frontloading to unwind post-tariff clarity. Arb to price ~20% on forwards, discounting tariff.	Not priced meaningfully currently, could trigger frontloading and premium upside
More info	See slide 132	See slide 114	See slide 112

We think PGMS are underpricing tariffs despite inclusion in the Critical Minerals 232 investigation. Copper CME-LME price differential has some modest further upside (we think base case ~20% 1 yr forward assuming a 25% tariff).



Source: Citi Research, Bloomberg, CME Group, LME 10

ii. Global macroeconomic outlook

Key macro factors to watch across the energy and metals spaces

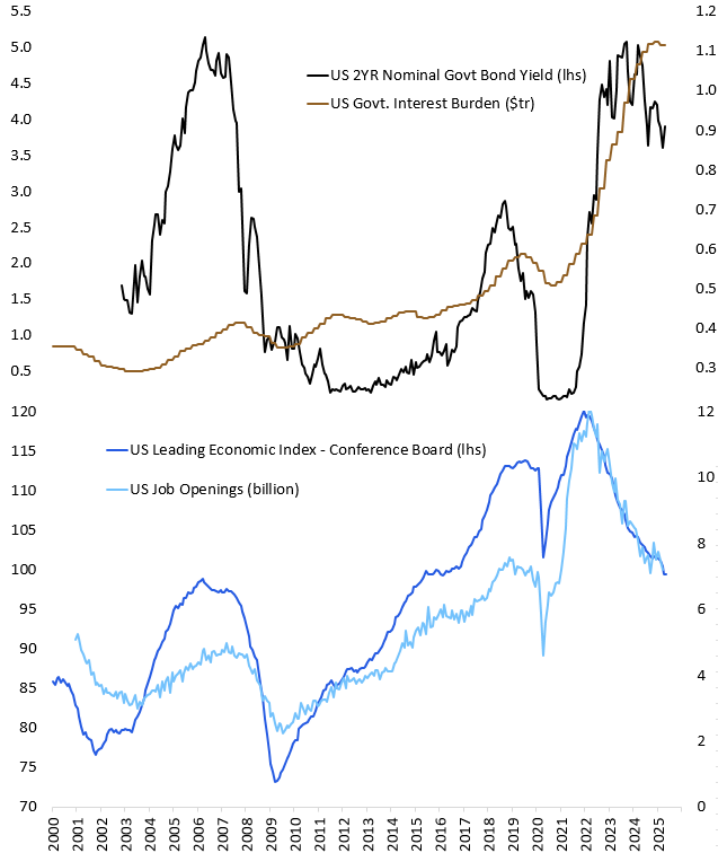
Global activity and risk factors for commodities over the coming months

Bearish growth/activity/risk-sentiment factors	Scale / scope	Timing	Likelihood	Gold	Oil	Copper
High overall level of tarifts, moderate growth impact on global activity, deflationary ex-US for 2H'25	$200-300bn revenues (~15% effective rate)	Ongoing/Done	High	Bullish	Bearish	Bearish
Bullish growth/activity/risk-sentiment factors	**Scale / scope**	**Timing**	**Likelihood**	**Gold**	**Oil**	**Copper**
One Big Beautiful Bill Act (OBBBA)	**Net stimulatory for US economy, delta to budget is bullish manufacturing and middle income earners, broadly paid for with tariffs (which are partly paid for by foreign companies) for next few years**	**July, before August 4**	**High**	**Bearish**	**Bullish**	**Bullish**
US trade deals	Limited deals with China, UK have been done, likely to see similar limited deals with other major nations	June-August	Moderate-High	Bearish	Bullish	Bullish
De-escalation of risks to oil supply in the ME	Though it may get significantly worse in the near term, our base case is de-escalation could lower oil prices by ~10 dollars all else equal, supporting Fed cuts, reduce global geopolitical risks	July/August	Moderate-High	Bearish	Bearish	Bearish initially, Bullish eventually
OPEC+ aggressively bringing back spare capacity	Helps to provide a modest global deflationary impluse, which would ultimately be supportive for global growth given inflation concerns	May-August	High	Bearish	Bearish	Bearish initially, Bullish eventually
US banking sector deregulation	Lowering of capital requirements and stablecoin legislation may support US growth and growth expectations	July/August	Moderate-High	Bearish	Bullish	Bullish
US revaluation of gold reserves (or borrowing using gold as collateral)	Could raise $400-800bn, buy bonds, for some reason not being pursued at present	Possible anytime	Moderate-High	Bearish	Bullish	Bullish
Fed cutting cycle	We see this beginning (again) in September, with 5 cuts taking rates down to neutral by March 2026	Sep 2025-Mar 2026	Moderate-High	Bullish initially, Bearish eventually	Bullish	Bullish
US Capex sentiment bounced back to reasonable high levels in May, probably remains solid	Capex is $8tr in US p.a. (25% of GDP!)	2026/2027	Moderate	Bearish	Bullish	Bullish
US EPA / Energy sector deregulation	Could impact investment in energy, stock market returns, and lower the cost of living over time	2026/2027	High	Bearish	-	Bullish
Russia/Ukraine deal	Could lower oil prices by 2-5 dollars all else equal, supporting Fed cuts, reduce global geopolitical risks	Uncertain	Uncertain	Bearish	Bearish	Bearish initially, Bullish eventually
US gold card program	~25bn per annum? - 5k cards p.a., details on scale/scope have been delayed for weeks	June	Moderate	Bearish	Bullish	Bullish
US dollar	Broadly neutral outlook, eventual growth improvement partly offset by rate cuts in 2026			Neutral	Neutral	Neutral
Net macro impact on commodity market near term				**Neutral**	**Bearish**	**Neutral**
Net macro impact on commodity market by late 2025/2026				**Bearish**	**Buy sub $60/bbl Brent**	**Bullish**

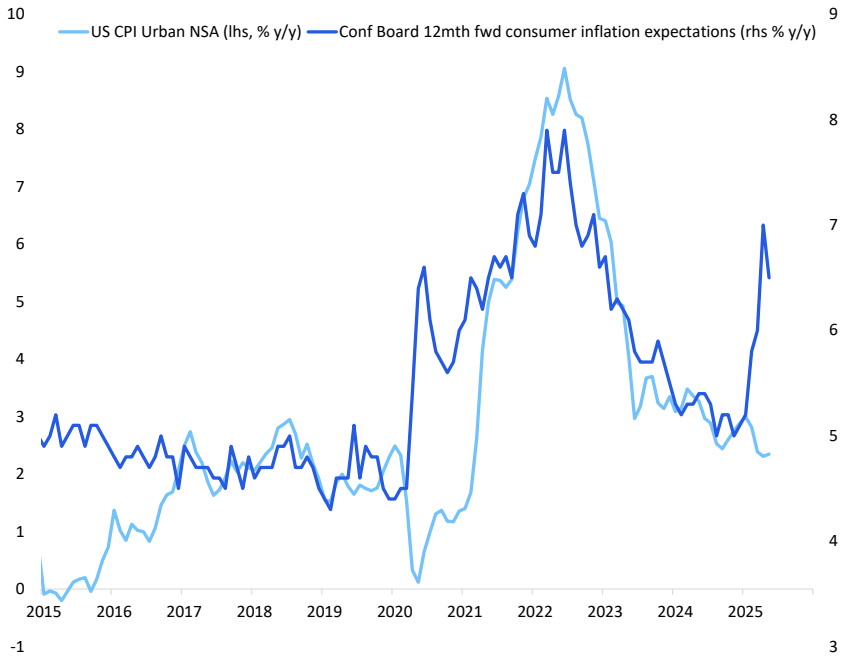
US rates are the key, with declines set to unleash a commodity bull market

Lower US rates would unleash a boom in copper, aluminium, EUAs, and modestly higher oil prices, but would likely result in substantially lower gold prices. The US and global economies have been held back by extremely high US interest rates for the past 3 years (black line, lhs), driving a slowing in the US economic activity (darker blue line, lhs) and labour market activity (lighter blue line, lhs), and driving up US government interest costs (brown line, lhs). The recent cuts by the Fed have seen interest costs stop growing in the US, and further cuts, to 3% by March (our base case) would likely underpin a bottoming in US and global growth, and declines in US government interest costs, alongside the net bullish US OBBBA, European stimulus and an ongoing boom in China's new economy.

The US economy in a nutshell over the past 3 years – historically high interest rates drives slowing economic and labour market activity, and rising govt debt service



Through May 2025 actual US inflation remained subdued (2.3%). The big question is whether it stays that way and inflation expectations fall



Geopolitical tensions in the Middle East risk higher oil, though not base case

President Trump has identified energy as the primary channel through which he wishes to lower inflation, the cost of living, and US interest rates. This helps to inform his foreign policy actions and his drive for deals with Iran and Russia/Ukraine, and the pressure will rise over time to resolve the conflict in Iran in order to achieve this goal. The Iran/Israel conflict has led to a more than $10/bbl risk premium in oil prices and this may remain as long as the conflict continues to threaten energy supply from the region (weeks, or even months). The return of OPEC+ barrels should keep a lid on prices, even in some of the worse case scenarios (our bull case is $85-90/bbl), and eventually see prices return to $60-65/bbl sometime during the 2H'25.

- **Our recent work on oil positioning suggests that shorts have covered such that higher prices would likely require fresh long positions. This means that for the $10-12/bbl risk premium to widen, we believe that either substantial actual oil production or exports would need to be impacted (i.e. at Kharg Island or the Strait of Hormuz), or the Iran/Israel conflict would need to intensify significantly.**
- **The risk of oil production/exports being drawn into the conflict remains high, but not our base case**, because a) this could draw other countries into the conflict; b) there is pressure on both Iran and Israel to ensure this does not happen; and c) Iran's relationships with other Gulf states is much better than in the past. For reference, our bull-case scenario from our 2Q'25 outlook was for prices to reach $85-90/bbl+ prices during 2Q-3Q in the case that we see 1mb/d of losses from Iran for a quarter, and regional energy infrastructure affected.
- **Catalysts for the risk premium to fall would be an end to the ongoing military conflict, an Iran/US nuclear deal, and rising political stability in Iran.**

- **Please find here a few relevant reports on Iran, Kharg Island and the Strait of Hormuz:**

  - Middle East Economics: Assessing GCC's Oil Exports Amid Elevated Geopolitical Tail Risks (May 2, 2024) on alternative routes to the Strait of Hormuz and economic impacts on key Middle Eastern countries.

  - ME disruption potential, assessing historical risk events (Oct 14, 2024) on the potential impacts of a strike on Iran's Kharg Island – a major oil export hub of Iran), the closing of the Strait of Hormuz, and a review of ~40 episodes of key geopolitical risk events since the late 1950s.

Global growth outlook – 2H'25 slowing likely but 2026 to see improvement

Our global economics team sees global economic growth slowing to 2.3% y/y in 2025, down from 2.8% in 2024, owing to still high US nominal and real rates and higher US tariffs. China growth is expected to remain resilient at 4.7%. We expect 75bps of Fed rate cuts this year (25bps in September, October, and December) and 50bps next year (25bps in January and March). Risks skew toward more aggressive cuts, and we would not be too surprised by a repeat of last year with the Fed cutting 50bps in September

China GDP to slow to 4.7% and US to 1.2% in 2025

	GDP GROWTH		
	GDP GROWTH		
	2024	2025	2026
Global	**2.8**	**2.3**	**2.5**
United States	2.8	1.2	1.5
Euro Area	0.8	0.9	1.2
Japan	0.1	1.5	1.1
China	5	4.7	4.8
India	6.7	6.7	6.8

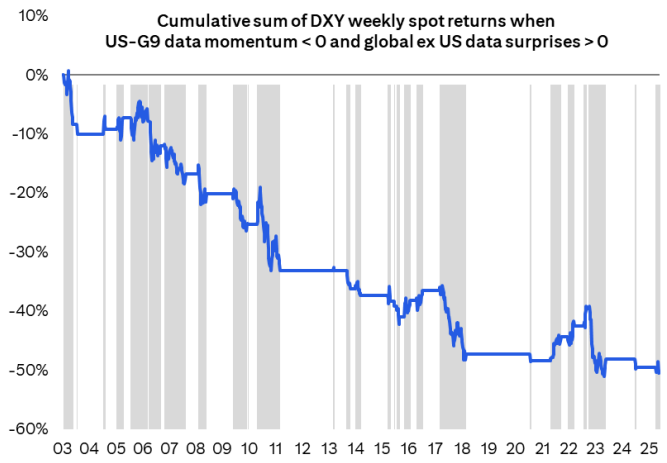
The Fed is set to cut to 'neutral' over the next 6-9 months, starting in September

	Citi Forecast	
Fed Meeting	Policy Range	Change
18-Jun-25	4.25-4.5	0
30-Jul-25	4.25-4.5	0
17-Sep-25	4-4.25	-0.25
29-Oct-25	3.75-4.0	-0.25
10-Dec-25	3.5-3.75	-0.25
28-Jan-26	3.25-3.5	-0.25
18-Mar-26	3.0-3.25	-0.25
29-Apr-26	3.0-3.25	0
17-Jun-26	3.0-3.25	0
29-Jul-26	3.0-3.25	0
16-Sep-26	3.0-3.25	0
28-Oct-26	3.0-3.25	0
9-Dec-26	3.0-3.25	0

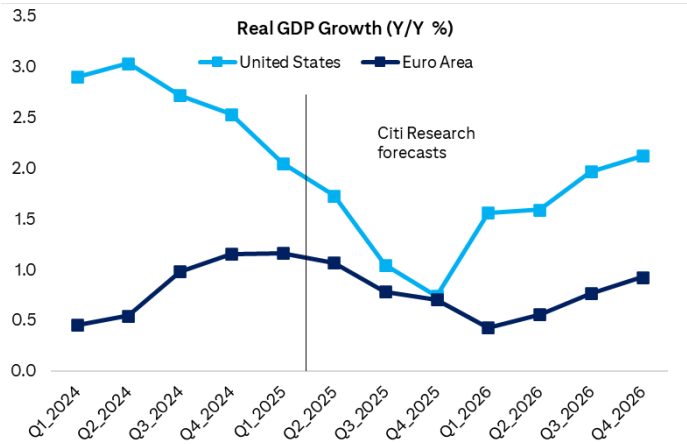
US dollar outlook: bearish, but not structurally (Citi's G10 FX research team)

Until we have greater clarity – and that may still take a few months – we are more likely to be in choppy FX markets but with an asymmetry for USD selling. We expect dovish Fed repricing once the data turns to weigh on USD in H2 2025. Fiscal risks have reduced in the short-term but remain another USD headwind this year. We see USD weakness reversing next year once a more growth-friendly policy mix materializes. USD-negative flows YTD have been driven more by FX hedge ratio adjustments than actual asset rotation. Increased EU fiscal spend is positive – but also priced – and investors may be overestimating the long-term impact on potential EU GDP growth. Reserve currency status maintained. We remain skeptical USD's reserve currency status is in question. While policy uncertainty has contributed to USD weakness, we do not expect reserve managers to rotate away from USD assets given limited alternatives.

We expect this USD-negative regime to persist in H2 '25



But a US growth rebound in '26 can drive a USD rebound



Read More

Our global growth and Trump tariff base/bull/bear scenarios

Global growth base case (60% indicative probability)

- President Trump is both a tariff man and a dealmaker, and that the implementation of tariffs includes relatively quick re-distribution to low-middle income households (via no tax on tips, and/or tax cuts via the US BBB)
- US tariffs – Citi US and global economists assume that the US effective tariff rate will rise by roughly 13-15 ppt in 2025. We assume large reciprocal tariffs (likely 10-30%) are implemented through 3Q'25, alongside deals for those getting 10% tariffs (the lower end of the range).
- US labour market continues to gradually weaken through 2025 (continuing a 2–3-year trend, on the back of still high/above neutral US interest rates).
- Debt service burdens moderate globally on lower rates, and moderate in the US during 1H'26 owing to lower US Fed funds rates.
- China eases sufficiently to meet GDP growth of 4.5-5% during 2025. China's easing to be energy-transition and equipment-upgrade intensive, alongside a robot and the AI/datacentre boom, with a shift towards incentivising domestic consumption, including a substantial risk of government property repurchases leading to strong 'finishing' demand for commodities. This is copper and aluminium. supportive
- Geopolitics – Oil supply risks remain high but do not materialise in a substantive way (remain less than <~500kb/d). Russia/Ukraine war continues for the foreseeable future in our baseline.

Global growth bear case (20%)

- Large tariffs are implemented but the BBB does not pass, limiting the redistribution of tariff revenue to US households.
- Geopolitics – Russia/Ukraine and Iran conflicts escalate in a way that drives up energy prices and inflation in a sustained way (beyond the next 1-2 months, with disruptions larger than>500kb/d for sustained period), compounding the issues above through higher for longer US interest rates.
- US interest rates are higher for longer, resulting in higher debt service burdens across the developed markets, further raising downside risks to asset prices (raising need for austerity), further constraining global investment and manufacturing activity.
- China easing is too small and GDP growth is more like 4.0-4.5%, owing to escalating trade wars, confidence deficit by Chinese consumers, sustained China property market issues.

Global growth bull case (20%)

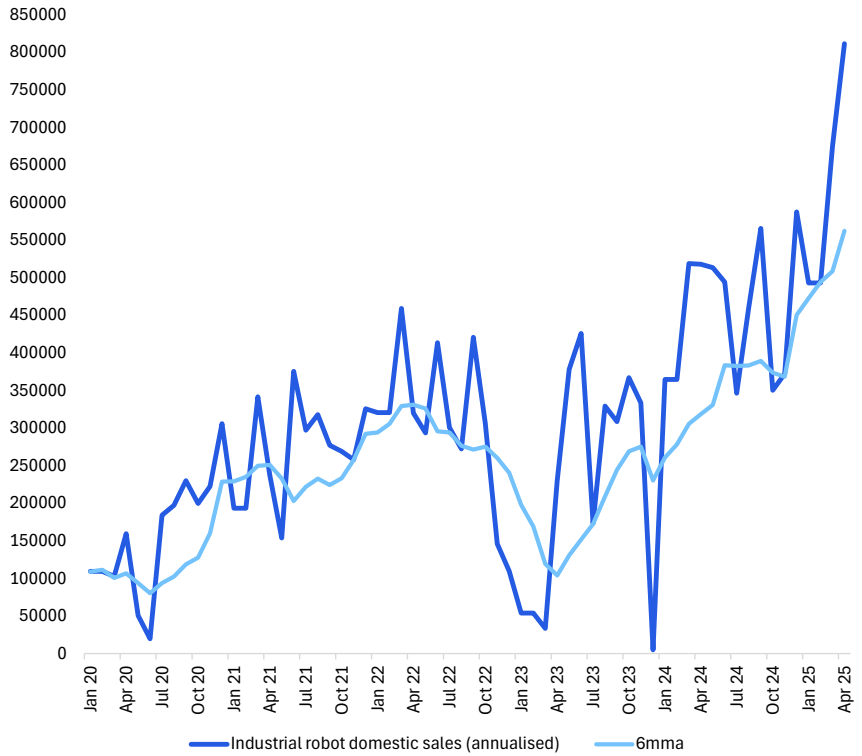
- President Trump does numerous deals that and tariff rates end up being only around 10%, with quick passage of the BBB resulting in a net stimulus to US growth and limited damage to global growth. Assumes something close to a US goldilocks scenario, where Fed can cut more aggressively owing to lower energy prices and softer US wage growth, without the labour market getting so weak as to result in a recession.
- The Fed focusses on downside risks to growth and lowers rates to neutral quickly during 2H'25, around 3% by year end.
- Assumes substantial China easing, both fiscal and monetary, over the next 6-12 months, to the tune of 3-5% of GDP, to ensure 5% GDP growth.
- Geopolitics – Russia/Ukraine and Iran de-escalate in a way that drives down energy prices and inflation (freeing up oil on water, gas supply to Europe), supporting more central bank cuts and a recovery in US and global investment and manufacturing.

iii. Robots, datacentres, and the energy transition

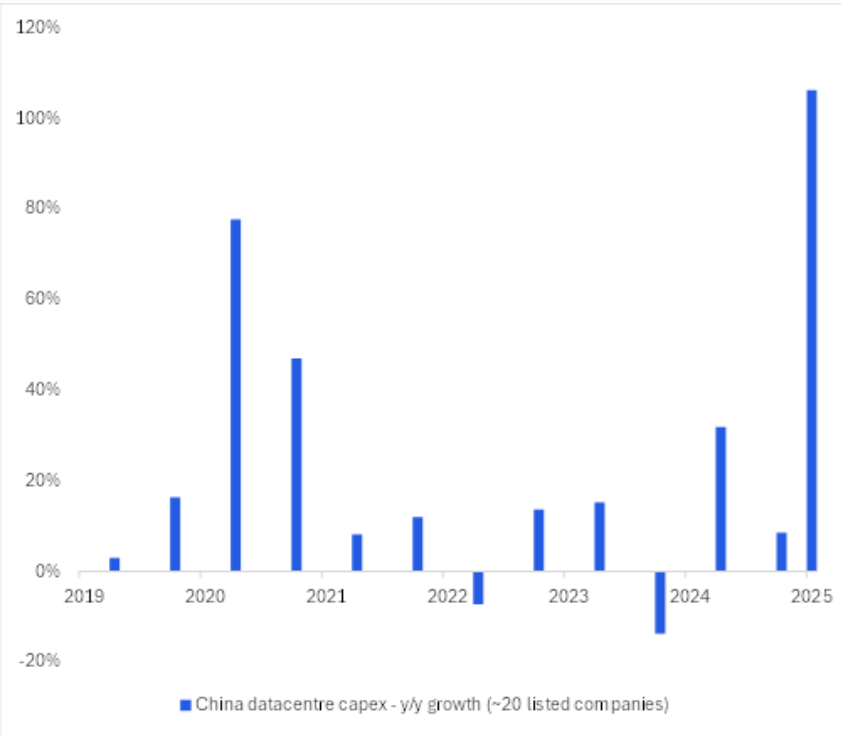
Robots, AI/Datacentres are booming in China, implications for AL, LI, Power

China has dramatically stepped up its production of, and spending on, robots and datacentres, a trend we expect to continue. Industrial robot output in China increased by 60% y/y in April 2025 to 800k units (annualized), and datacentre capex in China has increased by 100% y/y in 1Q'25 (listed company capex). These sectors should provide a medium- to long-term boost to aluminium, lithium, power, and copper demand. Capital is trapped in China and will be deployed in this space in a massive way, lowering costs, and driving technological innovation in these markets, providing a new growth engine alongside the energy transition spending that has helped to offset property market weakness. China's rare earth endowment may provide a competitive advantage in mass-scale robotics near term.

Industrial robot output in China increased by 60% y/y in April 2025 to 800k units (annualized)



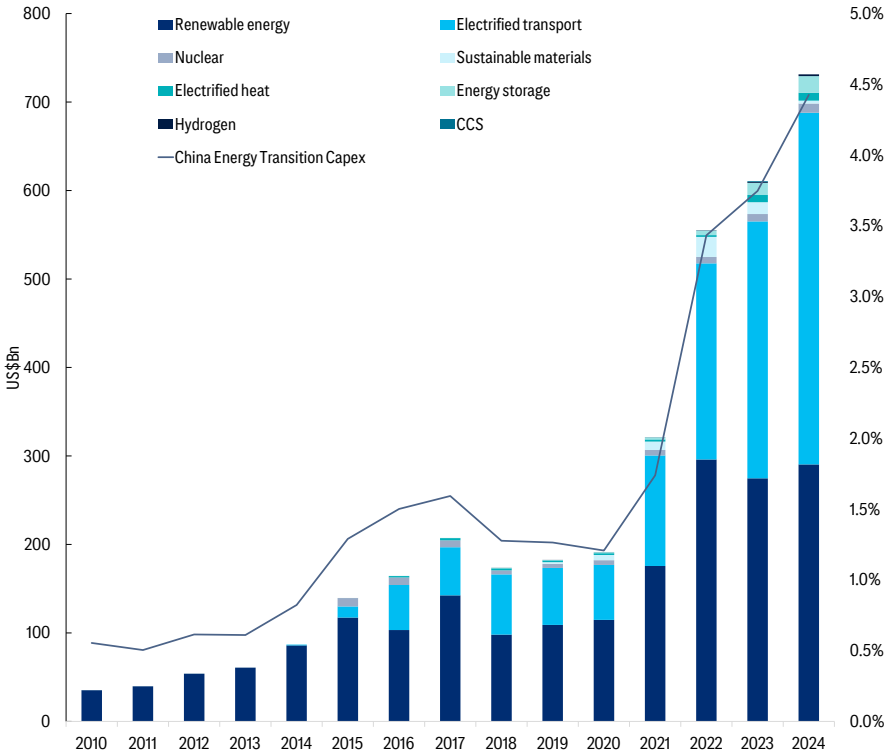
Datacentre capex in China has increased by 100% y/y in 1Q'25 (listed company capex)



Robot/datacentre boom may echo China's Energy Transition, shale revolution

When massive amounts of capital were directed at China's net zero (energy transition) push post July-2020 (chart left) and when massive amounts of capital were directed at US shale (chart right), we saw production boom and costs collapse (of electric vehicles, solar panels and installations, oil production). We can expect China to allocate massive amounts of capital to Robotics (humanoid, dog, aerial drones, industrial) and AI/datacentres, and we can expect similar results. Commodity inputs for these sectors can be expected to boom, such as demand for aluminium, copper, lithium, and power.

Cumulative China investment in energy transition capex increased from less than 4-5x over the past 5 years to over $700bn per annum



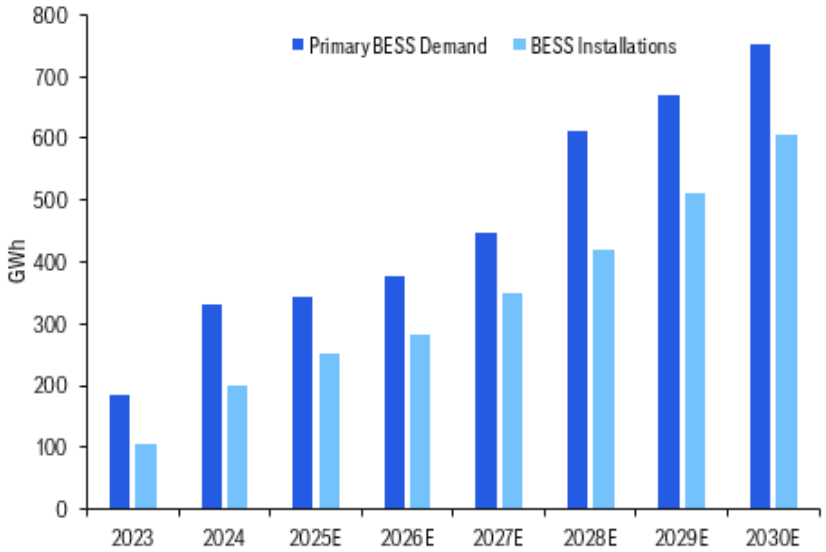
Cumulative US shale investment was ~$500bn during the 2011-2014 period, driving the Shale Revolution (higher output, lower costs)

Source: NBS, Bloomberg BNEF, Citi Research estimates

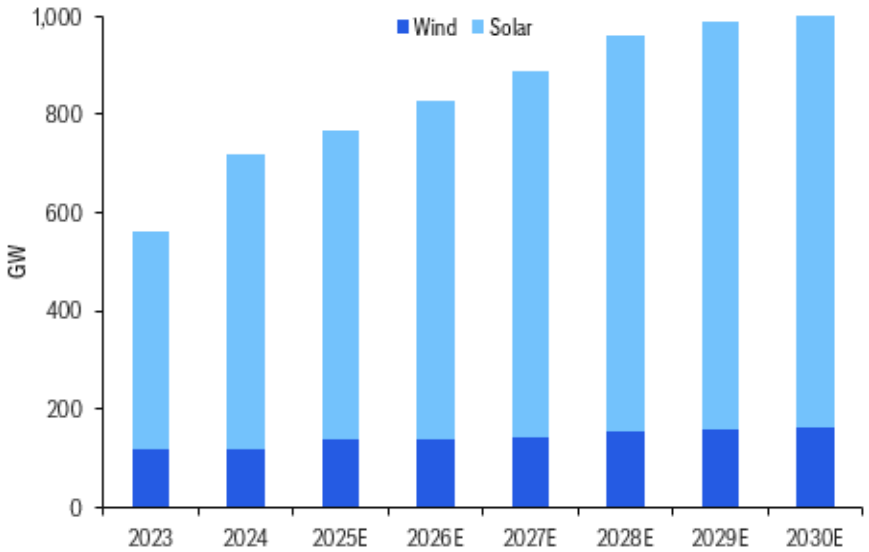
Renewables demand growth to stay strong, despite near-term headwinds

- **We see solar installations in China falling 2H'25 versus 1H'25 following policy-related frontloading.** China's solar installations for the first four months of the year rose 75% y/y aided largely by front loading ahead of change in regulatory guidelines effective June 2025. Our China utilities team expect PRC solar installation to drop 39-44% h/h to 90-95GW^{ac} in 2H'25, from 155-160GW^{ac} in 1H'25 owing to the installation rush in 5M'25. The team has revised their global solar installation forecast to 535GW^{ac}, +0.9% y/y from 580GW^{ac}, +9% y/y mainly owing to less installations in China from 290GW^{ac} (+4.5% y/y) to 250GW^{ac} (-9.9% y/y). Despite slower growth in solar installations this year and the headwinds for 2H'25, we expect solar and wind demand growth to remain strong in the medium term.
- **Energy storage applications have underpinned demand for lithium (and copper to a lesser extent) over the last 12-18 months underpinned by strong wind and solar additions, particularly in China. We expect strong but slower growth of 27% this year due to changes in solar sector.** Last year saw ~200GWh of battery ESS installed globally mainly paired with utility scale solar or wind installations. China ESS cell output has outpaced installations over the last few years aided by front loading from overseas markets ahead of potential tariffs (e.g. from US and EU). Despite China solar headwinds, we expect global BESS installations to grow ~27% y/y to 250GW.

In our base case, we expect primary BESS demand to touch ~800GWh by 2030



Our solar and wind capacity addition forecasts* underpinning our metal demand projections (Solar in GW/DC)

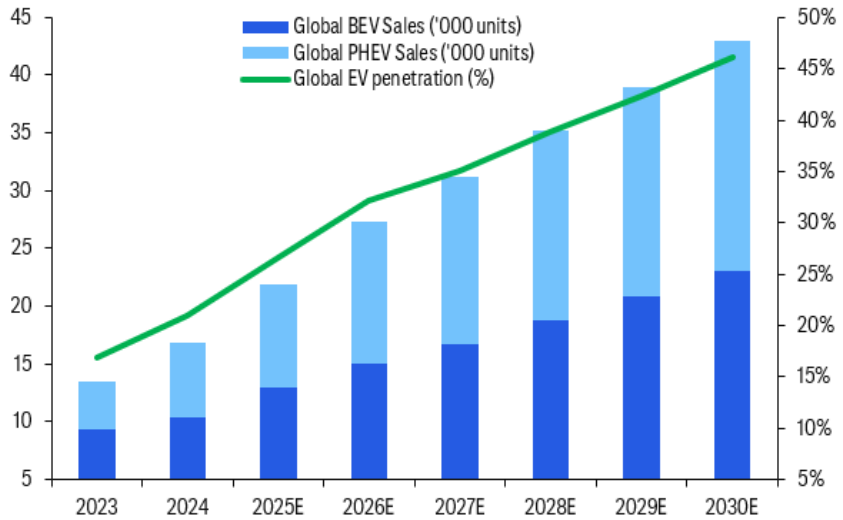


Source: Citi Research, BNEF, Bloomberg, GWEC *Forecasts are a combination of Citi Utilities, Materials and Commodities team expectations

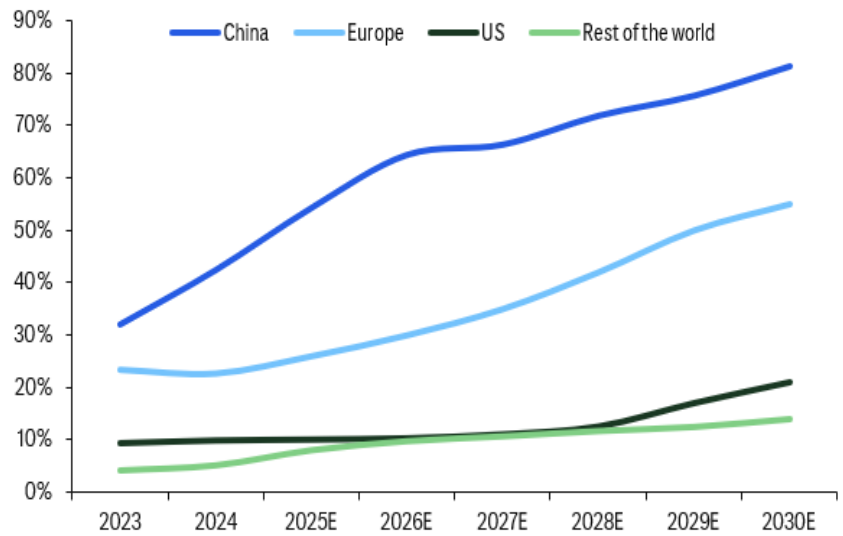
Global EV demand – China driving growth, US impacted by policy changes

- **We see global EV sales rising 30% y/y to ~22mn units in 2025, underpinned by ~40% y/y growth in China.** Our China Autos team recently upgraded their China wholesale EV forecasts assuming strong growth in China EV (particularly PHEV) exports. We lift our global EV forecasts for CY25/26 by 3%/5% underpinned by China EV sales. We are optimistic about growth in China EV sales which rose 44% y/y in 4M'25 and we see continuing into 2H'25. However, rising price discounts have attracted increased regulatory scrutiny. National "trade-in" subsidies have reportedly been suspended in some provinces, earlier than the end of 2025 as previously expected (Sohu.com, 27-May). In addition, although China's exports are well diversified, exports to certain countries in future may attract regulatory headwinds and barriers, as well as competition from ex-China OEMs.
- **Policy change is likely to slow the pace of US EV adoption over the next 3-4 years. We see US EV penetration rates rising slowly to 20% by 2030 (previously c.30%).** Proposed BBB bill, if approved by Senate, would largely phase out clean vehicle credits of $7,500 by the end of 2026. However, the credit for most auto OEMs would phase out at the end of 2025 since credit into 2026 is only valid for auto OEMs who have sold >200k units. In addition, the new bill proposes a $250 annual federal fee for EV owners. Large western auto OEMs (see here) are reworking their electrification strategy with Honda planning to increase share of HEVs over pure battery electric vehicles. HEVs generally have far smaller battery sizes compared to BEV/PHEVs with some using nickel metal hydride batteries rather than Li-ion cells.

We see global EV penetration reaching 45% by 2030



However, there are policy headwinds for western EV adoption



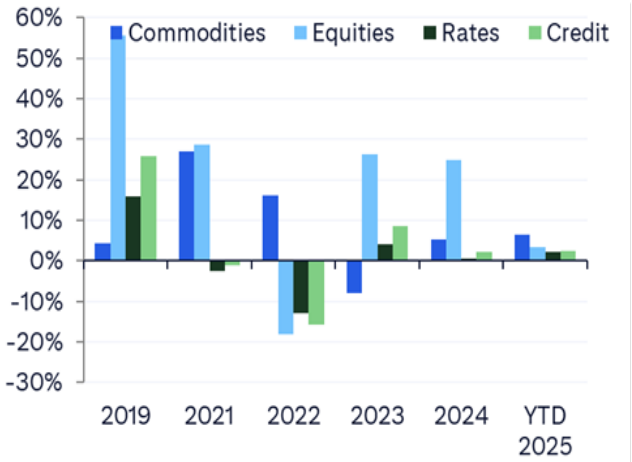
Source: Citi Research, CPCA, ACEA, Bloomberg, *Forecasts are a combination of Citi Autos and Commodities team expectations

iv. Commodities as an asset class

Commodity outperformance ytd driven by precious metals

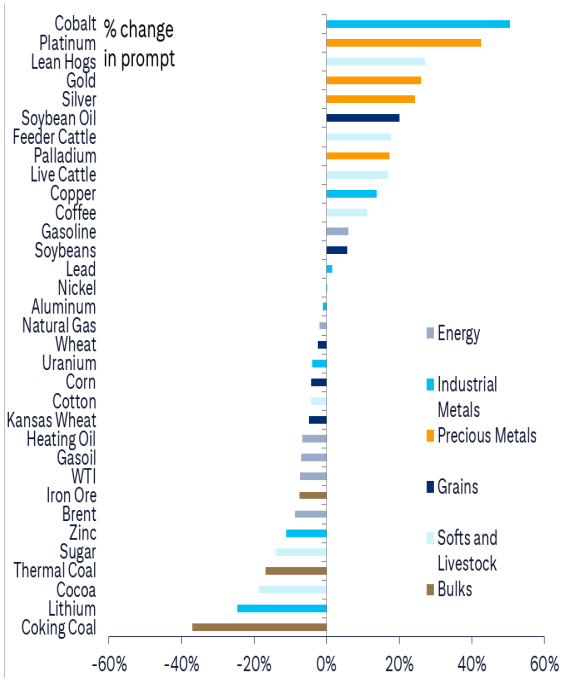
Commodities continue to outperform other asset classes this year, driven by precious metals (gold, silver, and platinum), and the ags complex. Bearish macro sentiment continue to be the driver of precious metals as investors flock to safe heaven assets while energy performance remains neutral-to-lower as the market stays reactive to headlines affecting supply and demand. We continue to see commodities post small declines driven by the precious metals rally softening, oil's nascent bear market, and softs recovering. We expect some commodity curve structure loosening during 2H'25, led by oil as the surplus that is building away from the hubs eventually makes it to hubs post a de-escalation of tensions in the ME, and/or as OPEC+ ramps up.

Commodities continues to be the best performing asset class in 2025 so far...



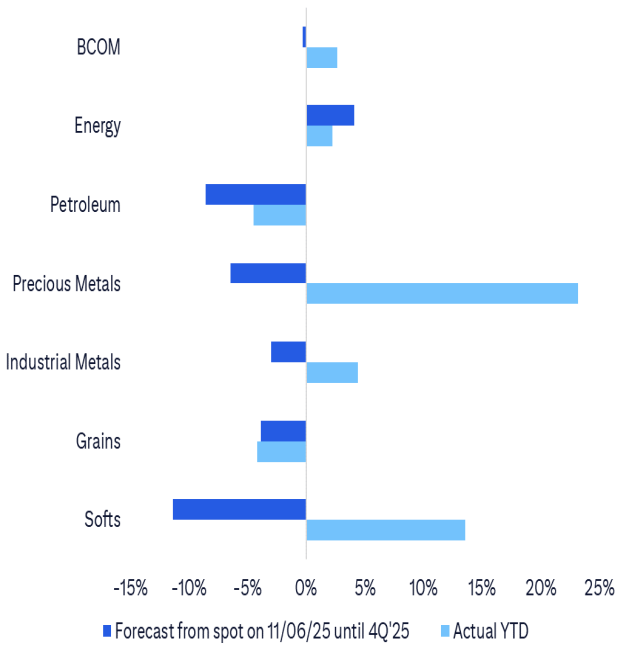
... driven by gold, silver, lean hogs, and platinum

Percentage change in prompt YTD 2025



We see energy slightly lower, and the precious metals recent rally softening

Projected 2025 BCOM indices returns* and YTD 2025 returns**

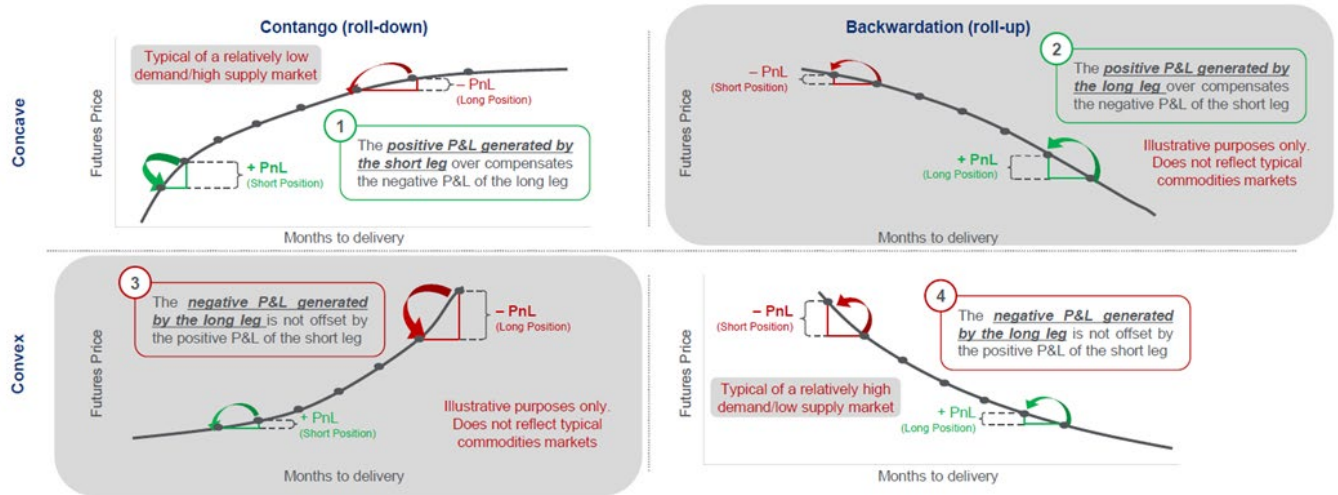


Source: Bloomberg, Citi Research, *not volatility adjusted (where's asterisk above?), **using Citi Research forecasts from spot returns relative to spot prices

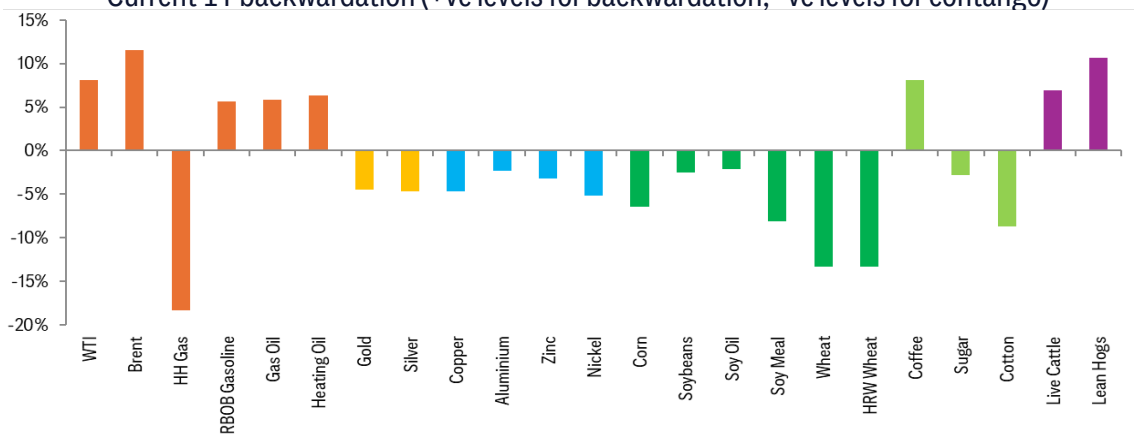
CARRY ON – we still favor commodity curve carry strategies

We have been bullish curve carry strategies since January and expect the positive performance to continue into 3Q as our fundamental price views point to weaker backwardation levels/potential shifts into contango across a wide range of commodities including crude oil and base metals and select ags products. We note the historical weak seasonality of curve carry performance in August and September but consider any underperformance as good entry point ahead of strong return seasonality in 4Q.

Commodity curve carry strategies generally perform best when curves are concave



Current 1Y backwardation (+ve levels for backwardation, -ve levels for contango)



Source: Citi Research, Bloomberg

Curve carry outperformed as portfolio diversifier amid 2025 tariff uncertainty

Curve carry strategies may act as an attractive long-term diversifier given historically low correlation to other alpha strategies

10y Corr	Carry	Backwardation	Momentum	Value	Skewness	Congestion	Vol Carry (Brent)	Vol Carry (copper)	Vol Carry (corn)
Carry	100%	28%	2%	-8%	-18%	30%	-1%	2%	15%
Backwardation	28%	100%	23%	-10%	19%	22%	4%	8%	2%
Momentum	2%	23%	100%	1%	3%	-1%	-13%	-13%	-8%
Value	-8%	-10%	1%	100%	-2%	-8%	-3%	-3%	-5%
Skewness	-18%	19%	3%	-2%	100%	-4%	12%	7%	5%
Congestion	30%	22%	-1%	-8%	-4%	100%	8%	5%	9%
Vol Carry (Brent)	-1%	4%	-13%	-3%	12%	8%	100%	21%	14%
Vol Carry (copper)	2%	8%	-13%	-3%	7%	5%	21%	100%	13%
Vol Carry (corn)	15%	2%	-8%	-5%	5%	9%	14%	13%	100%

Curve carry performance seasonality

Median		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Energy	CL	0.5%	0.0%	0.4%	0.3%	0.8%	0.1%	0.5%	-0.1%	-0.4%	1.4%	1.4%	0.3%	0.4%
	CO	-0.3%	-0.6%	-0.1%	-0.3%	0.3%	0.3%	0.7%	-0.1%	0.4%	0.8%	0.5%	-0.4%	0.1%
	NG	1.6%	3.0%	1.0%	0.7%	0.2%	0.2%	1.7%	0.0%	1.3%	2.3%	2.0%	2.9%	1.4%
	XB	-0.4%	0.2%	-0.1%	0.7%	-0.1%	0.4%	-0.3%	0.0%	-0.1%	1.8%	0.6%	-0.8%	0.1%
	QS	0.1%	-0.2%	0.2%	0.0%	0.2%	0.0%	0.2%	-1.3%	0.0%	0.3%	0.1%	0.2%	0.0%
	HO	-0.3%	0.0%	0.3%	-0.1%	0.1%	0.0%	0.4%	-0.8%	0.0%	0.8%	0.4%	0.3%	0.1%
Precious Metals	GC	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	SI	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Industrial Metals	HG	0.1%	0.1%	0.3%	0.1%	0.3%	0.0%	0.2%	0.2%	0.0%	0.2%	0.1%	0.1%	0.1%
	LA	0.0%	0.2%	0.4%	0.2%	0.3%	0.2%	0.1%	0.3%	0.0%	0.1%	0.1%	0.2%	0.2%
	LX	0.3%	0.3%	0.4%	0.1%	0.2%	0.3%	0.2%	0.2%	0.3%	-0.4%	0.0%	0.1%	0.2%
	LN	-0.1%	-0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%
	LL	-0.1%	0.2%	0.3%	0.0%	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%	-0.1%	0.1%	0.1%
Grains	CX	-0.3%	0.1%	0.6%	0.1%	0.0%	0.4%	1.4%	0.6%	0.1%	-0.4%	0.1%	-0.5%	0.2%
	SX	0.1%	-0.6%	0.0%	0.1%	0.4%	-0.1%	0.7%	0.5%	0.5%	0.1%	0.1%	0.5%	0.2%
	BO	0.7%	0.1%	0.4%	-0.1%	0.7%	0.0%	0.1%	0.1%	0.5%	-0.1%	0.1%	0.4%	0.2%
	SM	-0.8%	-0.9%	0.0%	0.1%	0.3%	-0.1%	0.3%	0.0%	0.5%	-0.5%	0.5%	0.2%	0.0%
	WX	0.4%	0.8%	1.0%	0.8%	0.2%	0.5%	0.6%	0.1%	-0.2%	-0.1%	0.7%	-0.1%	0.4%
	KW	0.2%	0.1%	0.9%	0.4%	0.0%	0.6%	0.2%	0.0%	-0.1%	0.4%	0.0%	0.3%	0.2%
Softs	KC	0.1%	0.0%	0.5%	-0.1%	0.2%	0.2%	0.1%	0.1%	0.0%	0.2%	0.1%	0.1%	0.1%
	SB	0.7%	-0.1%	2.5%	0.4%	0.5%	0.3%	-0.2%	1.0%	0.1%	-0.1%	0.2%	0.7%	0.5%
	CT	0.4%	0.6%	0.4%	1.3%	1.9%	0.3%	0.1%	-0.2%	0.5%	1.0%	0.4%	-0.6%	0.5%
	Avg	0.1%	0.2%	0.4%	0.2%	0.3%	0.2%	0.3%	0.0%	0.2%	0.4%	0.3%	0.2%	

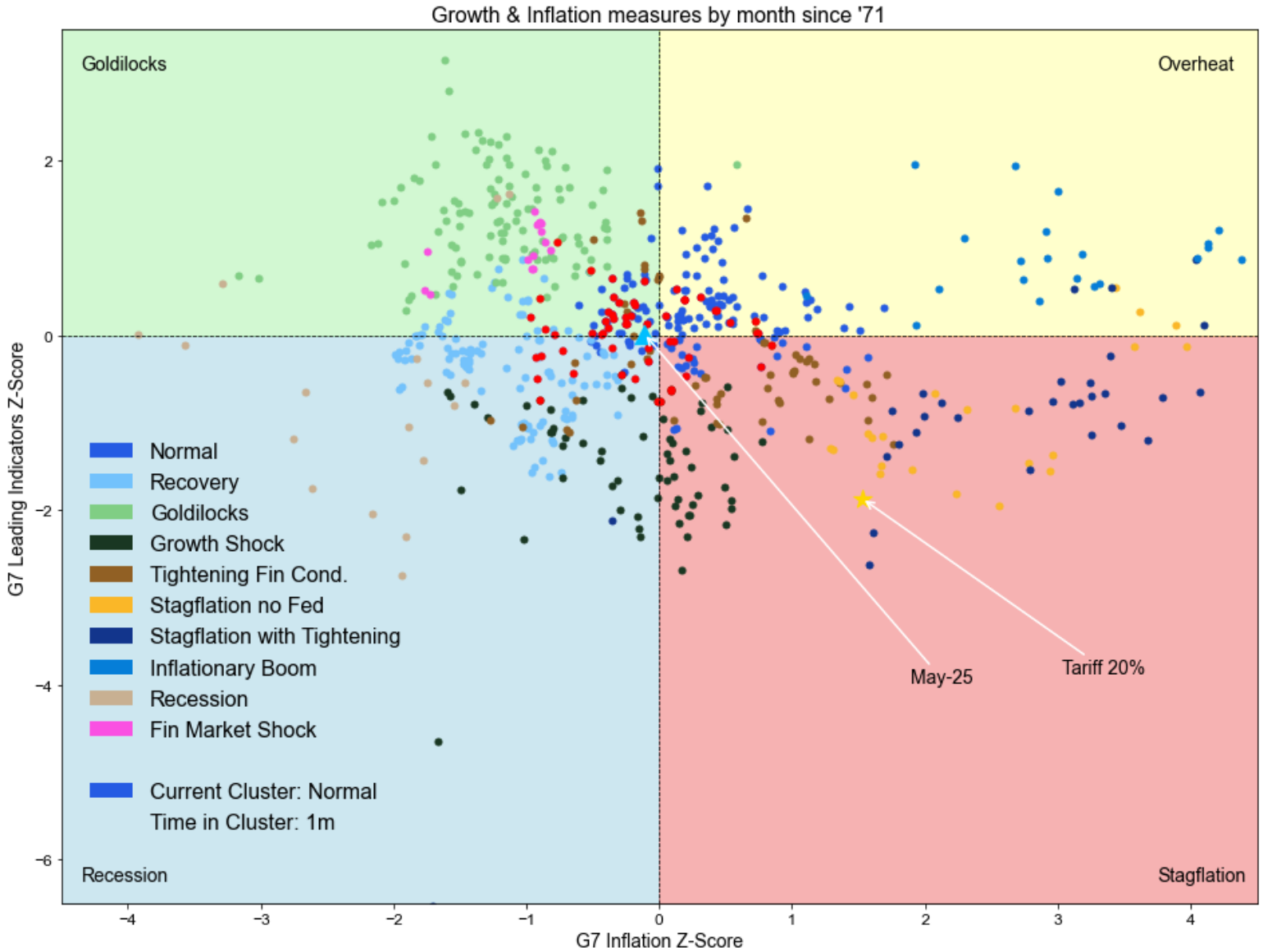
Source: Citi Research, Bloomberg, Calculated using average returns of short F0 vs long F6 indices for each month from Jan 2000 – Dec 2024; Past 10-year correlation based on weekly returns through Dec 2024; using CICXACDI/CVICDBAX/CICXMOMB/CICXVAL1/CICXSKBE/CVICRTB1/CICXCOME/CICXHGTE/CICXCXTE indices respectively to track

Commodities systematic strategies across macro regimes: back to Normal

Our quant research team cluster macro conditions to find useful environment definitions. The current macro-environment has transitioned back to the Normal regime from the Tightening Financial Conditions regime. Historically, curve carry is attractive in normal and recovery times. Commodity momentum strategies do well in inflationary times. Curve carry and congestion also perform well in stagflation, especially without financial condition tightening. Vol-selling strategies tend to do well in recessions.

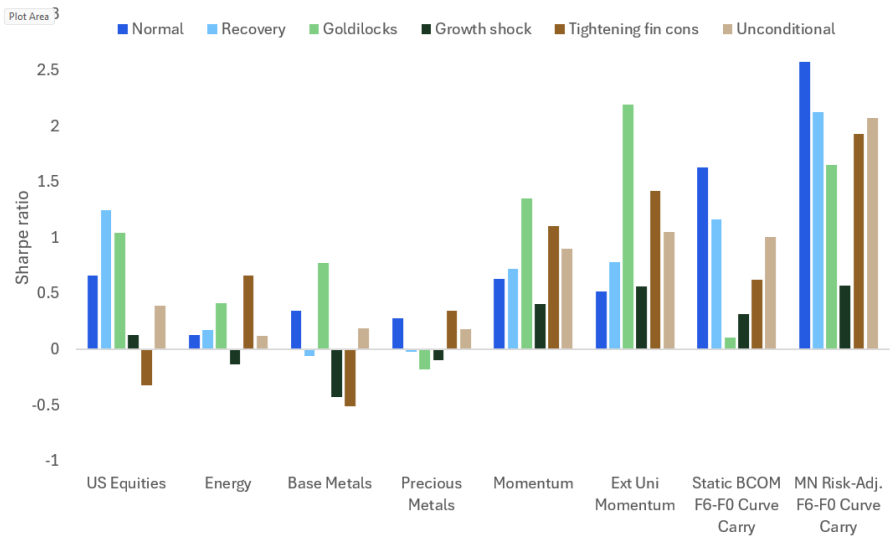
	Cluster	G7 Inflation	G7 LEIs	X-asset vols	Fincl Cond's	Description	Time-periods
Normal	1	0.27	0.26	-0.68	-0.60	Variables close to neutral	most recent '24 and '17-18
Recovery	2	-1.09	-0.33	-0.39	-0.85	Low inflation/growth easy fin conditions	02-04 & 13-15
Goldilocks	3	-1.19	1.35	0.21	-0.39	Inflation below trend / growth above	94-99, mid-09
Growth shock	4	-0.23	-1.44	0.22	0.09	Low growth other variables close to trend	90-91, 01-02, 18-19
Tightening fin cons	5	0.49	-0.37	0.28	1.22	Tight financial conditions only	2000 & 23
Stagflation no Fed	6	2.43	-0.86	1.73	0.32	High inflation low growth	73-75, late 22
Stagflation with tightening	7	2.35	-1.30	1.63	3.39	Hi infl / low growth with a tightening in fin. conditions	08 & 22
Inflationary boom	8	3.14	0.90	0.05	0.13	High inflation and growth	2005 &'21-22
Recession	9	-2.25	-0.67	1.40	1.16	Inflation growth low. Fin conditions tight and vol high.	82, 09 & 20
Fin market shock/crisis	10	-1.08	0.98	3.72	-0.12	Spike in volatility	Oct 87 and 98

Transition back to the Normal regime from Tightening Financial Conditions

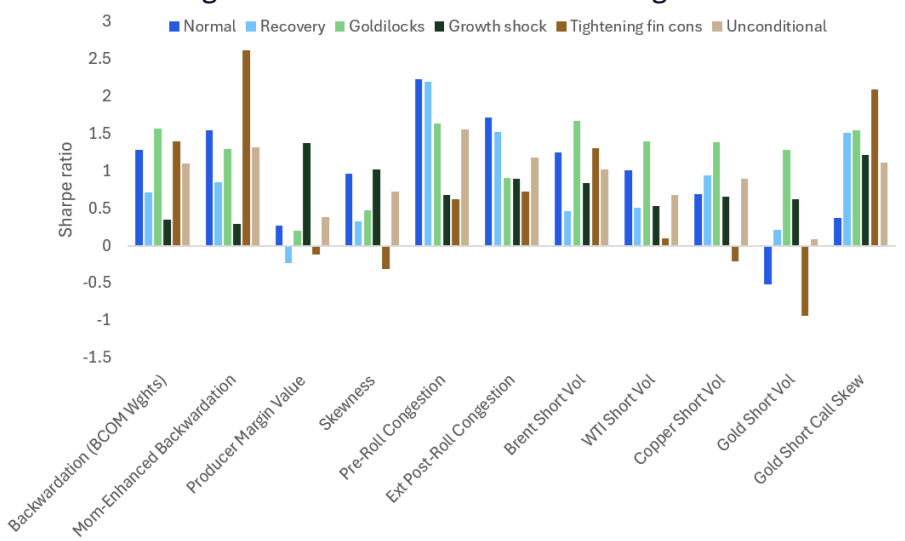


Commodities systematic strategies across macro regimes

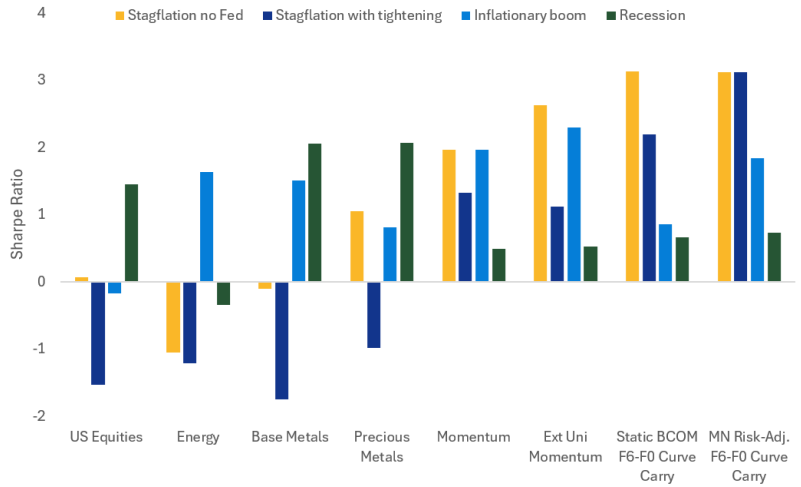
Momentum does well in goldilocks and tightening financial conditions. Curve carry prefers normal and recovery environments



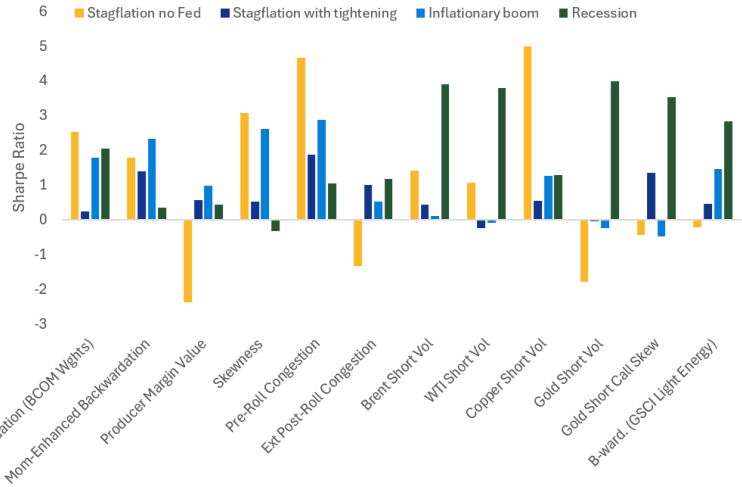
Backwardation trades do well in tightening regimes. Congestion in normal times. Short vol likes goldilocks



Curve carry has done well in stagflationary times, especially if broader financial conditions do not tighten. Momentum also does well with inflation



Backwardation likes high inflation environments, short vol the depths of a recession (markets typically recover)



Backwardation Dashboard

Our Backwardation Dashboard shows coffee, Brent, WTI, lean hogs, and live cattle as the most backwardated commodities, and copper, CBOT wheat, HRW wheat, soybean meal, and cotton as the most contangoed commodities, as measured by the 1-year backwardation levels and the historical ranks. For a given commodity, strong current backwardation level, along with the expectation of curve flattening/shifting into a contango, point to potentially great entry point for curve carry strategies.

Commodity Complex	Commodity	Current 1Y Backwardation	1Y Rank	5Y Rank	1D Change	1W Change	1M Change	1Y Change	1Y Return on F0-F3 carry	1Y Return on F0-F6 carry
Energy	WTI	8%	97%	69%	3.7%	5.7%	6.4%	3.2%	-6.8%	-9.2%
	Brent	12%	99%	85%	3.9%	6.6%	8.6%	5.7%	-5.7%	-7.1%
	HH Gas	-18%	65%	46%	2.5%	-3.9%	-2.0%	2.9%	-6.3%	-6.1%
	RBOB Gasoline	6%	43%	28%	0.4%	1.5%	-1.3%	0.1%	6.9%	6.7%
	Gas Oil	6%	89%	54%	2.5%	2.1%	3.4%	4.6%	-3.8%	-4.0%
	Heating Oil	6%	88%	58%	3.0%	3.7%	1.3%	6.8%	-5.3%	-6.6%
Precious Metals	Gold	-4%	88%	51%	0.0%	0.2%	0.4%	1.1%	0.7%	0.9%
	Silver	-5%	83%	44%	-0.1%	-0.1%	0.3%	1.3%	0.3%	0.5%
Base Metals	Copper	-5%	13%	3%	-0.1%	0.1%	0.6%	-3.6%	0.8%	2.6%
	Aluminium	-2%	58%	57%	-0.8%	1.0%	-2.2%	5.9%	0.0%	-1.1%
	Zinc	-3%	25%	7%	0.0%	-0.5%	-3.1%	0.0%	2.0%	2.3%
	Nickel	-5%	63%	24%	-0.1%	-0.2%	-1.1%	2.5%	0.0%	0.2%
Grains	Corn	-6%	40%	27%	1.1%	1.8%	-1.1%	3.4%	4.1%	4.5%
	Soybeans	-3%	53%	11%	0.4%	-0.5%	-1.2%	-2.2%	-2.1%	-0.9%
	Soy Oil	-2%	14%	9%	0.1%	0.4%	-3.2%	1.3%	3.6%	3.4%
	Soy Meal	-8%	18%	3%	0.0%	1.1%	-0.4%	-9.3%	-0.5%	3.1%
	Wheat	-13%	45%	18%	0.8%	-0.7%	0.6%	-1.5%	1.2%	3.8%
	HRW Wheat	-13%	23%	4%	0.9%	-0.3%	0.6%	-7.5%	0.9%	2.6%
Softs	Coffee	8%	54%	89%	0.0%	0.3%	0.1%	6.0%	1.0%	1.4%
	Sugar	-3%	0%	1%	-0.4%	-0.9%	-5.3%	-6.2%	3.4%	5.6%
	Cotton	-9%	8%	1%	0.0%	0.6%	0.0%	-4.1%	11.4%	16.1%
Livestock	Live Cattle	7%	100%	100%	0.0%	0.7%	3.8%	10.0%	-3.3%	N/A
	Lean Hogs	11%	88%	81%	5.2%	6.0%	6.5%	11.5%	-2.3%	N/A

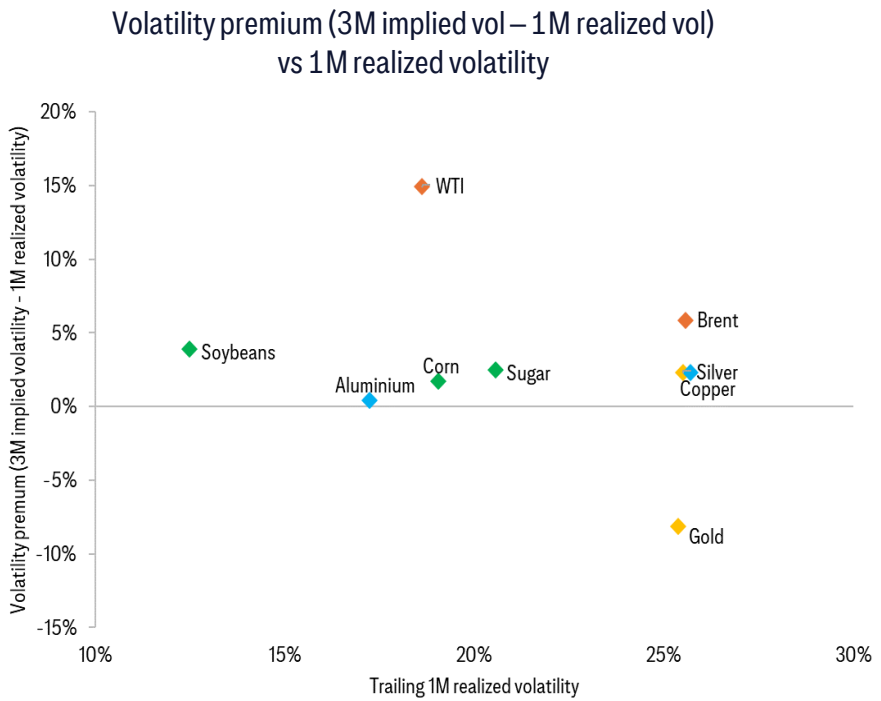
%ile rank of a given Backwardation Level is the percentage of historical (1y or 5y) backwardation levels that are less than such Backwardation Level. A 100% (or 0%) rank denotes that the Backwardation Level is the highest (lowest) backwardation level seen historically (1y or 5y).

Vol premium back in positive territory for major commodities except gold

Our Volatility Dashboard indicates relatively rich volatility premia for WTI, RBOB gasoline and coffee, as measured by the difference between 3M implied volatility and 1M realized volatility. Volatility carry strategies (selling short options and delta hedging in order to capture the volatility premium) generally benefit when volatility realizes lower than implied levels.

Commodity Complex	Commodity	3M ATM Implied Vol				1M Realized Vol	Vol Premium (IV - RV)
		Level	1d Chg	2Y Rank	5Y Rank		
Energy	WTI	35%	1.8%	85%	51%	22%	13%
	Brent	33%	1.5%	80%	42%	32%	1%
	HH Gas	56%	0.4%	51%	44%	68%	-12%
	RBOB Gasoline	31%	1.3%	54%	30%	26%	5%
	Gas Oil	30%	2.9%	59%	28%	28%	2%
	Heating Oil	31%	2.5%	66%	42%	33%	-2%
Precious Metals	Gold	18%	0.8%	93%	87%	25%	-7%
	Silver	28%	0.1%	57%	42%	25%	3%
Industrial Metals	Copper	28%	-0.3%	93%	65%	26%	2%
	Aluminium	18%	0.0%	15%	16%	17%	0%
	Zinc	21%	0.0%	1%	0%	19%	3%
	Nickel	21%	-0.1%	4%	2%	17%	3%
CBOT Grains	Corn	21%	-0.1%	38%	23%	18%	2%
	Soybeans	17%	0.1%	10%	7%	14%	2%
	Soy Oil	30%	0.2%	59%	52%	39%	-9%
	Soy Meal	17%	0.0%	0%	0%	18%	-1%
	Wheat	24%	0.0%	0%	6%	27%	-3%
	HRW Wheat	24%	-0.1%	0%	1%	26%	-2%
Softs	Coffee	38%	0.4%	61%	73%	27%	11%
	Sugar	23%	0.2%	16%	30%	20%	3%
	Cotton	25%	0.0%	90%	47%	22%	3%
Livestock	Live Cattle	16%	0.1%	95%	84%	12%	4%
	Lean Hogs	23%	0.4%	40%	19%	37%	-14%

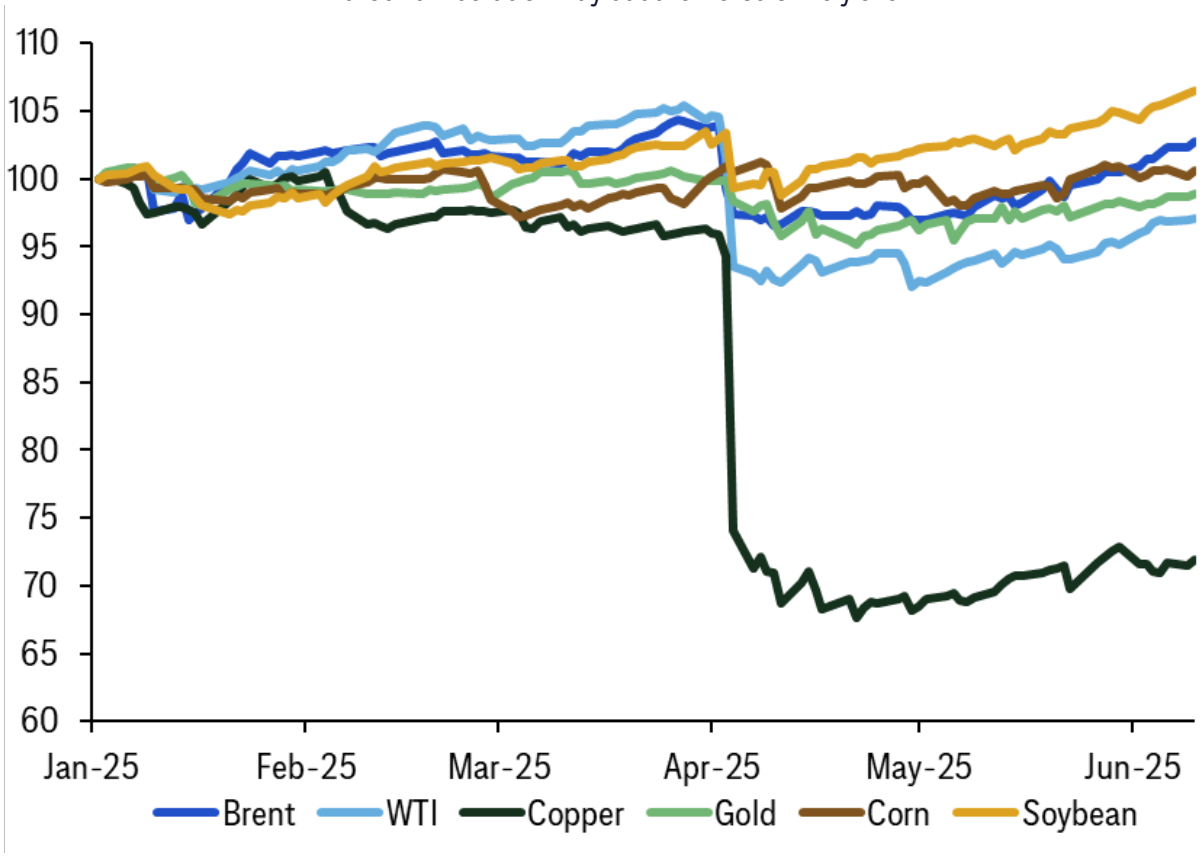
%ile rank of a given Implied Volatility Level is the percentage of historical (2y/5y) implied volatility levels that are less than such Implied Volatility Level. A 100% (or 0%) rank denotes that the Implied Volatility Level is the highest (lowest) implied vol level seen historically (2y/5y).



The worst is likely over for commodity volatility carry strategies

Volatility carry strategies – which involve systematically selling of options and delta-hedging to capture the volatility premium (spread between implied and realized volatility levels) – have suffered from the outsized price moves driven by tariff headlines, particularly around Liberation Day. However, we believe the worst is over as President Trump now focuses on finalizing trade deals and pro-growth economic agenda. Major risk events still abound for individual commodities (e.g. Iran situation for crude, Section 232 decision on copper) but any vol spikes around these events would likely present decent entry points for short vol strategies.

Systematic short vol strategies have suffered from outsized market moves around Liberation Day but the worst is likely over



Source: Citi Research, Bloomberg, Calculated using daily returns of Citi short vol indices, indexed at 100 for beginning of 2025; using CICXCORE/CICXCLME/CICXHGTE/CICXGCTE/CICXCXTE/CICXSXUE indices respectively to track performance in vol carry strategies on Brent/WTI/COMEX

Commitment of Traders (COT) Positioning Dashboard

Our COT Positioning Dashboard indicates historically strong spec positioning on coffee, soybean oil, silver, copper, lean hogs, live cattle, and historically weak spec positioning on HH natgas, RBOB gasoline, the wheat complex, soybean meal, sugar, cotton and lead, as measured by historical ranks of managed money/investment fund positioning based on the latest COT data from CFTC/LME.

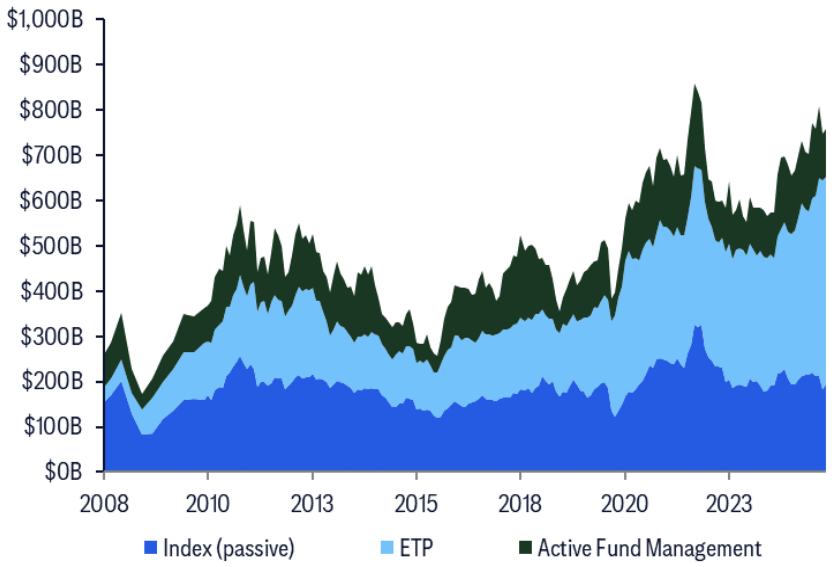
Commodity Complex	Commodity	Net Positioning	1-week change	4-week change	2Y Avg	5Y Avg	2Y Rank	5Y Rank	10Y Seasonal Rank
Energy	Brent	196922	29159	45778	183033	204077	60%	58%	37%
	WTI	179134	16056	39846	160540	228811	45%	31%	30%
	HH Gas	-84420	-31655	-45771	-36305	-8397	28%	24%	21%
	RBOB Gasoline	20408	-9030	-18878	47816	52806	19%	19%	34%
	Gas Oil	31631	11810	23766	23530	54291	60%	44%	25%
	Heating Oil	15561	9792	32712	4184	11587	72%	65%	42%
Precious Metals	Gold	129851	-657	18977	150538	115119	54%	58%	50%
	Silver	48793	3412	20333	23921	22812	99%	99%	72%
Base Metals	Copper	38953	3439	6560	28774	27070	62%	62%	64%
	Aluminium	19325	409	17684	43034	63773	35%	30%	37%
	Nickel	-1309	4552	5311	-9417	8037	64%	35%	33%
	Zinc	11086	1572	11967	17122	28992	42%	37%	35%
	Lead	-9328	2020	6898	-311	3411	29%	29%	0%
Grains	Corn	-164020	-9977	-79044	-79062	91553	26%	25%	23%
	Soybeans	25639	17038	-12768	-35178	58408	69%	50%	46%
	Wheat	-94011	6561	32884	-72367	-37954	32%	19%	20%
	Soybean Meal	-86808	9909	15937	10044	40216	8%	8%	0%
	Soybean Oil	24768	-7222	-42664	-2616	35356	73%	60%	68%
	HRW Wheat	-74964	3064	5835	-30215	3250	6%	4%	0%
Softs	Sugar	-38526	-20086	-58930	70235	129433	5%	4%	27%
	Coffee	32599	1892	-8081	38290	29850	63%	65%	78%
	Cocoa	17244	173	-1252	39910	21283	8%	50%	45%
	Cotton	-52859	-6254	-23771	-7289	25041	15%	15%	0%
Livestock	Live Cattle	137836	6031	2242	81702	68264	87%	87%	100%
	Lean Hogs	118218	16592	37132	47106	44037	90%	91%	100%

Positioning data are for the Investment Funds category (defined by LME) for base metals and for the Managed Money category (defined by CFTC) for other commodities. Historical rank shows the percentile rank of the latest positioning within the historical positioning range over the lookback periods (e.g. 2Y or 5Y). 10Y seasonal rank shows the percentile rank of the latest positioning within the historical positioning range of the 5 weeks centered around the latest COT date in the past 10 years (i.e. 50 weeks of data).

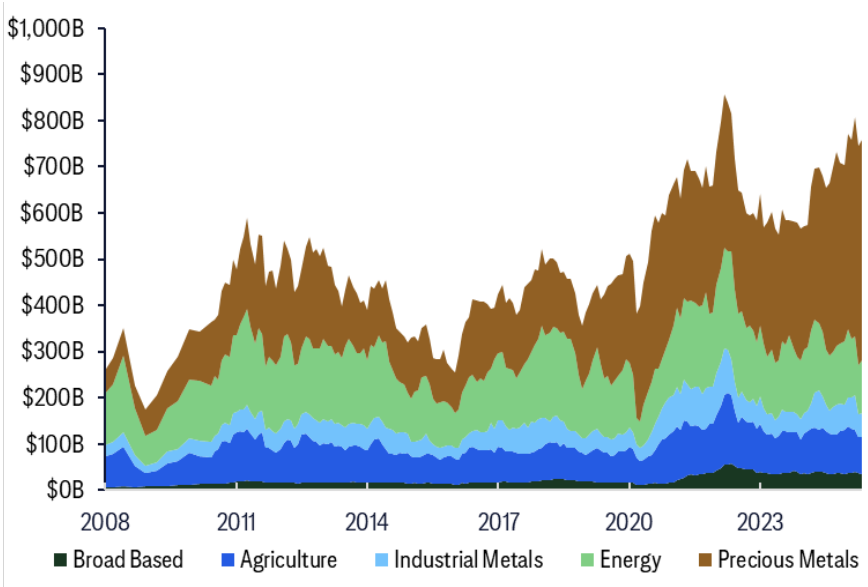
Commodities AUM continued gains driven by bullion ETFs

Our estimate for global commodities AUM reached $757Bn by the end of May, up 7.6% YTD and 8.4% y/y. The 2025 gains are driven all by precious metals, offsetting small AUM losses across all the other commodity sectors. Within precious metals, the AUM gain is driven by ETPs, as active fund managers actually sold heavily into the gold rally in April.

Commodities AUM estimates by holder type



Commodities AUM estimates by sector



Source: Citi Research, Bloomberg, CFTC; biased to US/London markets, exclude OTC

3. Precious Metals:

Gold prices to remain strong through 3Q'25, cautious thereafter;

Silver to outperform gold on improved growth outlook and persistent market deficit;

PGM rally likely beyond fundamentals – buying into future platinum dips and selling palladium strength

Citi Research precious metal price forecasts

Precious Metals	Unit*	0-3 mth pt price	6-12 mth pt price	1Q25	2Q25f	3Q25f	4Q25f	2025f	1Q26f	2Q26f	3Q26f	4Q26f	2026f	2027f
Gold NEW	$/oz	3300	2800	2858	3300	3200	3000	3100	2900	2800	2700	2600	2750	2600
Gold (OLD)		3500	3000	2858	3200	3100	3000	3050	2900	2850	2750	2700	2800	2600
Silver NEW	$/oz	38.0	40.0	31.9	34.0	37.0	38.0	35.2	38.0	37.0	36.0	36.0	36.8	35.0
Silver (OLD)		34.0	35.0	31.9	34.0	33.5	33.0	33.1	33.5	34.0	35.0	35.0	34.4	32.0
Platinum NEW	$/oz	1150	1200	969	1050	1100	1125	1060	1150	1175	1200	1225	1190	1250
Platinum (OLD)		1050	1000	969	1025	1000	1000	1000	1000	1000	1000	1000	1000	1000
Palladium NEW	$/oz	950	900	961	1000	975	950	970	925	925	900	900	915	850
Palladium (OLD)		900	850	961	950	925	925	940	900	900	875	875	890	850

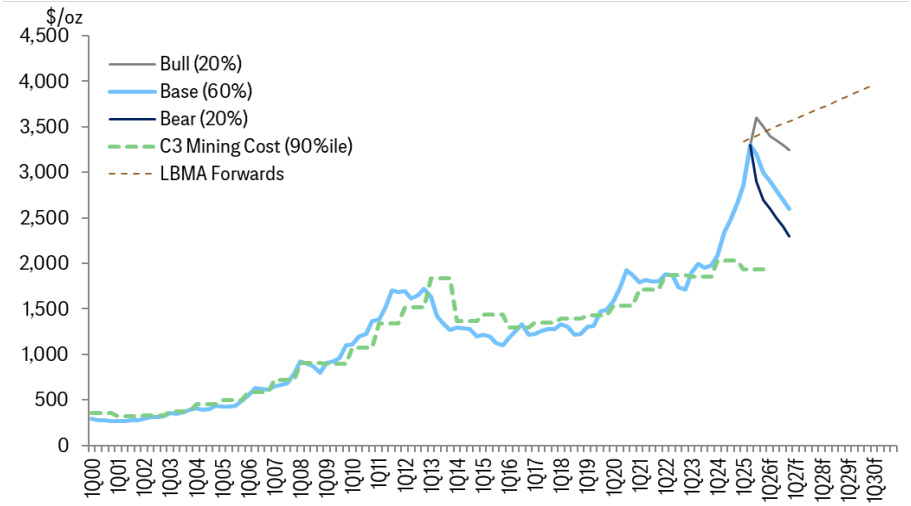
Precious Metals	Scenario Weight	Unit	0-3 mth pt price	6-12 mth pt price	1Q25	2Q25f	3Q25f	4Q25f	2025f	1Q26f	2Q26f	3Q26f	4Q26f	2026f	2027f
Gold (Bull)	20%	$/oz			2858	3300	3600	3500	3325	3400	3350	3300	3250	3325	3100
Gold (Base)	60%	$/oz	3300	2800	2858	3300	3200	3000	3100	2900	2800	2700	2600	2750	2600
Gold (Bear)	20%	$/oz					2900	2700	2950	2600	2500	2400	2300	2450	2200
Silver (Bull)	30%	$/oz			32	34	44.0	46.0	39.0	46.0	44.0	43.0	43.0	44.0	42.0
Silver (Base)	60%	$/oz	38.0	40.0	31.9	34.0	37.0	38.0	35.2	38.0	37.0	36.0	36.0	36.8	35.0
Silver (Bear)	10%	$/oz					30.0	30.0	31.5	30.0	30.0	29.0	29.0	30.0	28.0
Platinum (Bull)	20%	$/oz			969	1050	1300	1300	1155	1350	1350	1400	1400	1375	1500
Platinum (Base)	60%	$/oz	1150	1200	969	1050	1100	1125	1060	1150	1175	1200	1225	1190	1250
Platinum (Bear)	20%	$/oz					950	900	965	900	900	900	900	900	900
Palladium (Bull)	20%	$/oz			961	1000	1050	1025	1010	1000	1000	975	975	990	950
Palladium (Base)	60%	$/oz	950	850	961	1000	975	950	970	925	925	900	900	915	850
Palladium (Bear)	20%	$/oz					850	850	915	800	800	800	800	800	800

Gold: prices to remain strong through 3Q'25, cautious thereafter

We downgrade our 0-3m and 6-12m point-price targets for gold to $3,300/oz (from $3,500/oz) and $2,800/oz (from $3,000/oz), respectively. We expect gold prices to continue consolidating around $3,100-$3,500/oz over the coming quarter, as the world digests US tariff policy changes, geopolitical risks remain high, and US budget and growth concerns remain elevated. However, our work suggests that we may have already seen the highs at ~$3,500/oz in late April as gold market deficit is peaking soon if not already. We reiterate the two drivers of our longer-term caution on gold as 1) growth risks could unwind on Fed rate cuts and into the US midterms, and 2) households are now record long gold in at least half a century.

- **In our base case (60% probability), we see gold prices consolidating around $3,100-$3,500/oz in 3Q before starting the downtrend and break below $3,000/oz by late 2025/early 2026.** Declining investment demand from 4Q'25 (down from all time highs) can come from any modest improvement in global growth confidence as the stimulatory US budget passes and starts to take affect, as President Trump's trade and other economic policies become less bearish as the US midterms come into sight, and as the Fed cut rates towards neutral.
- **In our bull case (20% probability), we see gold prices breaching the $3,500/oz record in 3Q, underpinned by much higher hedging/investment demand on potential tariff/geopolitical re-escalation and fears of US hard landing/stagflation.** President Trump's policy implementation could stay volatile, boosting gold demand.
- **In our bear case (20% probability), we see gold prices dipping below $3,000/oz amid quick tariff resolutions, geopolitical de-escalation, and the US economy remaining resilient and ending up with a no-landing scenario.** Even in this scenario EM CB buying should support gold prices at historically elevated levels.

Citi Research gold price forecasts and bull/bear scenarios

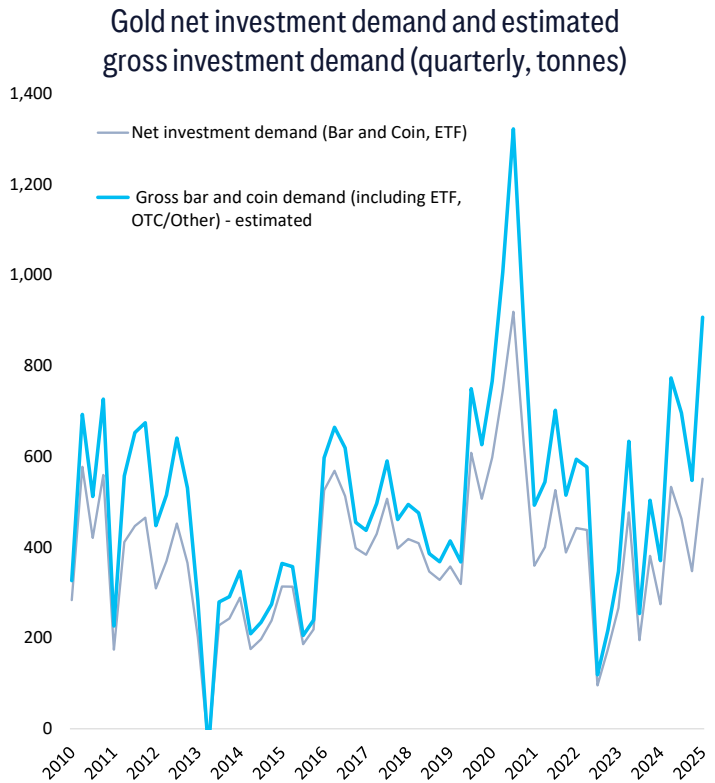


Gold supply and demand balances, 2019-2027F

Tonne	2019	2020	2021	2022	2023	2024	2025F	2026F	2027F
Mine production	3,606	3,483	3,573	3,638	3,647	3,673	3,737	3,781	3,769
Scrap	1,276	1,293	1,136	1,136	1,234	1,369	1,538	1,338	1,195
Total Supply	**4,888**	**4,739**	**4,703**	**4,768**	**4,951**	**4,988**	**5,300**	**5,134**	**4,980**
Jewelry	2,152	1,324	2,247	2,228	2,206	2,012	1,784	2,016	2,110
Industrial	333	309	337	315	305	326	331	338	345
Bar & coin	871	902	1,180	1,222	1,190	1,188	1,225	1,150	1,116
ETF	404	893	-189	-110	-244	-7	601	-25	-200
Central banks & other institutions	605	255	450	1,080	1,051	1,086	1,054	1,001	815
Total Demand	**4,365**	**3,683**	**4,026**	**4,736**	**4,508**	**4,606**	**4,996**	**4,480**	**4,186**
OTC & other	523	1,057	677	32	443	382	304	654	794
Net investment & industrial, share of mine supply	76%	99%	69%	70%	73%	82%	93%	82%	75%
Jewelry net of scrap, share of mine supply	24%	1%	31%	30%	27%	18%	7%	18%	24%
Gold Price ($/oz)	**1,393**	**1,770**	**1,799**	**1,800**	**1,941**	**2,386**	**3,100**	**2,750**	**2,600**

Estimating gross investment reveals what's going on with gold and prices

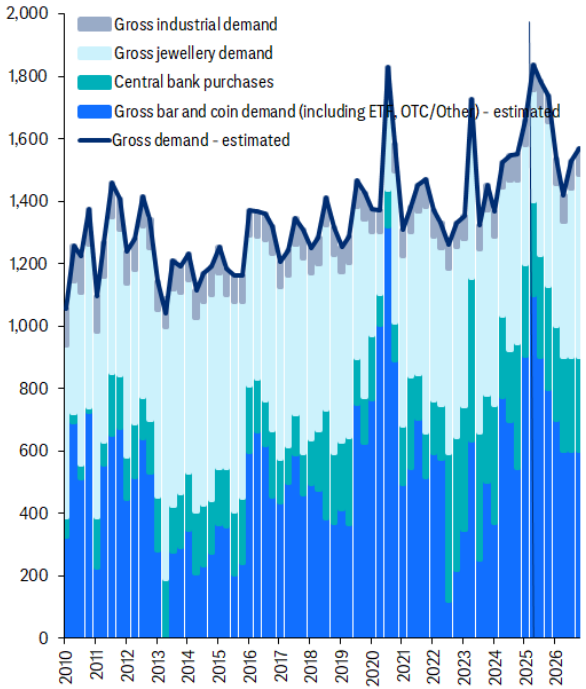
The key to estimating what's really going on in the gold market, is to scale up net investment demand (retail, ETF, and large bar demand, ex-central bank) in order to estimate gross demand. Using industry anecdotes, the chart below shows our estimate of gross gold investment demand ex-central bank (blue line), compared to the published net investment demand data (grey line). Gold's physical supply figures are reported gross, and include mine supply and jewelry and industrial scrap supply. Gold's physical demand figures are on the other hand reported as a mix of gross (industrial, jewelry) and net figures (retail bar and coin, ETFs, central bank), such that the published gold supply and demand balances by construction/definition equal zero. When the balances don't equal zero this simply reflects net under/over-reported demand and/or supply. Gold's net central bank figures can be sorted at the country level so that you can see gross demand and gross supply. Retail bar and coin demand (1kg bars or lower) and ETFs are reported net, while large bar (>1kg) demand is not recorded and is thus captured in the balance error term (which is effectively, for the most part underreported demand).



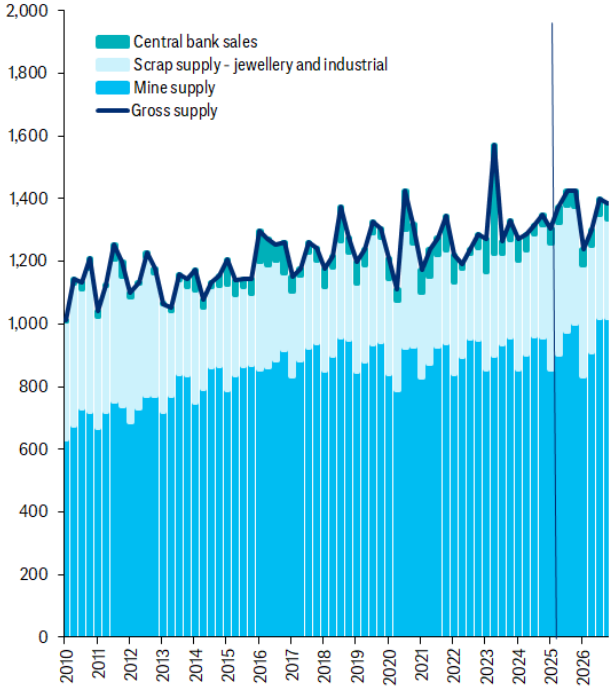
By estimating gross demand we can see the underlying s/d drives prices

Using gross gold investment demand as per the prior slide, we can reveal estimates of the historical gold supply and demand balance. Of course, these **are** a guide only, but they clearly illustrate a few things: 1) All gold demand matters; 2) All gold supply matters; 3) The recent upswing in price was driven by an increase in gross investment demand (estimated, dark blue bars, lhs chart), alongside relatively resilient jewelry consumption; 4) **Gold** is never in a true deficit like, for example, oil, as the estimated deficit in this chart is met by sales from stockholders, and as each year we mine around 4,000t of gold that add to the stock of jewelry and bars and coins (the fungible above ground stock is always rising).

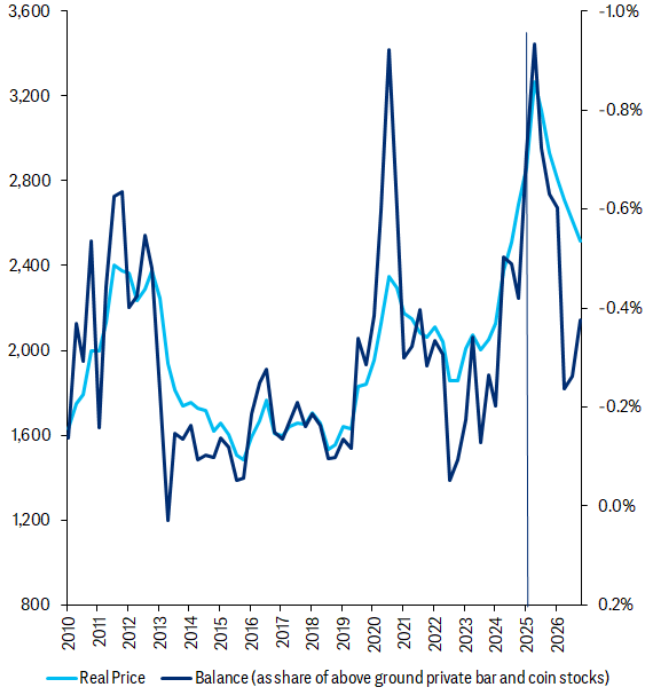
Gold physical demand (Citi estimates of gross bar and coin, ex central bank)



Gold physical supply



Gold physical supply and demand balance as share of private above ground stocks (call on private bar and coin stockholders), versus real gold price

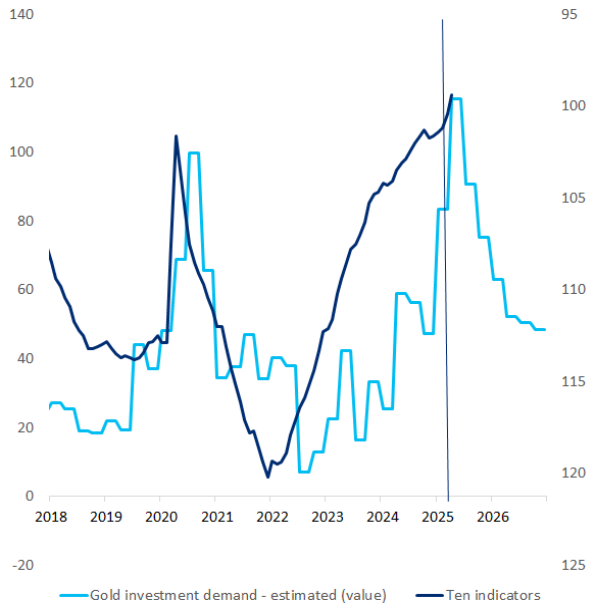


Source: Citi Research estimates, Bloomberg, World Gold Council

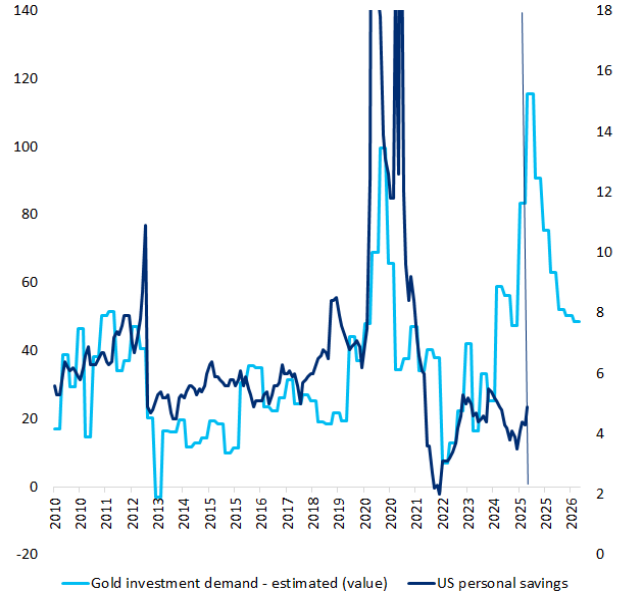
YTD strength in investment demand appears driven by growth concerns

Estimated gross investment demand (ex-central bank) is unlikely to be driven by one single variable over time as many factors influence gold investment. Having said this, most wealth is tied to, or concentrated in, the US (i.e. US equity market the largest, and the global growth and equities bellwether) and US wealth is the largest in the world, so it makes sense that the volatility in gold investment is largely tied to US growth and US equities. The first chart shows that the US economy (and labor market) has been slowing down gradually since 2022, supporting rising gold investment demand, and the last chart shows US growth indicators are inversely related to gold investment historically. The second shows that US savings rates as a good proxy for US household fear and gold investment demand. Finally, you can see here our projections for gold investment demand are for it to decline but remain historically elevated.

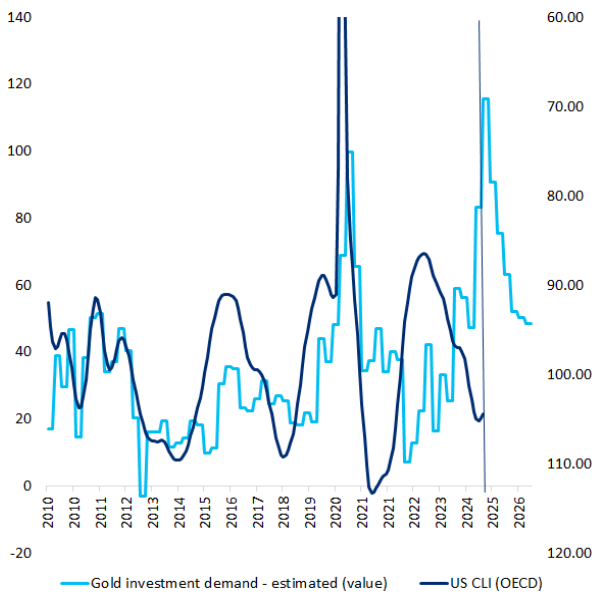
Gross bar and coin demand (value) and inverted CB ten leading indicators



Gross bar and coin demand (value) and US personal savings rates



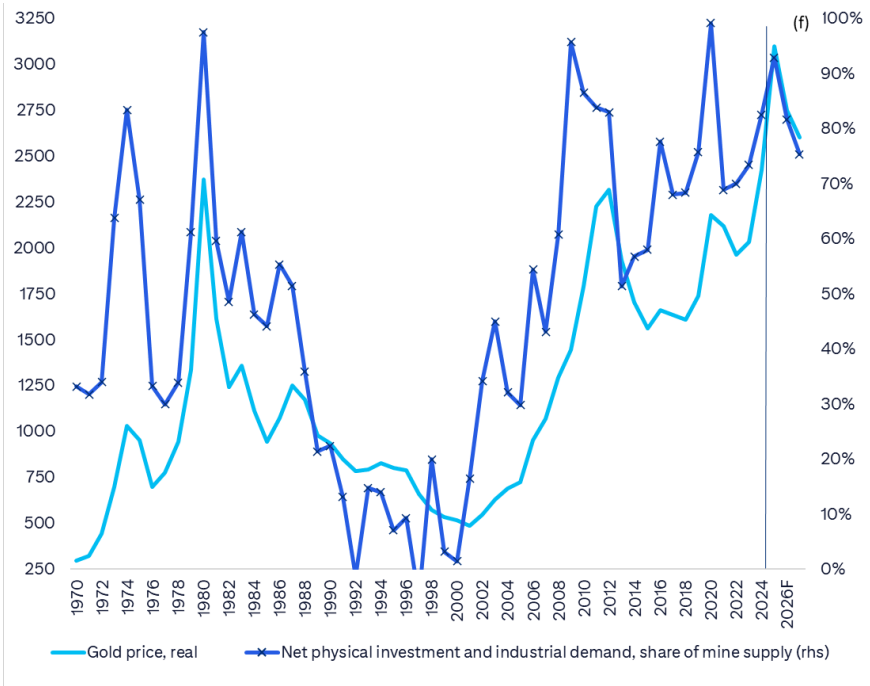
Gross bar and coin demand (value) and inverted US composite leading indicator (OECD)



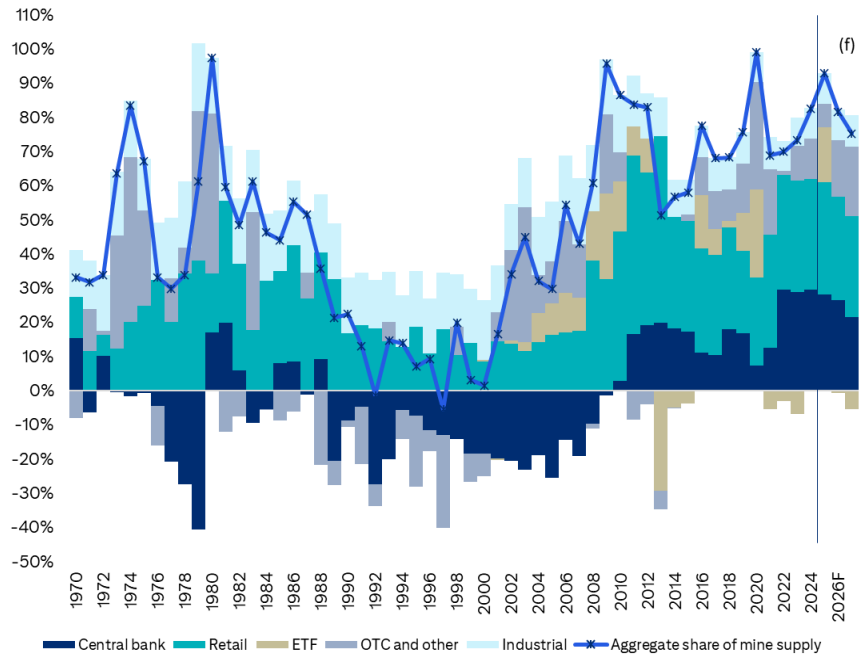
Our fundamental framework of gold pricing points to lower prices post 3Q'25

We find that physical investment demand, taken relative to mine supply, has been the primary driver of gold pricing. The relationship between gold prices and total private (household) and public (central bank/government) investment demand as a share of mine supply has been remarkably strong over the past 55 years on an annual basis, as well as over the past 25 years on a quarterly basis.

Physical investment demand is the key determinant of gold pricing – 1970-2026F



Components of physical investment demand as share of mine supply – 1970-2026F

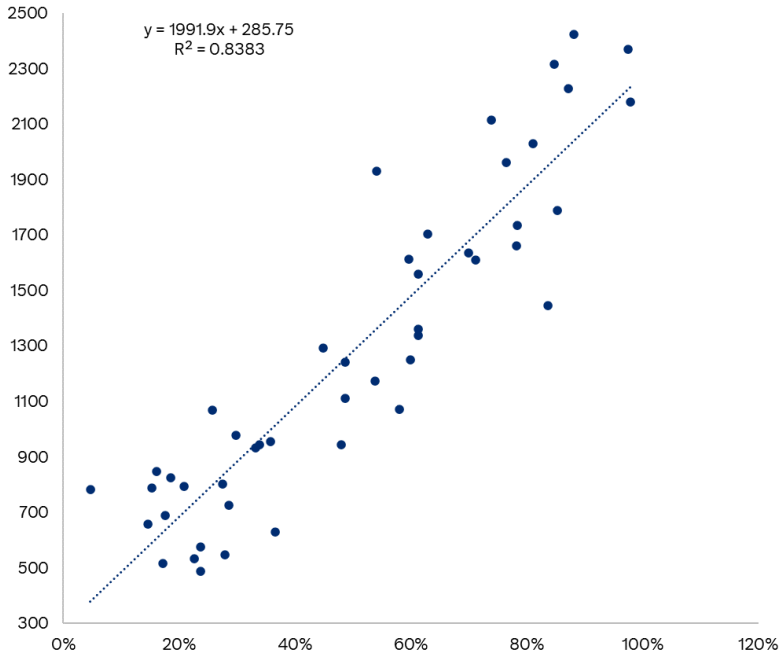


Source: Citi Research, Bloomberg, WGC

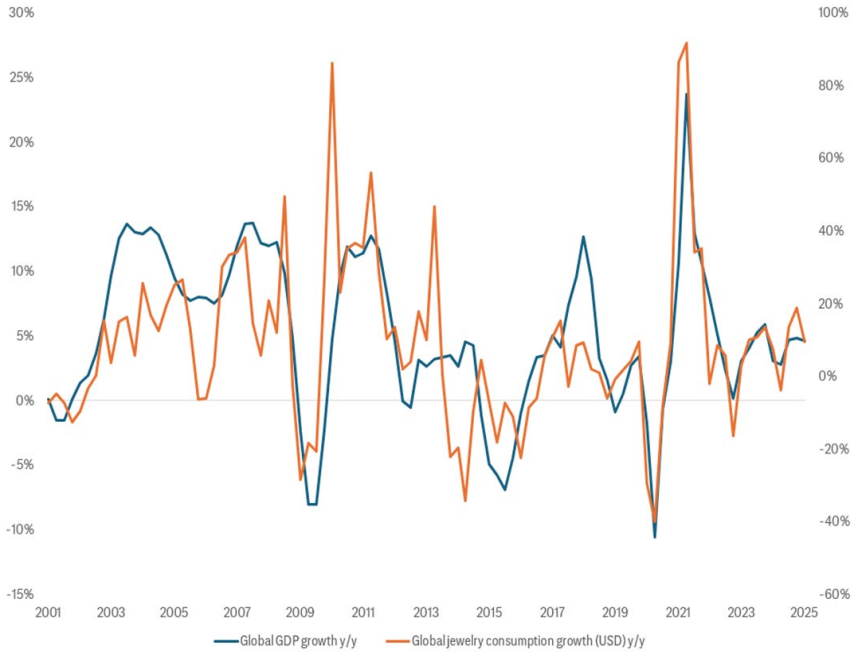
Jewelry resilience supported price but weaker investment demand will weigh

As investment demand (as a share of mine supply) rises, prices move higher to price out jewelry consumption, incentivize jewelry scrap supply, and incentivize gold stockholders to sell, and vice versa. Jewelry demand has been very resilient relative to the price increase this year, which helped support gold prices. However, eventually weaker investment demand will dominate and drive prices lower.

For every 10% increase/decrease in investment demand as a share of mine supply, gold prices rise/fall by ~$200/oz. Each 1moz of additional ETF demand would historically drive-up gold prices by ~$14-15/oz, all else equal



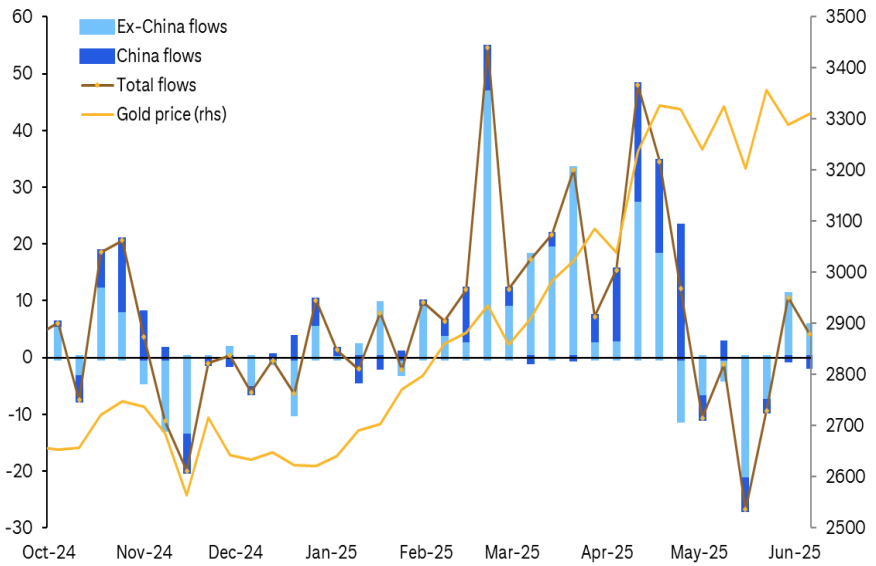
Jewelry demand has been very resilient relative to the price increase, with the value of jewelry consumption rising in line with global GDP



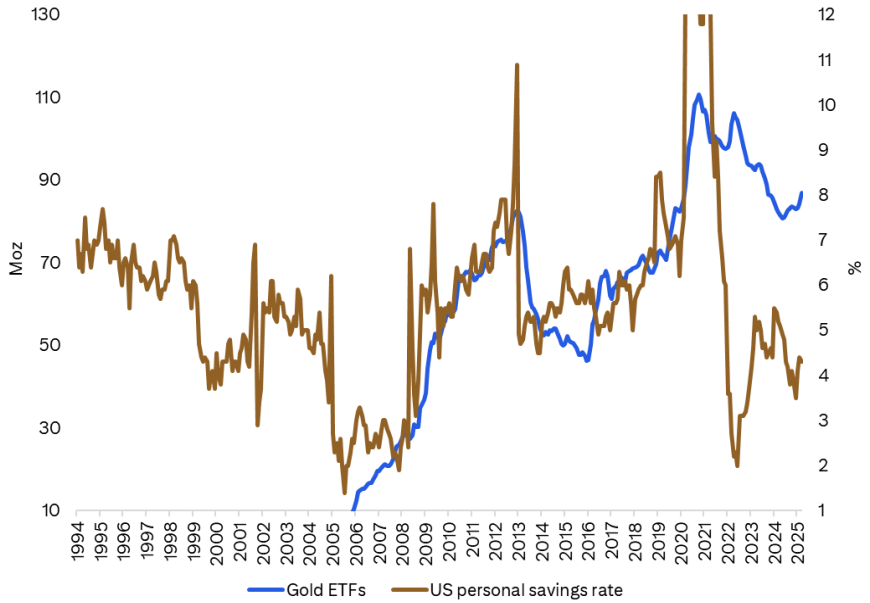
ETF inflows supportive YTD but could start unwinding on improved outlook

Household fear on tariff uncertainty, weakening labor market, equity market drawdown and currency depreciation has led to strong gold ETF inflows YTD, a key driver for the record gold price rally. However, holdings are already off the late April peak now and could continue to unwind on improving growth outlook with trade deals and tax cuts.

ETF flows started weakening in both China and ROW after peaking in late April on extreme tariff/growth fears



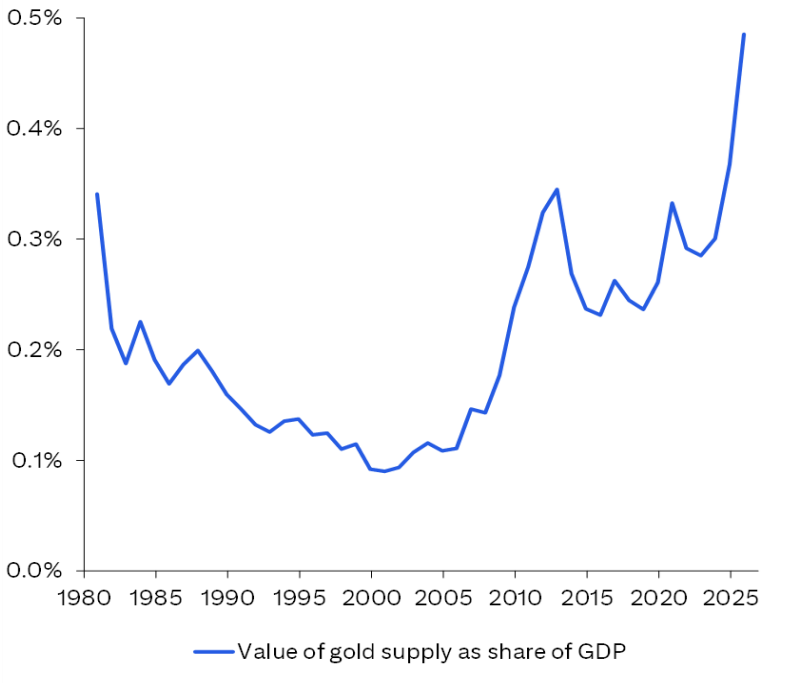
Gold ETF holdings have been historically related to US household precautionary savings rate



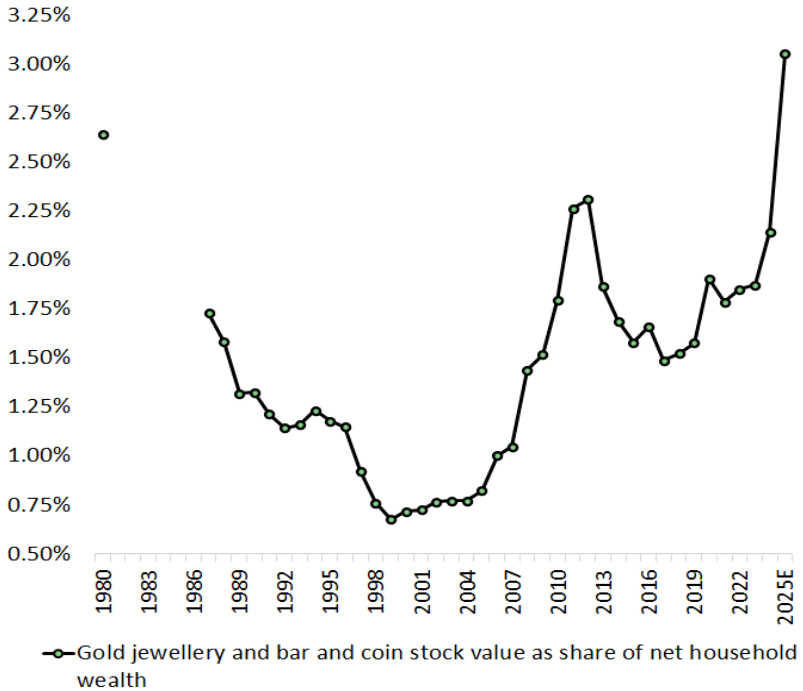
The world is spending 0.5% of GDP in 2025, the highest in 50 years

Households are now record-long gold as a share of their wealth, the highest in 50 years (since as far back as data exist). Gold as a share of GDP also reached a 50-year high of 0.5% this year based on our price forecasts. Already stretched asset allocation to gold could limit the scope for further upside for household buying.

The spending on gold as a share of GDP is the highest in half a century, even higher than during the second oil shock of 1980



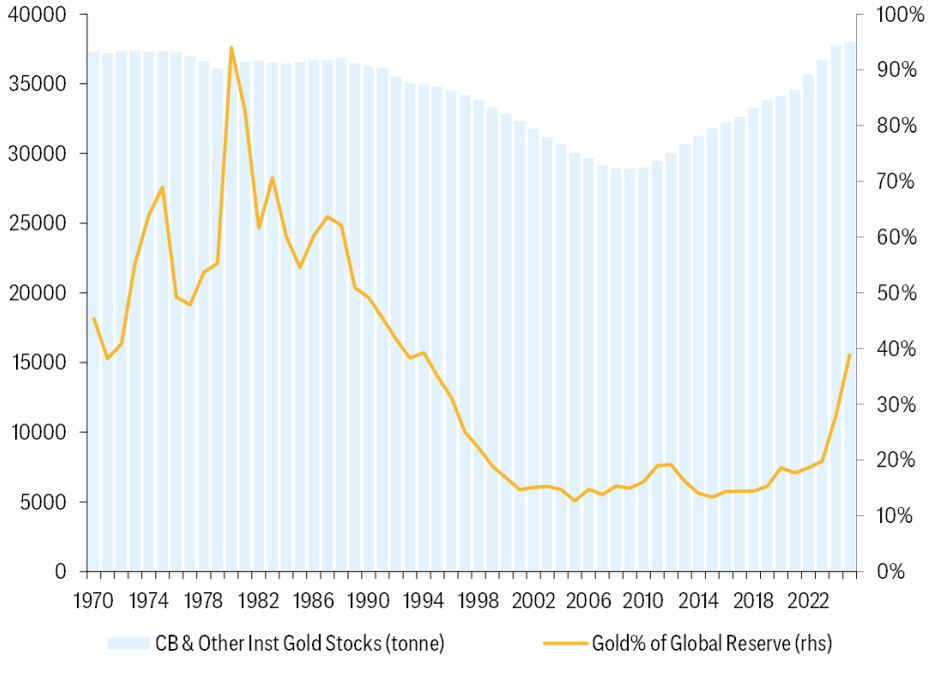
The share of household net wealth held in gold jewelry and bar and coins has risen to an all time high of 3%, doubling over the past 5 years



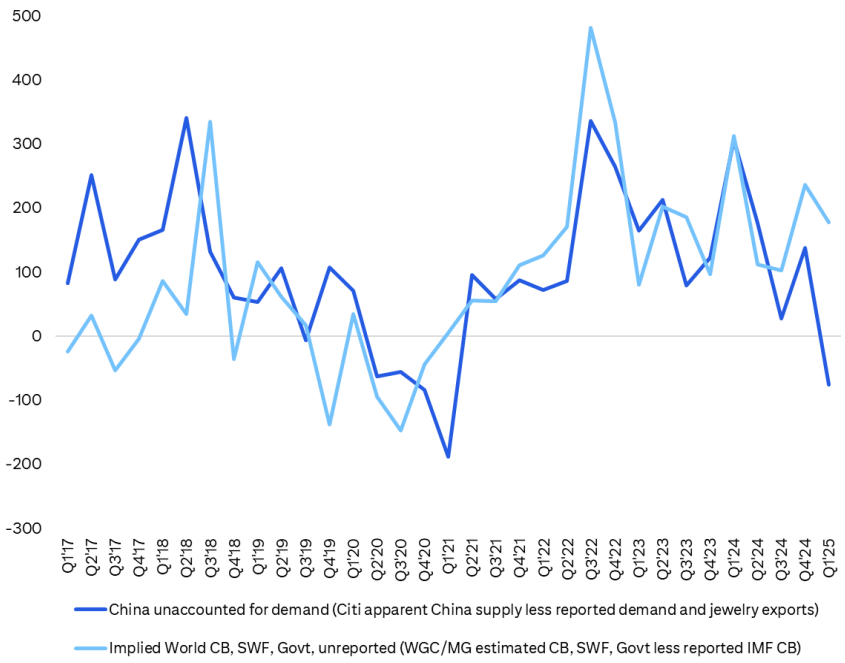
Central banks are now most long gold in three decades

Gold share of global central bank reserve assets has doubled to 40% over the past years, driven by record pace of EM central bank buying and gold price gain. We expect EM central bank buying to slightly moderate over the coming years but remain historically strong, which should support gold prices at above $2,600/oz amid eventually weakening private sector buying.

The rise in the gold price has seen gold share of foreign reserves rise to nearly 40% from 20% (nearly double), its highest level since the mid-1990s



China "unaccounted for" demand (apparent supply less reported demand and jewelry exports) has shown co-movement with the WGC unreported CB & other institutions demand, especially in 2022-24

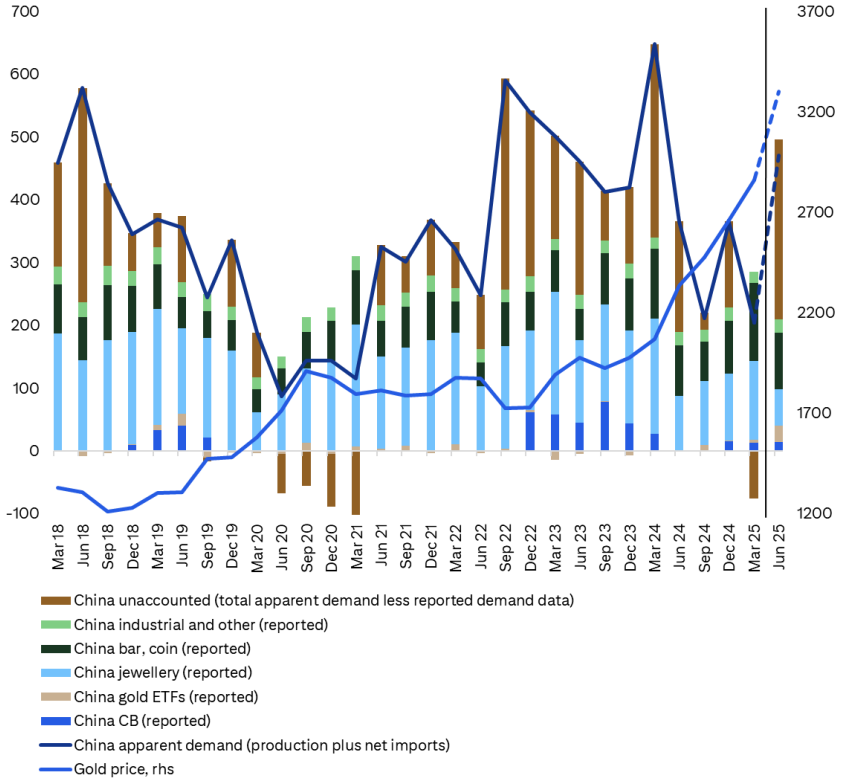


Source: Citi Research, Bloomberg, Credit Suisse, WGC

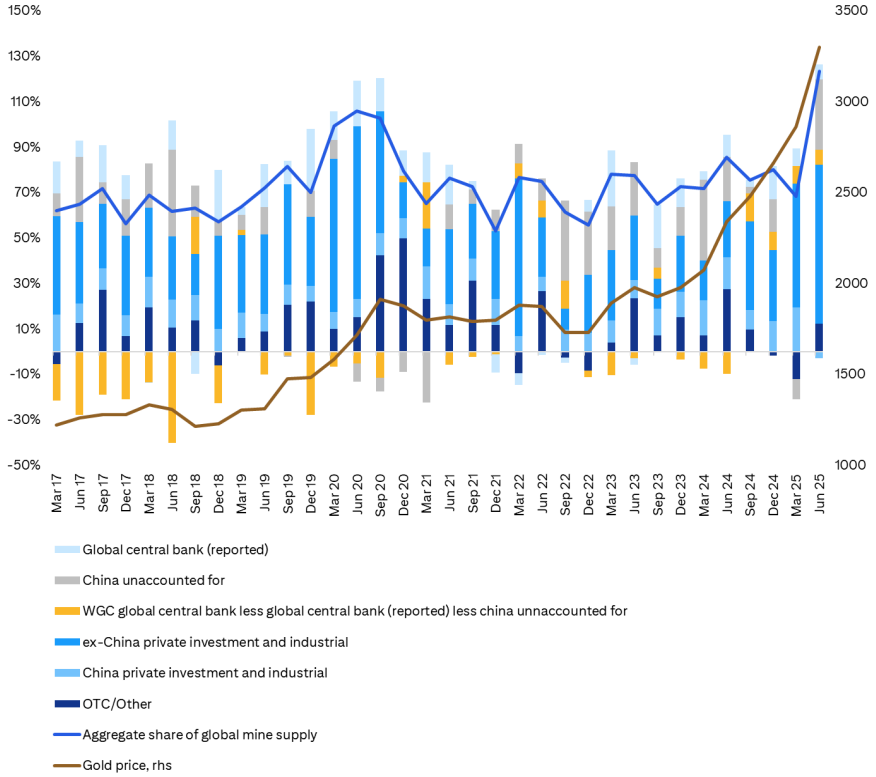
China apparent demand rebounding from 1Q'25 trough

Our China apparent demand model (production plus net imports) shows very weak apparent gold demand in 1Q'25 likely due to shortage in import quota. Demand is likely rebounding in 2Q with insurance companies starting to allocate to gold in late March, record ETF inflows in April, and a return of import quota reported in mid-April. China buying was a key driver of gold market strength particularly in 2022-24 when DM demand was weak, and should remain a key support for gold prices in the upcoming price downturn.

China's apparent gold demand has come off in 1Q, likely owing to high prices and shortage in import quota (with new quota reportedly released only by mid-April this year) – we expect China demand to rebound and stay historically robust



China's share in global demand shrank in 1Q, and yet gold market rallied on, driven by DM ETF inflows – 2Q likely saw a combination of still robust DM demand and a rebound in China demand, supporting record gold prices

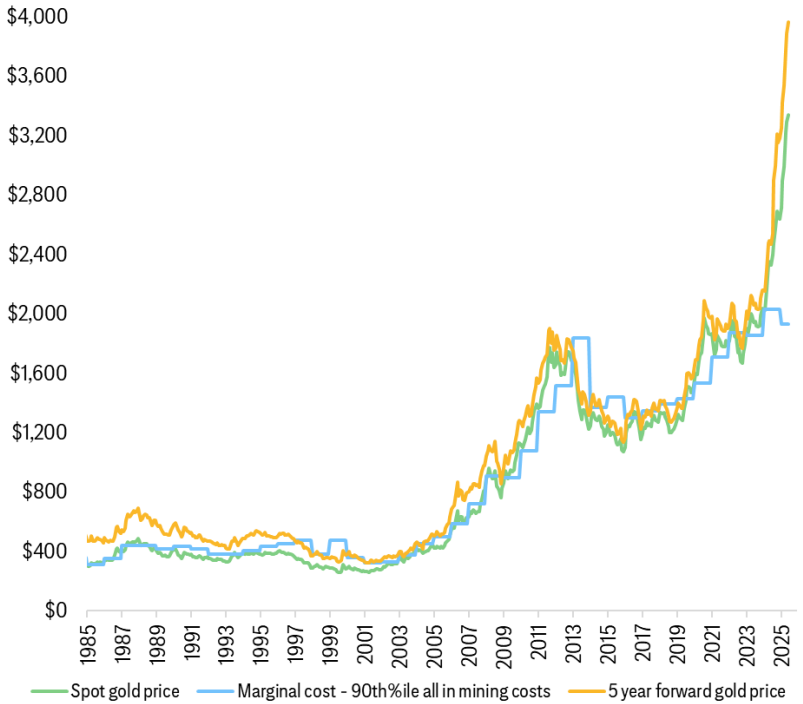


Source: Citi Research, Bloomberg, WGC, CGA, China Customs

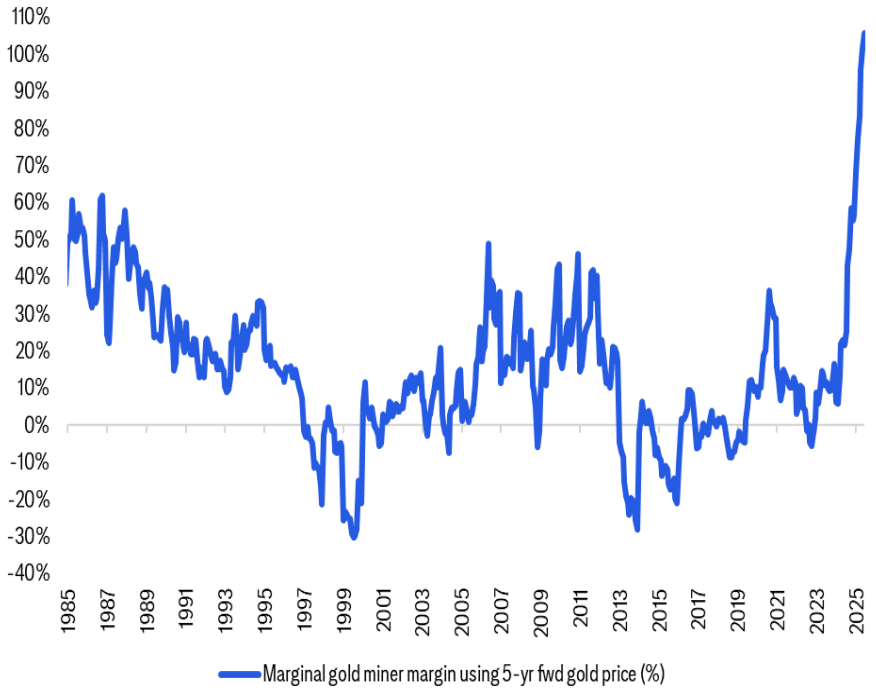
Gold producer margins are at 50-year highs using 5-year forwards

Record gold forwards due to strong spot prices and high rates present a great opportunity for producers to lock in high future margins through insurance. Gold prices peaking and start moderating lower (our base case), weakening US$ and eventual interest rate decline driven by Fed cuts would ultimately see an unwind in such gold market anomalies.

Gold prices have rallied to record levels in nominal and real terms, and have disconnected from the marginal cost of mining production



High-cost gold miners margins are at their highest level since the 1980s, using 5-year forward prices of $4000/oz, with a massive ~$2,000/oz gap between the forward and the 90th%ile of the all-in mining cost curve



Silver: expecting outperformance over gold in 2H'25

We expect silver prices to rise to $40/oz over the coming 6-12 months. We expect silver availability to tighten on consecutive years of deficit, sticky stockholders requiring higher prices to sell, and robust investment demand. A quicker resolution to the US-China trade war combined with a hawkish Fed could see silver prices reaching $46/oz in 3Q'25 in our bull case.

Silver prices have rallied to ~$36/oz (up ~21% YTD) driven by surge in investment demand. Investors bought 10mn oz of ETF in the first week of June, ETF investment in silver has now touched 35mn oz ytd . We believe investment demand, large deficit and Fed cuts will continue to drive silver prices to $38/oz by 4Q 25 (base case indicative 60% probability).

- **Managed money net positioning stands at 45k contracts or 227mn oz of exposure. Generally, at these levels derisking or profit taking happens. However, we expect positioning to return to these levels again to take advantage of Fed cuts**. We expect silver to outperform gold In 2H'25, due to recovery in investment demand and large market deficit, with this gold/silver price ratio improving towards ~80-85x from above ~95x in 1H 2025.

- **China and India silver import outlooks remain mixed for 2H'25.** Currently, India silver demand is showing resilience to higher prices driven by retail investment demand and uncharacteristic strength in silver jewelry demand due to gold substitution (Economic Times, 31 Oct 2024). As such, local silver premiums continue to remain positive with silver prices at $36/oz. However, we expect mixed response towards silver imports as further increase in silver prices could see profit booking and/or higher recycling. China silver import outlook also remains mixed despite underlying industrial demand strength as it faces headwinds from higher prices that tend to weigh on retail demand and increase recycling and profit booking. Other headwinds include consolidation in Chinese solar PV industry and an unresolved US tariff.

- **The silver market has been in deficit since 2021, with stockholders clearing the market at higher and higher prices over time.** Over last four years stockholders have cleared ~800 moz of silver, and we expect this trend to continue. We believe the current sharp10% jump in silver prices pointing towards sticky stockholders requiring higher prices to sell. Our S&D balances indicate a deficit of 160-165moz over 2025-26, driven by a pickup in investor demand and healthy industrial demand. In our base case (60% probability), we forecast silver prices to average $38/oz by 4Q'25 on the back of Fed cuts, robust investment demand, and physical deficit. In 2026, with macro recovery and broader risk-on sentiment we expect investment to rotate out of silver and into equities. The profit taking and higher recycling will likely lead to a decline in silver prices towards $36/oz by 4Q'26.

Citi Research silver price forecasts and bull/bear scenarios

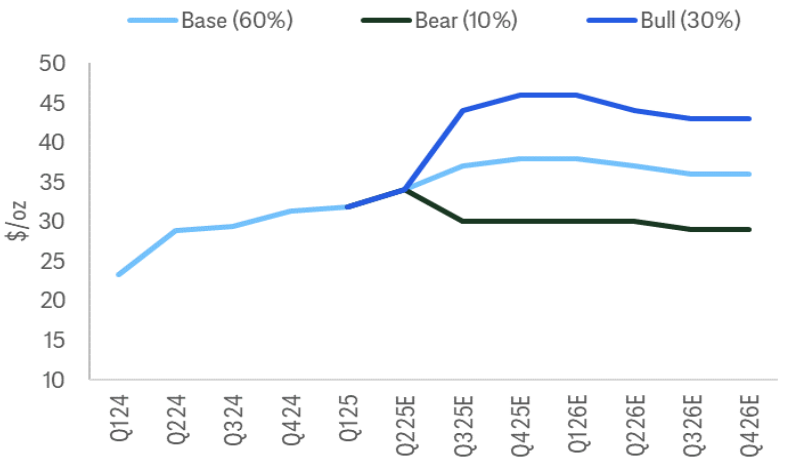
Silver ($/oz)	0-3m	6-12m	1Q'25	2Q'25	3Q'25	4Q'25	1Q'26	2Q'26	3Q'26	4Q'26	2025E	2026E	2027E	LT
Base Case (60%)	38.0	40.0	31.9	34.0	37.0	38.0	38.0	37.0	36.0	36.0	35.2	36.8	35.0	25.0
Scenarios														
Bull (30%)					44.0	46.0	46.0	44.0	43.0	43.0	39.0	44.0	42.0	
Bearl (10%)					30.0	30.0	30.0	30.0	29.0	29.0	31.5	29.5	28.0	

Silver market has been in deficit for several years now…

Citi silver supply and demand balance, 2021-2026F

Moz	2021	2022	2023	*2024*	*2025F*	*2026F*
Mine production	830	839	814	*806*	*846*	*845*
Scrap	174	177	181	*194*	*201*	*206*
Government sales	2	2	2	*1*	*1*	*1*
Total Supply	1006	1017	997	*1002*	*1048*	*1052*
Industrial - solar	175	208	292	*302*	*302*	*305*
Industrial - other	472	470	461	*440*	*431*	*435*
Photography	28	27	27	*26*	*25*	*25*
Net physical investment (visible)	284	337	243	*200*	*210*	*210*
Physical ETF change	-4	-137	-49	*16*	*40*	*30*
Jewellery and Silverware	222	307	258	*210*	*205*	*205*
Total Demand	1178	1213	1231	*1195*	*1213*	*1210*
Call on stockholders (OTC/other investment)	-172	-196	-234	*-193*	*-165*	*-158*
ETF stock level	886	749	700	*716*	*756*	*786*
Bar and coin (ex-ETF) stock level (est)	2192	2328	2332	*2333*	*2371*	*2417*
Value of implied silver bar and coin stocks	77	67	71	*86*	*110*	*118*
Silver price (nominal)	*25*	*22*	*23*	*28*	*35*	*37*
Silver price (real)	*29*	*23*	*24*	*28*	*35*	*36*
Industrial plus investment (as share of mine supply)	115%	108%	119%	*122%*	*119%*	*119%*
Jewellery net of scrap (as share of mine supply)	6%	16%	9%	*2%*	*0%*	*0%*
Call on stockholders (as share of mine supply)	21%	23%	29%	*24%*	*19%*	*19%*

Citi Research silver price forecasts and bull/bear scenarios

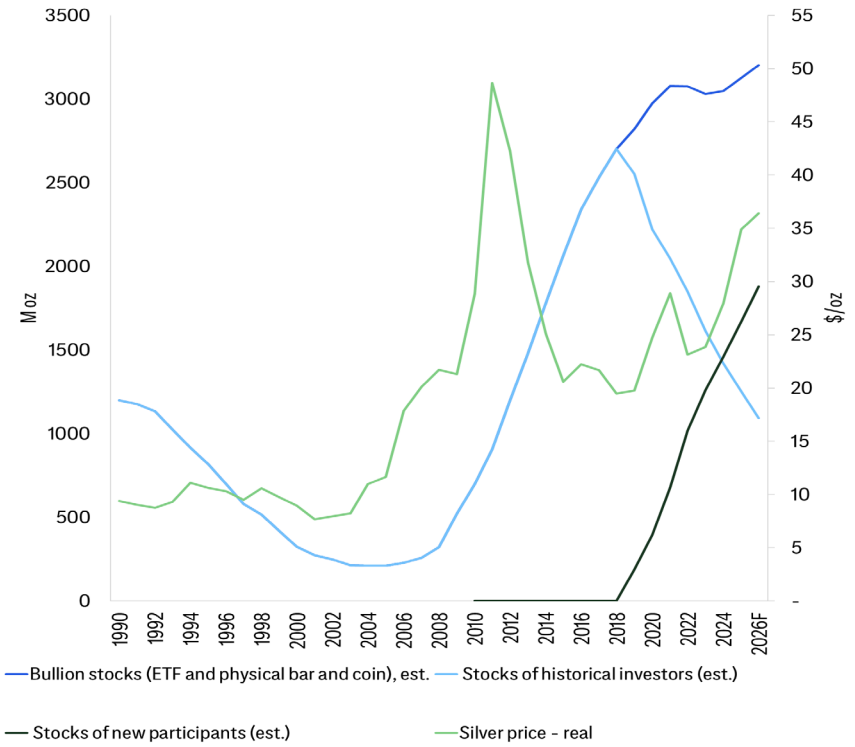


- **Our bull case (30% probability) is for prices to rise to $46/oz in 4Q'25,** on a quicker resolution to US-China trade war, larger Fed cuts, declining US real rates, low-probability stagflation risks, deeper than expected slowdown in the DM with strong EM outperformance, escalation in geopolitical tensions, and strong recovery in silver imports from China and India.
- **Our bear case (10% probability) is for price to decline to $30/oz by 4Q'25,** owing to further slowdown in solar cell production, tighter-than-expected Fed policy, a prolonged US-China trade war, decline in geopolitical tensions, and substantial weakening in demand from China and India.

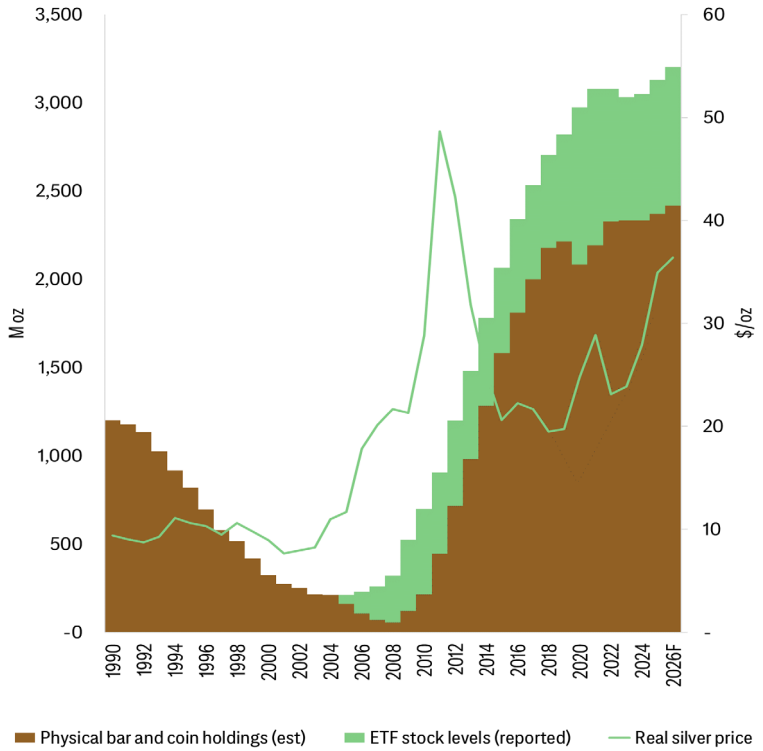
...however, the silver deficit results in a turnover of above ground stock

We model silver stocks and find that the deficits don't actually drive down silver inventories and instead drive a churn of investors holding the inventories. This likely means newer investors who have been buying at higher prices have higher hurdle rates before they sell. Indeed, we estimate that the average cost of today's silver stock at around $24-25/oz in today's dollars, up from $20/oz five years ago. The scale of stockholder sales required to meet the deficit can be estimated – and is around 15-20moz per month representing ~0.8% of physical bar and coin holder stocks, so around that amount needs to be sold each month to meet the excess demand, likely requiring higher and higher prices to incentive stockholders to sell.

Potentially as much as half of the stock of silver bar and coins and ETF holdings are relatively new holders who have bought at relatively high prices (Moz, lhs, $/oz, rhs)



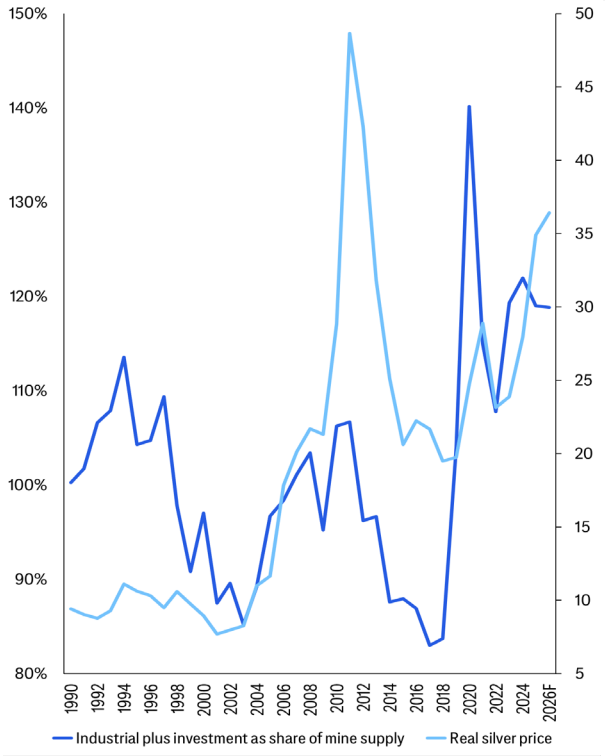
Most physical bullion / bar and coin stocks are held outside of ETF format (Moz, lhs, $/oz, rhs)



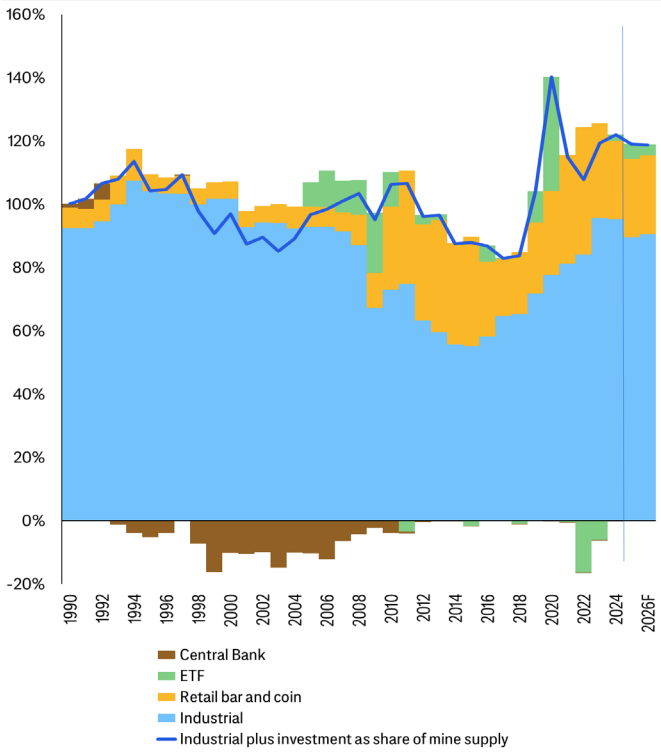
Our silver framework helps increase our conviction in higher silver prices

Our new silver framework like our gold pricing framework works well to explain silver price developments in the past. Over the past five years strong silver industrial and investment demand has been met by pricing out jewelry, pricing in scrap, and getting stockholders to sell. This scenario is currently in-play in China with retail demand declining and destocking driving down silver premiums. Silver has seen strong industrial demand due primarily to solar, with ETFs set to drive the next move higher (green columns). The market is only able to clear owing to stockholder sales (orange columns), which have been requiring higher and higher prices…

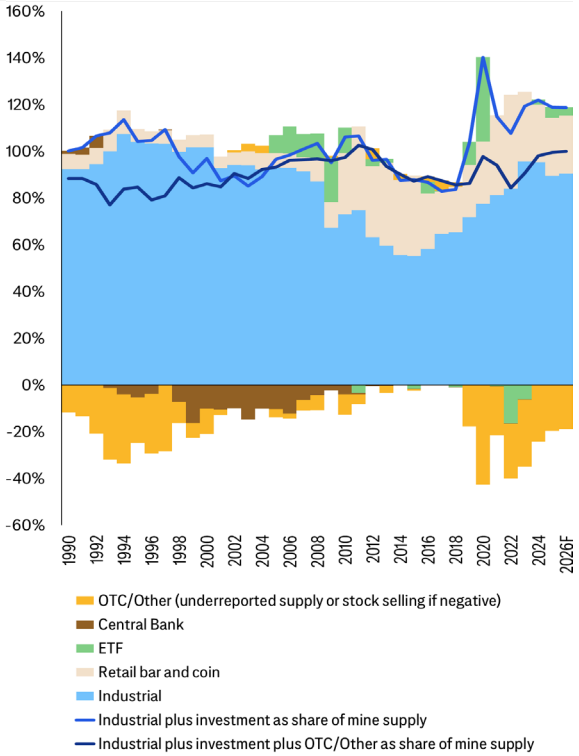
Strong silver industrial and investment demand is trying to price out jewelry, price in scrap, get stockholders to sell



Silver has seen strong industrial demand due primarily to solar over the past 5 years, with ETFs set to drive the next move higher



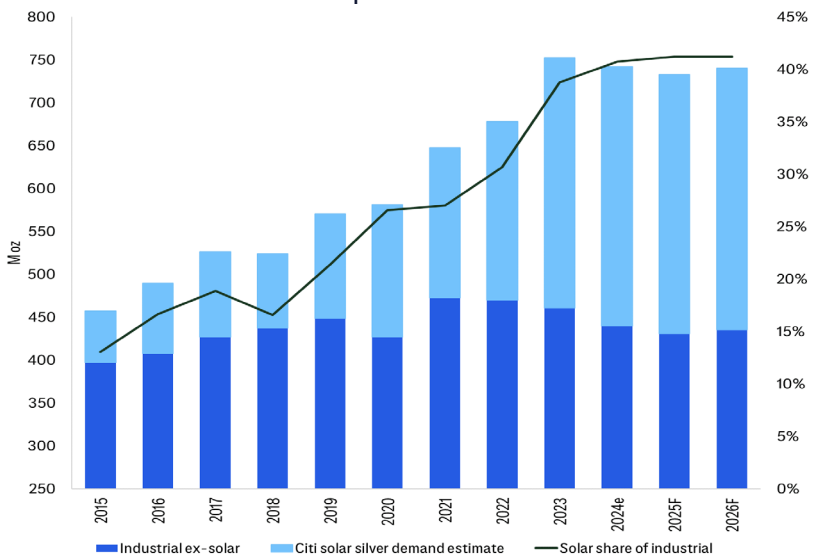
The silver market has only been able to clear because of stockholder sales (the yellow bars), albeit at higher and higher prices!



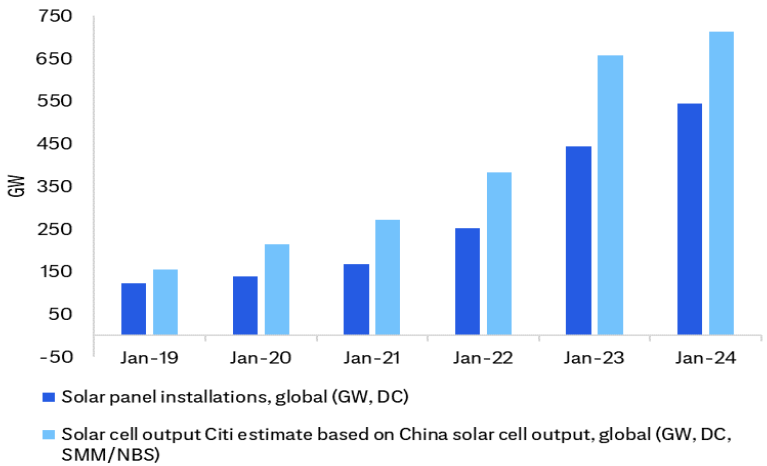
We believe that solar silver demand may have been underestimated

- There is a strong case to be made that the solar installation data is underreported, based on the significantly higher China solar cell output data, and considering the potential for larger scale underreporting of non-utility scale solar installations globally.
- Since silver is consumed in solar cells when they are made rather than when they are installed, we believe using the cell output data is more accurate.
- Using this data, solar silver estimates are around 72moz per annum higher than the Silver Institute estimates over the past 5 years. Though our bullish view does not depend on this, this certainly helps to explain silver's strong price action in recent years.

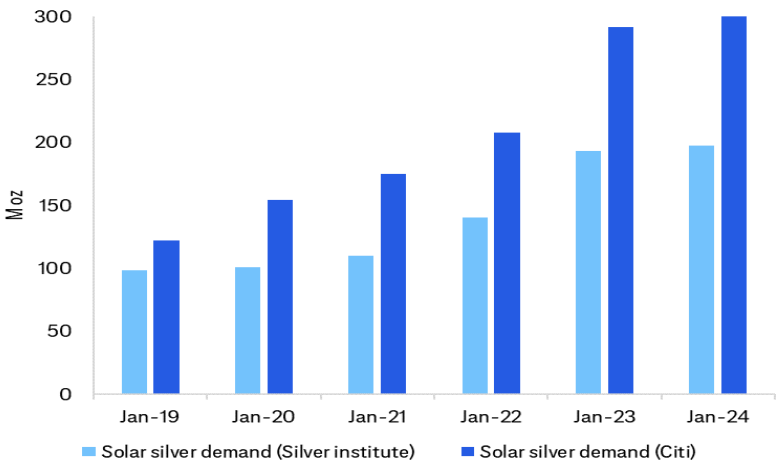
Solar demand has driven total industrial demand over the past decade



Solar panel installations have been running around 30% below solar cell output estimates (GW)



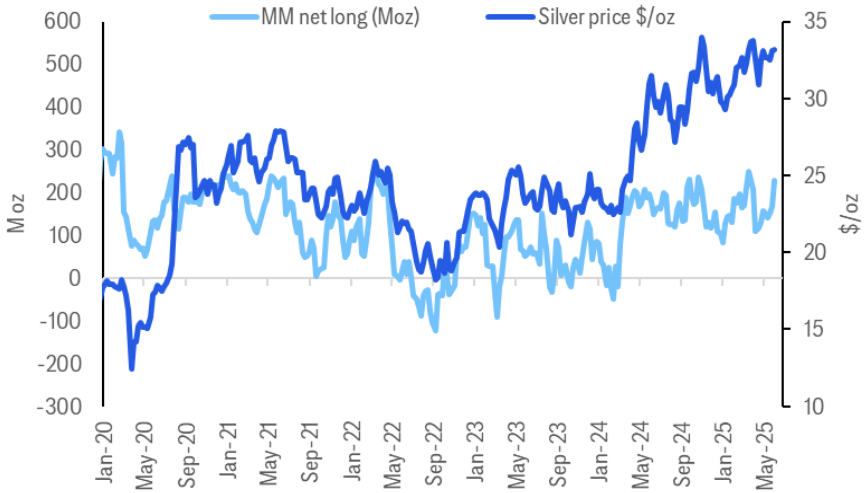
Using solar cell output instead of installation data results in an extra 50% silver demand from solar over the past 5 years



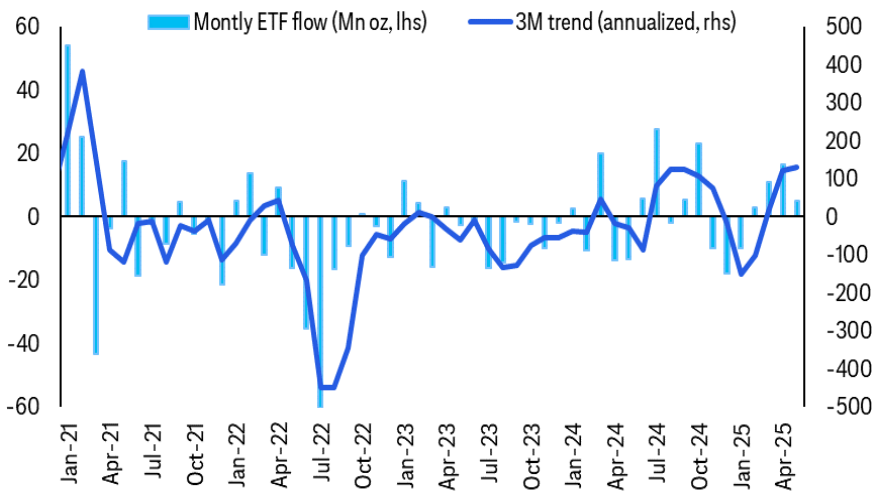
Source: Citi Research, SMM, NBS, Metals Focus, Silver Institute

Fund positioning can have a powerful near-term impact on silver

Silver prices and COMEX net speculative positioning are highly correlated, but the levels of prices vary for a given positioning level pointing to fundamental or physical factors dominating over time. There is still room for positioning to strengthen.



Investment demand for silver was lacking at the same level as gold, which benefited from 'safe-haven' demand and central bank buying. Investors have added ~35mn oz of silver YTD and ~10mn oz in first week of June. We believe the market now sees silver's strong fundamentals and has rotated money into silver ETFs.

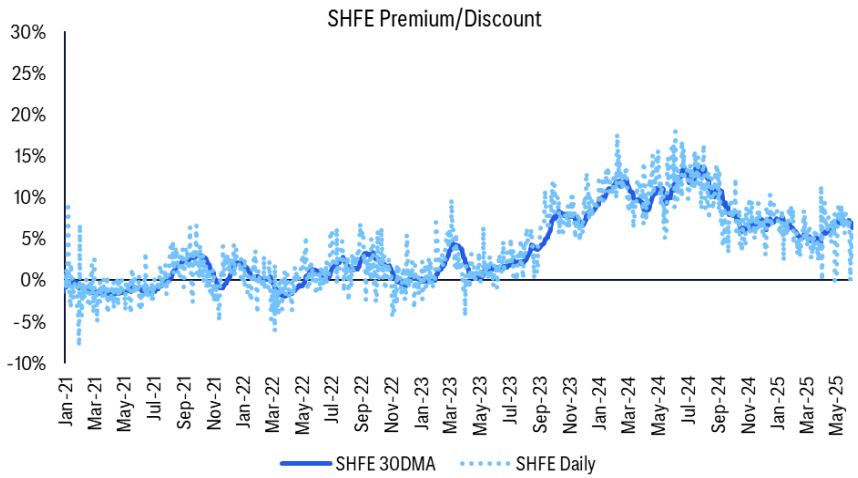


China and India silver imports likely to remain muted in 2H'25

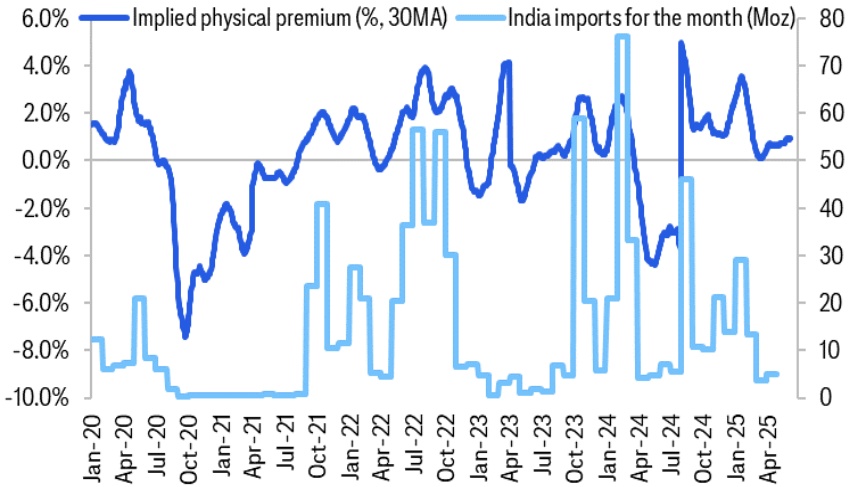
We expect silver demand from China solar PV to decline in 2025, offset by higher EV penetration and electronics sales. Starting June, China solar installation will no longer benefit from fixed feed-in tariffs, driving consolidation among Chinese PV module manufacturers. Also, higher silver prices are likely to drive destocking and weaker retail demand in China. A possible headwind is a prolonged trade war hurting China economic growth and non-solar PV and EV industrial demand. The local silver premiums in China have declined to $1-2/oz compared to the ~$4/oz peak in 2024. Over the next 6m, China silver imports face headwinds from weaker retail demand and destocking.

As of April 2025, Indian silver imports totaled 51moz, down 62% y/y. The month of May saw local silver premiums rising towards 1%, suggesting tight availability amid muted demand. However, we do not expect a significant improvement in silver imports in 2025 as higher prices could lead to higher recycling and profit booking. Over the next 6-12m, we expect silver prices to trade in the range of $37-40/oz. At these price levels, we generally expect negative impact on India silver demand. In 2024, despite a 18% y/y increase in local silver prices, silver jewelry demand grew by 5% y/y and investment demand grew 20% y/y, as per the Silver Institute. For 2025, we expect continued strength in silver jewelry demand to be dependent on elevated gold prices. Meanwhile, a higher local premium combined with higher silver prices could see profit booking from investors. Also, higher silver prices could see higher recycling offsetting the need for imports. In 2025, we expect festive and wedding season months to drive a pickup in Indian silver imports.

Chinese silver price premiums (%) decline as retail demand weakens and possible destocking



Local silver premiums in India trade around 0.1% despite silver trading above $33/oz



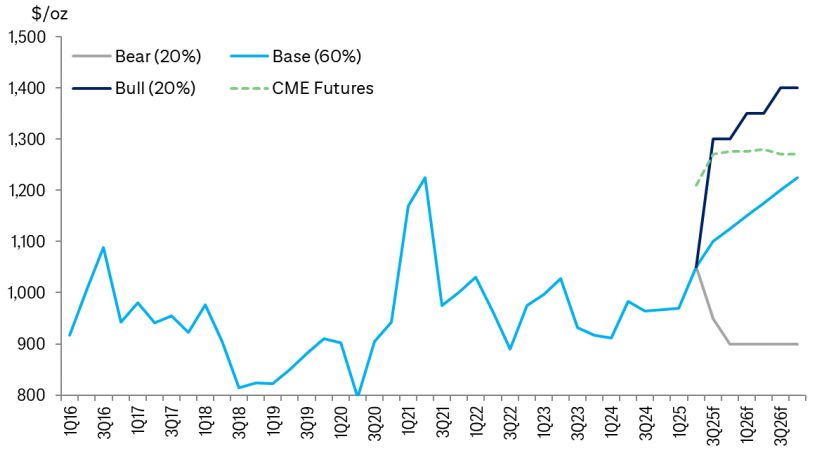
Source: Citi Research, Bloomberg, Metals Focus

Platinum: continued stockdraw supports price but recent rally likely overdone

Global platinum S&D balances

Pt koz	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E
Autocatalyst	2,666	2,171	2,497	2,778	3,269	3,219	3,101	3,001	2,768
Other Industrial:	2,418	2,264	2,569	2,607	2,671	2,572	2,442	2,501	2,707
Chemical	690	613	663	659	726	659	650	652	753
Electrical	185	180	199	172	155	180	199	170	167
Glass	404	525	700	661	654	587	373	353	450
Medical	257	232	242	256	268	275	282	294	303
Petroleum	236	167	177	204	183	167	217	211	163
Jewelry	2,082	1,609	1,624	1,443	1,381	1,375	1,448	1,404	1,417
Retail Investment	232	566	304	176	289	227	286	344	388
Total demand	**7,398**	**6,610**	**6,994**	**7,003**	**7,610**	**7,392**	**7,277**	**7,251**	**7,280**
Mining:									
Southern Africa	4,831	3,737	5,141	4,438	4,479	4,571	4,353	4,285	4,229
Russia	716	701	643	556	731	666	679	668	662
North America	358	334	272	263	278	254	192	193	182
Total Refined Supply	**6,069**	**4,957**	**6,225**	**5,416**	**5,638**	**5,638**	**5,377**	**5,299**	**5,222**
Autocatalyst Recycling	1,499	1,339	1,425	1,288	1,089	1,103	1,124	1,186	1,326
Industrial Recycling	47	46	54	52	53	59	61	66	72
Jewelry Recycling	546	446	396	298	267	262	266	245	238
Total Secondary Supply	**2,091**	**1,831**	**1,874**	**1,639**	**1,409**	**1,424**	**1,451**	**1,498**	**1,637**
Total Supply	**8,160**	**6,788**	**8,099**	**7,055**	**7,048**	**7,062**	**6,828**	**6,797**	**6,859**
Balance	**762**	**178**	**1,105**	**52**	**(562)**	**(330)**	**(449)**	**(454)**	**(421)**
Change in ETF Holdings (YTD for 2025)	967	511	(259)	(567)	(76)	265	177	-	-
Balance after change in ETF holdings	**(205)**	**(333)**	**1,364**	**619**	**(486)**	**(596)**	**(626)**	**(454)**	**(421)**

Citi Research platinum price forecasts and bull/bear scenarios



- **Platinum prices rallied ~25% since the London Platinum Week to test the 2021 highs of ~$1,300/oz on hope of improved China jewelry demand. We upgrade our point-price targets to $1,150/oz for 0-3m and $1,200/oz for 6-12m respectively but believe the ongoing price spike is likely overdone in the short term. Sentiment on PGMs improved amid efforts to boost China platinum jewelry and investment demand.** While strong April import data (released on May 20, which helped kickstart the bull rally) imply robust China jewelry fabricator restocking, we have not seen enough evidence for an actual shift in end-**use** consumption, with Chinese jewelry consumers still favoring gold and with jewelry demand overall losing out to bar & coin, a market which is **even more** dominated by gold.

- **We believe a material shift in consumer taste (beyond just fabricator restocking) is required for any sustainable upside above $1,200/oz**. Jewelry and investment demand needs to pick up substantially to offset the loss in autocatalyst and other industrial demand. Despite increased headwinds for BEV penetration growth, autocatalyst demand has peaked and should continue declining, especially with substitution from Pt to Pd going underway due to diverging PGM prices. Once deemed as the major driver of future demand growth, the hydrogen economy faces increasing policy and cost headwinds and has so far failed to gain traction.

- **We expect the consecutive years of stockdraw and continued physical deficit ahead to keep supporting platinum prices and recommend buying into dips when the current FOMO-driven rally fades.** Continued decline in mine supply due to lack of investment and mine closure, as well as tepid recycling market which has consistently underperformed market expectations over the past years, have kept the platinum market in physical deficit despite overall weakening demand trend.

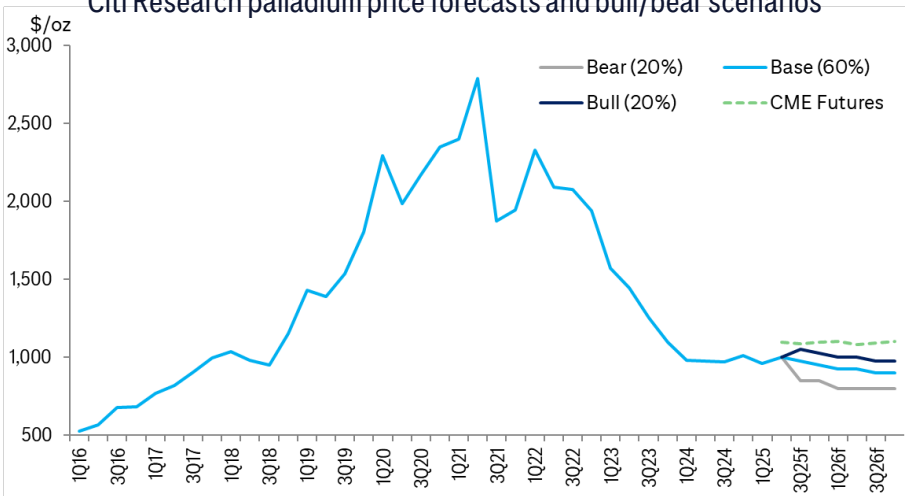
Source: Citi Research, Bloomberg, Johnson Matthey, SFA Oxford, Metals Focus

Palladium: yet another opportunity for producer hedging/spec shortselling

Global palladium S&D balances

Pd koz	2019	2020	2021	2022	2023	2024	2025E	2026E	2027E
Autocatalyst	9,247	8,036	8,094	8,048	8,631	8,205	7,915	7,836	7,967
Other Industrial:	1,757	1,578	1,583	1,521	1,444	1,446	1,465	1,442	1,418
Chemical	494	485	506	518	494	486	519	495	479
Medical	313	239	217	199	190	176	164	154	147
Electrical	773	694	690	633	587	596	610	615	610
Jewelry	205	152	151	151	150	148	148	159	171
Total demand	**11,224**	**9,735**	**9,830**	**9,721**	**10,221**	**9,791**	**9,502**	**9,438**	**9,556**
Mining:									
Southern Africa	2,952	2,340	3,107	2,663	2,738	2,774	2,643	2,616	2,596
Russia	2,927	2,757	2,630	2,593	2,694	2,757	2,743	2,718	2,727
North America	1,017	978	918	800	832	781	605	552	535
Total Refined Supply	**7,134**	**6,339**	**6,895**	**6,301**	**6,511**	**6,557**	**6,238**	**6,131**	**6,095**
Autocatalyst Recycling	2,774	2,640	2,925	2,687	2,225	2,331	2,460	2,583	2,921
Industrial Recycling	415	383	415	408	404	407	409	341	351
Jewelry Recycling	65	63	55	52	44	35	33	42	39
Total Secondary Supply	**3,254**	**3,085**	**3,395**	**3,148**	**2,674**	**2,773**	**2,902**	**2,966**	**3,311**
Total Supply	**10,388**	**9,424**	**10,290**	**9,449**	**9,185**	**9,330**	**9,140**	**9,097**	**9,406**
Balance	**(835)**	**(311)**	**460**	**(272)**	**(1,036)**	**(462)**	**(362)**	**(341)**	**(151)**
Change in ETF Holdings (YTD for 2025)	(106)	(116)	36	(92)	69	246	55	-	-
Balance after change in ETF holdings	**(729)**	**(196)**	**424**	**(180)**	**(1,104)**	**(708)**	**(417)**	**(341)**	**(151)**

Citi Research palladium price forecasts and bull/bear scenarios



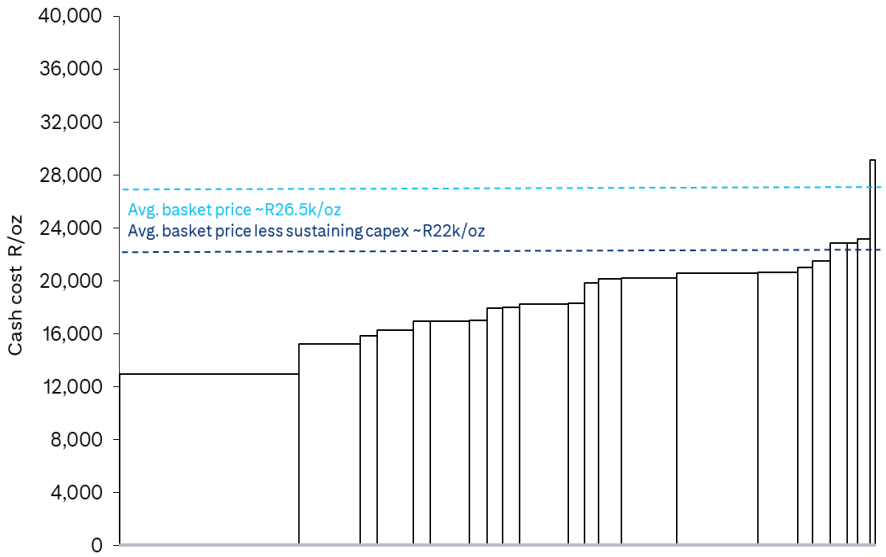
- **We remain bearish palladium with a 0-3m point-price target of $950/oz and consider the ongoing price rally as yet another opportunity for producers to boost hedging and for speculators to open new short positions.** Moving in the same direction as platinum but lagging, palladium prices also rallied 13% since the London Platinum Week in late May to reach the highest level since November 2024, the prior short squeeze event when the Biden Administration threatened to sanction Russian PGM exports.

- **The ongoing rally in palladium prices seems to be simply a catchup trade for platinum, fueled by FOMO buying and short squeeze, with no headlines or apparent shift in fundamental supply/demand dynamics.** Unlike platinum which has much more diversified demand exposure and can benefit if there is an actual shift in jewelry and investment demand from gold to platinum (see previous slide for details), palladium still has over 80% of its gross demand exposed to autocatalyst. Despite slower-than-expected BEV penetration growth rate, autocatalyst demand peaked in 2023 and has since been on a downtrend. Market share gains by hybrid vehicles and upcoming reverse substitution from Pt to Pd (thanks to now much higher platinum prices) could help moderate but not reverse the downtrend in autocatalyst demand.

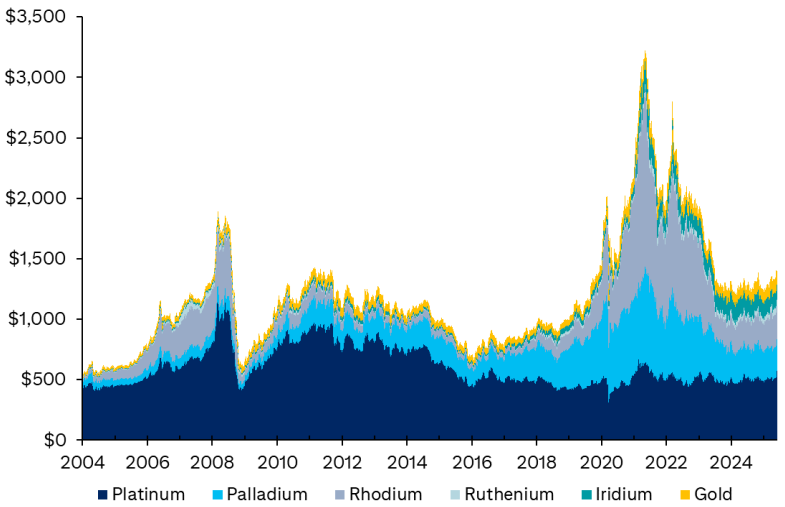
- **The pace of the long-term structural decline in palladium prices seems to have slowed with producer response function forming support at below $900/oz, but this support could be at risk if the platinum strength persists.** After a $2,000/oz decline from early 2021 to late 2023, palladium has traded largely within the range of $850-1,100/oz since late 2023, with solid support forming at $850-900/oz, helped by production cuts. However, this support could weaken if platinum prices keep rallying (now at record level in ZAR terms) as the PGMs are produced together as a basket.

PGM producer margin improved significantly on recent rally

Estimated global 6E basket cost curve – surging PGM prices alleviating the pain for producers, with the 6E basket now estimated at 26.5kZar, vs the low of 22kZar last summer

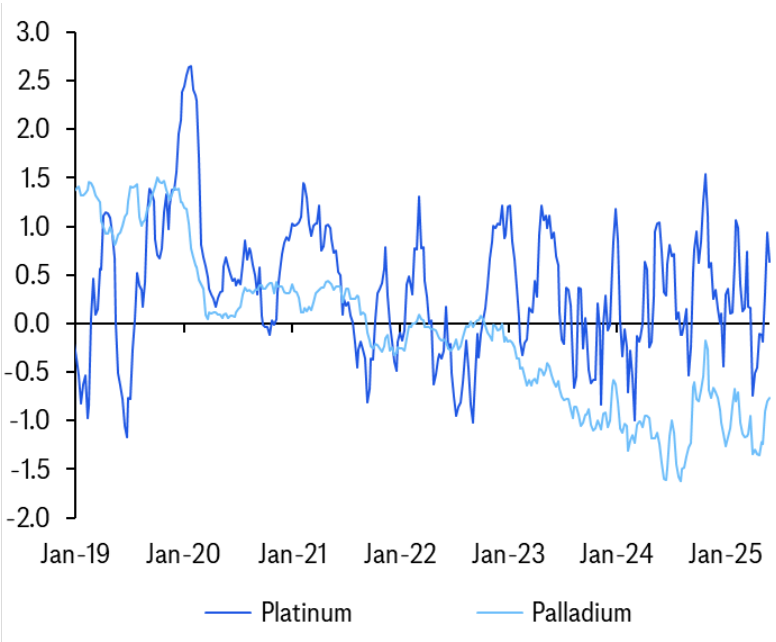


6E basket breakdown – basket revenue improving thanks to the recent rebound in PGM prices, and still high gold prices

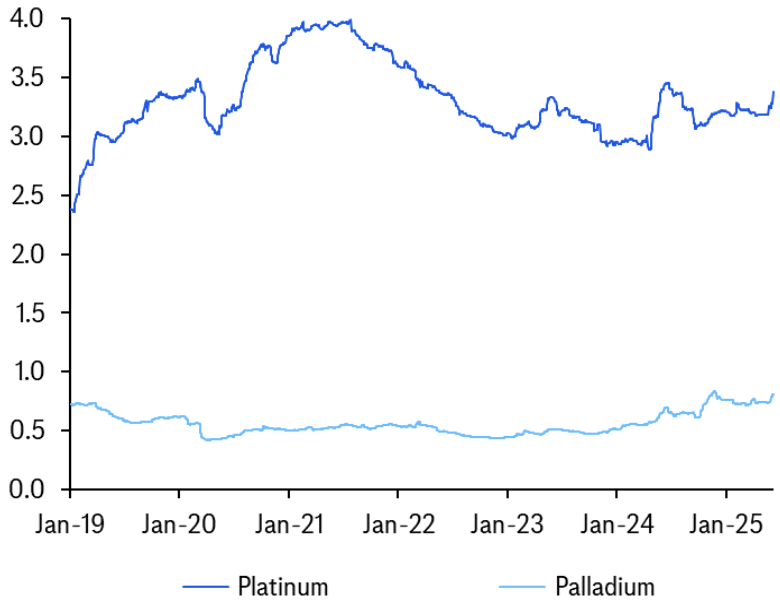


Investor sentiment turning positive with strong ETF inflows amid recent rally

Managed money net positioning (moz) spiked for platinum amid the recent rally, while palladium saw another short squeeze

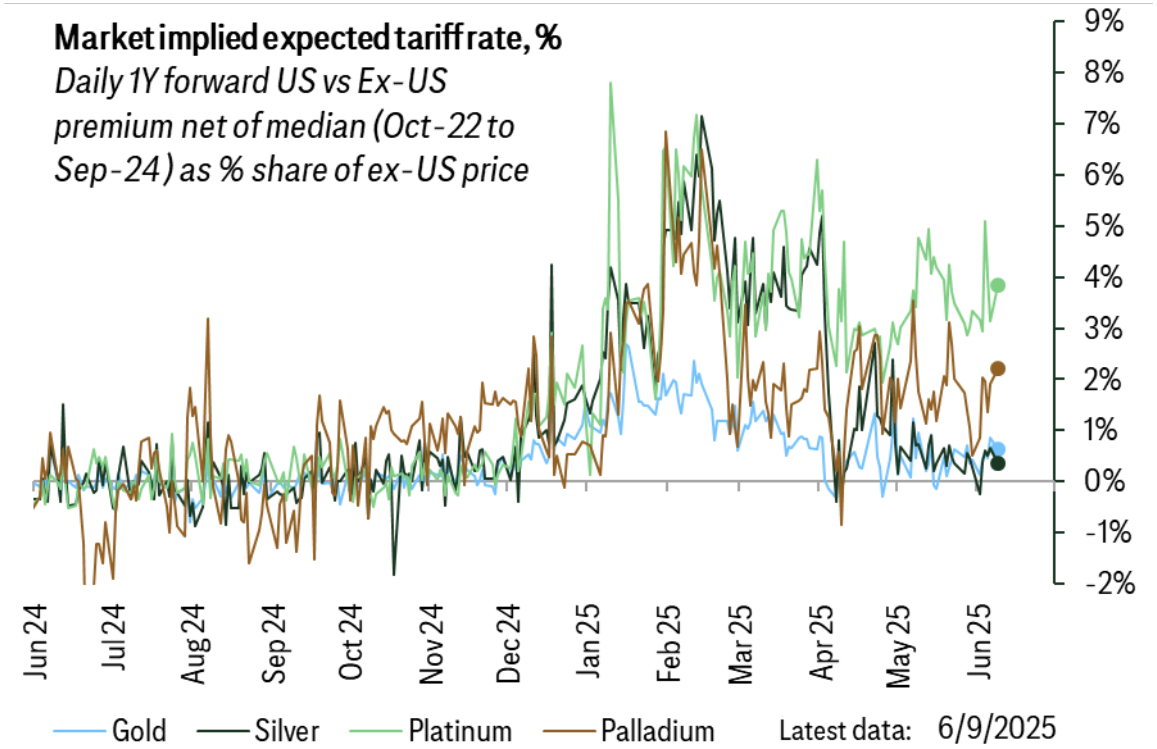


ETF holdings (moz) jumped for both platinum and palladium as investor sentiment turned positive on recent headlines



Upside potential for US platinum premium if Section 232 implemented

CME-Loco London 1y forward differential for platinum is trading at only ~4% (implying a similar tariff rate), having halved from the peak seen early this year, implying potential for significant upside should the critical minerals Section 232 tariffs be implemented. While tariffs on platinum do not make much sense given limited scope for US domestic production and recycling to ramp up, the risk of Section 232 tariffs is on the rise as President Trump might be backing down from the broader/reciprocal tariffs.



3. Energy: a riveting summer ahead – surprises in oil; divergent outcomes for gas; EUA breakout; CCA political uncertainty; an uranium comeback story

i. Petroleum: prices can be more resilient than widely expected

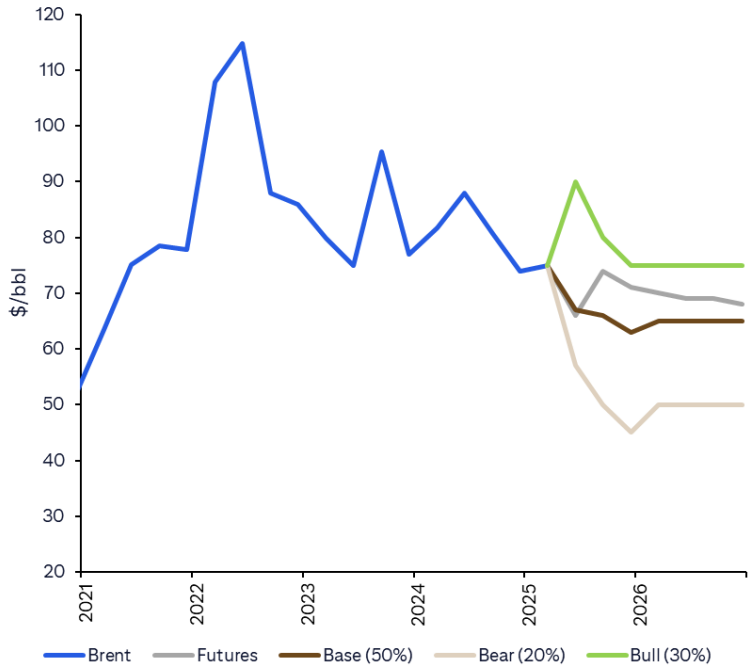
Oil: elevated geopolitical tensions *should* not affect oil supply, which is rising

Our base case sees elevated geopolitical tensions keeping prices firm, though it looks unlikely that oil supply would be affected. Suppose oil supply is not affected by geopolitical tensions, then rising production as OPEC+ continues to raise production should lead to lower prices in the months ahead. While the possibility of a wider conflict cannot be dismissed, the probability of affecting oil supply should be low, as it is not to the benefit of Iran or the US.

Thus, with only half a month left in 2Q25, Brent prices should average $67/bbl in the quarter. Assuming no oil supply is disrupted, then 3Q25 Brent should slip to $67/bbl, assuming an embedded geopolitical risk premium.

In the bear case (20% probability), oil prices could move to the mid-$50s/bbl sooner and then into the mid-$40s/bbl by year-end. This scenario could materialize either if demand is further eroded by tariffs or OPEC+'s accelerated supply increases continue month after month.

In the bull case (30% probability), prices could still surge, possibly to $90+/bbl if we see 1-m b/d+ losses from Iran and energy infrastructure hit by sanctions and ME escalation, while OPEC+ cuts hold, but then easing as OPEC+ and other supply steps up.



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

Citi Oil Price Deck		Point Price Targets		Quarterly Forecasts								Annual Forecats	
	Prob.	0-3M	6-12M	Q125	Q225	Q325	Q425	Q126	Q226	Q326	Q426	2025F	2026F
Brent Base Case	**50%**	**70**	**65**	**75**	**67**	**66**	**63**	**65**	**65**	**65**	**65**	**68**	**65**
Brent Futures as of 12-Jun				75	66	74	71	70	69	69	68	72	69
Brent Base Case vs. Futures				0%	2%	-11%	-11%	-7%	-6%	-6%	-4%	-6%	-6%
Brent Bear Case	**20%**			**75**	**57**	**50**	**45**	**50**	**50**	**50**	**50**	**57**	**50**
Brent Bull Case	**30%**			**75**	**90**	**80**	**75**	**75**	**75**	**75**	**75**	**80**	**75**
WTI		**68**	**62**	**72**	**63**	**63**	**60**	**62**	**62**	**62**	**62**	**65**	**62**
WTI Futures as of 12-Jun				72	63	72	68	66	66	65	65	70	65
WTI vs. Futures				0%	0%	-13%	-12%	-6%	-6%	-5%	-5%	-8%	-5%
WTI-Brent				**(3)**	**(4)**	**(3)**	**(3)**	**(3)**	**(3)**	**(3)**	**(3)**	**(4)**	**(3)**
WTI-Brent Futures as of 12-Jun				(4)	(3)	(2)	(3)	(4)	(3)	(4)	(3)	(2)	(4)

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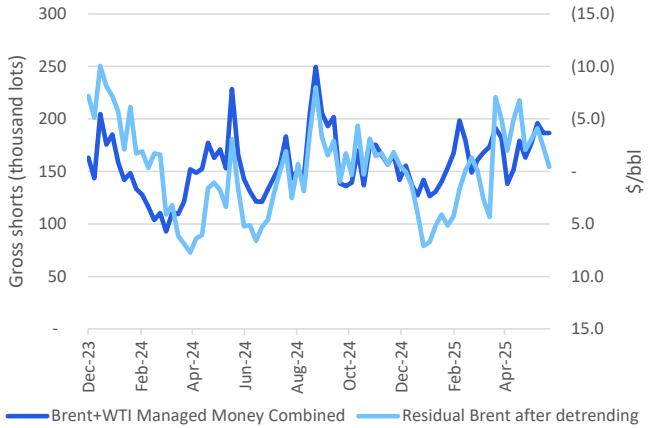
Note: Futures trading involves substantial risk of loss.

Source: Bloomberg, Citi Research estimates as of June 9, 2024

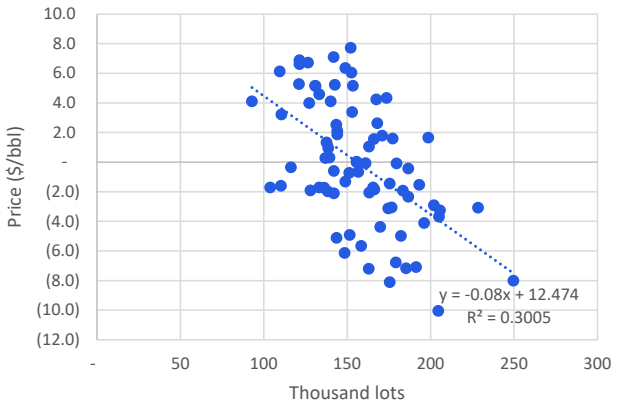
Geopolitical tensions in the Middle East have lifted prices

- **Israel's military strikes against Iran lifted Brent to an intraday-high of $78.5/bbl. We believe that energy flow disruptions should be limited. Heightened geopolitical tensions may well remain, but we don't expect energy prices to stay elevated for a sustained period of time. President Trump administration's goal of achieving lower oil prices likely gets more difficult with this operation.**
- **Effectively, the only way to get to lower oil prices is through diplomacy, since oil supply can move more than demand.** To raise supply, one of the most feasible methods would have been through Iran – but Israel's military actions may delay or disrupt the US-Iran negotiation process. To break down price impacts, managed money positioning is helpful. If the Israeli operation against Iran effectively were to reduce managed money gross shorts from 187-klots in early June to 0, then the price move could have been ~$14/bbl
- **Iran's diplomatic relations with its Gulf state neighbors have also broadly gotten much better in recent times** (see Foreign Affairs, June 10).
- **Unlocking Iranian oil can be effective in raising supply, since US oil producers have not moved to increase production in response to Trump administration preferences for lower oil prices, and Saudi Arabia has already announced accelerated production return.**
- **By analyzing managed money positioning on Brent and WTI vs. prices themselves, compared with last week's positioning and price at around $65/bbl, then the intraday high of $78.5/bbl effectively mimic this magnitude of price reaction if gross shorts were eliminated.** Fresh longs would then need to lift prices further. Thus, we do not expect a further short-covering rally in meaningful size. For details on developments leading to the current situation, please see our recent Oil Monitor report.
- **The market is closely monitoring further Iranian and Israeli responses and whether military actions might involve energy infrastructure in the future.** Please see Global Commodities - Oil market impact update - Israel/Iran conflict - June 16 for additional details.

Detrended Brent oil prices vs. Brent+WTI's managed money gross shorts combined futures and options since the start of the Israel-Hamas war do have influence on each other...



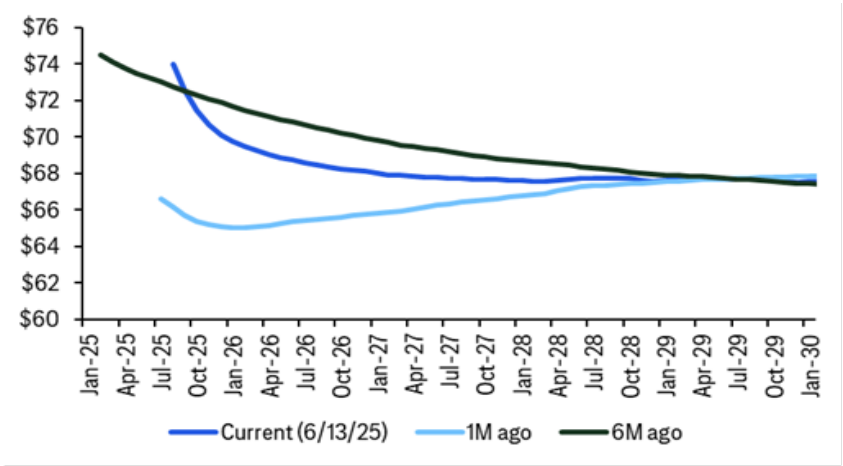
...The relationship in scatterplot form shows the possible approximate impact of changes in managed money gross shorts on prices



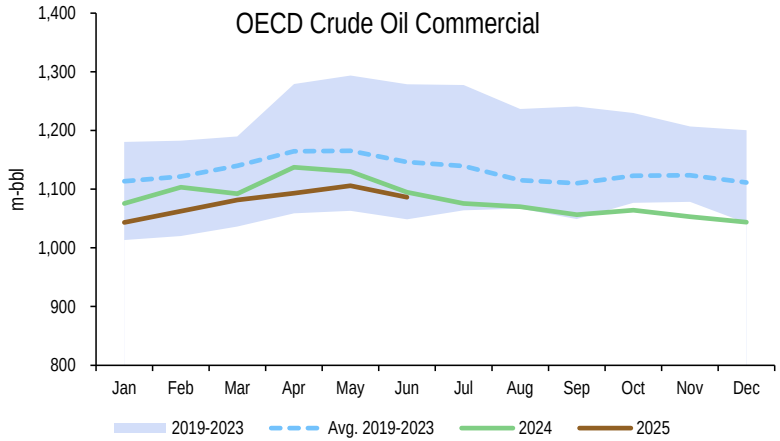
Source: Bloomberg, CFTC, Citi Research estimates

Yet physically, near-term support can ease as stocks rise, barring geopolitics

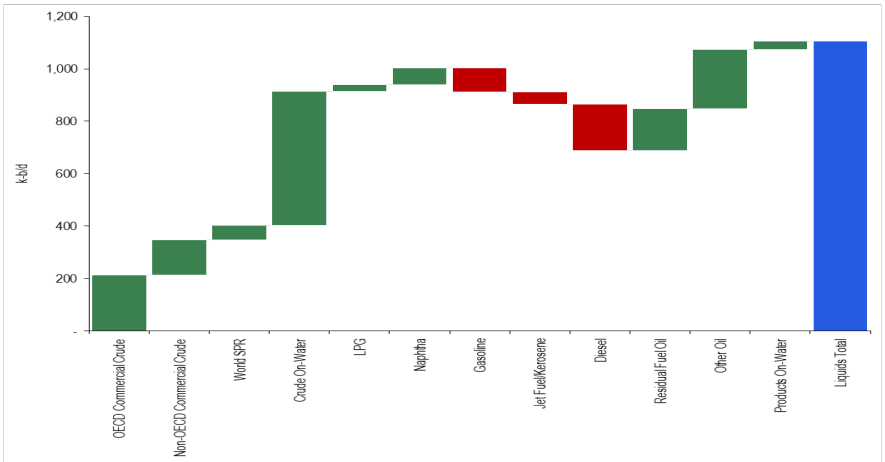
After correcting down to the $60s, near-dated Brent contracts are seeing strong timespreads, particularly with near-term heightened geopolitical risks (Brent futures curves at 6/9/25)



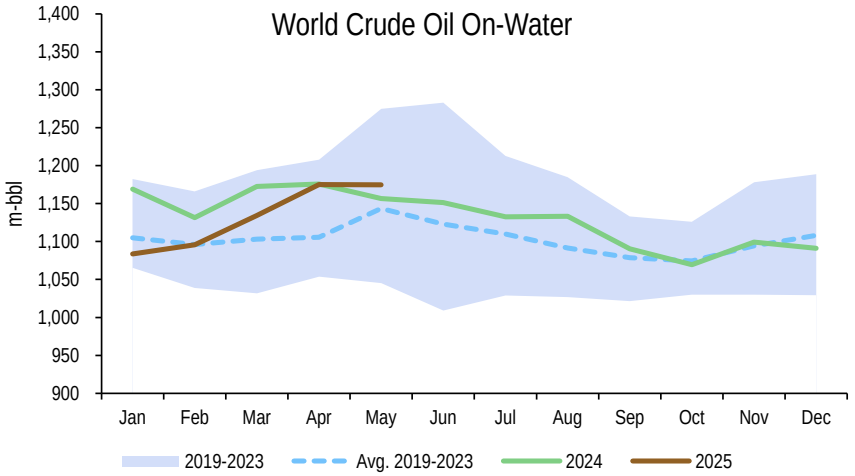
One reason could be that half of the YTD stock build occurred across oil on-water, while key pricing hubs across OECD commercial crude inventories, including Cushing, are still low in absolute terms



Half of the preliminary >1-m b/d stock build occurred across oil on-water, while other sizeable builds occurred across difficult to track Non-OECD hubs and other oils. Still OECD commercial crude oil is building



Global oil-in-transit has surged, which should eventually show up in on-land, and OECD inventories, as Mideast summer crude burn eases

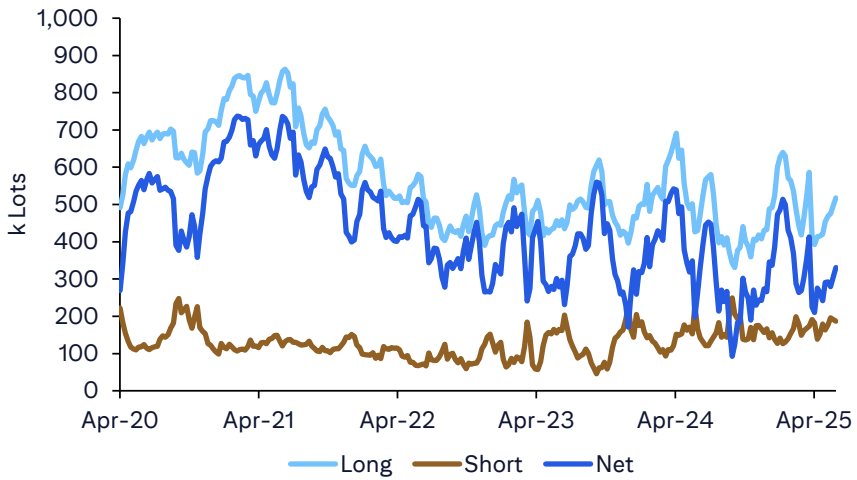


Source: Bloomberg, Citi Research estimates

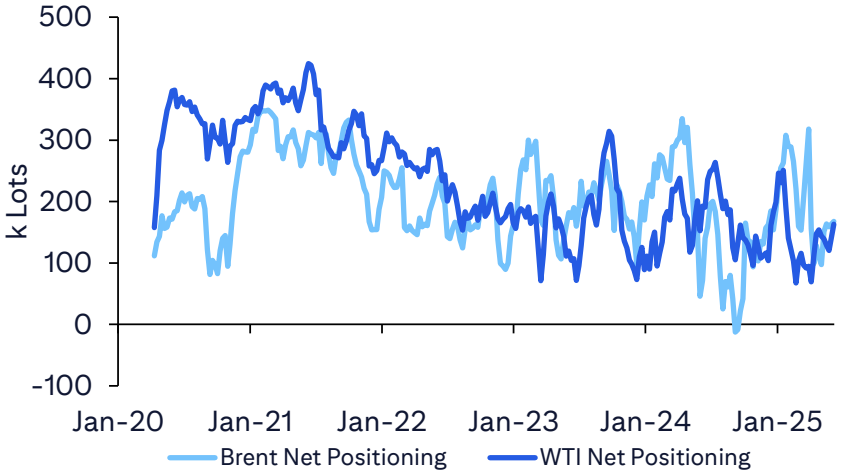
Crude positioning has risen amid escalating geopolitical tensions

After holding up on geopolitical fears and underappreciating Trump administration tariff risks, Brent and WTI money manager net length dropped sharply in early April, mostly due to gross longs liquidating. We pointed to Apr'25 as a key bearish catalyst, and it did indeed lead to a break from the $70-90 range for Brent down to the $60-70 range. OPEC+ also surprised in early April with an accelerated pace of its production cut unwinding. Since then, money manager net longs are ticking up as tariff fears have retreated from peak concerns, while geopolitical tensions have escalated recently, even with (and perhaps allowing for) OPEC+ maintaining an accelerated rate of output quota tapering.

ICE Brent and Nymex WTI managed money net contracts combined fell due to major liquidation of longs in early April, but has started to filter back in since then



NYMEX WTI managed money net length has moved to historically short levels, before recovering slightly; ICE Brent was relatively long, but fell sharply in early April as higher-than-expected US tariffs were threatened. Both major crude benchmark positioning looks neutral at this point, keeping two-way risks alive

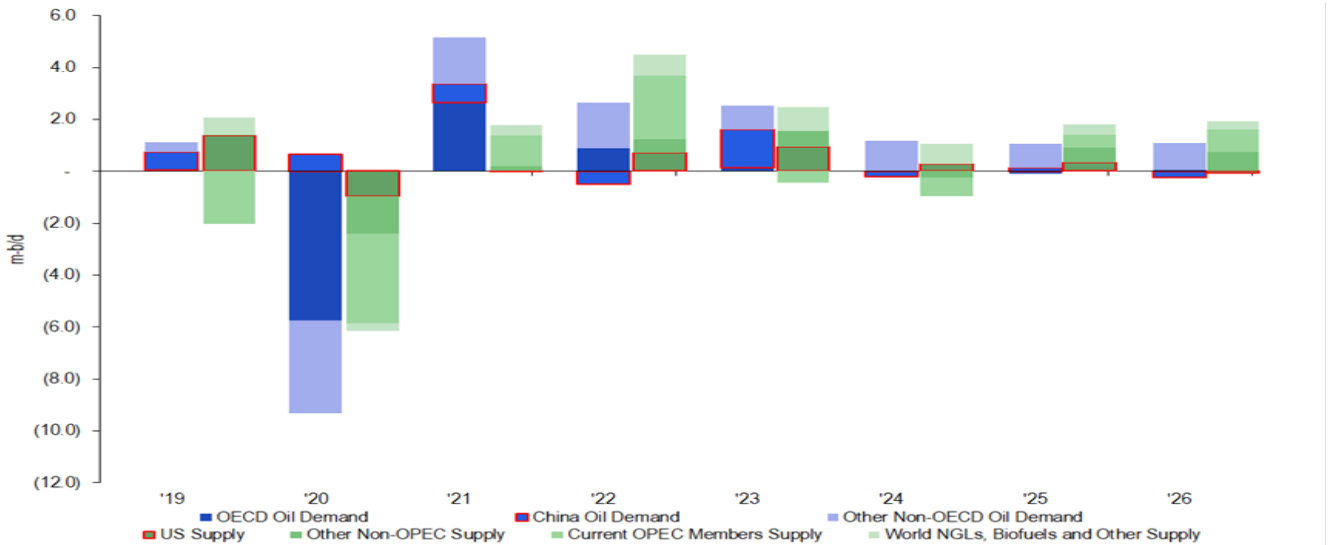


OPEC+ fast output return can repeat in Aug, but pause on potential softness

Assuming no geopolitical disruptions, consensus see global oil market balances in a surplus in both 2025 and 2026. OPEC+ is phasing in supply more quickly with stronger physical markets through mid-year. With ongoing oversupply, inventory replenishment and post-summer crude burn, OPEC+ could pause production increases again by year-end.

- **Citi's global oil balances point to a surplus of 0.9-mb/d on average in 2025, vs.0.6-m b/d previously, and +1-m b/d in 2026.** With OPEC+ increasing quotas ~411-k b/d for July, and an expected further increase in Aug'25 given near-term robust physical markets, balances could be even more oversupplied. However, short-term physical markets are holding as stock builds have mostly taken place ex-OECD, and on-water, even as Mideast production increases are masked by strong domestic crude power burn demand, while disruptions hit Canada. As markets weaken from late 3Q, as summer demand eases, we can see OPEC+ shifting gears and pausing production unwinds from Sep'25 onwards, and through 2026.
- **Real oil demand is expected to grow by 1-m b/d in 2025, and +0.9-m b/d in 2026, still vulnerable to downside risks from ongoing trade tensions.** Even if peak tariff fears may have passed, some substantial tariffs (~15% effective) are expected to remain, with physical impacts still to filter through to oil demand over multiple quarters.
- **Total oil supply growth is expected at 1.5-m b/d in 2025 and 0.9-m b/d in 2026.** Non-OPEC crude oil, condensates and NGLs production is likely to rise by 1.2-m b/d in 2025 and 0.6-m b/d in 2026. US oil output could still grow 0.3-m b/d in 2025, slowing to a 0.1-m b/d decline in 2026, though along with total liquids, growth could be +0.5-m b/d in '25, flat in 26. OPEC crude oil, condensates and NGLs production could climb by +0.7-m b/d in both '25 and '26.

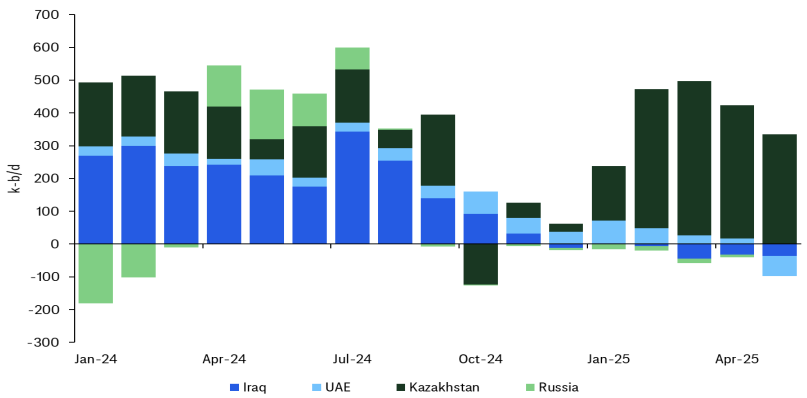
Global liquids SND: Demand growth at sub-1-m b/d in 2025 and 2026, as China real oil demand peaks, while Non-OPEC liquids supply growth at 1.3-m b/d in 2025 and 1-m b/d in 2026, even with US shale oil supply dropping next year



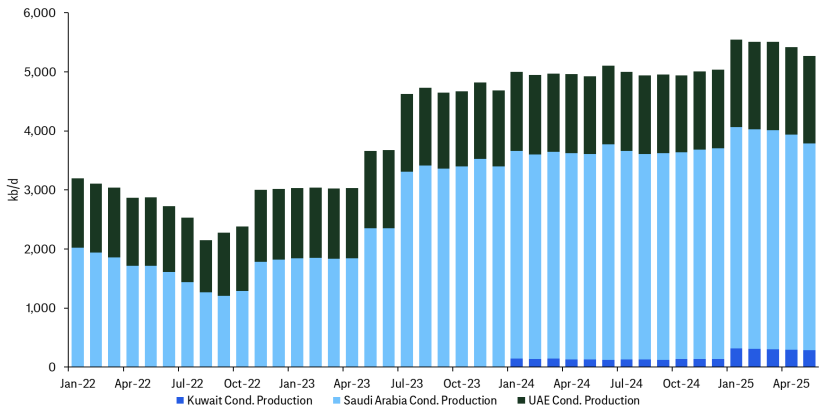
OPEC+ raised quotas by ~1.4-m b/d Apr-Jul'25, could pause from ~Sep'25

- **OPEC+ started unwinding the output cuts starting Apr'25, and instead of ~137-k b/d per month, has raised quotas by ~411-k b/d per month for May, June, and most recently for Jul'25, meaning +1.4-m b/d of the 2.2-m b/d voluntary cuts to be brought back (2.5-m b/d if UAE's baseline increase is included). The group could continue to add ~411-k b/d in Aug'25 given near-term firm markets but then pause as prices fall and markets are increasingly oversupplied.** Near-term, the group's production increase does not flow through completely to exports, as crude burn for powergen in the Middle East is ramping up into a hot summer but could be revealed as 3Q'25 wraps up. Overproducers may also not raise already-high production, such that higher quotas are simply "marking to market" low compliance. This has also come as Iran's oil exports are running into sanctions pressures, with tankers sitting off the coast of China, adding to oil on water / floating storage, with little reaching on-land OECD inventories so far – but these core areas could see builds in 2H'25 too.
- **Several narratives have been proposed for why OPEC+ is bringing back supply at a fast rate,** which also suggest whether this is a new normal, or just a temporary strategy, which could revert to managing supply more tightly to support price levels. For now, we see this as temporary, with a pause by Sep'25.
  - **OPEC+ has pointed to near-term robust physical markets,** which are indeed reflected in low inventories in major on-land hubs, as well as strong crude timespreads, even as global macro concerns persist, though recent sentiment has improved on renewed US-China trade talks. If physical markets weaken, OPEC+ could slow increase back to ~137-k b/d increments or even pause or cut again.
  - **Punishing low compliance?** Some argue that Saudi Arabia might want to bring prices lower to create consequences for non-compliance, as well as not be free-ridden upon by withholding its own output. This might point to an openness for prices in the $60s, even $50s, albeit temporarily.
  - **Saudi-US coordination?** With the recent US visit to Saudi Arabia yielding some initial announced deals, but not yet a civil nuclear deal among other Saudi interests, the Kingdom may continue to be willing to accept lower prices inline with US interests until a little after such deals come to pass.
  - **Shift to regaining market share after many years of cuts?** Could this be the beginning of a long-term trend of returning supply to market after withholding for several years, as peak oil demand trends are visible over the horizon, and low-cost producers need to monetize reserves?

Selected OPEC+ members' compliance to OPEC+ quotas



OPEC "Core 3" spare capacity

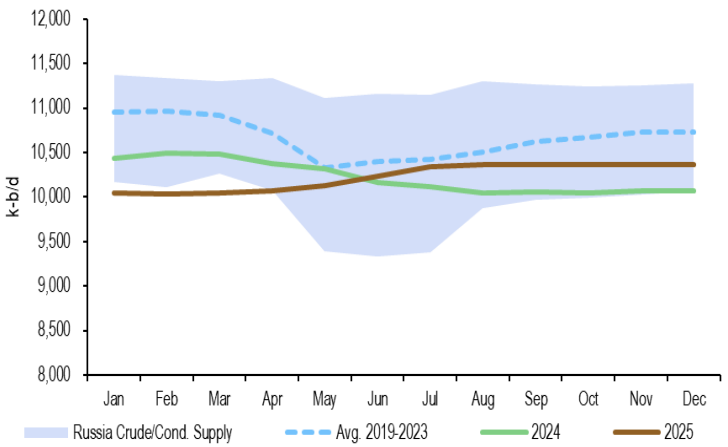


Source: OPEC, Citi Research estimates

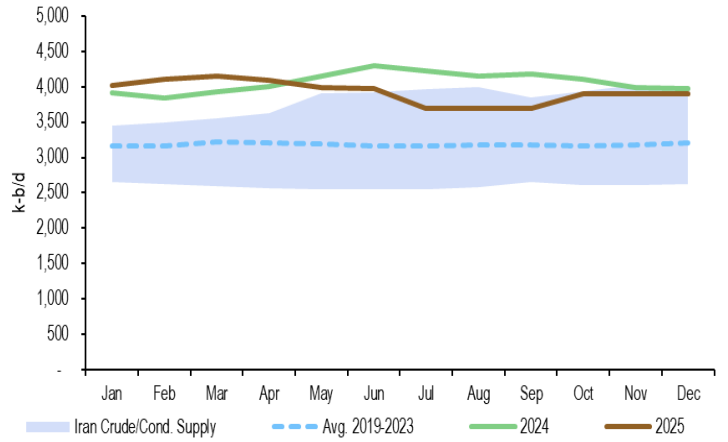
Other geopolitics and wildfire risks bear watching

- **Russia-Ukraine talks are still ongoing if rocky, with no ceasefire at recent peace talks in Turkey, with the White House seemingly frustrated with the process, and the EU pushing for more sanctions.** After talks in Istanbul, with no ceasefire, the fighting has continued, though both sides held a prisoner exchange on 6/9/25.
- **Libya continues to see fragile domestic situation keeping its light sweet crude oil exports at risk** as the UN-recognized administration based in Tripoli led by Prime Minister Dbeibeh in the west remains at odds with General Haftar's rival government in the east, with varying loyalties to both among multiple militias, with oil fields and export infrastructure at risk of attacks for leverage (Al-Jazeera, 5/13/25).
- **Venezuela could see its exports struggle to find new export destinations** as Chevron wound down its operations in the country as its waiver - which had allowed it to operate in the country - expired, even as other buyers of Venezuelan oil have retreated under US warnings of "secondary tariffs".
- **Canadian wildfires have shut-in ~0.35-m b/d temporarily** as Cenovus, CNRL, MEG Energy suspended operations as fires remain out of control and head eastward toward Fort McMurray.
- **Hurricane season official started in June and runs through November, and is expected to be more active than normal, after a relatively mild last year in terms of oil impacts.** This could hit US offshore oil and gas platforms as well as Gulf Coast refineries.

Russia crude and condensates supply



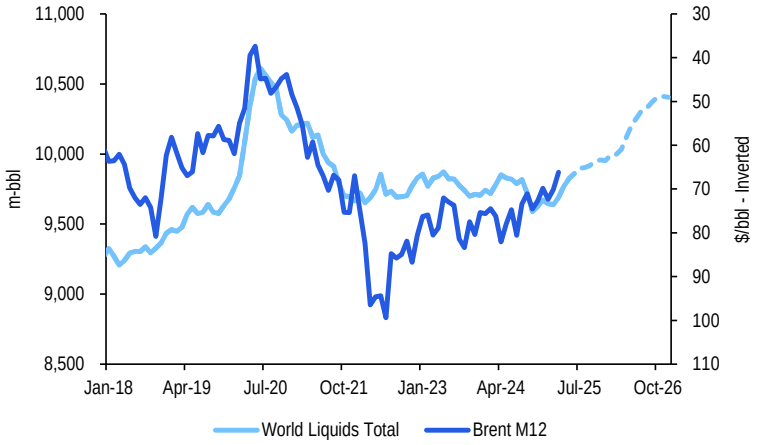
Iran crude and condensates supply



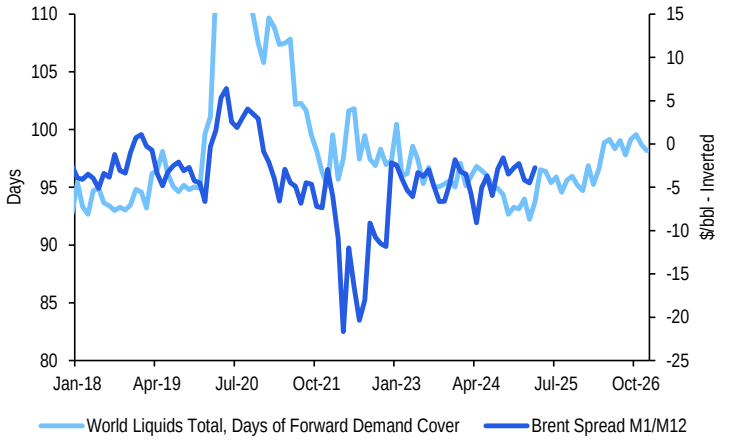
Stock trajectory is bearish, esp. post-summer, with tariffs, political deal risks

- **Physically as a baseline, 1Q'25 built a modest 0.3-m b/d, but accelerated in 2Q'25 to an estimated +1.9-m b/d,** gradually replenishing low inventories to more neutral levels, though so far, major hubs remained low.
- **Scenarios still hinge significantly on geopolitical deals and other disruptions risks.** A no-deal along with geopolitical disruptions would reduce or eliminate the stock build, depending on the size of the disruption. An Iran nuclear deal could lead to the country's 3.7-m b/d of production to head back to 4.1-m b/d as well as drawing down bloated on-land and floating storage. A Russia-Ukraine deal would help reduce oil-on-water, free up refinery capacity. Venezuela's exports could fall as Chevron shuts down operations as its waiver has expired. Libyan supply is at risk.
- **Through 2H' 25, global oil markets should get looser, and crude oil structure should soften, especially as 3Q'25 wraps up, potentially flipping into contango as the futures curve is already showing for 4Q'25 onwards, as stock builds continue.** A Russia-Ukraine truce would also lead to subsiding of high oil on-water levels, and could yet materialize in 2H'25, though recent talks have been stuck with no ceasefire; after a potentially significant Ukrainian drone strike on Russia's bomber fleet, will this stymie or accelerate talks? Crude oil term structure could eventually be under more downside pressure if Iran's oil exports hold up, if US sanctions do not bite as much, or if there is a nuclear deal. Timespreads should weaken as OPEC+ compliance stays weak and the producer group continues with faster tapering in Aug'25, and if downside risks continue to emerge for the economy and trade. Some trade flows may have been heightened ahead of tariffs, and can turn down progressively through mid-year, even if US-China and other trade barriers are pulled back from more extreme levels to moderate but still incrementally trade-negative levels. 3Q'25 may be supported by strong Mideast summer crude burn for power generation and robust refinery runs and summer driving, but these factors should ease by end-3Q, though hurricane wildcard risks remain until Nov'25.

Absolute level of total oil inventories vs. Brent 12M (inverted)



Inventories in days of forward demand cover vs. Brent 1-12M (inverted)



Source: OilX, Bloomberg, Citi Research estimates

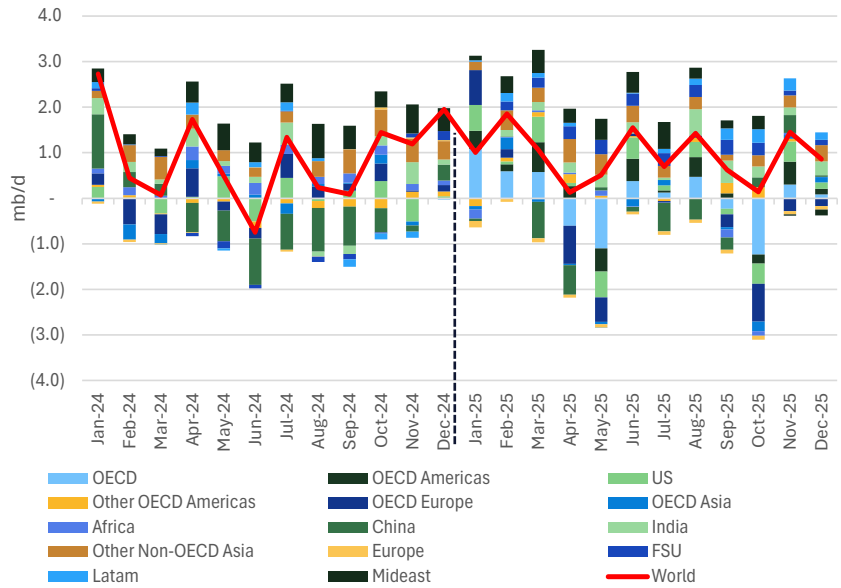
Oil demand: some summer seasonal strength, but downside risks remain

We continue to peg 2025 global oil demand growth at 1-m b/d, and 2026 at 0.9-m b/d, still with downside risks, as we did not fully bake in the most extreme tariff numbers first proposed in the Trump administration's major tariffs announcement on April 2,, or in subsequent escalation between the US and China, which is likely to be negotiated down by some amount. We did find that in a blanket US tariff on goods imports of 10% scenario, global oil demand growth could soften to just over +0.6-m b/d in 2025 and +0.5-m b/d in 2026; if these end up at an effective 15% US tariff, this keeps demand at risk, and thus could yield potential larger oversupply in balances.

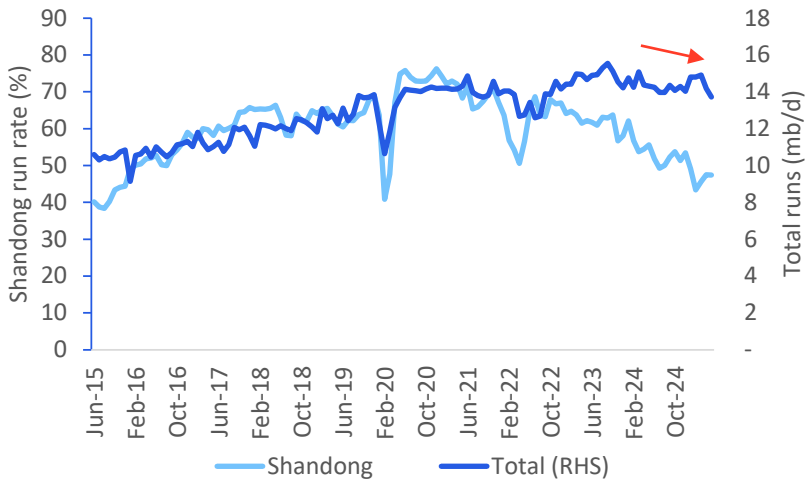
- Non-OECD oil demand is forecast to expand by ~1-m b/d y/y, driven by India and the Middle East at around 0.2-0.3-m b/d y/y each. However, China's real oil demand could grow by 0.1-m b/d in 2025 but decline by ~0.2-m b/d in 2026 as road transport fuel demand growth turns negative.
- OECD oil demand should be relatively flat, supported by the Americas. In Asia, the global trade slowdown could add pressure on South Korea alongside the secular decline in Japan.

On refined products, oil demand growth is mainly driven by petrochemical feedstock (NGLs and naphtha) amid the petrochemical capacity expansion in China, while road fuels continue to face headwinds as China's gasoline demand turns negative and global diesel demand growth faces further risks.

Global oil demand y/y by region, 2024-2025E



China's oil demand is slowing, as total refinery runs (RHS) have moderated, while Shandong refinery run rates (LNS) have fallen, especially if some refineries can't obtain sanctioned, discounted oil, such as Iranian oil

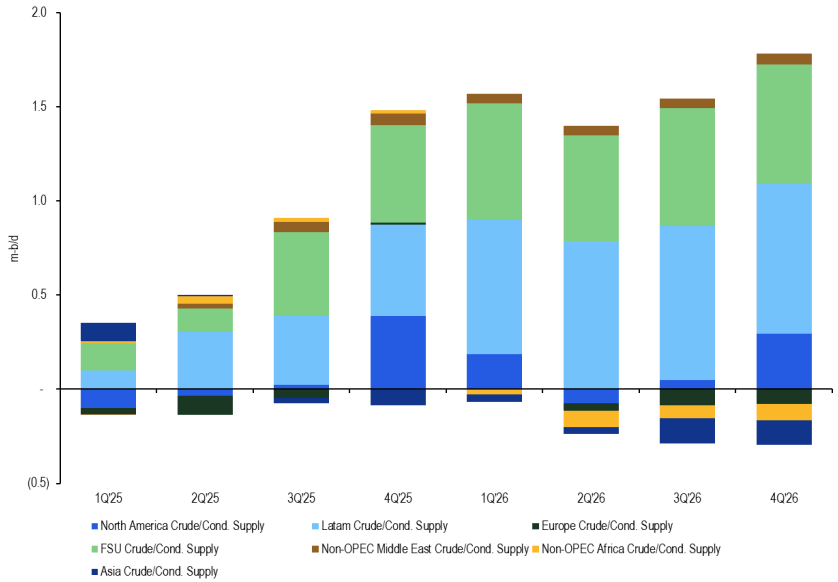


Source: EIA, IMF, IEA, JODI, FGE, China NBS, Citi Research estimates

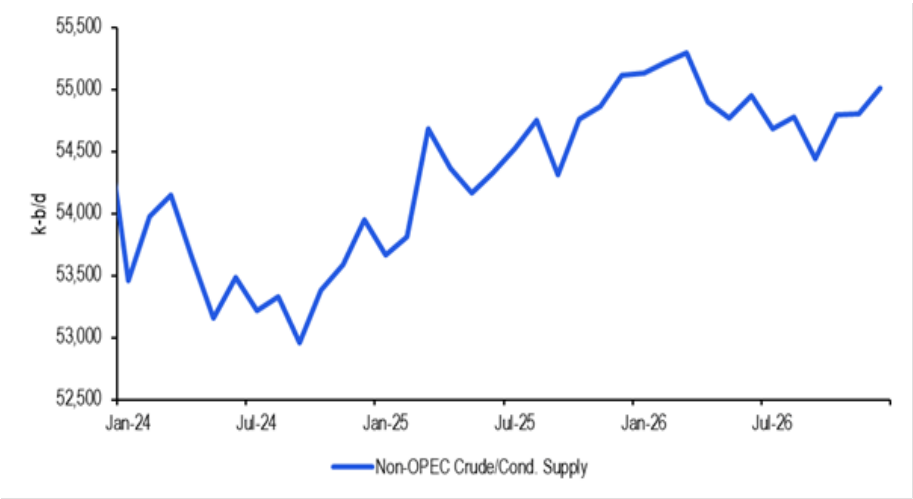
Non-OPEC+ supply growth driven by Americas, but US slowing in 2026

- **Non-OPEC crude oil, condensates and NGLs production is projected to rise by 1.2-mb/d in 2025 and 0.6-mb/d in 2026.** These are out of the total expected liquids supply growth of 2-mb/d in 2025 and 1.3-mb/d in 2026. Global oil supply growth is driven by unconventional production, including oil sands and shale oil in North America this year, before entering into declines next year, and shallow and deep water in the rest of the Atlantic Basin.
- **At the country level for 2025,** US crude oil and NGLs supply can rise by ~0.5-m b/d; Canada could grow by 0.2-m b/d with some wildfire impact currently; Brazil could grow 0.3-m b/d or more, after delays and maintenance muted supply growth in 2024. Guyana and Argentina could each add ~0.1-m b/d in 2025. Mexico continues to underperform on budgetary and debt constraints, and Norway sees a little annualized growth from the delayed Johan Castberg megaproject.
- **Non-OPEC+ supply growth continues to add pressure vs. the "call on OPEC+" oil,** which is further exacerbated by poor compliance from Iraq, Kazakhstan, and the UAE, which in part contributed to the OPEC+ group moving to an accelerated unwind of cuts so far over Apr-Jul'25, which could stretch for a month or two more before potentially pausing again. Amid these dynamics, a market surplus should persist throughout 2025. So far, much of the stock builds have been seen in oil on water and outside OECD, but major hubs and on-land stocks should see more builds through 2H'25.

Top contributions by region to global oil supply growth vs. 4Q'24



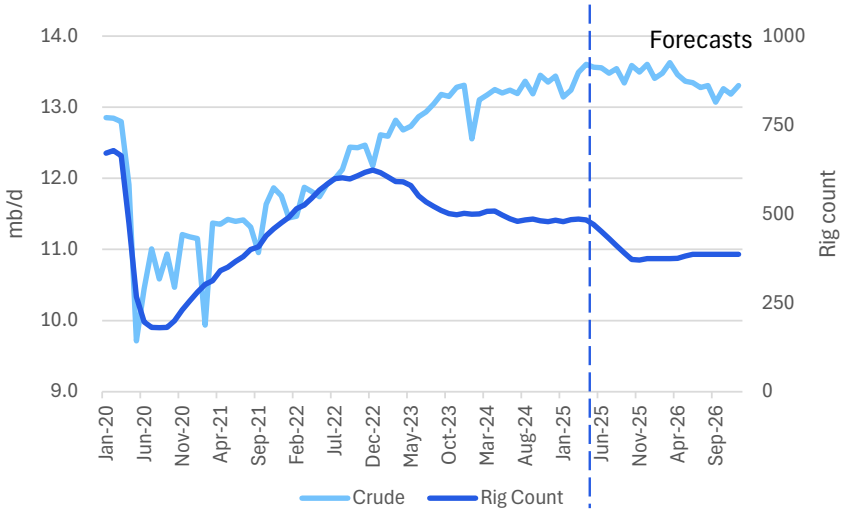
Non-OPEC supply to keep climbing in 2025 before stabilizing in 2026



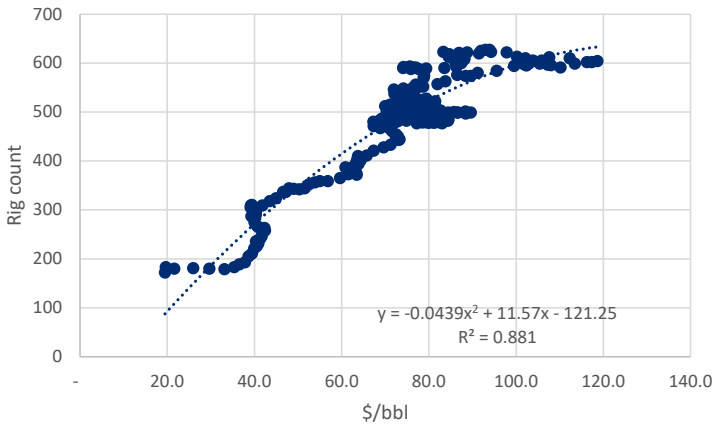
Source: Citi Research, IEA, EIA, OilX

US production growth should fall, sowing the seeds of future price recovery

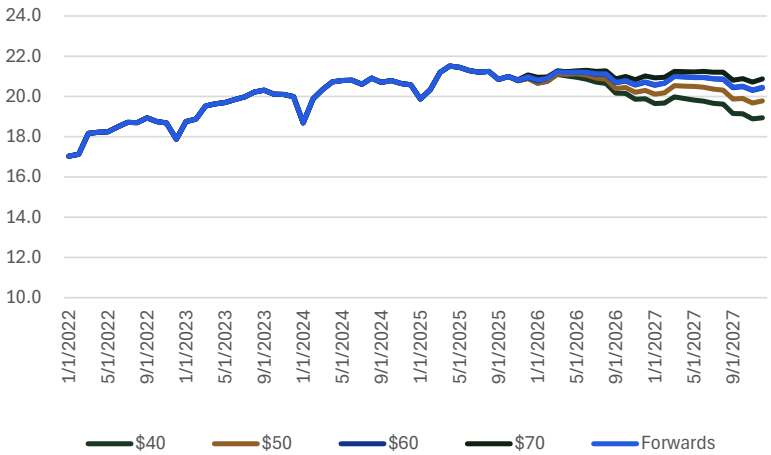
Projected US crude oil production assuming current futures should imply a peak then fall of production in the months ahead



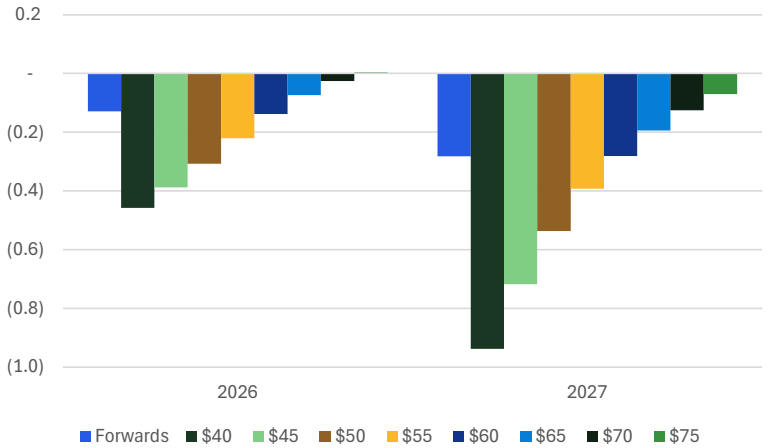
We do expect US oil rig count to keep falling for now, as seen in the following WTI vs. US oil rig count relationship since 2020 after the COVID period that forced many US producers to restructure...



...Resulting in the following total US crude + NGLs production trajectories based on different prices...



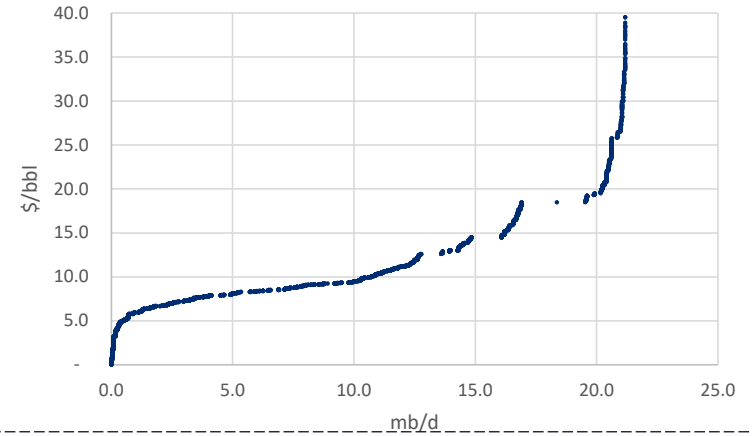
Nonetheless, US crude oil production could fall substantially in 2026 and 2027, particularly if Brent were to average around the mid-$40s/bbl and WTI at ~$40/bbl. The 2026-27 cumulative fall could be ~1.3-mb/d...



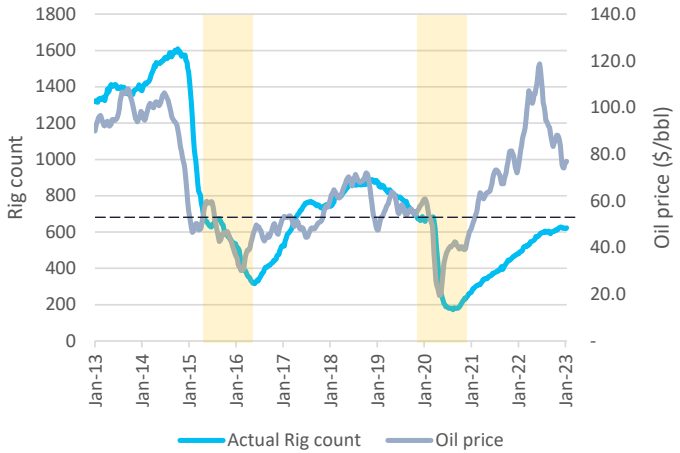
Source: Baker Hughes, Bloomberg, Citi Research

US oil production response subject to price levels

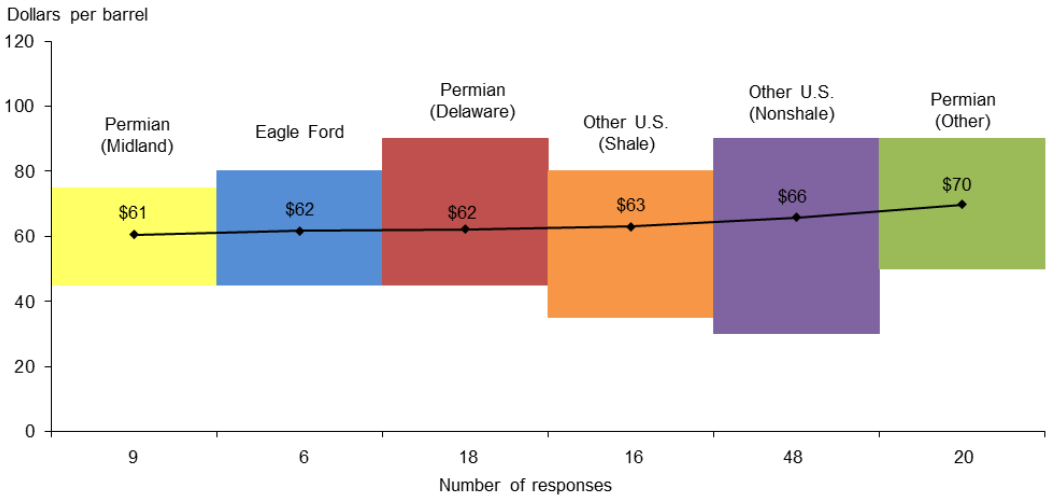
If geopolitical tensions were to ease, US production is far from at risk of major shut-ins: the OPEX curve shows that production shut-ins should not happen unless prices are below $30/bbl, outside of some possible "stripper wells" with negligible volumes



However, if oil prices were to plunge, US oil rig count tended to fall more rapidly when WTI oil prices edge closer to US$50/bbl or below



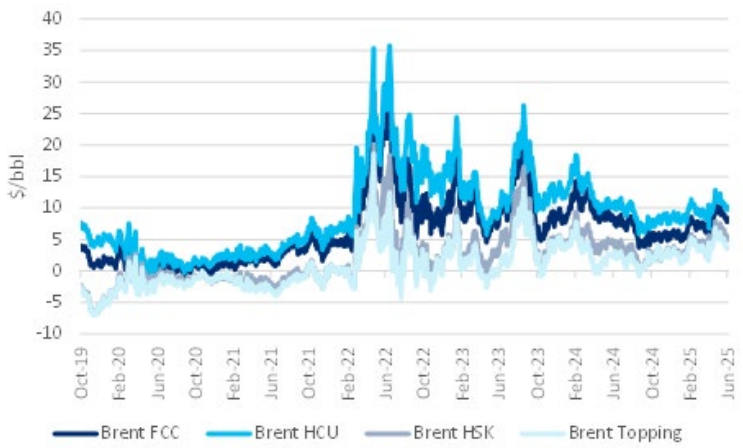
This is consistent with responses to a Dallas Fed question on the willingness to drill: "In the top two areas in which your firm is active: What WTI oil price does your firm need to profitably drill a new well?"



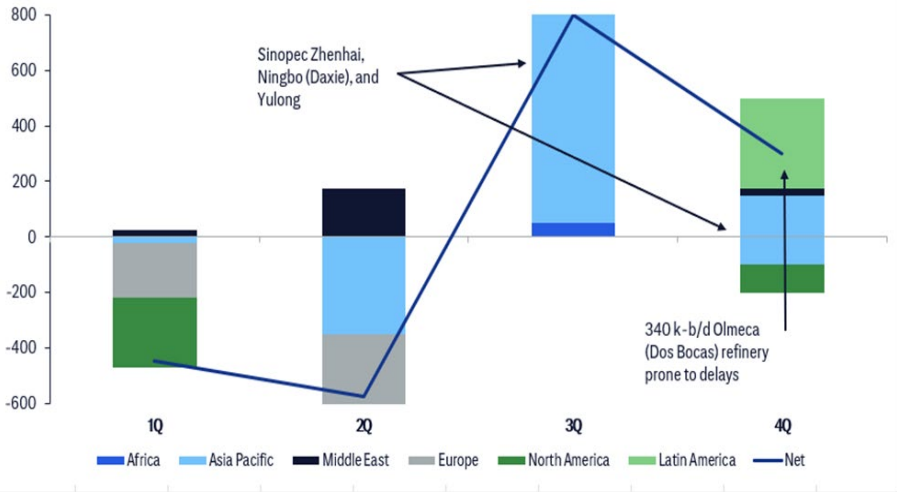
NOTES: Lines show the mean, and bars show the range of responses. Executives from 81 exploration and production firms answered this question during the survey collection period, March 12–20, 2025.
SOURCE: Federal Reserve Bank of Dallas.

Refining margin rebound in 1H'25 could fitfully ease toward 4Q'25

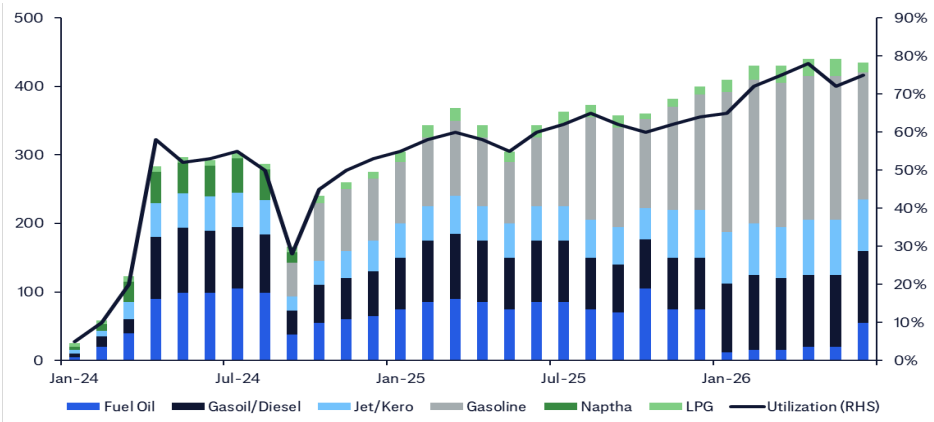
Refining margins had trended higher through 2Q'25, but eased through May, in part mirroring the crude sell-off then claw back to ~$67 Brent



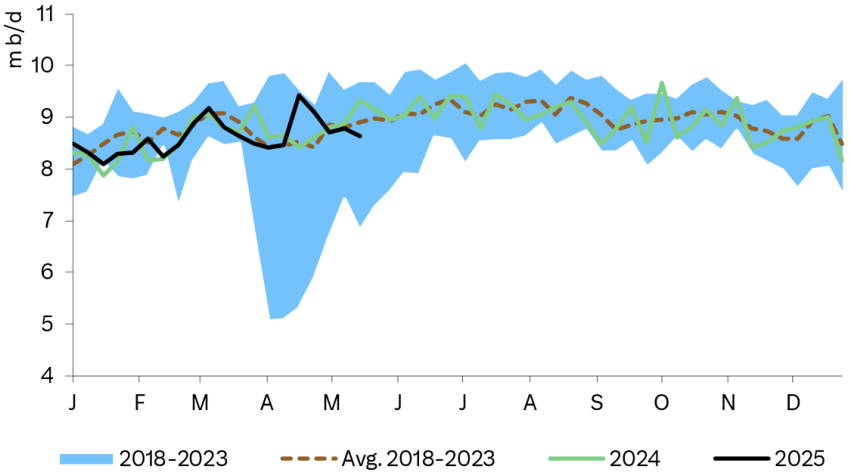
Refinery closures continue but 2H'25 sees some capacity additions, though mainly in China, while the Olmeca refinery could yet see further delays



Dangote's gasoline-focused RFCC unit continues to face issues, with outages in Apr-May, and could run at low rates until Oct'25; this would restrict its gasoline blending component supply, keeping Atlantic Basin gasoline supply relatively tighter (Dangote estimated refinery output by product, and utilization rate)



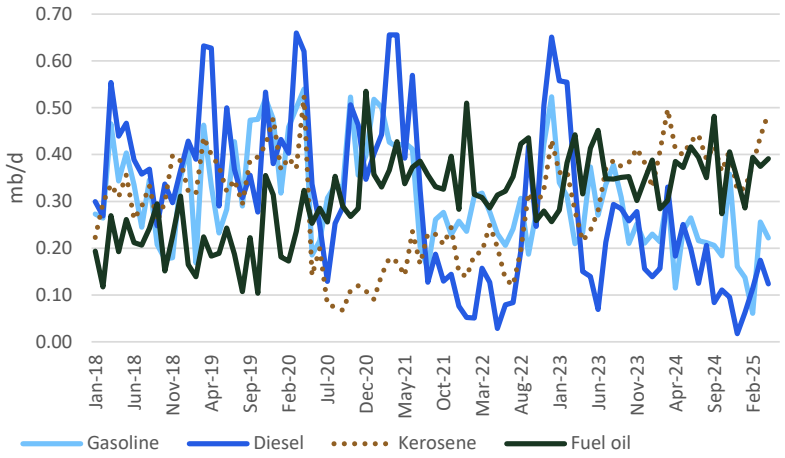
Weekly implied US gasoline demand has been stable, despite lower gasoline prices y/y



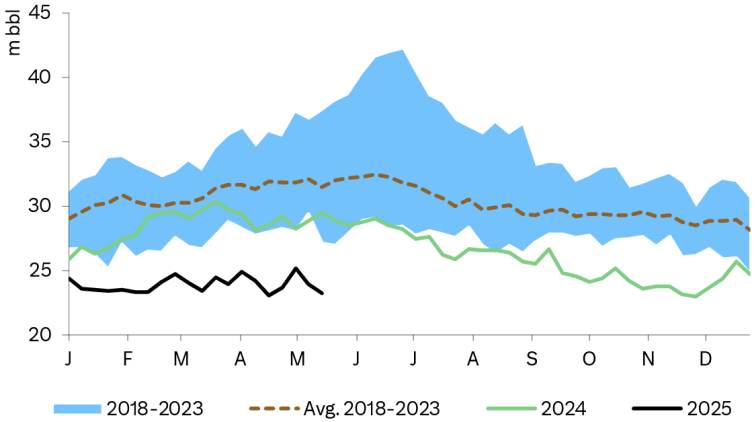
Source: Bloomberg, FGE, Citi Research estimates

Cracks for fuel oil strong, gasoil supported, but demand to eventually weaken

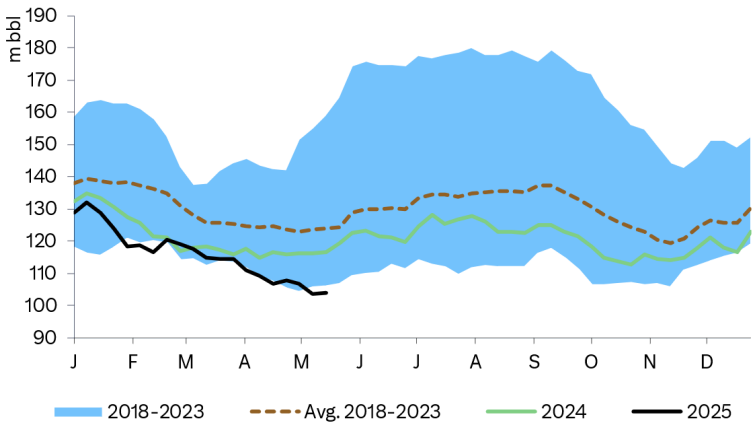
China's petroleum product exports remain flat for fuel oil despite price strength and are still low for gasoil, giving cracks support for now



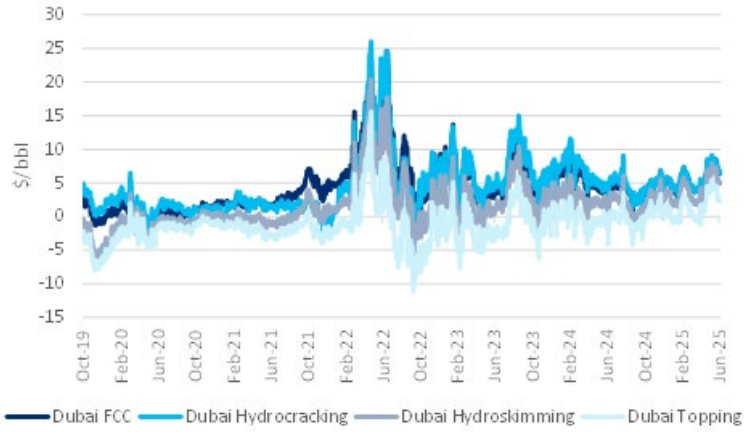
Fuel oil stocks in the US (shown below) and Europe are low amid robust freight demand, so that strong cracks have supported margins of simpler refineries, but the front-loading of trade should eventually pass



Similarly, diesel stocks in the US are allow and help to support cracks, but an expected slowing of freight demand and seasonal weakness should emerge...



...Thus, refining margins, particularly for simple refineries that are currently strong and more backwardated than crude oil's front-of-the-curve backwardation, should weaken as demand slows



Citi global oil/liquids balances*

Demand	1Q'23	2Q'23	3Q'23	4Q'23	1Q'24	2Q'24	3Q'24	4Q'24	1Q'25	2Q'25	3Q'25	4Q'25	1Q'26	2Q'26	3Q'26	4Q'26	2023	2024	2025	2026	'24	'25	'26
US Total Oil Demand	19.8	20.4	20.3	20.6	19.8	20.4	20.5	20.6	20.3	20.1	20.4	20.4	20.0	20.1	20.4	20.4	20.3	20.3	20.3	20.2	0.0	0.0	(0.1)
Other OECD Americas Total Oil Demand	4.5	4.6	4.8	4.5	4.5	4.5	4.6	4.5	4.4	4.5	4.6	4.5	4.6	4.5	4.7	4.6	4.6	4.5	4.5	4.6	(0.1)	(0.0)	0.1
OECD Europe Total Oil Demand	13.2	13.6	13.7	13.4	12.9	13.6	14.0	13.5	12.9	13.5	14.1	13.3	13.2	13.4	14.1	13.3	13.5	13.5	13.5	13.5	0.1	(0.0)	0.0
OECD Asia Total Oil Demand	7.7	6.9	7.0	7.4	7.5	7.0	6.9	7.4	7.3	6.9	6.9	7.4	7.6	6.9	6.9	7.4	7.2	7.2	7.1	7.2	(0.0)	(0.1)	0.0
OECD Total Oil Demand	**45.2**	**45.4**	**45.8**	**45.9**	**44.7**	**45.5**	**46.1**	**45.9**	**45.0**	**45.0**	**46.0**	**45.7**	**45.4**	**44.9**	**46.1**	**45.7**	**45.6**	**45.5**	**45.4**	**45.5**	**(0.0)**	**(0.1)**	**0.1**
China Total Oil Demand	15.8	17.1	16.8	15.9	16.1	16.4	16.2	16.1	16.7	16.1	15.9	16.6	16.0	16.0	15.8	16.4	16.4	16.2	16.3	16.1	(0.2)	0.1	(0.2)
India Total Oil Demand	5.2	5.2	4.9	5.1	5.4	5.4	4.9	5.4	5.4	5.5	5.3	5.6	5.8	5.8	5.5	5.8	5.1	5.3	5.4	5.7	0.2	0.2	0.3
Other Non-OECD Asia Total Oil Demand	9.1	9.0	8.9	9.1	9.4	9.2	9.3	9.6	9.7	9.6	9.4	9.8	10.0	9.9	9.7	10.1	9.0	9.4	9.6	9.9	0.4	0.2	0.3
Africa Total Oil Demand	4.4	4.2	4.3	4.3	4.5	4.4	4.5	4.5	4.6	4.5	4.4	4.5	4.5	4.5	4.4	4.5	4.3	4.5	4.5	4.5	0.2	0.0	0.0
Non-OECD Europe Total Oil Demand	0.8	0.8	0.9	0.8	0.7	0.8	0.9	0.8	0.7	0.7	0.8	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.7	0.8	(0.0)	(0.1)	0.1
FSU Total Oil Demand	4.2	4.3	4.5	4.5	4.3	4.2	4.4	4.5	4.4	4.4	4.7	4.7	4.5	4.5	4.7	4.7	4.4	4.4	4.6	4.6	(0.0)	0.2	0.0
Middle East Total Oil Demand	9.1	8.6	9.1	9.2	9.4	9.1	9.7	9.7	10.0	9.5	10.0	9.7	10.0	9.7	10.3	10.0	9.0	9.4	9.8	10.0	0.4	0.3	0.2
Latam Total Oil Demand	6.9	7.0	7.2	7.1	7.0	7.1	7.2	7.0	6.8	7.0	7.3	7.2	7.1	7.1	7.4	7.2	7.0	7.1	7.1	7.2	0.0	0.0	0.1
Non-OECD Total Oil Demand	**55.5**	**56.0**	**56.5**	**55.9**	**56.8**	**56.5**	**57.0**	**57.5**	**58.2**	**57.4**	**57.8**	**58.8**	**58.6**	**58.3**	**58.7**	**59.6**	**56.0**	**57.0**	**58.0**	**58.8**	**1.0**	**1.1**	**0.8**
World Total Oil Demand	**100.7**	**101.4**	**102.3**	**101.8**	**101.4**	**102.0**	**103.1**	**103.5**	**103.3**	**102.3**	**103.9**	**104.5**	**104.0**	**103.2**	**104.8**	**105.3**	**101.6**	**102.5**	**103.5**	**104.3**	**1.0**	**1.0**	**0.9**
Supply																							
Canada Crude/Cond. Supply	4.9	4.6	5.0	5.2	5.1	5.0	5.1	5.4	5.3	5.1	5.3	5.4	5.5	5.4	5.4	5.7	4.9	5.1	5.3	5.5	0.2	0.2	0.2
Mexico Crude/Cond. Supply	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.6	1.6	1.7	1.7	1.7	1.9	1.8	1.7	1.6	(0.1)	(0.2)	(0.0)
US PSM Crude/Cond. Supply	12.7	12.8	13.1	13.2	12.9	13.2	13.2	13.4	13.3	13.6	13.5	13.6	13.5	13.4	13.2	13.2	12.9	13.2	13.5	13.3	0.3	0.3	(0.1)
North America Crude/Cond. Supply	**19.5**	**19.3**	**20.0**	**20.4**	**19.9**	**20.0**	**20.2**	**20.5**	**20.3**	**20.4**	**20.5**	**20.6**	**20.7**	**20.4**	**20.3**	**20.5**	**19.8**	**20.2**	**20.4**	**20.5**	**0.4**	**0.3**	**0.0**
Argentina Crude/Cond. Supply	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.9	0.9	0.6	0.7	0.8	0.9	0.1	0.1	0.1
Brazil Crude/Cond. Supply	3.2	3.2	3.5	3.6	3.4	3.3	3.3	3.3	3.5	3.6	3.6	3.7	3.8	3.8	3.8	3.7	3.4	3.4	3.6	3.8	(0.0)	0.3	0.1
Colombia Crude/Cond. Supply	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	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
Guyana Crude/Cond. Supply	0.4	0.4	0.4	0.4	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.8	0.9	0.9	0.9	0.4	0.6	0.7	0.9	0.2	0.0	0.2
Latam Crude/Cond. Supply	**5.6**	**5.7**	**6.0**	**6.1**	**6.1**	**6.0**	**6.0**	**6.1**	**6.3**	**6.4**	**6.5**	**6.6**	**6.8**	**6.9**	**6.9**	**6.9**	**5.8**	**6.1**	**6.4**	**6.9**	**0.2**	**0.4**	**0.4**
Norway Crude/Cond. Supply	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	(0.0)	(0.0)	0.0
UK Crude/Cond. Supply	0.7	0.7	0.6	0.6	0.6	0.6	0.5	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)
Europe Crude/Cond. Supply	**2.9**	**2.9**	**2.8**	**2.9**	**2.9**	**2.8**	**2.7**	**2.8**	**2.9**	**2.9**	**2.8**	**2.9**	**2.9**	**2.9**	**2.8**	**2.8**	**2.9**	**2.8**	**2.9**	**2.9**	**(0.1)**	**0.0**	**0.0**
Azerbaijan Crude/Cond. Supply	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	0.6	0.6	0.6	0.6	0.6	(0.0)	(0.0)	0.0
Kazakhstan Crude/Cond. Supply	2.0	1.9	1.8	1.9	1.9	1.9	1.9	1.7	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	1.9	1.9	2.1	2.1	(0.1)	0.3	0.0
Russia Crude/Cond. Supply	10.9	10.4	10.4	10.5	10.5	10.3	10.1	10.1	10.0	10.1	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.2	10.2	10.4	(0.3)	0.0	0.1
FSU Crude/Cond. Supply	**13.7**	**13.2**	**13.0**	**13.3**	**13.2**	**13.0**	**12.7**	**12.6**	**13.0**	**13.1**	**13.3**	**13.3**	**13.3**	**13.3**	**13.3**	**13.3**	**13.3**	**12.9**	**13.1**	**13.3**	**(0.4)**	**0.2**	**0.2**
Non-OPEC Middle East Crude/Cond. Supply	**2.6**	**2.6**	**2.6**	**2.6**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.6**	**2.5**	**2.6**	**2.6**	**(0.1)**	**0.0**	**0.1**
Non-OPEC Africa Crude/Cond. Supply	**2.3**	**2.3**	**2.4**	**2.4**	**2.3**	**2.2**	**2.3**	**2.3**	**2.2**	**2.2**	**2.3**	**2.3**	**2.2**	**2.2**	**2.2**	**2.1**	**2.3**	**2.3**	**2.2**	**2.2**	**(0.0)**	**(0.0)**	**(0.1)**
China Crude/Cond. Supply	4.3	4.3	4.1	4.2	4.3	4.3	4.2	4.2	4.4	4.4	4.3	4.2	4.3	4.3	4.2	4.2	4.2	4.3	4.3	4.3	0.1	0.1	(0.0)
Asia Crude/Cond. Supply	**6.9**	**6.8**	**6.6**	**6.7**	**6.8**	**6.8**	**6.6**	**6.7**	**6.9**	**6.8**	**6.6**	**6.6**	**6.7**	**6.6**	**6.5**	**6.5**	**6.8**	**6.7**	**6.7**	**6.6**	**(0.0)**	**(0.0)**	**(0.2)**
Non-OPEC Crude/Cond. Supply	**53.5**	**52.8**	**53.3**	**54.4**	**53.9**	**53.4**	**53.2**	**53.6**	**54.1**	**54.3**	**54.5**	**54.9**	**55.2**	**54.9**	**54.6**	**54.9**	**53.5**	**53.5**	**54.4**	**54.9**	**0.0**	**0.9**	**0.5**
Algeria Crude/Cond. Supply	1.2	1.2	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.1	1.1	(0.1)	0.0	0.0
Congo Crude/Cond. Supply	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	0.3	0.3	0.3	0.3	0.3	(0.0)	(0.0)	(0.0)
Equatorial Guinea Crude/Cond. Supply	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	0.1	0.1	0.1	0.1	0.1	(0.0)	(0.0)	(0.0)
Gabon Crude/Cond. Supply	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	0.2	0.2	0.2	0.2	0.2	(0.0)	(0.0)	(0.0)
Iran Crude/Cond. Supply	3.5	3.8	3.9	4.0	3.9	4.2	4.2	4.0	4.1	4.0	3.7	3.9	3.9	3.9	3.9	3.9	3.8	4.1	3.9	3.9	0.3	(0.1)	(0.0)
Iraq Crude/Cond. Supply	4.6	4.3	4.4	4.5	4.4	4.3	4.3	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.5	4.3	4.2	4.2	(0.2)	(0.1)	0.1
Kuwait Crude/Cond. Supply	2.8	2.7	2.7	2.7	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.5	2.6	2.6	(0.2)	0.0	0.0
Libya Crude/Cond. Supply	1.2	1.2	1.2	1.2	1.2	1.2	0.9	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.1	1.3	1.3	(0.1)	0.1	0.0
Nigeria Crude/Cond. Supply	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.5	1.5	1.7	1.7	0.1	0.1	(0.0)
Saudi Arabia Crude/Cond. Supply	10.7	10.3	9.2	9.1	9.2	9.1	9.1	9.1	9.1	9.3	9.7	9.8	9.8	9.8	9.8	9.8	9.8	9.1	9.5	9.8	(0.7)	0.3	0.3
UAE Crude/Cond. Supply	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.6	3.7	3.7	3.7	3.7	3.7	3.4	3.4	3.5	3.7	(0.0)	0.1	0.1
Venezuela Crude/Cond. Supply	0.8	0.8	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	0.8	1.0	1.0	1.0	0.1	0.1	(0.0)
Current OPEC Crude/Cond. Supply	**30.4**	**29.7**	**28.8**	**28.9**	**28.6**	**28.8**	**28.7**	**28.8**	**29.0**	**29.2**	**29.4**	**29.7**	**29.8**	**29.8**	**29.8**	**29.8**	**29.4**	**28.7**	**29.3**	**29.8**	**(0.7)**	**0.6**	**0.5**
World Crude/Cond. Supply	**83.9**	**82.5**	**82.1**	**83.3**	**82.4**	**82.2**	**81.9**	**82.4**	**83.0**	**83.5**	**83.9**	**84.7**	**85.0**	**84.6**	**84.4**	**84.6**	**83.0**	**82.2**	**83.8**	**84.7**	**(0.7)**	**1.5**	**0.9**
Canada NGLs Supply	1.1	1.0	1.0	1.2	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.2	1.3	1.2	1.2	1.3	1.1	1.1	1.2	1.2	0.1	0.1	0.1
OPEC NGLs Supply	3.2	3.2	3.2	3.3	3.2	3.3	3.3	3.3	3.3	3.3	3.3	3.4	3.4	3.5	3.5	3.5	3.2	3.3	3.3	3.5	0.0	0.1	0.2
US PSM NGLs Supply	6.2	6.4	6.6	6.7	6.5	7.0	7.0	7.2	7.0	7.3	7.2	7.2	7.3	7.3	7.3	7.3	6.5	6.9	7.2	7.3	0.4	0.2	0.1
World NGLs Supply	**12.6**	**12.8**	**13.1**	**13.4**	**13.2**	**13.6**	**13.6**	**13.9**	**13.7**	**14.0**	**13.9**	**14.1**	**14.2**	**14.1**	**14.2**	**14.3**	**13.0**	**13.6**	**13.9**	**14.2**	**0.6**	**0.4**	**0.3**
World Biofuels Supply	2.6	3.2	3.5	3.2	2.8	3.5	3.8	3.3	3.0	3.5	3.8	3.4	3.0	3.6	3.9	3.5	3.1	3.3	3.4	3.5	0.2	0.1	0.1
World Processing Gains Supply	2.3	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.4	2.4	2.4	2.5	0.0	0.0	0.1
World Other Supply	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.8	0.9	(0.0)	0.1	0.0
World Other Supply	**5.7**	**6.4**	**6.8**	**6.4**	**5.9**	**6.7**	**7.0**	**6.5**	**6.2**	**6.8**	**7.1**	**6.7**	**6.3**	**6.9**	**7.2**	**6.8**	**6.3**	**6.5**	**6.7**	**6.8**	**0.2**	**0.2**	**0.1**
World Liquids Supply	**102.3**	**101.8**	**102.0**	**103.1**	**101.5**	**102.5**	**102.5**	**102.8**	**102.9**	**104.2**	**104.8**	**105.4**	**105.5**	**105.7**	**105.7**	**105.8**	**102.3**	**102.3**	**104.4**	**105.7**	**0.1**	**2.0**	**1.3**
China Liquids SPR Change	0.0	0.1	(0.1)	(0.0)	(0.0)	0.0	(0.0)	0.1	0.0	0.0	-	-	0.1	0.1	0.1	0.1	(0.0)	0.0	0.0	0.1			
US Liquids SPR Change	(0.2)	(0.2)	(0.1)	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.2	-	-	0.2	(0.1)	0.1	0.1	0.1			
US + China Liquids SPR Change	**(0.2)**	**(0.1)**	**(0.2)**	**0.0**	**0.1**	**0.1**	**0.1**	**0.2**	**0.1**	**0.1**	**0.1**	**0.1**	**0.3**	**0.1**	**0.1**	**0.3**	**(0.1)**	**0.1**	**0.1**	**0.2**			
Expected Liquids Stock Changes	**0.0**	**(0.0)**	**(0.9)**	**(0.4)**	**0.9**	**0.4**	**(1.1)**	**(0.6)**	**0.3**	**1.9**	**0.8**	**0.7**	**1.1**	**2.2**	**0.7**	**0.0**	**(0.3)**	**(0.1)**	**0.9**	**1.0**			

ii. Natural Gas: read the fine print – limited upside for the supposedly bullish US gas; but more upside for European gas this summer

Risks skewed higher for TTF/JKM but neutral for Henry Hub balance of year

<u>European TTF natural gas and Asian JKM LNG</u>: With TTF trading at ~€35/MWh (equivalent to $11.7/MMBtu), close to the floor of our range from low-€30s to low-€40s/MWh, we are constructive TTF prices heading into the peak summer season in 3Q. Similarly, JKM trading at $12.3/MMBtu is close to the support levels around $11-12/MMBtu.

- Fundamentally, European inventory remains low, at 48% full by the end of May, compared to ~70% full at this time of the year in 2024 and 2023. Hence, TTF remains supported as European buyers continue to bid for LNG cargoes away from Asia to replenish inventories.
- Meanwhile, Asian buyers have become more active in spot LNG markets lately as they gear up for peak summer season. SE Asian LNG imports are boosted by new LNG power plants and declining domestic production, while Taiwan's LNG demand buoyed by the closure of its last nuclear power plant in May'25. South Korean state weather agency warned of a hot summer outlook, driving Korean companies to step up purchases since late May. China's LNG imports have been weak YTD, but some recent spot buying activities suggest parts of China may be running low on inventory, which indicates China demand may pick up in the next few months, providing support to JKM and TTF prices.
- **Wildcard risks remain: Unplanned outages of Norwegian production or US LNG export disruptions due to hurricanes will see TTF and JKM surge towards low-€40s/MWh and $13.5-14/MMBtu respectively, representing at least 15-20% upsides.** Granted, a Russia-Ukraine peace deal will likely see some Russian gas return to Europe, lowering TTF and JKM prices. Yet as we explained in detail, the volumes of Russian gas returning in the first several months post a deal will be limited due to technical, legal and regulatory hurdles, which should limit the downside to TTF and JKM prices in 2025.

<u>US Henry Hub</u>: We are neutral at $3.7-3.8/MMBtu for 3Q25 given the uncertainty with regard to US restrictions on ethane exports to China and a potentially normal summer weather outlook.

- Daily US production has come off from the record high in mid-May'25, in line with our expectation that production should plateau in 2H25 as producers largely cleared their drilled-but-uncompleted (DUCs) and turn-in-line (TILs) wells. Yet, recent US government restricting ethane exports to China is likely to leave such ethane stranded and therefore sold as natural gas in domestic markets. This will inflate US natural gas production in the coming months, putting downward pressures on Henry Hub prices.
- Weather at the start of summer (May and 1H Jun 2025) has been cooler than or close to normal, which reduced need for cooling-related power demand, and in turn drives natural gas power generation weaker. We expect summer weather outlook to dominate short-term volatility of Henry Hub prices.
- Rapid ramp-up of new US LNG export terminals as well as resilient natural gas power as a percent of thermal power mix have helped to offset partly the bearish drivers from production and weather. They are also reasons why we are neutral at current prices rather than leaning more bearish as some in the markets are.

Citi forecasts for global natural gas benchmarks

($/MMBtu)	1Q24	2Q24	3Q24	4Q24	1Q25	2Q25	3Q25	4Q25	1Q26	2Q26	3Q26	4Q26	2023	2024	2025	2026
Henry Hub																
Base	**2.1**	**2.3**	**2.2**	**3.0**	**3.9**	**3.5**	**3.8**	**4.3**	**4.7**	**5.0**	**5.3**	**5.0**	**2.7**	**2.4**	**3.9**	**5.0**
Bull					3.9	3.5	5.0	5.3	5.7	6.0	6.3	6.0			4.4	6.0
Bear					3.9	3.5	2.9	2.9	2.9	2.9	2.9	2.9			3.3	2.9
Futures					3.9	3.5	3.7	4.2	4.7	4.0	4.3	4.6			3.8	4.4
TTF																
Base	**8.8**	**10.0**	**11.5**	**13.5**	**14.4**	**11.8**	**12.5**	**12.0**	**11.5**	**9.6**	**9.4**	**9.6**	**13.1**	**10.9**	**12.7**	**10.0**
Bull					14.4	11.8	15.3	15.5	15.3	15.1	15.1	15.1			14.2	15.1
Bear					14.4	11.8	7.6	7.2	7.0	6.9	6.9	6.9			10.3	6.9
Futures					14.4	11.7	11.8	12.2	12.2	11.2	11.1	11.3			12.5	11.5
TTF (€/MWh)																
Base	**28**	**32**	**36**	**43**	**43**	**36**	**38**	**36**	**34**	**29**	**28**	**29**	**41**	**35**	**38**	**30**
Bull					43	36	46	46	46	45	45	45			43	45
Bear					43	36	23	22	21	21	21	21			31	21
Futures					47	35	35	37	37	33	33	34			39	34
JKM																
Base	**9.5**	**11.1**	**13.0**	**13.9**	**14.0**	**12.2**	**12.8**	**12.6**	**12.3**	**10.3**	**10.2**	**10.4**	**14.4**	**11.9**	**12.9**	**10.8**
Bull					14.0	12.2	15.3	15.5	15.3	15.1	15.1	15.1			14.2	15.1
Bear					14.0	12.2	7.9	7.8	7.8	7.7	7.7	7.7			10.5	7.7
Futures					14.0	12.2	12.5	12.8	13.0	11.7	11.7	12.1			12.8	12.1
JKM-TTF																
Base	**0.7**	**1.1**	**1.5**	**0.0**	**-0.4**	**0.4**	**0.3**	**0.6**	**0.8**	**0.8**	**0.8**	**0.8**	**1.4**	**0.9**	**0.2**	**0.8**
Bull					-0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.8
Bear					-0.4	0.4	0.3	0.6	0.8	0.8	0.8	0.8			0.2	0.8
Futures					-0.4	0.5	0.6	0.5	0.7	0.5	0.6	0.8			0.3	0.6

European TTF and Asian JKM LNG:

- **Bull case:** This assumes that there will be LNG supply disruptions and a 2025 summer that is hotter than expected. Thus, JKM prices should trade close to naphtha and diesel levels. With European gas inventory also low due to a lack of additional Russian gas supply, Europe will need to bid for LNG, so that TTF could potentially be at parity with JKM.
- **Bear case:** This assumes that Asian LNG demand remains very weak, while weather remains milder than the last couple of years. A peace or ceasefire deal can lead to additional Russian gas flowing to Europe.

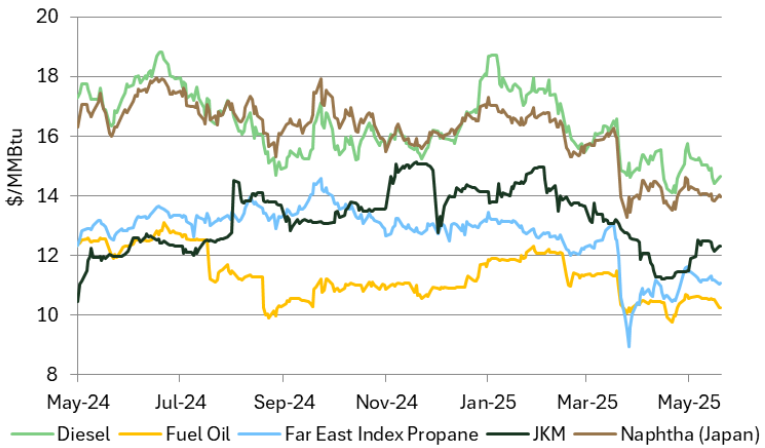
US Henry Hub:

- **Bull case:** This assumes that there is less gas behind pipelines contrary to market expectation, a very hot summer and strong power demand, such as from data centers. Prices need to rise along the switching curve to fill storage and satisfy LNG exports.
- **Bear case:** Producers ramp up production based on high forward prices, while summer turns out to the mild, so that prices would have to fall back to avoid the possibility of storage congestion issue in Oct'25.

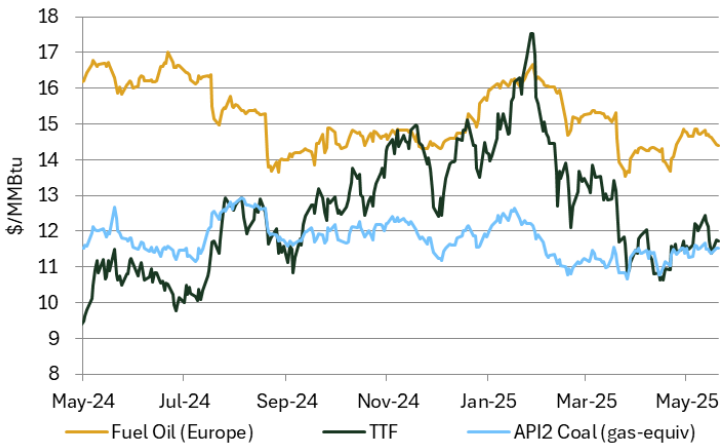
Source: Citi Research, Bloomberg. Note: Futures trading involves substantial risk of loss. Futures prices as of June 10, 2025

Competitive fuels and alternative sources help to set the range of TTF and JKM

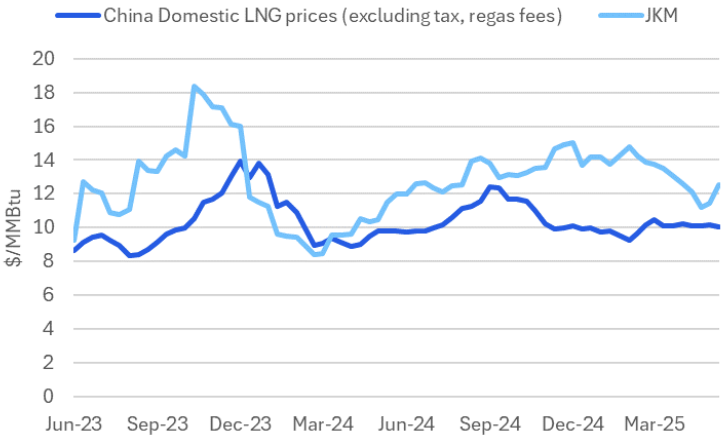
In Asia, propane and fuel oil set the floor at $10-11/MMBtu, while naphtha and diesel set the ceiling at $14-15/MMBtu



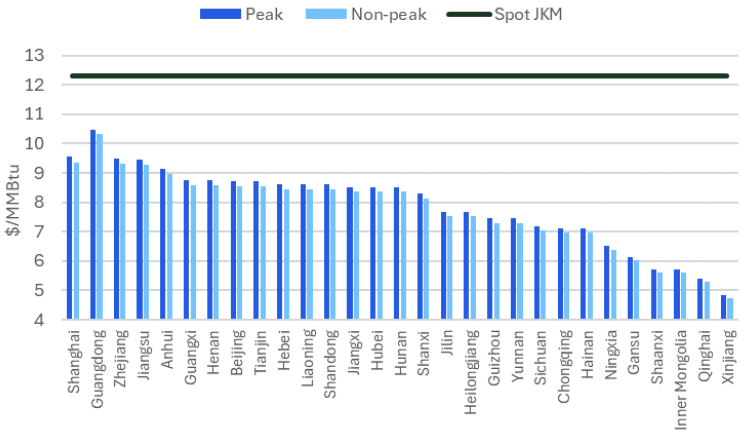
In Europe, API2 coal* sets the floor at $11-11.5/MMBtu (low €30s/MWh) and fuel oil caps at ~$14.5/MMBtu



China's domestic traded LNG prices are steady at CNY 4400-4500/t, which implies that if JKM fall to low $10s/MMBtu, spot LNG becomes attractive again



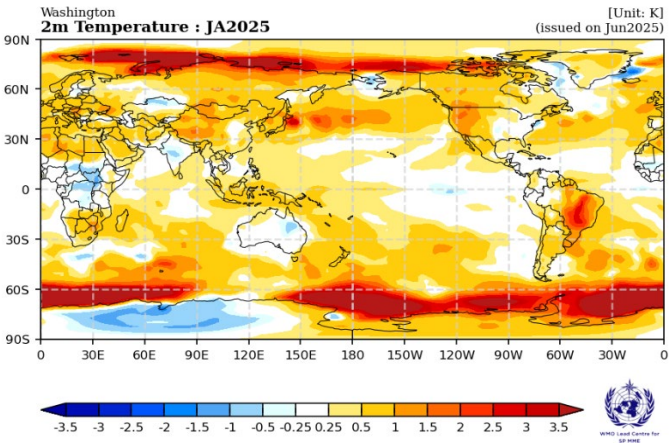
China's national oil companies offer citygate pipeline gas at around $9-10/MMBtu in coastal provinces, implying a lower floor for downstream companies



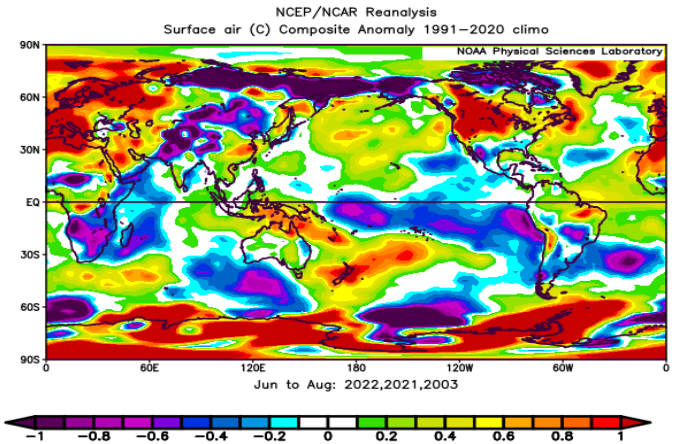
Source: Citi Research, Bloomberg, NDRC, NBS, Company reports. Note: API2 Coal (gas-equiv) and fuel oil (Europe) account for the differences in heat rates and carbon emission costs for

Summer weather can exacerbate tighter TTF vs. JKM; limited upside for 3Q US

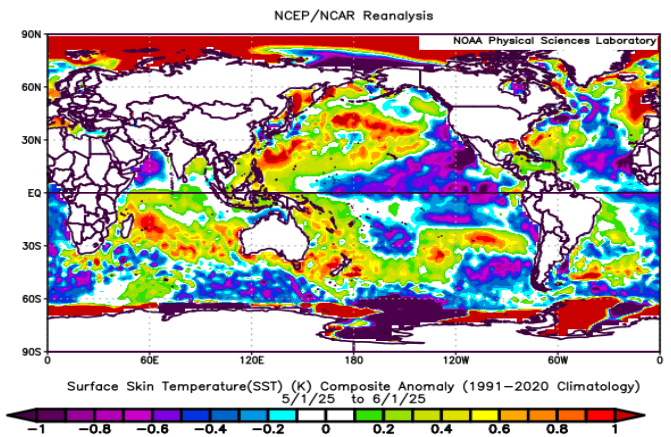
Jul to Aug outlook by NOAA via WMO points to more intense heat in the western part of the US and in Europe compared with less intense heat in the eastern parts of the US and China.



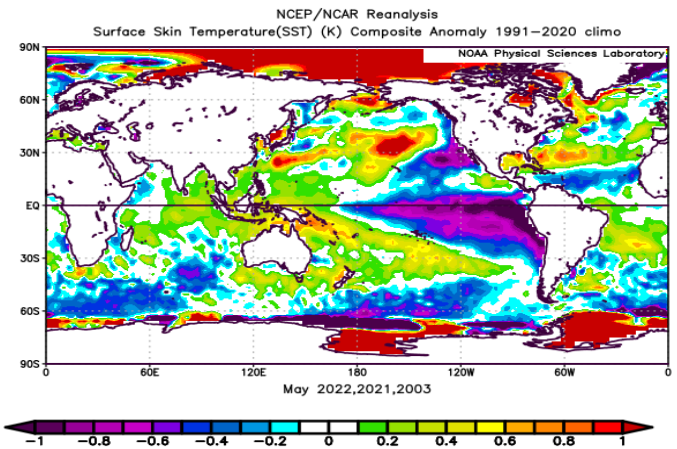
Our analysis of teleconnections based on analog analysis using the years 2003, 2021 and 2022 point to similar outlook for the summer of 2025



The analysis of teleconnections is based on sea surface temperature (SST) anomaly observed in May'25, which serves as initial conditions for subsequent weather evolution..



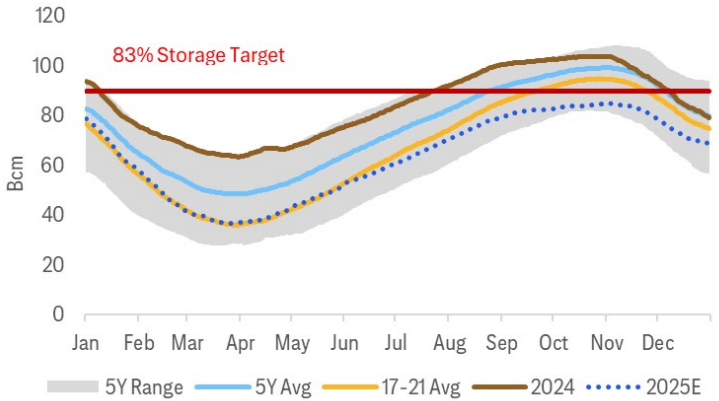
.. And such SST anomaly in May is closely resembled by the May conditions observed in the combined years of 2003, 2021 and 2022



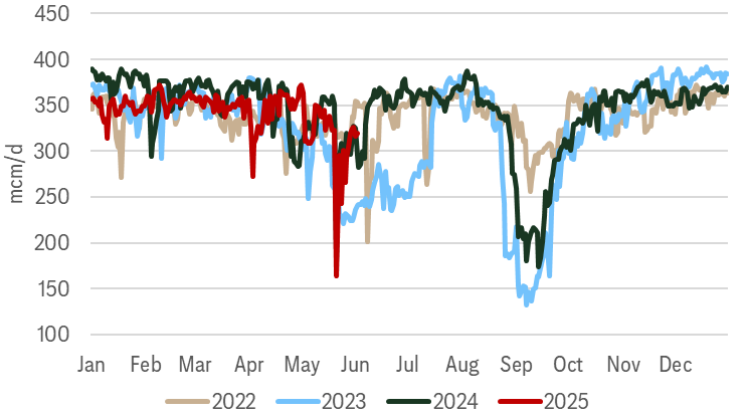
Source: Citi Research, NOAA, NOAA Physical Sciences Laboratory, WMO

EU markets remain fragile with low inventory and unplanned Norway outages

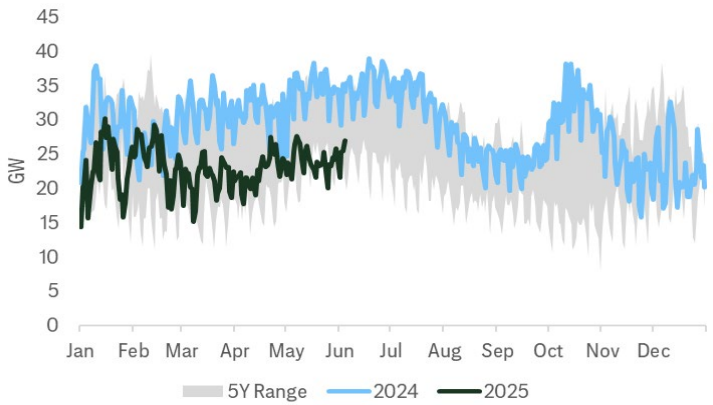
European gas inventory is likely to be less than 80% full heading into winter, which will be far lower than the 95-99% full in the past three years.



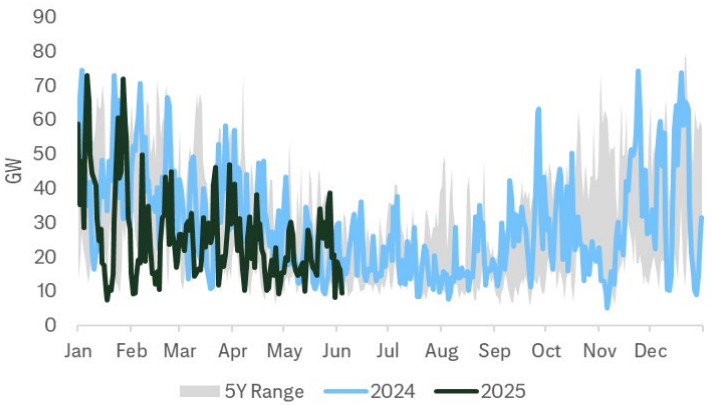
Meanwhile, Norwegian production is in its typical maintenance season, and any additional unplanned outages will likely put markets on edge, like summer 2023.



Hydropower has been much weaker y/y, bolstering natural gas power generation. Yet recent heavy rains in the Alps region helped to replenish reservoirs, likely to cap the strength of natural gas demand...

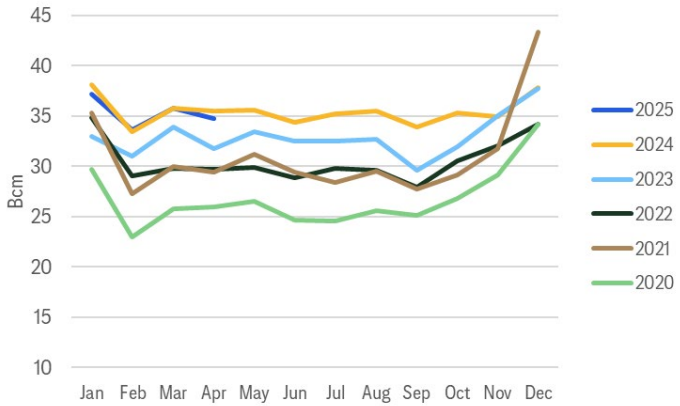


... That said, uncertainty remains high. Europe suffered from prolonged windless periods in Feb-May, driving wind power much weaker y/y. Wind remains an important swing factor for summer gas demand in Europe.

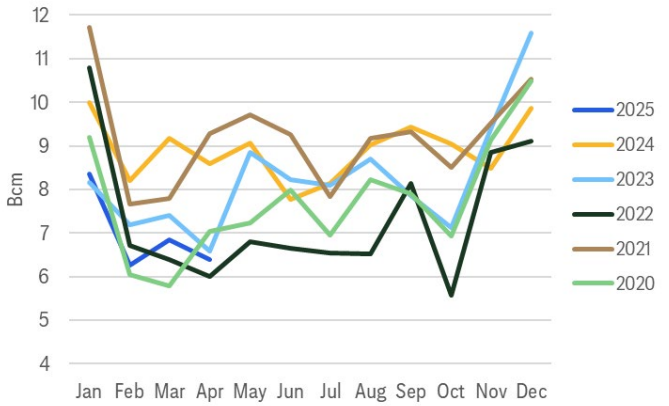


Fundamentally, some bright spots exist in China's demand amid weak macro

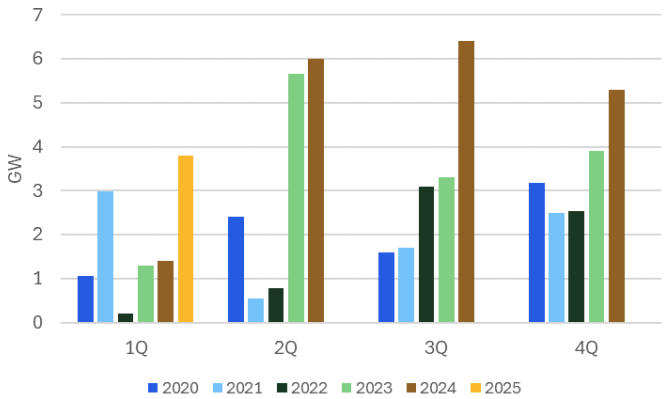
On existing bearish factors: in Jan-Apr'25, China's apparent gas consumption (=actual demand+storage injection) fell 2% y/y, in part due to a warm winter...



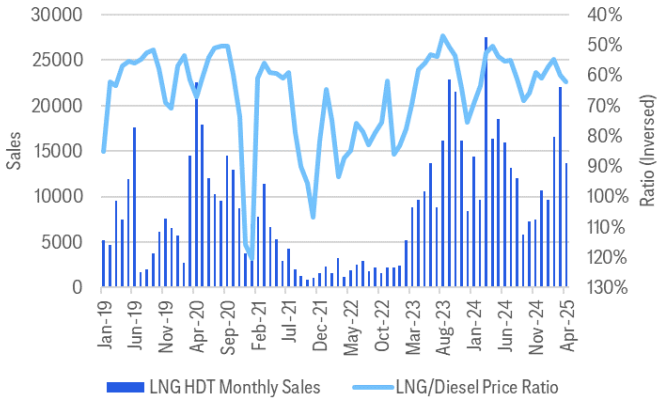
... leading to a 23% y/y decline of LNG imports during Jan-Apr'25, amid weak demand, strong domestic production and pipeline imports



On emerging constructive factors: China added 3.8GW[1] of gas power plants in 1Q25, almost tripled y/y, extending the fast pace of 2024. Renewables growth is set to slow down in 2H25 due to power price reform (Taiyang News, 28 Feb 2025), also supportive of gas power demand.



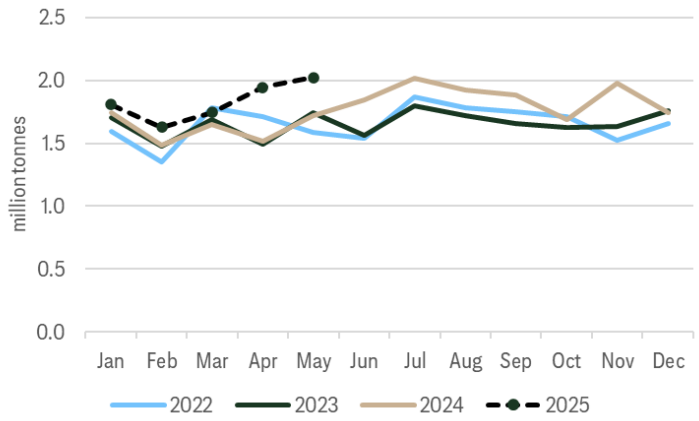
Gas consumption of the transport sector is set to grow y/y after a significant pickup of sales of LNG heavy-duty trucks (HDTs) since 2H23



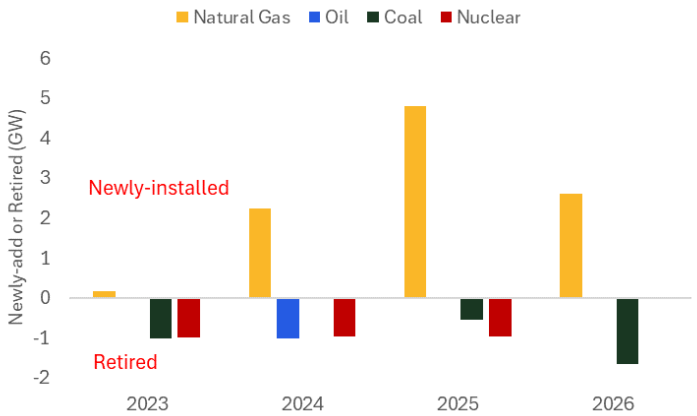
Source: Citi Research, NDRC, NBS, Bloomberg ([1]Please check Citi report for more details: China Power Sector - PRC Power Demand Growth Accelerated in Mar with High Grid Capex)

Mixed picture in other East Asian countries, partly on different nuclear policies

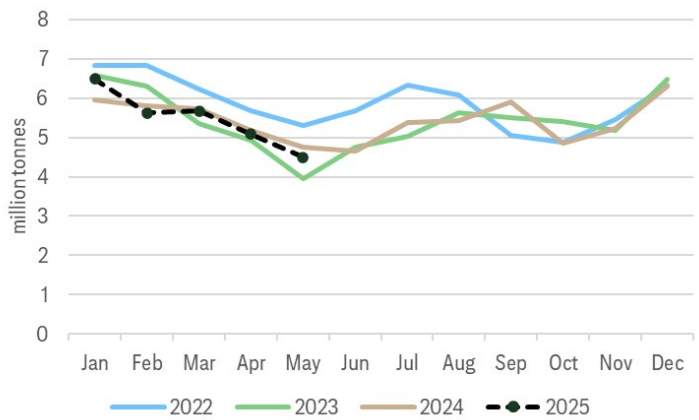
From Jan to May, Taiwan's LNG imports have risen by 13% y/y according to shiptracking data



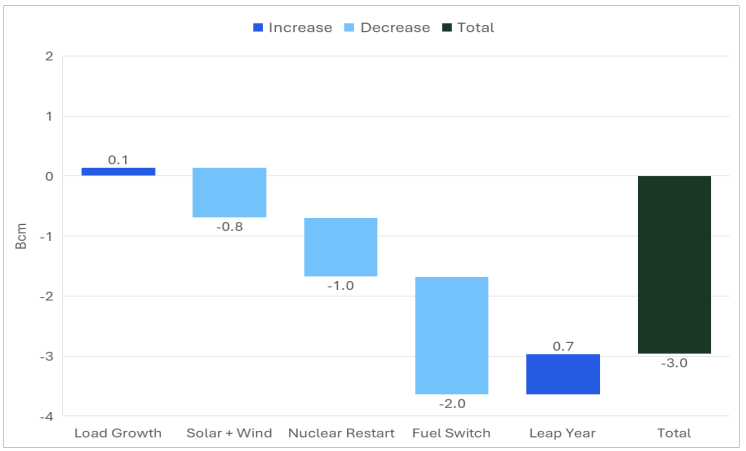
Taiwan's LNG imports will be further lifted in 2H25 thanks to the new Guantang LNG import terminal in Jun'25 and closure of Taiwan's last nuclear unit in May'25.



On the other hand, Japan's LNG imports have fallen y/y since Feb'25 after a strong start of the year



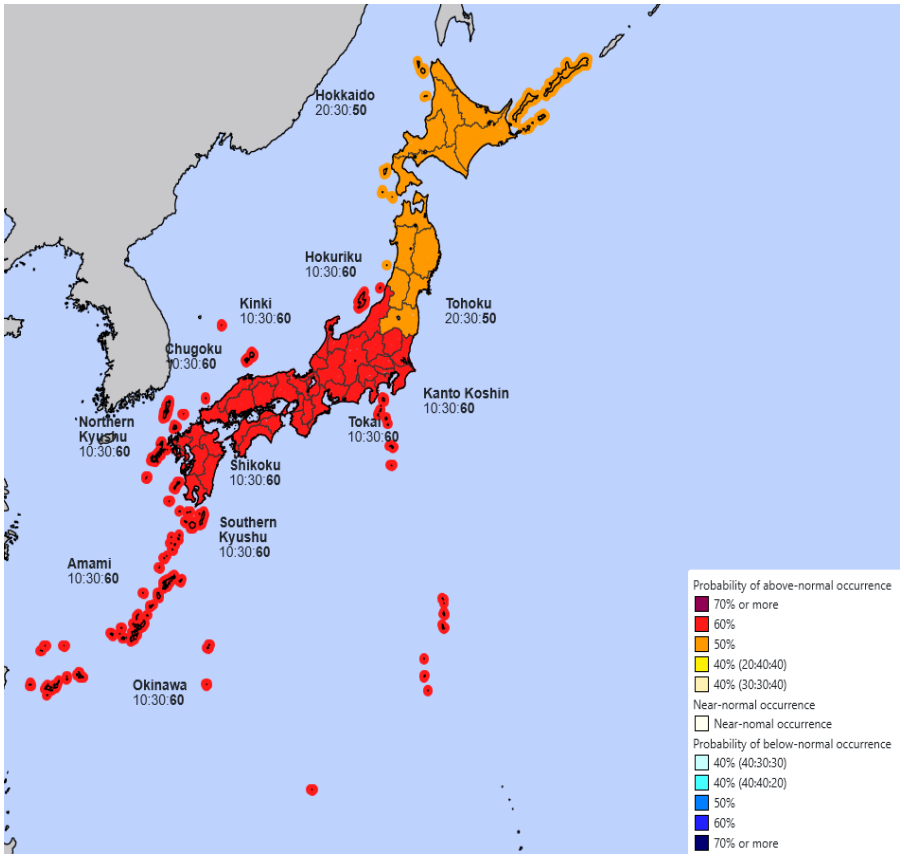
Nuclear restarts, renewables growth and gas to coal/oil switching for power generation are all driving Japan's LNG imports lower y/y



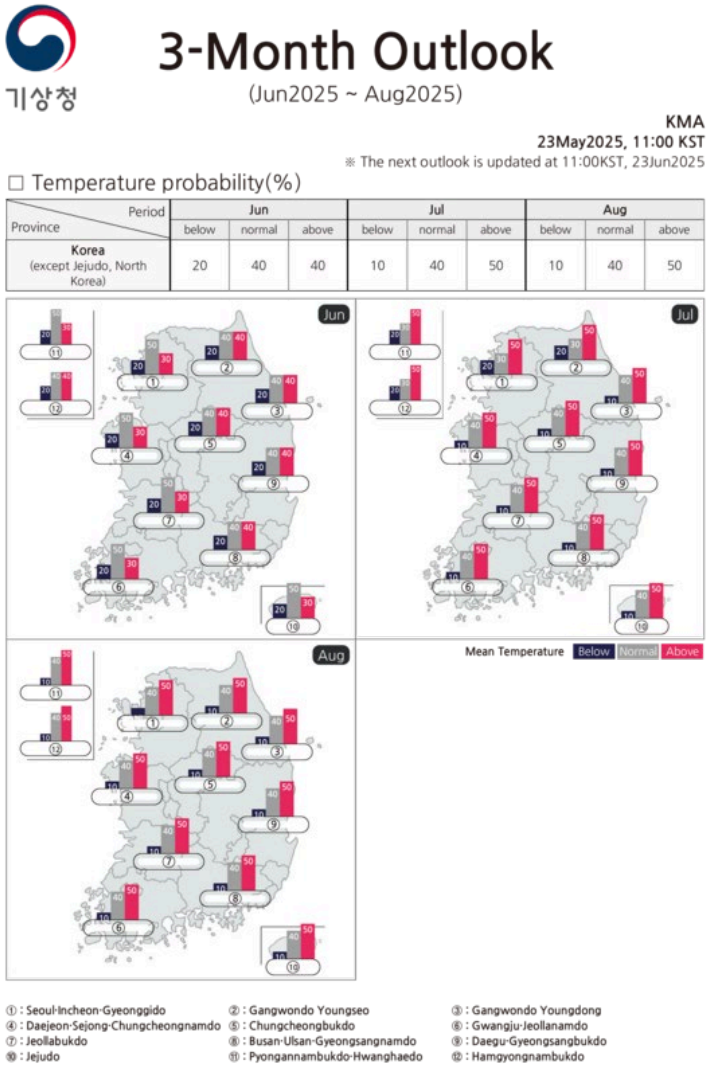
Source: Citi Research, METI, Bloomberg, Company reports

Hot summer is set to boost LNG demand by East Asian countries

Japan Meteorological Agency expect Jun-Aug to be hotter than normal, even though this year may not be as hot as summer 2024, which was the hottest on record



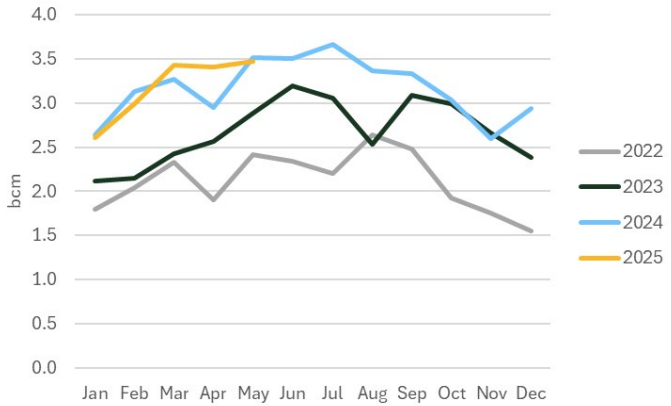
Korea Meteorological Administration's outlook points to hotter than normal summer weather especially in Jul and Aug



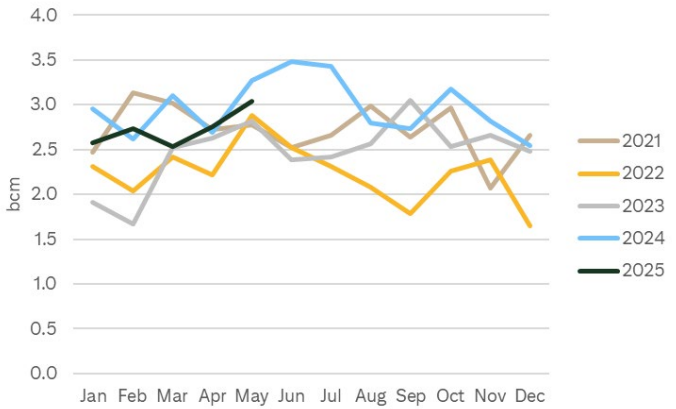
Source: Citi Research, Japan Meteorological Agency, Korea Meteorological Administration

S&SE Asia: strong hydro can be more than offset by high summer temperature

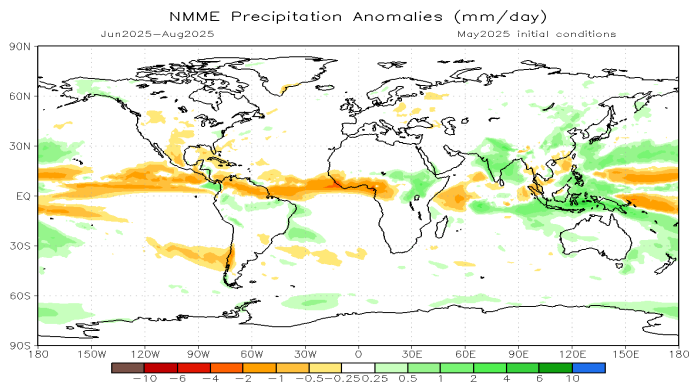
SE Asia's Jan-May LNG imports are up slightly y/y, as the region faces challenges of growing energy demand and falling natural gas production.



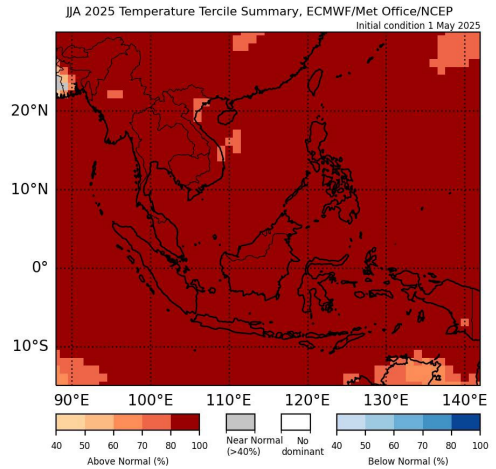
India's LNG imports fell y/y, as high prices led to switching from LNG to oil products. Mild summer weather in May and the early start of the monsoon season also raised hydro output and curbed gas power generation.



Although 2025 Monsoon season (Jun-Sept) is likely to bring above normal rainfall to India and SE Asia, which slows down growth of this region's LNG imports in 3Q25...



...risks of scorching heat in 3Q25 loom large, as Vietnamese governments already urged (Báo Điện tử Chính phủ , 4 June 2025) LNG power plants to come into operation and avoid any power shortages.



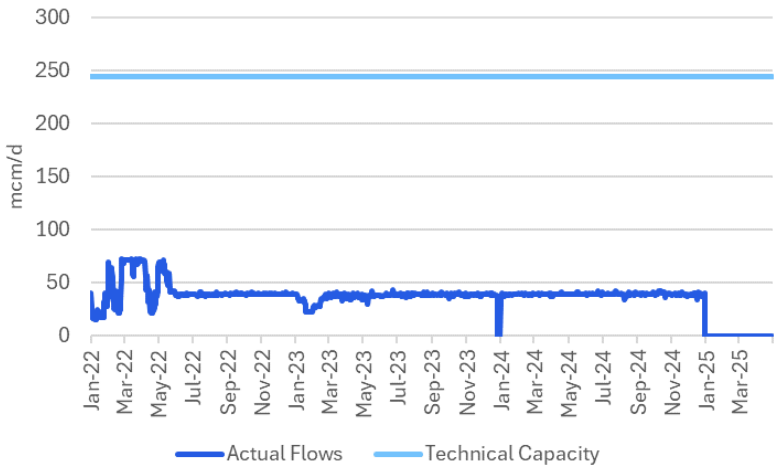
Source: Citi Research, NOAA, Bloomberg, ECMWF, NCEP, UK Met Office

Russian gas back to EU? Technical, legal and regulatory hurdles limit volumes

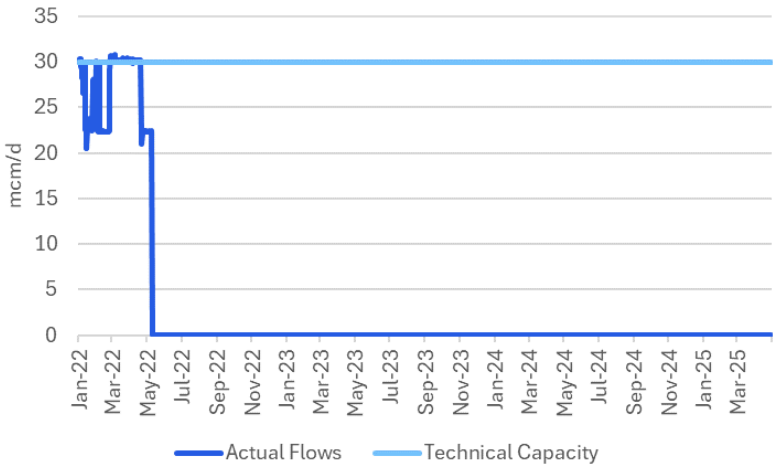
Given the legal and logistics challenges, the Ukraine transit route is likely to be the easiest to start in case of a peace deal, followed by Arctic LNG 2, which is constrained by shipping capacity. Meanwhile, it will likely take some time to clear all the legal hurdles for Nord Stream 2 (NS2) pipeline, which makes it more likely to be many more months after even if the Ukrainian route and Arctic LNG 2 were to start. Chancellor Merz's opposition to NS2 should mean low likelihood of its return, even with a peace deal (Politico, May 28).

- The return of 30-mcm/d of flow on the Ukrainian route should take prices down to around $10/MMBtu (~€30.7/MWh), or a 10 to 15% downside from the current level.
- Adding train 1 of Arctic LNG 2 on top of the Ukrainian route could lower 2026 prices to the $8 to $9/MMBtu range (€24.5 to €27.5/MWh), as the Oct'26 European gas storage can get up to 100% full or above.
- Starting up Nord Stream 2 on top of the above supply additions can take prices down to the $5 to $6/MMBtu range (~€15 to €18/MWh).

Sudzha was the last trans-shipping point on Russia-Ukraine border prior to the compete halt on Jan 1, 2025. However, it was damaged (Tass, 26 March 2025) in Mar'25, and the repair could take long.

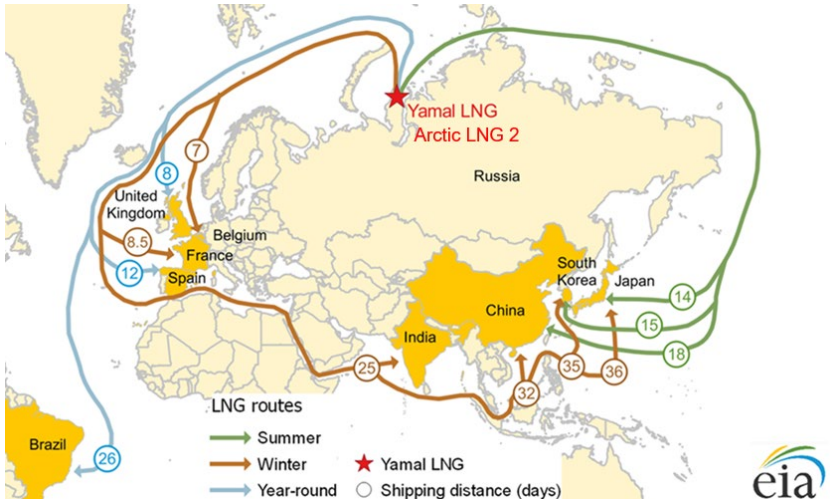


This leaves the Sokhranivka interconnecting point the only option to allow for an immediate restart of Russian gas via Ukraine. However, it is limited by a much smaller capacity of 30-mcm/d, or 11-bcm/y.

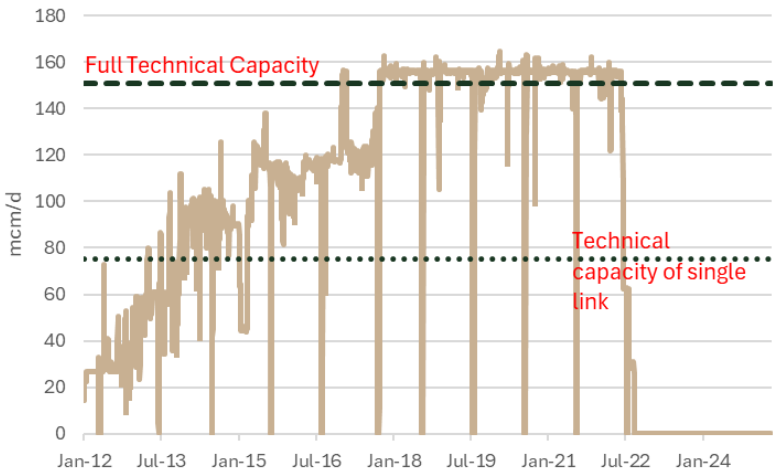


How Russian gas could return as a scenario planning exercise

A fully operational Train 1 of Arctic LNG 2 could add up to 9-bcm/y of additional LNG supply in 2026. Yet further upside is likely limited due to the number of ice-class Arc7 LNG vessels available.

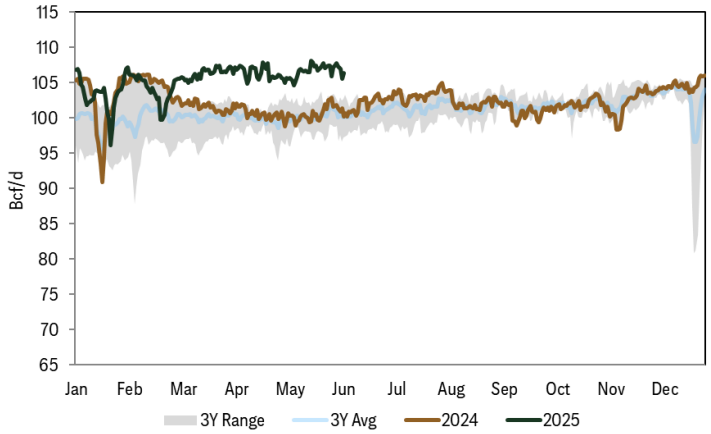


Nord Stream 2 could potentially bring up to 27.5-bcm/y of Russian gas back to Europe. Yet, it still needs to be certified by German government, and signing new contracts is complicated by the proposed EU ban and pending arbitration disputes (Oxford Energy, 15 June 2025)

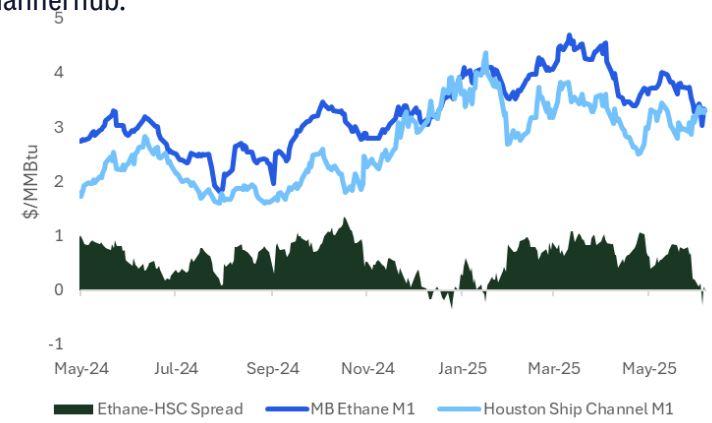


US Henry Hub: ethane rejection, mild weather, better hydro weigh on prices…

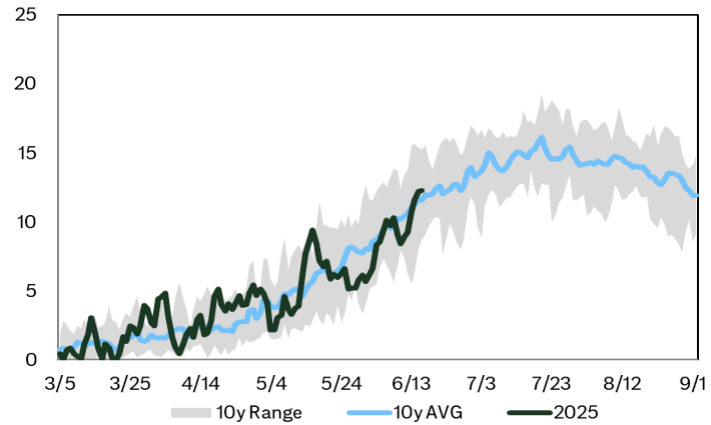
US natural gas production has been much stronger y/y since Mar'25, but it is likely to plateau in 2H25 as producers have likely cleared up their inventories of drilled-but-uncompleted (DUCs) and deferred turn-in-line (TIL) wells..



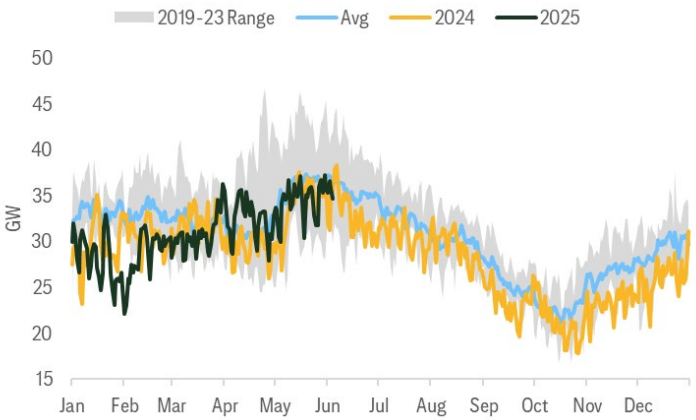
..Yet US restricting (Bloomberg, 5 June 2025) ethane exports to China likely drives more ethane rejection[1], inflating natural gas output in the coming months. US ethane price already fell below gas prices at the nearby Houston Ship Channel hub.



Cooling degree days (CDDs)[2] have been close to or below 10-year average in May and 1H Jun, weighing on gas demand for power generation. Short-term weather outlook will continue to drive price volatilities.



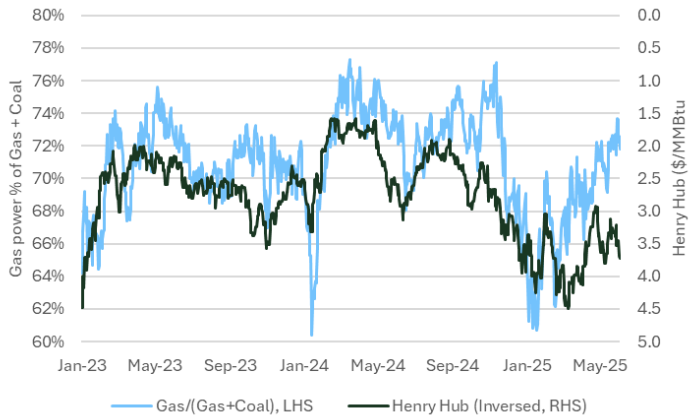
Hydropower recovered strongly in Apr, but y/y growth has slowed down since May. We expect marginal improvements y/y in 3Q after 2024 hydropower fell to the lowest since at least 2010, which adds some downward pressures on natural gas power generation.



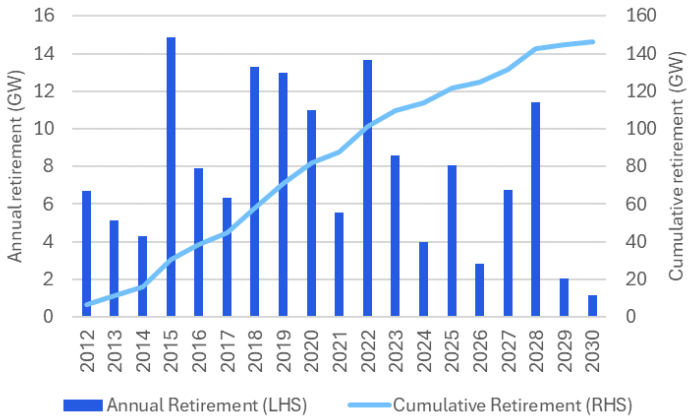
Source: EIA, Bloomberg, Citi Research ([1]Ethane rejection: when ethane prices are low relative to dry natural gas prices, natural gas processing plant operators leave ethane in the processed natural gas and sell it into the natural gas market at its heat value, rather than recover ethane and sell it into the petrochemical sector. [2]CDDs are a measure of how hot the

...yet resilient gas power generation and rising exports provide a floor

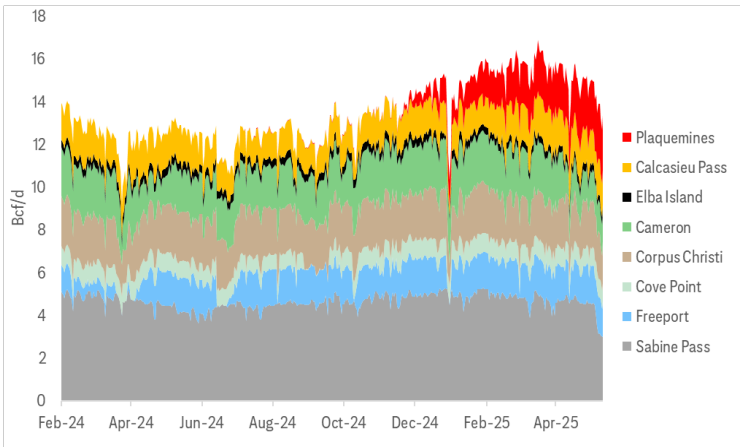
Despite much higher Henry Hub prices y/y, gas % of thermal is resilient at 72-73%, similar to last year's levels, defying some more bearish market expectations.



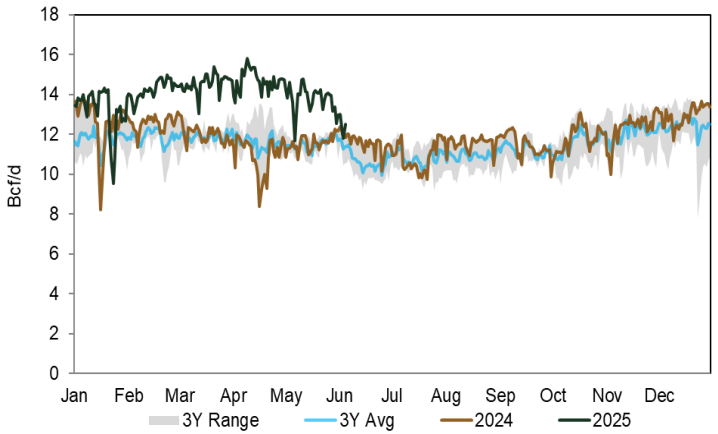
The robust natural gas power output is likely in part supported by coal power plant retirements, along with hot weather being concentrated in the west coast, where few coal power plants are located.



The rapid ramp-up of Plaquemines LNG export terminal and Corpus Christi Stage 3 Expansion led to strong US LNG exports growth YTD..

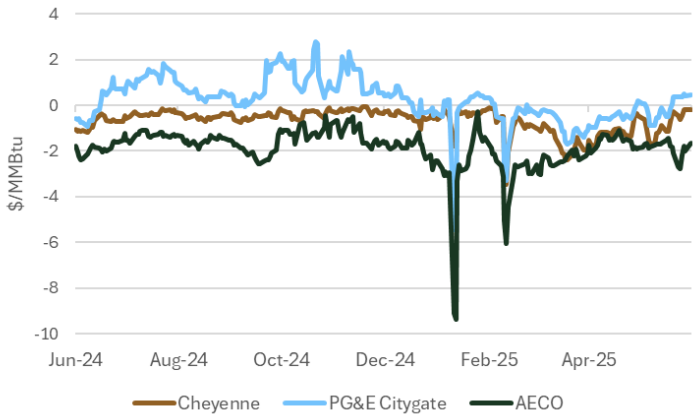


..After planned maintenance in May and Jun, LNG exports should resume the strong y/y growth.

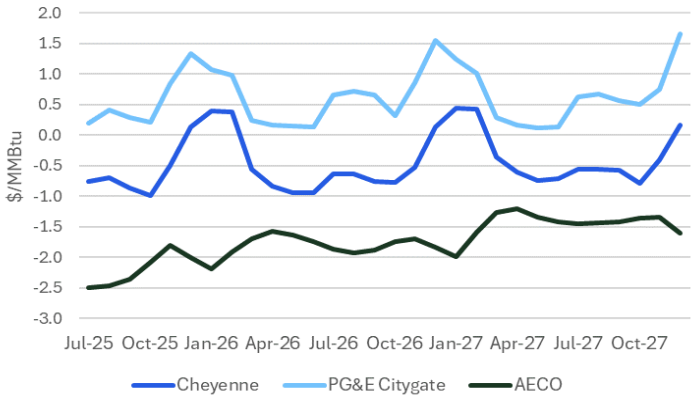


Western US gas prices are firming up against rest of the country since 2Q

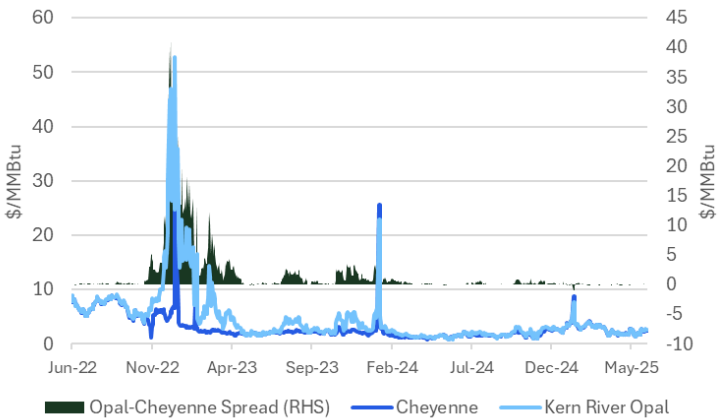
Spot of natural gas basis[1] at Northern California (PG&E Citygate) and Rockies production region has risen in 2Q



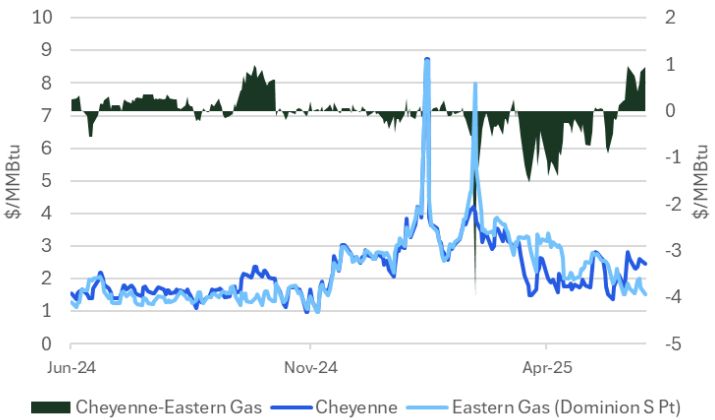
While basis forward curves suggest Northern California (PG&E) stays as a premium market out to 2027, while western Canada (AECO) remains depressed, the PGECG-AECO forwards could narrow as LNG Canada export ramps up over time



The spot natural gas basis spread between western Wyoming (Opal) and eastern Wyoming (Cheyenne) have narrowed, and when the Overthrust Pipeline finishes expansion in 4Q25, the west-east premiums should be further kept in check.



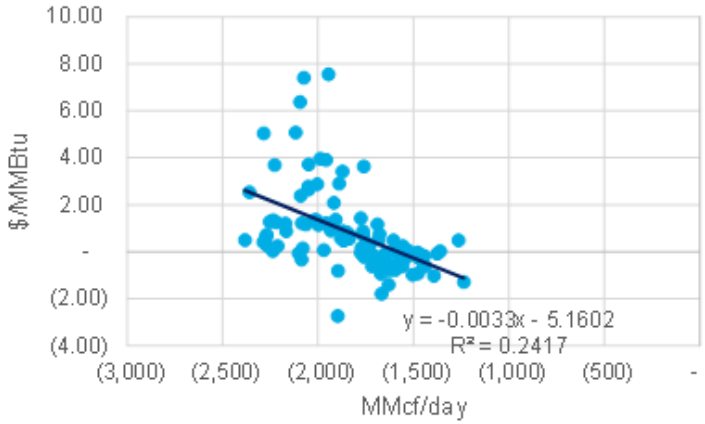
Spot natural gas price at eastern Wyoming (Cheyenne) rallied since late Apr'25 while price in the northeastern US (Eastern Gas) sold off, likely reflective of a sustained demand for Rockies gas out west



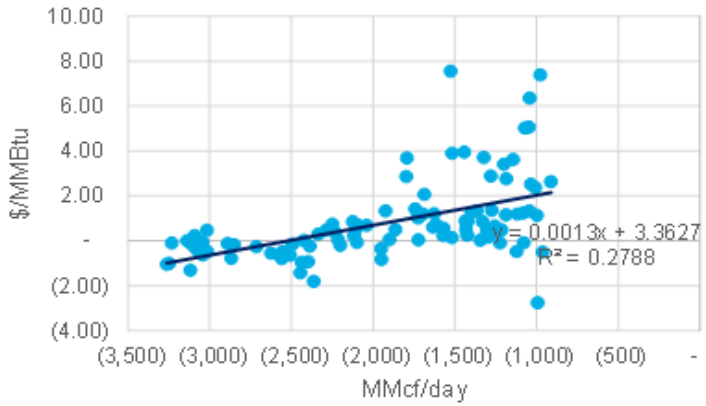
Source: Citi Research, Bloomberg ([1]basis refers to the spread between local natural gas price and Henry Hub)

Key inter-regional gas flows that set the basis in the Rockies region

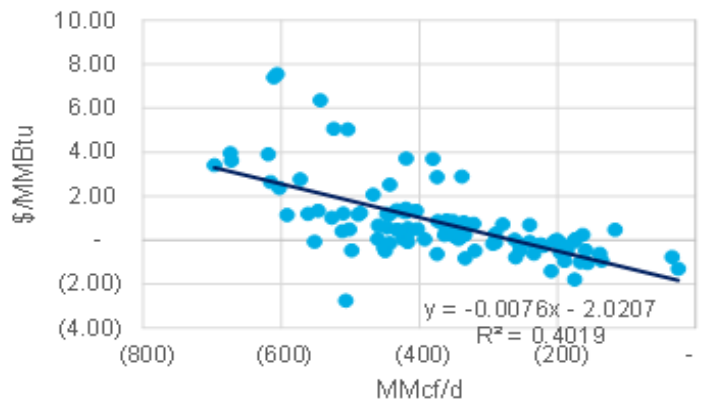
How much of natural gas that the Rockies production region is sending to California is key to determining the western Wyoming (Opal) basis[1]



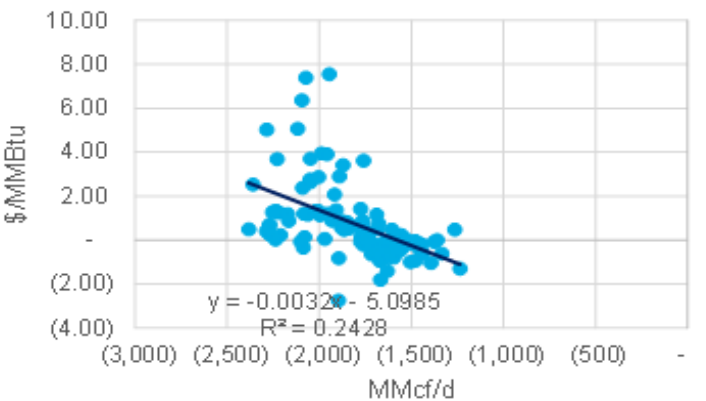
If the demand from the West Coast is weak, then surplus Rockies gas has to go eastward, resulting in a positive correlation between Opal basis and how much natural gas is sent from Rockies to eastern US markets



Breaking it down, the amounts of gas pulled on the Ruby pipeline to Northern California and...



... the amounts of gas pulled on the Kern River pipeline to Southern California are key to Opal basis



Source: Citi Research, Bloomberg ([1]basis refers to the spread between local natural gas price and Henry Hub)

European natural gas supply/demand balance (monthly; 2024-2026; bcm)

	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	2024	y/y
Total Supply	**36.7**	**32.5**	**34.7**	**33.1**	**31.4**	**28.9**	**30.8**	**29.1**	**25.1**	**31.3**	**33.5**	**35.6**	**383**	**(23)**
Production	**18.1**	**16.2**	**17.3**	**15.9**	**15.5**	**15.2**	**16.7**	**16.2**	**12.2**	**16.1**	**16.6**	**16.9**	**193**	**3**
Norway	11.8	10.5	11.4	10.4	10.0	10.4	11.2	10.8	7.2	10.6	10.8	11.2	126	9
UK	3.0	2.5	2.8	2.7	2.5	2.0	2.5	2.3	2.2	2.5	2.8	2.6	30	(4)
Rest of Europe	3.4	3.2	3.2	2.8	3.0	2.8	3.0	3.1	2.8	3.0	3.0	3.1	37	(2)
LNG Imports	**13.0**	**11.0**	**11.2**	**11.1**	**9.7**	**8.1**	**8.3**	**7.3**	**8.0**	**9.1**	**10.6**	**12.5**	**120**	**(26)**
Pipeline Imports (Net)	**5.6**	**5.3**	**6.2**	**6.2**	**6.2**	**5.6**	**5.8**	**5.6**	**4.9**	**6.1**	**6.3**	**6.1**	**70**	**0**
Russia	2.4	2.4	2.7	2.4	2.7	2.4	2.7	2.7	2.6	2.7	2.6	2.7	31	1
Algeria	2.1	2.0	2.6	2.7	2.6	2.4	2.3	2.3	1.6	2.7	2.7	2.5	28	(1)
Libya	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	1	(1)
Azerbaijan	1.0	0.9	1.0	0.9	1.0	0.9	1.0	0.7	0.9	1.0	1.0	1.0	11	0
Total Demand	**54.0**	**40.4**	**38.4**	**30.0**	**23.5**	**21.3**	**21.8**	**19.9**	**23.1**	**29.2**	**42.4**	**48.1**	**392**	**(7)**
Consumption	**54.0**	**40.4**	**38.4**	**30.0**	**23.5**	**21.3**	**21.8**	**19.9**	**23.1**	**29.2**	**42.4**	**48.1**	**392**	**(7)**
Power Demand	9.7	6.9	6.8	5.2	5.3	5.1	6.5	6.3	6.3	6.6	10.2	9.4	84	(7)
Non-Power Demand	44.3	33.5	31.6	24.8	18.3	16.2	15.2	13.6	16.8	22.5	32.3	38.7	308	0
Inventory	**75.9**	**67.7**	**63.2**	**66.9**	**75.2**	**83.3**	**91.8**	**100.2**	**102.5**	**103.6**	**93.2**	**78.8**		

	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	2025	y/y
Total Supply	**34.3**	**32.6**	**35.6**	**33.2**	**32.1**	***29.3***	***30.3***	***28.2***	***26.3***	***32.1***	***35.2***	***37.0***	**386**	**4**
Production	**16.8**	**15.1**	**16.5**	**15.6**	**14.9**	***13.5***	***15.1***	***15.0***	***13.1***	***16.2***	***15.9***	***17.0***	**185**	**(7)**
Norway	10.8	10.0	10.9	10.3	9.7	*8.7*	*10.0*	*10.2*	*8.6*	*10.7*	*10.6*	*11.1*	121	(5)
UK	3.0	2.5	2.5	2.3	2.3	*2.1*	*2.3*	*2.0*	*2.0*	*2.3*	*2.2*	*2.5*	28	(2)
Rest of Europe	3.0	2.7	3.1	3.0	2.9	*2.7*	*2.9*	*2.8*	*2.5*	*3.2*	*3.1*	*3.4*	35	(0)
LNG Imports	**12.7**	**13.4**	**14.5**	**13.3**	**13.0**	***11.1***	***10.7***	***9.6***	***10.0***	***11.0***	***13.2***	***14.2***	**147**	**27**
Pipeline Imports (Net)	**4.8**	**4.1**	**4.5**	**4.3**	**4.2**	***4.6***	***4.4***	***3.5***	***3.2***	***4.9***	***6.0***	***5.8***	**54**	**(15)**
Russia	1.5	1.5	1.3	1.2	1.3	*1.3*	*1.3*	*1.3*	*1.3*	*1.3*	*2.2*	*2.2*	18	(13)
Algeria	2.6	2.4	2.4	2.4	2.4	*2.5*	*2.3*	*2.3*	*1.6*	*2.7*	*2.7*	*2.5*	29	0
Libya	0.0	0.0	0.1	0.1	0.1	*0.1*	*0.1*	*0.1*	*0.0*	*0.1*	*0.1*	*0.1*	1	(0)
Azerbaijan	0.8	0.7	0.9	0.9	0.9	*1.0*	*1.1*	*0.8*	*1.0*	*1.1*	*1.1*	*1.1*	11	0
Total Demand	**53.8**	**46.6**	**39.8**	**27.6**	**22.6**	***20.4***	***20.8***	***20.0***	***23.7***	***30.2***	***40.6***	***47.5***	**394**	**0**
Consumption	**53.8**	**46.6**	**39.8**	**27.6**	**22.6**	***20.4***	***20.8***	***20.0***	***23.7***	***30.2***	***40.6***	***47.5***	**394**	**0**
Power Demand	10.7	10.0	8.2	5.9	5.0	*6.1*	*7.4*	*6.6*	*6.9*	*6.7*	*7.6*	*7.2*	88	4
Non-Power Demand	43.1	36.6	31.6	21.6	17.6	*14.3*	*13.4*	*13.3*	*16.9*	*23.6*	*33.1*	*40.4*	305	(3)
Inventory	**58.2**	**41.9**	**36.7**	**42.3**	**51.9**	***60.8***	***70.3***	***78.5***	***81.0***	***82.9***	***77.4***	***66.8***		

	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	2026	y/y
Total Supply	***39.3***	***33.1***	***37.3***	***36.6***	***35.5***	***32.1***	***34.1***	***31.2***	***29.7***	***35.4***	***37.6***	***40.2***	**422**	**36**
Production	***16.7***	***13.6***	***16.2***	***14.6***	***14.5***	***13.5***	***15.4***	***14.8***	***13.2***	***15.9***	***15.2***	***16.8***	**180**	**(4)**
Norway	*11.2*	*9.2*	*11.0*	*9.7*	*9.5*	*9.0*	*10.6*	*10.3*	*9.0*	*10.8*	*10.3*	*11.3*	122	0
UK	*2.2*	*1.8*	*2.1*	*2.0*	*2.1*	*1.8*	*2.0*	*1.7*	*1.7*	*2.0*	*1.9*	*2.1*	24	(5)
Rest of Europe	*3.3*	*2.6*	*3.1*	*2.8*	*2.9*	*2.7*	*2.8*	*2.8*	*2.4*	*3.1*	*3.0*	*3.3*	35	(0)
LNG Imports	***17.1***	***14.6***	***15.6***	***16.5***	***15.4***	***13.0***	***13.0***	***11.6***	***12.1***	***13.3***	***16.0***	***17.2***	**175**	**29**
Pipeline Imports (Net)	***5.5***	***4.9***	***5.4***	***5.5***	***5.6***	***5.6***	***5.7***	***4.8***	***4.4***	***6.2***	***6.4***	***6.2***	**66**	**12**
Russia	*2.2*	*2.0*	*2.2*	*2.2*	*2.2*	*2.2*	*2.6*	*2.6*	*2.5*	*2.6*	*2.5*	*2.6*	28	11
Algeria	*2.6*	*2.4*	*2.4*	*2.4*	*2.4*	*2.4*	*2.3*	*2.3*	*1.6*	*2.7*	*2.7*	*2.5*	29	(0)
Libya	*0.0*	-	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.0*	*0.1*	*0.1*	*0.1*	1	(0)
Azerbaijan	*0.9*	*0.7*	*0.9*	*0.9*	*0.9*	*1.0*	*1.1*	*0.8*	*1.0*	*1.1*	*1.1*	*1.1*	11	0
Total Demand	***52.3***	***41.0***	***40.6***	***34.3***	***26.2***	***21.2***	***21.4***	***20.6***	***24.4***	***30.3***	***41.5***	***48.1***	**402**	**8**
Consumption	***52.3***	***41.0***	***40.6***	***34.3***	***26.2***	***21.2***	***21.4***	***20.6***	***24.4***	***30.3***	***41.5***	***48.1***	**402**	**8**
Power Demand	*8.7*	*6.8*	*6.8*	*6.3*	*5.9*	*6.9*	*8.1*	*7.3*	*7.5*	*7.3*	*8.3*	*7.9*	88	(1)
Non-Power Demand	*43.7*	*34.3*	*33.7*	*28.0*	*20.4*	*14.3*	*13.3*	*13.4*	*16.9*	*23.0*	*33.3*	*40.2*	314	9
Inventory	***53.8***	***45.8***	***42.5***	***44.7***	***54.0***	***64.9***	***77.7***	***88.3***	***93.5***	***98.6***	***94.7***	***86.8***		

Source: Citi Research, Bloomberg, JODI, NPD, UK North Sea Transition Authority, BP (Note: numbers in italics are Citi forecasts. We include Norway and UK in European market supply demand balance analysis but exclude Turkey and FSU countries.)

US natural gas supply/demand balance (monthly; 2024-2026; Bcf/d)

	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Y/Y Change	Annual
Total Supply	**89.8**	**90.4**	**86.7**	**88.2**	**86.2**	**88.0**	**91.3**	**88.5**	**86.6**	**88.0**	**88.4**	**90.8**	**(0.0)**	**88.6**
Prod	102.4	104.9	101.6	100.7	100.5	101.9	103.2	102.2	100.9	102.0	102.0	104.6	(0.4)	102.2
LNG Imports	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
Exports to Mexico	(6.0)	(5.9)	(5.9)	(6.4)	(6.8)	(6.8)	(7.0)	(7.1)	(6.9)	(6.5)	(6.0)	(5.7)	(0.3)	(6.4)
Imports from Canada	7.3	4.9	4.0	5.0	5.5	6.0	6.6	6.3	5.8	5.9	6.2	6.4	0.7	5.8
LNG Exports	(12.8)	(12.4)	(11.9)	(10.1)	(11.9)	(11.9)	(10.4)	(11.7)	(12.1)	(12.1)	(12.5)	(13.3)	(0.0)	(11.9)
LNG Exports Feedgas	(14.1)	(13.6)	(13.1)	(11.1)	(13.0)	(13.1)	(11.5)	(12.9)	(13.3)	(13.3)	(13.8)	(14.6)	(0.0)	(13.1)
LNG Export Capacity (Peak)	13.8	13.8	13.8	13.8	13.8	13.8	14.0	14.0	14.0	14.0	14.0	14.2	0.5	13.9
Total Demand	**119.8**	**102.2**	**90.1**	**79.8**	**75.2**	**81.0**	**88.5**	**87.5**	**80.5**	**78.3**	**90.1**	**108.0**	**1.0**	**90.1**
IND	25.7	24.5	23.9	23.2	22.0	21.8	22.0	22.4	22.2	22.2	23.9	25.5	(0.0)	23.3
ResComm	47.5	36.6	27.5	18.8	11.2	9.2	8.2	8.2	8.9	13.0	24.2	39.4	(0.5)	21.0
EG	36.6	31.5	29.7	29.3	33.7	41.4	49.4	48.1	40.9	34.5	33.0	33.3	1.5	36.8
Pipe Use	4.6	3.9	3.5	3.1	2.9	3.1	3.4	3.3	3.1	3.0	3.5	4.1	0.0	3.4
Lease and Plant Fuel	5.4	5.5	5.4	5.3	5.3	5.4	5.4	5.4	5.4	5.4	5.4	5.5	0.0	5.4
Transport	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)	0.1
Inventory (Bcf)	**2,584**	**2,324**	**2,282**	**2,538**	**2,898**	**3,147**	**3,264**	**3,339**	**3,583**	**3,906**	**3,885**	**3,410**		

	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	Aug-25	Sep-25	Oct-25	Nov-25	Dec-25	Y/Y Change	Annual
Total Supply	**90.3**	**88.6**	**89.0**	**90.1**	**90.9**	**88.9**	**89.3**	**88.7**	**88.5**	**88.3**	**87.8**	**87.5**	***0.4***	***89.0***
Prod	103.4	104.0	106.3	*106.4*	*106.6*	*106.0*	*106.3*	*106.2*	*106.7*	*106.7*	*106.5*	*107.4*	*3.8*	*106.1*
LNG Imports	0.1	0.0	0.0	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	*(0.0)*	*0.0*
Exports to Mexico	(6.4)	(6.3)	(6.0)	*(6.1)*	*(6.4)*	*(7.3)*	*(7.0)*	*(7.2)*	*(7.0)*	*(6.8)*	*(6.6)*	*(6.3)*	*(0.2)*	*(6.6)*
Imports from Canada	8.0	6.9	5.0	*5.8*	*5.7*	*5.7*	*5.5*	*5.4*	*5.0*	*5.6*	*5.8*	*5.9*	*0.0*	*5.9*
LNG Exports	(13.4)	(14.6)	(14.8)	*(14.7)*	*(13.8)*	*(14.1)*	*(14.0)*	*(14.3)*	*(14.7)*	*(15.6)*	*(16.3)*	*(17.8)*	(2.9)	(14.8)
LNG Exports Feedgas	(14.7)	(16.1)	(16.3)	*(16.1)*	*(15.1)*	*(15.5)*	*(15.4)*	*(15.7)*	*(16.2)*	*(17.2)*	*(17.9)*	*(19.6)*	(3.2)	(16.3)
LNG Export Capacity (Peak)	15.2	15.5	16.0	*16.6*	*16.9*	*17.0*	*17.0*	*17.2*	*17.5*	*17.7*	*18.1*	*18.4*	3.0	16.9
Total Demand	**126.2**	**115.4**	**88.3**	***80.6***	***74.8***	***78.1***	***87.0***	***85.8***	***78.1***	***78.8***	***91.3***	***103.4***	***0.6***	***90.7***
IND	26.6	26.1	24.0	*24.6*	*23.7*	*22.4*	*22.0*	*22.0*	*22.2*	*22.9*	*24.3*	*25.3*	*0.6*	*23.8*
ResComm	52.9	46.0	28.4	*18.8*	*11.6*	*9.0*	*8.2*	*8.0*	*8.7*	*14.6*	*26.7*	*37.0*	*1.4*	*22.5*
EG	36.3	33.3	26.8	*28.6*	*31.0*	*38.0*	*47.8*	*46.9*	*38.7*	*32.7*	*31.4*	*31.4*	*(1.5)*	*35.3*
Pipe Use	4.8	4.4	3.4	*2.9*	*2.8*	*2.9*	*3.2*	*3.2*	*2.9*	*2.9*	*3.3*	*3.9*	*(0.1)*	*3.4*
Lease and Plant Fuel	5.4	5.5	5.6	*5.5*	*5.5*	*5.6*	*5.6*	*5.6*	*5.5*	*5.5*	*5.5*	*5.6*	*0.1*	*5.5*
Transport	0.1	0.2	0.1	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.0*	*0.1*
Inventory (Bcf)	**2,399**	**1,766**	**1,814**	**2,117**	**2,615**	**2,975**	**3,047**	**3,142**	***3,455***	***3,713***	***3,573***	***3,088***		

	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26	Y/Y Change	Annual
Total Supply	**89.3**	**89.4**	**88.5**	**86.2**	**87.5**	**87.4**	**87.1**	**86.8**	**85.6**	**85.5**	**84.8**	**84.2**	***(2.1)***	***86.9***
Prod	*107.5*	*107.6*	*108.0*	*106.3*	*106.4*	*107.1*	*107.6*	*107.7*	*107.6*	*107.7*	*107.8*	*108.0*	*1.4*	*107.4*
LNG Imports	*0.1*	*0.0*	*0.0*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.1*	*0.0*	*0.0*	*0.1*	-	*0.0*
Exports to Mexico	*(6.0)*	*(6.1)*	*(6.2)*	*(6.4)*	*(6.8)*	*(7.5)*	*(7.3)*	*(7.6)*	*(7.4)*	*(6.8)*	*(7.1)*	*(6.6)*	*(0.2)*	*(6.8)*
Imports from Canada	*6.8*	*6.6*	*6.0*	*4.9*	*5.9*	*5.5*	*4.4*	*4.7*	*4.2*	*4.5*	*4.4*	*4.7*	*(0.6)*	*5.2*
LNG Exports	*(17.2)*	*(17.1)*	*(17.5)*	*(17.0)*	*(16.5)*	*(16.1)*	*(16.1)*	*(16.3)*	*(17.2)*	*(18.0)*	*(18.4)*	*(20.0)*	(2.5)	(17.3)
LNG Exports Feedgas	*(19.0)*	*(18.8)*	*(19.3)*	*(18.7)*	*(18.2)*	*(17.7)*	*(17.7)*	*(17.9)*	*(19.0)*	*(19.8)*	*(20.3)*	*(22.0)*	(2.7)	(19.0)
LNG Export Capacity (Peak)	*18.4*	*18.4*	*19.1*	*19.4*	*19.4*	*19.4*	*19.4*	*19.7*	*20.5*	*20.5*	*20.5*	*20.7*	2.7	19.6
Total Demand	***115.3***	***109.6***	***90.9***	***79.6***	***74.9***	***77.3***	***85.5***	***84.7***	***77.4***	***77.5***	***91.8***	***102.4***	***(1.7)***	***88.9***
IND	*26.2*	*25.8*	*24.4*	*23.4*	*22.6*	*22.2*	*22.2*	*22.2*	*22.3*	*23.0*	*24.4*	*25.4*	*(0.2)*	*23.7*
ResComm	*47.4*	*42.8*	*29.3*	*20.1*	*12.3*	*8.8*	*8.2*	*8.0*	*8.6*	*14.2*	*27.3*	*36.3*	*(0.6)*	*21.9*
EG	*31.6*	*31.2*	*28.1*	*27.4*	*31.5*	*37.6*	*46.1*	*45.6*	*37.9*	*31.7*	*30.9*	*31.1*	*(1.0)*	*34.2*
Pipe Use	*4.4*	*4.1*	*3.4*	*3.0*	*2.8*	*2.9*	*3.2*	*3.2*	*2.9*	*2.9*	*3.4*	*3.8*	*(0.0)*	*3.3*
Lease and Plant Fuel	*5.6*	*5.6*	*5.6*	*5.5*	*5.6*	*5.6*	*5.6*	*5.6*	*5.6*	*5.6*	*5.6*	*5.7*	*0.1*	*5.6*
Transport	*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)*	*0.1*
Inventory (Bcf)	**2,315**	**1,788**	**1,739**	**1,935**	**2,319**	**2,617**	**2,661**	**2,725**	***2,968***	***3,177***	***2,935***	***2,378***		

iii.a. Carbon – EUAs: poise for a breakout and introducing ETS2

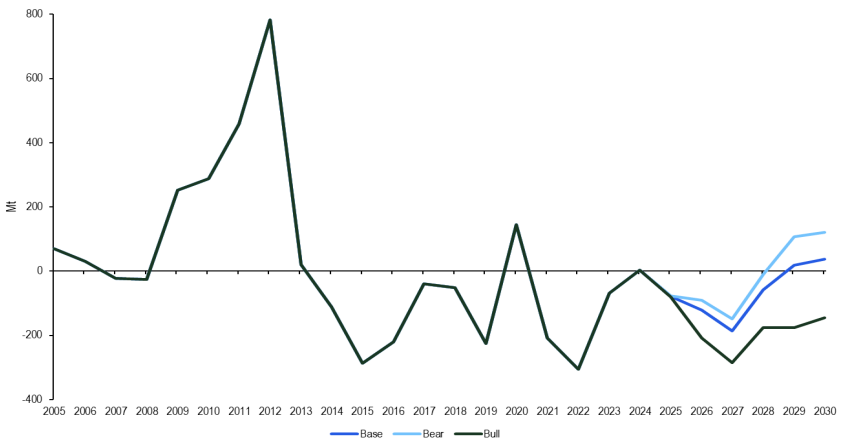
Structurally tightening EU ETS balances could push EUAs 30% up by yearend

- **We have revised our average 2025 EUA price forecasts to €80/t, with point price targets of €77/t over 0-3M and €95/t over 6-12M, as the EU ETS balances tighten faster than previously expected.** The projected 2025 deficit now stands near 100Mt, double earlier estimates, supporting a bullish 2H'25 outlook, particularly if low wind and normalized hydro output continue to lift the call-on fossil fuels once seasonal higher power demand returns, even as industrial emissions soften under macroeconomic uncertainty. Investment funds' interest remains firm, albeit light, with a net long of only 17k lots, leaving space for additional upside. That said, until the EEX releases the final auction calendar for Sep'25-Aug'26 and pre-MSR auction volumes for Sep-Dec'26, indicatively by the end of Jul'25, EUA prices are unlikely to see explosive upside, although the risk-reward profile remains skewed to the upside. Thereafter, with compliance demand intensifying ahead of Sep'25 deadline, EUAs could structurally reprice higher, reaching the mid-€90s/t by yearend, supported by a combination of compliance and speculative buying as market participants look forward to the large 2026-2027 projected deficits.
- **In our bear case, 2025 EUA prices average €70/t.** This case envisions a faster pace of renewables capacity installation for the same level of power consumption as of the base case, along with lower production activity levels for all the industrial sectors, leading to looser EU ETS balances between 2025-2030.
- **In our bull case, 2025 EUA prices average €85/t with more price upside in the following years.** This case assumes a higher electrification scenario with a slower pace of renewables generation capacity installation, along with reinvigorated industrial activity, leading to nearly 50% larger EU ETS deficits over the second half of the decade than in our base case.

Citi's EUA price forecasts

Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
New										
Base	54	81	85	65	80	115	130	170	155	165
Bear	54	81	85	55	70	80	90	85	85	80
Bull	54	81	85	75	85	150	165	190	230	280
Old										
Base	54	81	85	65	75	115	130	170	155	165
Bear	54	81	85	55	60	80	90	85	85	80
Bull	54	81	85	75	90	150	165	190	230	280
Change										
Base					5					
Bear					10					
Bull					(5)					

Citi's EU ETS balances under base, bear, and bull scenarios

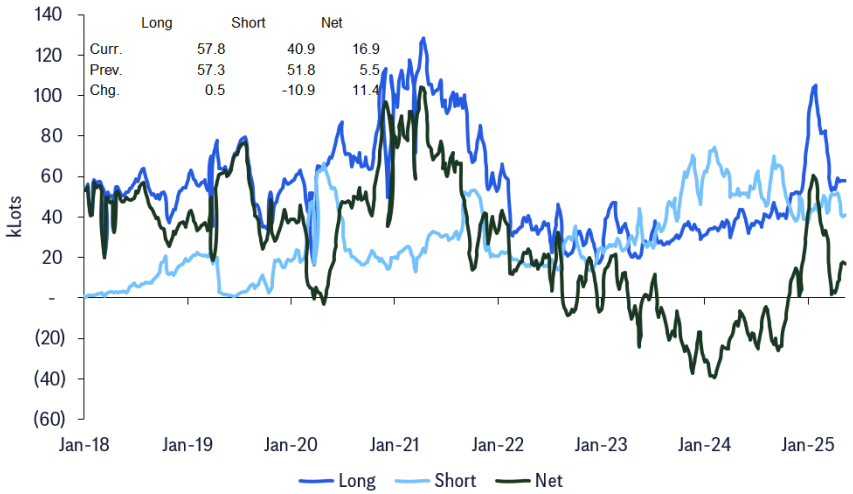


Source: Bloomberg, Citi Research,

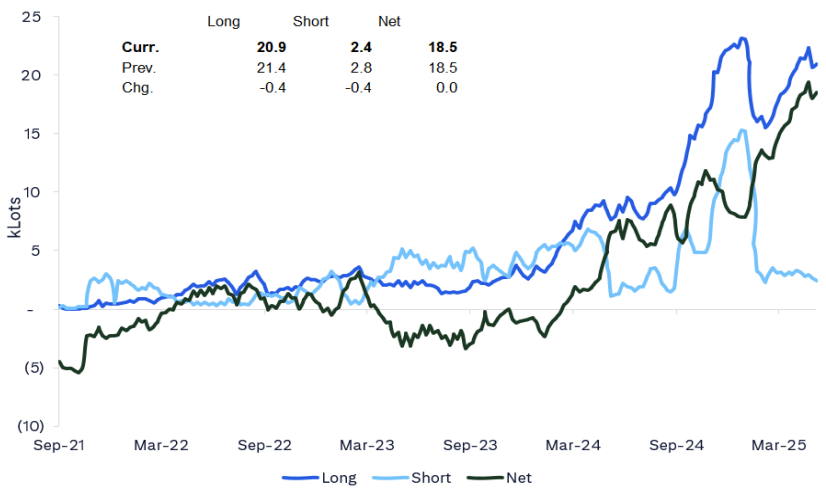
Speculative flows rebuild in EUAs but look stretched in UKAs ahead of linkage

- **With EU ETS balances structurally tightening in the years ahead, investment funds see strong optionality in holding long EUA positions. Yet, any hint by policymakers to frontload additional supply could quickly shift their risk-reward calculation.** Speculative interest has regained momentum since May'25, with investment funds rebuilding their net long holdings to 16.9k lots as of early Jun'25, despite Power & Heat sector's emissions actually moderate, which suggest the sentiment shift was likely ignited by expectations of structurally tighter balances ahead. That said, until the EEX releases the final auction calendar for Sep'25-Aug'26 and pre-MSR auction volumes for Sep-Dec'26, indicatively by the end of Jul'25, investment funds could only tip their toes into the EUAs market. Absent any policy surprise, we would expect a renewed wave of financial inflows thereafter.
- **Meanwhile, speculative net long positioning into UKAs appears extremely stretched as investment funds jumped ahead of policymakers, exposing the market to risk of sharp downside corrections**. Investment funds have front-run the prospect of a EU – UK ETS linkage, pushing net long positions to 18.5k lots, a level that accounts for nearly 40% of the total number of allowances in circulation (TNAC). While the perspective of a linkage of the two systems has become more concrete and the news headline has improved sentiment, the sheer size of speculative length suggest investment funds positioning could have run ahead of policy clarity. Without a detailed framework for the linkage and a clear timeline, UKAs remain especially vulnerable to a sharp repositioning if political momentum stalls or delays emerge. Still, the long-term outlook for the UK ETS appears solid, as the TNAC would be drown down faster than in the EU ETS by the end of the decade.

Investment funds positioning into EUAs



Investment funds positioning into UKAs

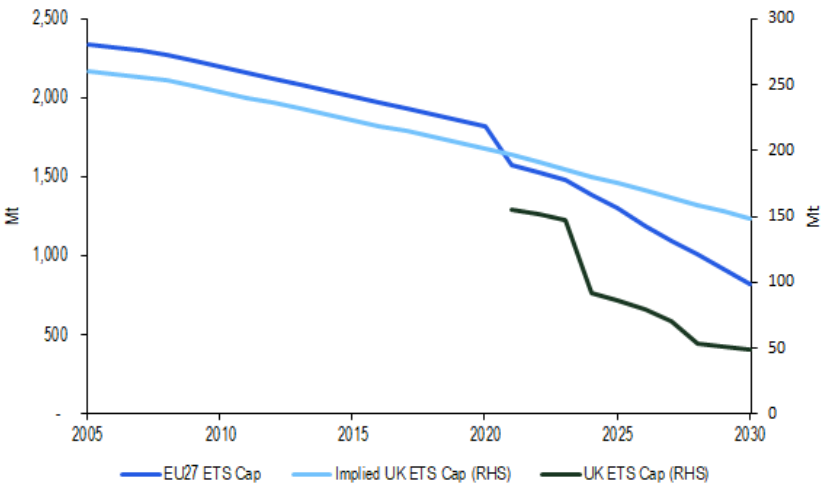


Source: Bloomberg, Citi Research,

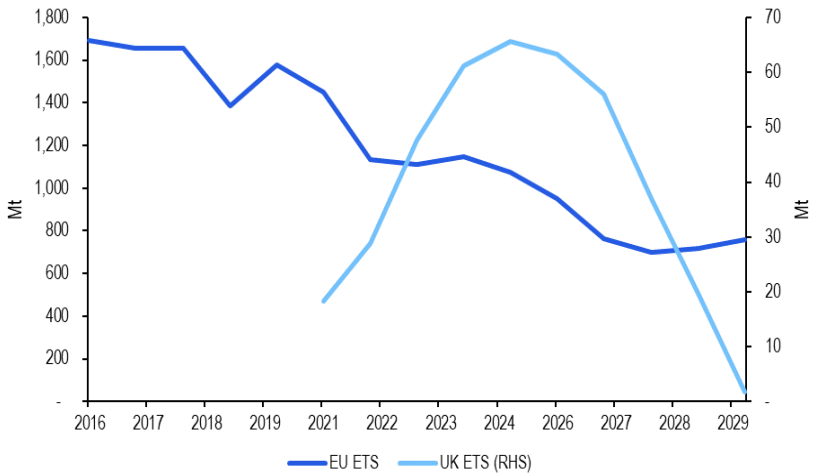
Toward linkage: carbon prices convergence hopes rise, but clarity still lacking

- **The recent agreement between the EU and the UK to explore a future linkage between their respective ETSs marks a significant step in post-Brexit cooperation. The linkage aims to stabilize carbon prices, enhance market liquidity, and streamline cross-border trading. A full linkage would see carbon prices converging.** The linkage would initially cover key sectors like power trading across interconnectors, industry and domestic/international aviation and maritime transportation. With the EU and the UK CBAMs coming into effect in Jan'26 and Jan'27 respectively, pressure is growing to finalize ETSs alignment to avoid trade frictions. If and when implemented, allowances from either system would be valid for compliance in both markets, facilitating cross-border trading and reducing the administrative burden of the respective CBAMs. Moreover, integrating the UK's smaller ETS with the EU's larger one would enhance UKA liquidity and price stability.
- **UKA prices have urged 75% YTD, reflecting improved sentiment around future linkage and tightening fundamentals. Yet, there is still uncertainty around the design and the timeline of the linkage, while UKAs remain exposed to a sharp unwind of stretched speculative net longs if political inertia sets in.** There are technical hurdles and policy uncertainties, including dealing with different ETS buffers such as the EU ETS Market Stability Reserve (MSR) or the UK ETS Cost Containment Mechanism (CCM), aligning the ETS caps to the respective carbon budgets and NDCs, harmonizing issuances of free allocations and auctions of the allowances. At best, a full linkage may not occur until 2028 – 2030, after both CBAMs become effective and once the UK ETS TNAC is drastically eroded, nevertheless.

EU and UK ETS cap trajectories



EU and UK ETS TNAC trajectories



Source: EU Commission, UK Government, EUROSTAT, Elexon, Thetis, The EEX, ICIS, OilX, Citi Research Estimates

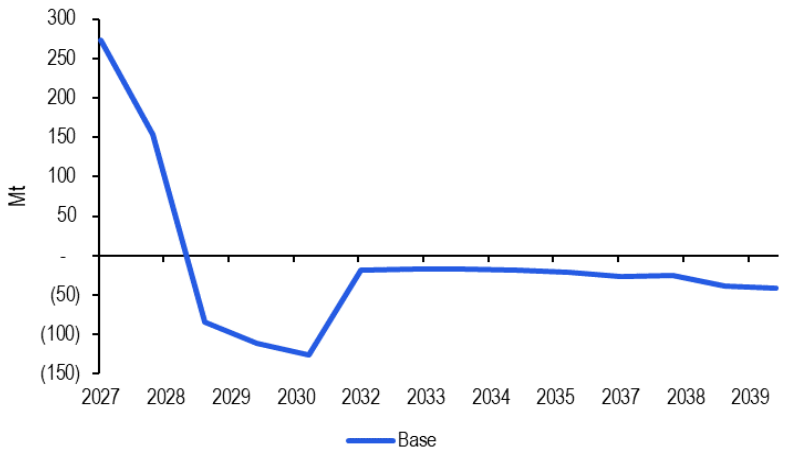
ETS2 primer. A new carbon market for buildings, transport, and small industry

- **The EU ETS2 introduces upstream carbon pricing for fuels used in buildings, transport, and small industry.** Set to launch in 2027, the EU ETS2 complements the existing EU ETS, expanding the scope of carbon pricing to commercial and residential heating, road transport, and small business. It applies to the suppliers, such as filling stations, but the tax burden would be passed onto end-user consumers. Despite backlash from several member states, the extensive timing of the ordinary legislative procedures would make a delay to 2028 unlikely.
- **EU ETS2 prices are set to rise sharply to reflect the high cost of decarbonizing households and vehicles.** EUA2s futures started trading in May'25 and already hover above €70/t. Based on our projected EU ETS2 balances and the marginal abatement cost curves of the covered sectors, EUA2 prices could overshoot the €200s/t-mark.
- **Inflation-adjusted impacts on consumers would be significant without adequate policy buffers.** Given standard emission coefficients, if fully passed through, EUA2 prices of €100/t would increase households transportation bills by €0.25/liter and heating bills by €0.20/Smc in 2027. The proposed size of the Social Climate Fund, expected to total some €90bn over 2026-2032, does not seem enough to support the +40m European citizens facing energy poverty. Yet, there was only one generic mention of the system in the Draghi report on EU competitiveness.
- **The system will have the same geographical scope of the EU ETS and double the carbon pricing coverage of the existing policies.** The system covers the European Economic Area (EU27 + Norway + Switzerland + Liechtenstein). The new sectors emitted nearly 1,400mt in 2021. Once launched, 80% of the bloc's emissions would be covered by a carbon pricing scheme.

Citi's EUA2 price forecasts

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
New																
ICE EUA2 Futures	80															
Base			100	150	200	250	250	225	225	225	225	200	175	200	200	200
Bear			50	75	100	150	150	150	125	100	100	75	75	125	100	100
Bull			150	200	250	300	300	300	300	300	300	275	250	275	275	300

Citi's projected EU ETS2 balances

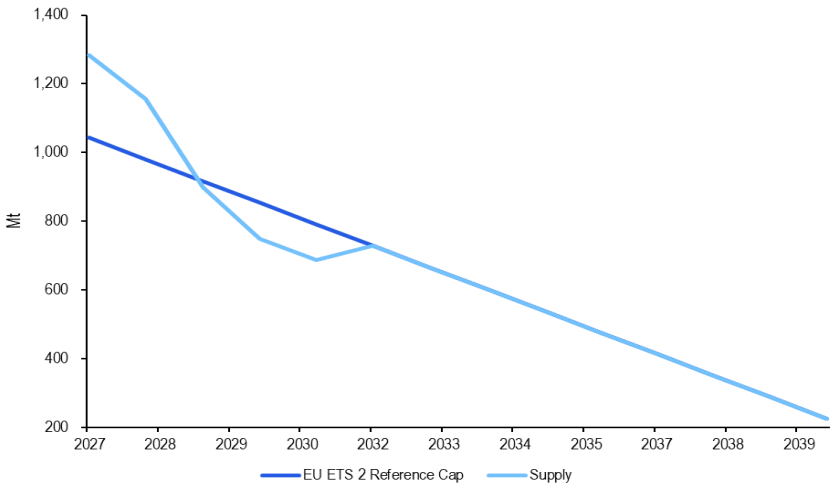


Source: EU Commission, UNFCCC, ICIS, Bloomberg, Citi Research

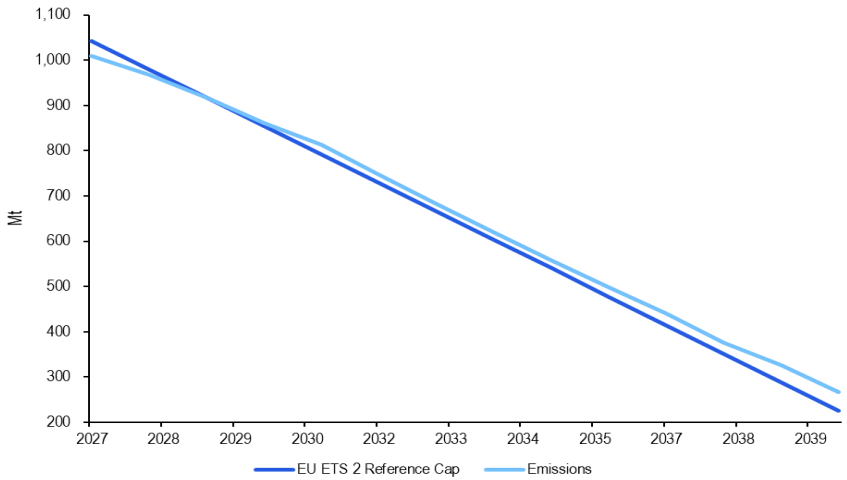
EU ETS2 design: Fast declining, auction-only cap, with partial frontloading

- **Unlike the EU ETS, the new EU ETS2 will have no free allocation, 100% of allowances will be auctioned.** This diverges from the EU ETS, where nearly 40% of the cap is freely allocated through 2030, although free allocations will be gradually phased out. The entire supply of allowances under the EU ETS2 is monetized through auctions to incentivize efficient fuel switching and abatement and to support the Social Climate Fund.
- **The cap starts at 1,036Mt in 2027, but the inclusion of few country-specific sectors would add some 7Mt more. The cap is projected to reach nearly 850Mt in 2030 and 225Mt in 2040.** The cap trajectory is aligned with the Effort Sharing Regulation (ESR) target of a 43% cut vs. 2005 levels by 2030. The linear reduction factor (LRF) would be 5.38%, above the 5.1% LRF used under the ESR guidelines, based on the 2024-2026 average emissions, which are still not available. Yet, the LRF could even increase above 5.38% if the 2024-2026 average emissions are more than 2% higher than 2025 levels, in accordance with the formula in Annex IIIa of the relevant directive.
- **Auction volumes are front-loaded to ensure liquidity in the first trading years, but this in unlikely to prevent EUA2 prices to overshoot.** To avoid a shallow launch, 2027 auction volumes would increase by 30% of the cap, pulling forward over 300Mt of allowances from 2029-2031, distributed pro-quota. This will be compensated via lower issuance in those years.

EU ETS2 projected cap and supply of allowances



EU ETS2 projected cap and covered emissions



Source: EU Commission, UNFCCC, ICIS, Bloomberg, Citi Research

iii.b. Carbon – California CCAs:

CCAs are at the price floor as market wants to see details and implementation timeline of future program reforms; medium-term fundamentals are still bullish, but when will confidence recover?

CCA prices near floor on policy fears—when do MT fundamentals reassert?

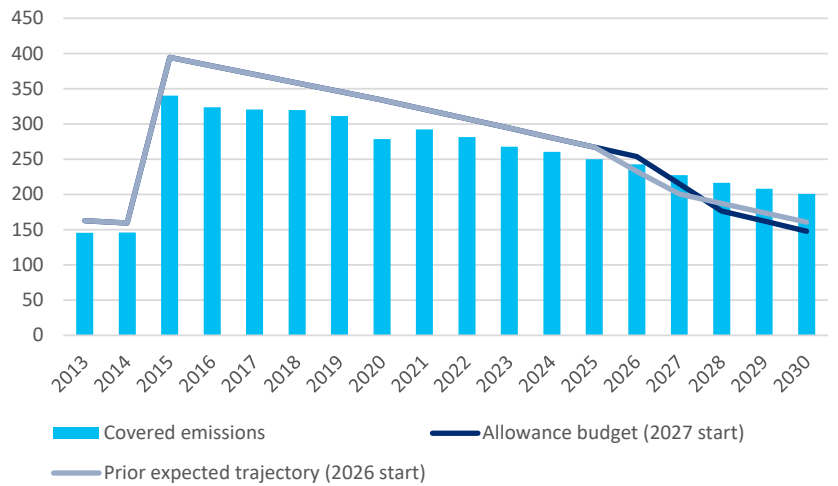
CCA prices have moved back to just ~$1 above the ~$25.87/t floor with recent weak auction as continued delays to tightening the emissions cap through June makes implementation in 2026 highly unlikely, while the focus is on California extending legislation beyond 2030 as federal level challenges mount. Medium-term fundamentals remain strong, but it may take time for prices to recover.

California carbon allowance (CCA) prices pushed above $28 in May but came back to <$27 for Dec'25 as markets have lost confidence in the pace of cap-and-trade rulemaking to be in time to be implemented in 2026.

Meanwhile, the state is focused on extending the cap-and-trade legislation beyond 2030, in the face of federal attacks. While this looks defensible it could be a long political and legal battle, though we expect the cap-and-trade program to prevail. CCA prices may take some time to move back to bullish mode, even though risk reward is now firmly to the upside given the price floor (which should still hold in our view). The 2Q'25 CCA auction came in at the floor price of $25.87, with >6m allowances unsold, a situation not seen since Aug'20.

We revise down our 2025 average to $30/t, pointing to a modest recovery from current $27 levels, and lower levels to the still-upward trajectory in prices 2026 onwards. If implemented beginning 2027, the first deficit year is deferred to 2027, but subsequent allowance bank reductions could be steeper/deeper in 2028, 29, 30.

CARB is still on track to tighten emissions caps, but a 2027 start could delay the downward revision and first year of deficit to 2027, but also lead to steeper y/y reductions when the time comes



Citi CCA price forecast scenarios, annual 2021-2035E

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Ceiling	65	72	82	88	95	101	108	116	124	133	142	152	162	174	186
Tier 2	53	59	67	72	77	83	89	95	101	109	116	124	133	142	152
Tier 1	41	46	52	56	60	64	69	74	79	84	90	97	104	111	119
Case 1			34	38	35	55	69	80	95	109	116	124	133	142	152
Case 2			34	38	30	35	45	70	101	133	142	152	162	174	186
Case 3 (base)	24	30	34	38	30	45	60	70	72	74	76	78	82	84	86
Case 4			34	38	32	55	67	72	77	83	89	94	96	98	100
Floor / Case 5	18	20	22	24	26	28	30	32	34	37	39	42	45	48	51

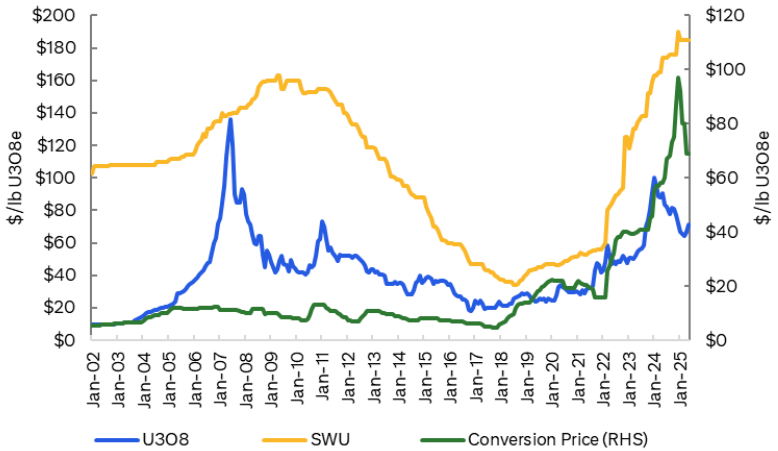
*See CARB Oct'24 notice Source: CARB, Citi Research

iv. Uranium: a comeback story – robust demand and a lack of new supply bring back price upside

We expect $100/lb in 2026 as upside momentum returns to uranium

After reaching our three month point price target $70/lb set in March, we now expect upside momentum to continue, and prices to reach $73/lb in 3M point price. In the mid-term, we keep our forecast unchanged and expect uranium prices to rise to $100/lb in 2026. Term prices have been trading at $80/lb in the past 4 months, which we consider supportive for our bullish narrative. Even though, optimism over nuclear energy in the US and globally has grown significantly, and Executive Orders signed by President Trump in May had a substantial lift for the industry, we kept our S/D balances unchanged since last time as there is still a lack of financing and actual projects. We strongly believe that mine output in the next 2-3 years would become one of the most significant factors in uranium price determination. When paired with dwindling inventories in the next 2-4 years, production developments along with increasing enrichment capacity would play a bigger role than before. We project that uranium supply from existing mines would increase by 13mln lbs in 2025 y/y, mainly led by growth of production in Africa, US, and Kazakhstan, with the total annual output at 166mln lbs.

Nuclear fuel prices remain at historically high levels



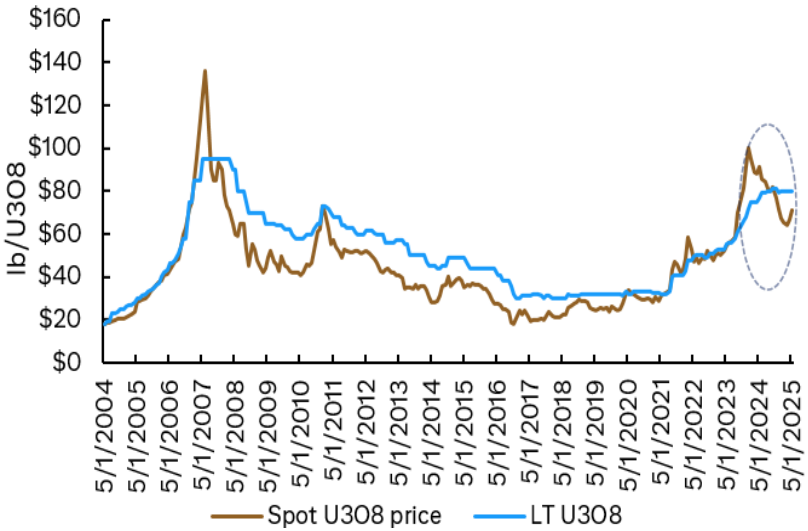
Citi Uranium (U3O8) Price Forecasts and Scenarios($/lb)

Price Deck	Point Prices		Quarterly Prices												Annual Prices			
	0-3M	6-12M	1Q24E	2Q24E	3Q24E	4Q24E	1Q25E	2Q25E	3Q25E	4Q25E	1Q26E	2Q26E	3Q26E	4Q26E	2024E	2025E	2026E	2027E
60% Base	73	77	99	91	82	79	69	70	80	82	100	100	100	100	89	75	100	115
10% Bull									85	90	125	125	125	125		87	125	135
30% Bear									60	65	70	75	75	80		64	75	87
Changes versus last report*																		
Base	3															(2)		-
Bull																		-
Bear																		-

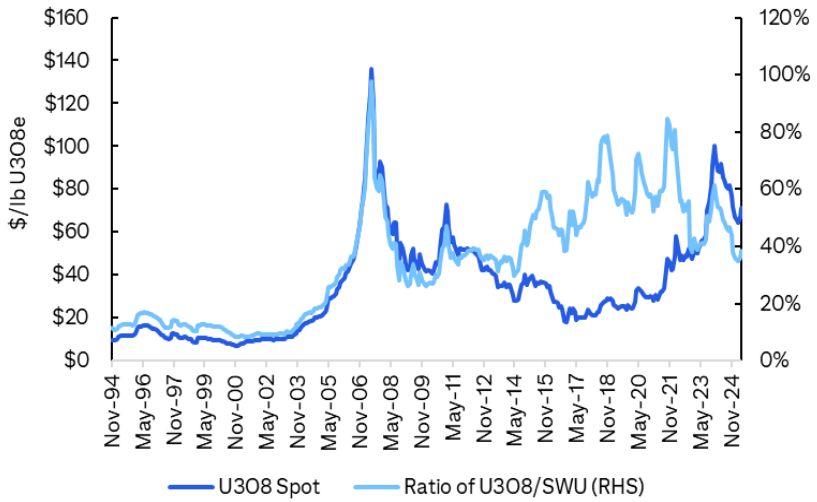
SWU continues to make new highs, while conversion prices retrace

Bear case scenario (30% implied probability) expects prices to average $64/lb in 2025, as Russian enriched uranium would likely be sold to the US and SWU will be significantly lower – averaging $90/SWU. This scenario would also account for the successful development of new mines by junior producers (at least 70% of those that are scheduled to come online in the next five years). A **more bullish scenario**, with 10% implied probability, would be driven mainly by supply concerns, as demand is relatively determined and is set to grow. Our bull scenario forecasts prices to average $87/lb in 2025 and $125/lb in 2026. It is likely that junior producers could significantly underperform and not able to meet their contractual obligations on longer-term contracts. Historically, junior producers were not able to materially ramp up production in the short time, due to the lack of expertise/technologies/financing. In such a scenario, they will be forced to aggressively enter the spot market.

Spot versus term U3O8 price dynamics ($/lb)



Nuclear fuel prices remain at historically high levels



Source : UxC, Citi Research

President Trump's policies are supportive, but financing is needed to back it up

President Trump has signed four executive orders (EO) under the Defense Production Act to aggressively scale US nuclear energy, positioning it as a national security priority. The headline goal is to increase US nuclear capacity from 100GW to 400GW by 2050 — a move that would add ~150Mlb/year of uranium demand, ~doubling today's global market from the US alone. The four orders include:

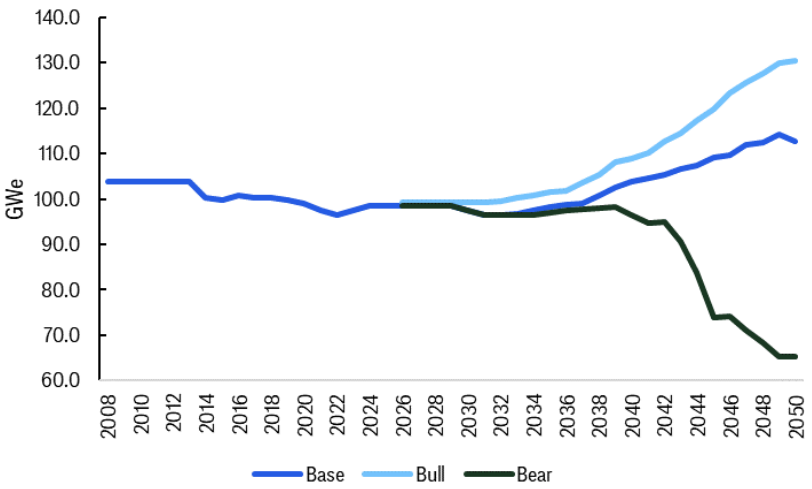
(1) **Accelerate Reactor Approvals – 18-month deadline for reactor project reviews.** This EO gives the Pentagon and the DOE a larger role in permitting new reactor designs for commercial operation on military sites and at national laboratories.

(2) **Pilot Program for Experimental Reactors.** This EO covering nuclear research and development at the DOE is likely the least controversial and the most in line with the policies of the Biden administration.

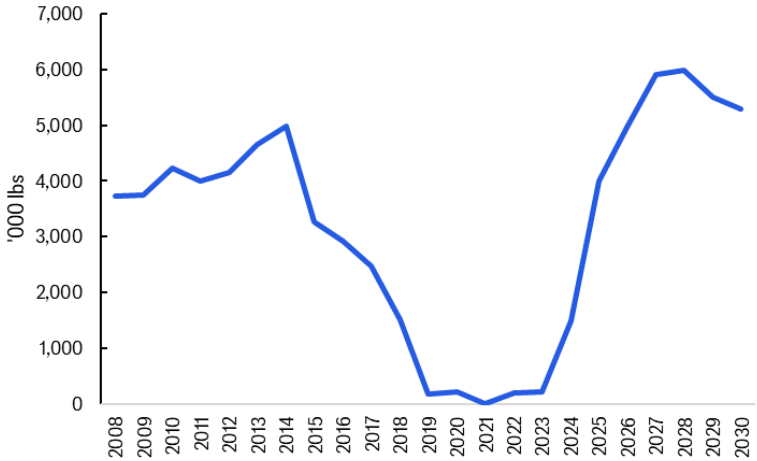
(3) **Reform of the Nuclear Regulatory Commission – removing bureaucratic hurdles.** This EO calls for total and complete reform of NRC culture to reorient to ensure reactor safety and promoting the development and adoption of nuclear technology.

(4) **Strengthening Domestic Uranium Supply Chains – DOE working with private industry to ensure domestic fuel processing.** The final EO focuses on rebuilding the U.S. nuclear supply chain, with provisions to fund fuel enrichment and recycling technologies, support the reopening of closed reactors, and enhance nuclear workforce development through interagency initiatives.

US generation under different scenarios



Uranium production in the US



Citi global uranium (U308) supply/demand balances – base case

mln lbs U308	2024	2025	2026	2027	2028	2029	2030	2025-26	2026-27	2027-28	2028-29	2029-30
Total Supply from Existing Mines	**152.1**	**165.7**	**176.8**	**182.0**	**182.2**	**182.4**	**182.5**	**11.0**	**5.2**	**0.3**	**0.2**	**0.1**
Africa	20.1	23.8	27.6	28.9	30.0	31.0	31.0	3.9	1.3	1.1	1.0	-
Australia	12.6	14.2	14.8	15.1	15.1	15.1	15.1	0.6	0.3	(0.1)	(0.0)	0.0
Canada	37.0	37.7	37.5	37.5	37.5	37.5	37.5	(0.2)	-	-	-	-
Kazakhstan	56.5	60.8	64.5	66.1	64.4	63.4	63.6	3.8	1.6	(1.8)	(1.0)	0.3
Other	6.5	7.4	8.2	8.2	8.2	8.2	8.2	0.9	-	-	-	-
Russia	6.8	6.8	7.7	8.3	8.7	9.4	9.4	0.9	0.6	0.4	0.7	-
Ukraine	0.8	0.8	1.0	1.5	2.0	2.0	2.0	0.3	0.5	0.5	-	-
United States	1.5	4.0	5.0	5.9	6.0	5.5	5.3	1.0	0.9	0.1	(0.5)	(0.2)
Uzbekistan	10.4	10.4	10.4	10.4	10.4	10.4	10.4	-	-	-	-	-
Planed New Production	**2**	**4**	**9**	**15**	**16**	**17**	**18**	**4.5**	**6.3**	**0.8**	**1.4**	**0.3**
Total Production	**153.8**	**170.0**	**185.5**	**197.0**	**198.1**	**199.8**	**200.1**	**15.5**	**11.5**	**1.1**	**1.6**	**0.4**
North America	49.8	62.9	61.0	60.8	64.0	60.8	58.7	(1.9)	(0.1)	3.1	(3.2)	(2.1)
Western Europe	38.0	36.7	32.4	36.9	34.6	30.9	37.1	(4.3)	4.5	(2.4)	(3.7)	6.2
Eastern Europe	25.4	24.6	22.3	31.8	28.3	24.7	26.8	(2.3)	9.5	(3.5)	(3.6)	2.1
Asia & Oceania	60.4	57.0	60.9	76.6	79.4	95.8	90.6	3.9	15.7	2.9	16.3	(5.1)
Africa & Mideast	4.2	4.4	6.6	6.7	4.7	7.5	8.7	2.2	0.1	(2.0)	2.8	1.2
South America	0.8	1.6	3.1	1.6	2.0	1.4	3.3	1.5	(1.5)	0.4	(0.6)	1.9
Total Utilitiy Demand	**178.6**	**187.1**	**186.2**	**214.4**	**212.9**	**221.0**	**225.2**	**(0.9)**	**28.1**	**(1.5)**	**8.1**	**4.2**
Production vs utilitiy demand	**(25)**	**(17)**	**(1)**	**(17)**	**(15)**	**(21)**	**(25)**					
Secondary Supplies*	**35**	**27**	**25**	**25**	**22**	**20**	**18**	**(2)**	**(1)**	**(3)**	**(2)**	**(2)**
Utilitiy Inventory Build	**7**	**7**	**6**	**8**	**8**	**6**	**6**	**(1)**	**2**	**-**	**(2)**	**-**
Secondary Demand**	**6**	**4**	**2**	**2**	**2**	**2**	**2**	**(2)**	**-**	**-**	**-**	**-**
Total Supply (Prod + Secondary Supply)	**189**	**197**	**211**	**222**	**220**	**220**	**218**	**14**	**11**	**(2)**	**(0)**	**(1)**
Total Demand (Utility Demand+Inv Build+Secondary Demand)	**192**	**198**	**194**	**224**	**223**	**229**	**233**	**(4)**	**30**	**(1)**	**6**	**4**
Implied deficit/surplus (Total Supply vs Demand)	**(3)**	**(1)**	**17**	**(2)**	**(3)**	**(9)**	**(15)**	**18**	**(19)**	**(1)**	**(6)**	**(6)**

Source: UxC, Platts, Energy Intelligence., Citi Research

4. Industrial and Battery Metals:

Neutral-to-bearish into 3Q'25
Tariff-related downside is a dip-buying opportunity

Metals – Neutral-to-bearish for 3Q'25, copper and lithium most vulnerable

- **We are Neutral-to-bearish base metals and lithium for 3Q'25**. We think tariff hikes and related uncertainty will weigh on global growth, manufacturing activity, metals consumption growth, and risk sentiment in the near-term. A slowdown in China solar installations into 2H'25 also poses a headwind. Individual metal fundamentals also have a neutral-to-bearish skew over the next quarter, e.g. **COPPER** is vulnerable to an eventual Section 232 physical unwind that we think sees prices fall to $8,800/t, and **LITHIUM** remains in structural surplus with downside to $7,000/t.
- **We see Dip-Buying opportunities into softer 3Q'25 pricing; we are constructive medium-term ALUMINIUM to $3,000/t and COPPER to $11k/t by 2027. Both are leveraged to an eventual cyclical rebound.** From 2026 we expect increased US and China policy stability and certainty, improved manufacturing sentiment on Fed-rate-cut tailwinds, structural metals demand (from energy transition/datacentres/robotics) and supply constraints to all drive renewed investor inflows.
- **Section 232 developments remains an important dynamic for the industrial metals complex through 3Q'25** The likelihood of further exemptions to 50% aluminium tariffs poses downside risks to the US MWP premium. We expect clarity on S232 copper tariffs to drive a physical unwind, we expect a 25% tariff which will support COMEX arb pricing. Other industrial metals covered in this section (Zn, Sn, Ni, Li) are in scope of the critical minerals S232 investigation which poses some upside risk for US physical premiums and potentially some shipment frontloading through 3Q'25.
- **Unless stated otherwise, our metal price forecasts have the following common macro scenarios and probabilities:**
  - **Base case (est. 60% indicative probability):** US tariff headwinds and uncertainty persist into 3Q'25, with manufacturing activity remaining under pressure as the broader growth impact feeds through. China metals consumption remains relatively robust, bar weaker demand from softer solar installations and export demand headwinds. US dollar moves to continue to cushion broader-tariff related volatility in metals pricing. Further China policy support is small and incremental. Growth expectations pick up from 2026 led by renewed Fed rate cuts.
  - **Bull case (est. 20% indicative probability):** We see a softer US tariff stance with trade deals adding to business certainty. The dollar sees further structural weakness, with the Fed cutting rates on reduced concern around inflation. China gets ahead of the curve on stimulus. Investors price for a cyclical rebound by reallocating to industrial metals.
  - **Bear case (est. 20% indicative probability):** President Trump escalates again on tariffs hitting global growth expectations and risk appetite. The dollar stabilises or strengthens despite tariff implications for US equities. China remains behind the policy curve. US growth deteriorates but the Fed remains reluctant to cut rates amid inflationary pressures.

Metals forecasts: 3Q'25 downside to offer good dip-buying opportunities

Industrial metals	Unit	0-3 mth pt price	6-12 mth pt price	1Q25	2Q25f	3Q25f	4Q25f	2025f	1Q26f	2Q26f	3Q26f	4Q26f	2026f	2027f
Copper NEW	$/t	**8800**	**9500**	9336	9500	9200	9000	**9250**	9000	10000	10000	11000	**10000**	**11000**
Copper (OLD)		**8800**	**8500**	9336	9300	8800	8800	**9060**	9500	10000	10000	10500	**10000**	**11000**
Aluminium NEW	$/t	**2450**	**2650**	2624	2430	2450	2550	**2510**	2600	2650	2800	3000	**2765**	**3000**
Aluminium (OLD)		**2300**	**2600**	2624	2400	2450	2550	**2510**	2750	2750	2800	2800	**2775**	**2800**
Nickel NEW	$/t	**14000**	**16000**	15571	15500	15000	15000	**15250**	16000	16000	16000	16000	**16000**	**17000**
Nickel (OLD)		**15000**	**16000**	15571	15500	15500	16000	**15650**	16500	17000	17000	17500	**17000**	**18000**
Zinc NEW	$/t	**2500**	**2700**	2837	2600	2600	2600	**2650**	2600	2700	2700	2800	**2700**	**2800**
Zinc (OLD)		**2500**	**2500**	2837	2600	2500	2500	**2610**	2600	2700	2700	2800	**2700**	**2800**
Lead NEW	$/t	**1900**	**2000**	1969	1950	1950	1950	**1950**	2000	2000	2000	2000	**2000**	**2100**
Lead (OLD)		**1900**	**1950**	1969	1950	1950	1950	**1950**	2000	2000	2000	2000	**2000**	**2100**
Tin NEW	$/t	**28000**	**30000**	31782	32000	30000	30000	**31000**	30000	30000	30000	30000	**30000**	**30000**
Tin (OLD)		**30000**	**26000**	31782	30000	28000	28000	**29400**	30000	30000	30000	30000	**30000**	**30000**
Lithium products		**0-3 mth pt price**	**6-12 mth pt price**	**1Q25**	**2Q25f**	**3Q25f**	**4Q25f**	**2025f**	**1Q26f**	**2Q26f**	**3Q26f**	**4Q26f**	**2026f**	**2027f**
Lithium Carbonate China NEW	$/t	**7000**	**9000**	10330	8800	7500	8250	**8700**	8500	9000	9000	9500	**9000**	**12000**
Lithium (OLD)		**7000**	**12000**	10300	10500	10000	10500	**10300**	11500	12000	12000	12500	**12000**	**15000**
Lithium Hydroxide CIF Asia NEW	$/t	**7000**	**8750**	9600	8600	7500	8000	**8400**	8250	8750	8750	9250	**8800**	**11000**
Lithium (OLD)		**7000**	**11000**	9600	10000	9500	9000	**9500**	10500	11000	11000	11500	**11000**	**14000**
Spodumene 6% CIF China NEW	$/t	**600**	**750**	880	730	625	650	**720**	700	750	750	800	**750**	**950**
Spodumene 6% CIF China (OLD)		**700**	**900**	880	850	825	825	**800**	850	900	900	925	**900**	**1200**
Aluminium premiums/alumina		**0-3 mth pt price**	**6-12 mth pt price**	**1Q25**	**2Q25f**	**3Q25f**	**4Q25f**	**2025f**	**1Q26f**	**2Q26f**	**3Q26f**	**4Q26f**	**2026f**	**2027f**
Al US MW Premia NEW	c/lb	**50.0**	**60.0**	32.0	46.0	50.0	45.0	**43.0**	40.0	40.0	35.0	35.0	**38.0**	**42.0**
Midwest - (OLD)		**42.0**	**39.0**	20.5	42.0	39.0	38.0	**35.0**	39.0	39.0	37.0	37.0	**38.0**	**37.0**
Alumina NEW	$/t	**360**	**375**	521	355	350	375	**400**	380	380	400	400	**390**	**450**
Alumina - (OLD)		**390**	**360**	521	350	350	375	**400**	400	400	450	450	**425**	**450**

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*Forecasts are reported dollar nominal. All base metal prices on an ex-US basis

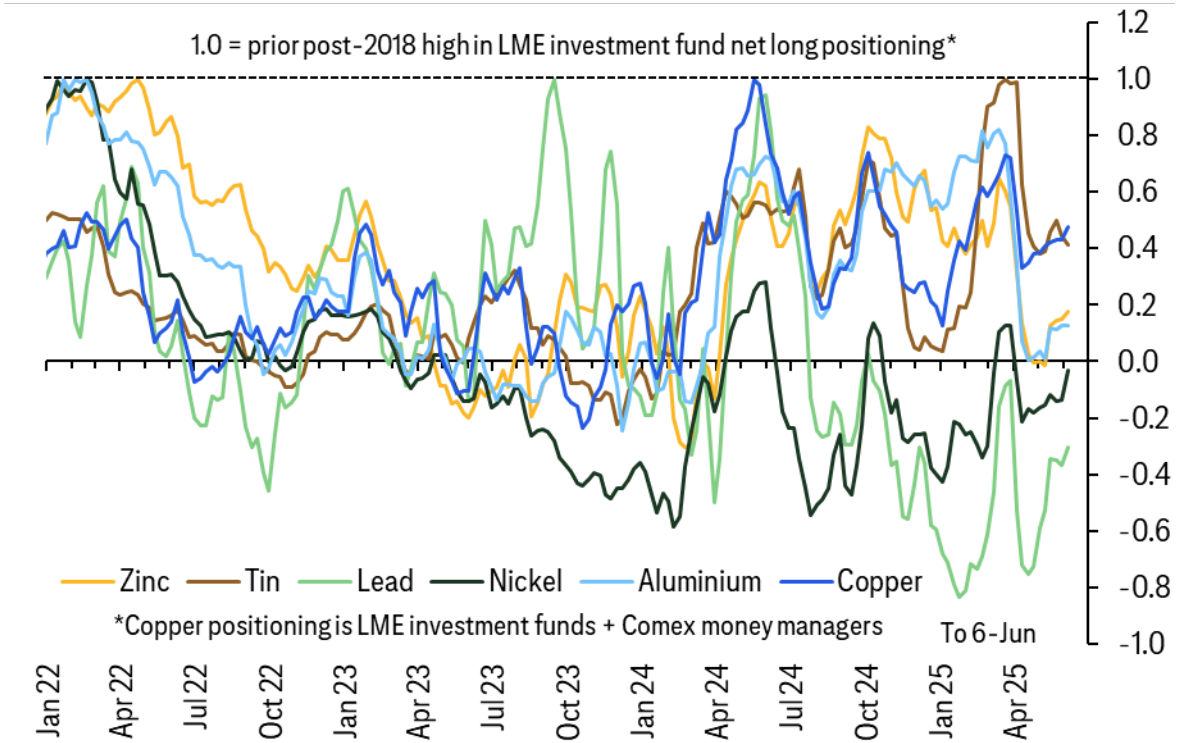
Source: Citi Research

Metals bull/bear scenarios reflect US tariff, China policy, and supply risks

Industrial Metals	Scenario Weight	Unit	0-3 mth pt price	6-12 mth pt price	1Q25	2Q25f	3Q25f	4Q25f	2025f	1Q26f	2Q26f	3Q26f	4Q26f	2026f	2027f
Copper (Bull)	20%	$/t			9336	9500	10500	10500	9950	11000	12000	12000	13000	12000	13000
Copper (Base)	60%	$/t	8800	9500	9336	9500	9200	9000	9250	9000	10000	10000	11000	10000	11000
Copper (Bear)	20%	$/t					8500	8500	8950	8000	8000	8000	8000	8000	7500
Aluminium (Bull)	20%	$/t			2624	2430	2750	2800	2650	2850	2875	3000	3200	2980	3500
Aluminium (Base)	60%	$/t	2450	2650	2624	2430	2450	2550	2510	2600	2650	2800	3000	2765	3000
Aluminium (Bear)	20%	$/t					2250	2250	2390	2300	2300	2350	2350	2315	2450
Nickel (Bull)	20%	$/t			15571	15500	18000	18000	16750	20000	20000	20000	20000	20000	21000
Nickel (Base)	60%	$/t	14000	16000	15571	15500	15000	15000	15250	16000	16000	16000	16000	16000	17000
Nickel (Bear)	20%	$/t					14000	14000	14750	14000	14000	14000	14000	14000	15000
Zinc (Bull)	20%	$/t			2837	2600	2800	2900	2800	3000	3000	3000	3000	3000	3100
Zinc (Base)	60%	$/t	2500	2700	2837	2600	2600	2600	2650	2600	2700	2700	2800	2700	2800
Zinc (Bear)	20%	$/t					2400	2400	2550	2500	2500	2500	2500	2500	2600
Lead (Bull)	20%	$/t			1969	1950	2050	2100	2020	2100	2100	2100	2100	2100	2100
Lead (Base)	60%	$/t	1900	2000	1969	1950	1950	1950	1950	2000	2000	2000	2000	2000	2100
Lead (Bear)	20%	$/t					1850	1850	1900	1900	1900	1900	1900	1900	1900
Tin (Bull)	20%	$/t			31782	32000	35000	35000	33500	35000	35000	35000	35000	35000	35000
Tin (Base)	60%	$/t	28000	30000	31782	32000	30000	30000	31000	30000	30000	30000	30000	30000	30000
Tin (Bear)	20%	$/t					25000	25000	28450	25000	25000	25000	25000	25000	25000
MW premium (Bull)	20%	c/lb			32	46	65	65	52	45	45	40	40	43	47
MW premium (Base)	60%	c/lb	50.0	45.0	32	46	50	45	43	40	40	35	35	38	35
MW premium (Bear)	20%	c/lb					42	35	39	35	35	30	30	33	32
Lithium Carbonate (Bull)	20%	$/t			10330	8800	9000	10000	9550	10000	11000	11000	13000	11300	15000
Lithium Carbonate (Base)	60%	$/t	7000	9000	10330	8800	7500	8250	8700	8500	9000	9000	9500	9000	12000
Lithium Carbonate (Bear)	20%	$/t					7000	6500	8150	6000	6000	6000	6000	6000	6000

Copper and tin most vulnerable to a further expected positioning unwind

- **Net fund positioning length across the complex has maintained weaker levels after the tariff-related pullback from from March highs.** Investors retain a net long position in copper (5/10) and tin (4/10), are broadly neutral zinc (2/10), aluminium (1/10) and nickel (0/10) whilst remaining modestly short lead (-3/10)
- **Copper and tin appear most vulnerable to a further pullback in positioning through 3Q'25, although we expect to see net positioning length across the rest of the complex retreat further modestly on rising consumption headwinds from US tariff hike implementation.** Downside vulnerability appears greatest for copper and tin given elevated positioning length and in copper's case from an eventual reversal of ex-US physical tightening driven by frontloading of copper shipments to the US ahead of feared Section 232 tariffs.



Source: Citi Research, Bloomberg, LME, CME Group

Metals – Critical Minerals Section 232 (inc. Pd, Pt, Ni, Zn, Sn, Co, Li)

- **On 15-April President Trump signed an executive order (White House) commencing a S232 investigation into US imports of critical minerals (as defined by the USGS) and their derivative products plus uranium and all rare earth elements.**
- **Most base and battery metals not already subject to an S232 are in-scope of this investigation, which represents an upside risk for US pricing and premiums if tariffs are imposed, although this is not our base case for individual metals.** If tariffs are eventually discussed for specific metals and there is a sufficient window before potential implementation we would expect this to drive frontloading of shipments to the US and some temporary physical market tightening akin to the dynamic in copper.

Critical minerals S232 in-scope metals and minerals

Industrial & Battery Metals (+ US 2024 net import reliance,%)		Rare Earths	Other
Cobalt	**76%**	Cerium	Antimony
Lithium	**>50%**	Dysprosium	Arsenic
Nickel	**48%**	Erbium	Barite
Tin	**73%**	Europium	Beryllium
Zinc	**73%**	Gadolinium	Bismuth
Graphite		Holmium	Cesium
Manganese		Lanthanum	Chromium
Vanadium		Lutetium	Fluorspar
		Neodymium	Gallium
Platinum Group Metals (PGMs) (+ US 2024 net import reliance,%)		Praseodymium	Germanium
		Promethium*	Hafnium
Palladium	**85%**	Samarium	Indium
Platinum	**36%**	Scandium	Magnesium
Rhodium		Terbium	Niobium
Ruthenium		Thulium	Rubidium
Iridium		Ytterbium	Tantalum
		Yttrium	Tellurium
Nuclear elements			Titanium
Uranium*			Tungsten
			Zirconium

*Not on 2022 USGS critical mineral list

N.b. Aluminium also on USGS critical list, already subject to Section 232 tariffs

Key statutory dates:

- 14-Jul: Interim report due (90-day timeline)
- 19-Oct: Final report due (180-day timeline)

*These are latest dates, and we expect the reports to be delivered sooner.

Citi Passenger Vehicle Forecasts*

	2023	2024	2025F	2026F	2027F	2028F	2029F	2030F
Total Passenger Vehicle Sales	79,529	80,400	82,220	85,129	89,082	90,643	91,984	93,015
y/y change (%)	*4%*	*1%*	*2%*	*4%*	*5%*	*2%*	*1%*	*1%*
Global EV Sales	13,454	16,890	21,882	27,339	31,242	35,170	38,989	42,913
y/y change (%)	*32%*	*26%*	*30%*	*25%*	*14%*	*13%*	*11%*	*10%*
Of which								
Global BEV	9,310	10,402	12,929	15,042	16,776	18,799	20,839	23,022
Global PHEV	4,143	6,488	8,953	12,298	14,466	16,371	18,150	19,891
BEV (% share of total EV)	*69%*	*62%*	*59%*	*55%*	*54%*	*53%*	*53%*	*54%*
PHEV (% share of total EV)	*31%*	*38%*	*41%*	*45%*	*46%*	*47%*	*47%*	*46%*
Regional Exposure (Domestic-only sales)								
China	7,832	10,944	14,607	18,950	21,743	24,126	25,789	27,785
Europe	3,009	2,944	3,387	3,916	4,578	5,506	6,569	7,241
US	1,441	1,561	1,620	1,691	1,848	2,142	2,971	3,744
ROW	1,171	1,441	2,268	2,782	3,072	3,396	3,660	4,142
China Wholesales (includes exports)	8,873	12,234	16,837	21,623	24,613	27,160	28,875	31,282
EV Penetration Rates (China trade adjusted)								
Global	17%	21%	27%	32%	35%	39%	42%	46%
China	35%	45%	58%	67%	69%	74%	78%	83%
Europe	22%	22%	24%	28%	33%	40%	49%	54%
US	9%	10%	10%	10%	11%	12%	17%	21%
ROW	1%	2%	2%	3%	3%	4%	5%	6%
EV Penetration Rates (domestic sales only)								
Global	17%	21%	27%	32%	35%	39%	42%	46%
China	32%	42%	54%	64%	66%	72%	76%	81%
Europe	23%	23%	26%	30%	35%	42%	50%	55%
US	9%	10%	10%	10%	11%	13%	17%	21%
ROW	4%	5%	8%	10%	11%	12%	12%	14%

Source: Citi Research, Bloomberg, Wood Mackenzie, Company Reports,*Forecasts based on Citi Autos and Commodities team assumptions

Copper – Awaiting S232 clarity to catalyse a 3Q'25 pullback sub $9k/t

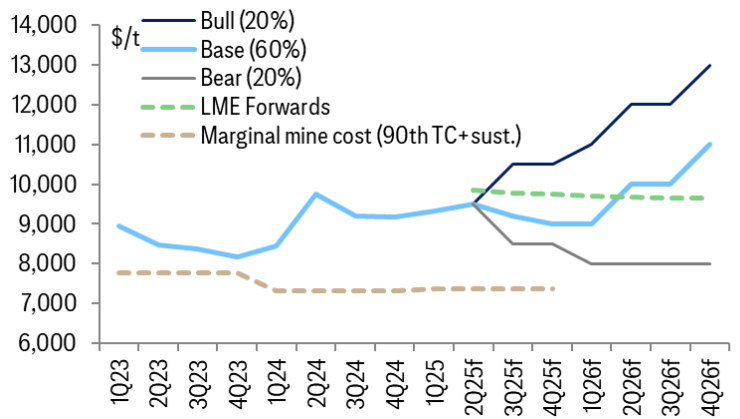
We see a copper pullback to $8,800/t in Q3'25 assuming Q3 announcement and implementation of Section 232 US import tariffs. Until then, elevated US copper imports can continue to exacerbate ex-US physical tightness and support prices around ~$10,000/t. We are medium-term copper bulls (2026+) and see an eventual S232 unwind as a good medium-term dip-buying opportunity.

- **In our base case (60% probability) copper trades around $10k/t near-term on ex-US physical tightness before retreating to $8,800/t in 3Q'25 with S232 tariff clarity.** We see this triggering a further pulllback in moderately net long investor positioning (currently 5/10) and a collapse in US refined copper import demand that could last 6+ months, relieving ex-US physical tightness. Softer consumption from the impact of broader US tariffs, business uncertainty, and weaker China solar demand (after pre-1 June policy frontloading) present additional headwinds for sentiment and pricing through 2H'25.
- **In our bull scenario (20% probability) the ex-US price averages $10.5 k/t in 4Q'25 and $12k/t in 2026.** Section 232 clarity is delayed until 4Q'25 and investors anticipate copper market deficits. Softening or deferral of broader US tariff hikes, stronger China policy support (e.g. government purchases and finishing of empty-shell properties), greater mine supply disruptions and meaningful curbs on global scrap flows can all be bullish drivers.
- **In our bear scenario (20% probability)** the ex-US price falls to average $8.5k/t through 2H'2025. This envisages US stagflation and tepid China growth, with broader US tariff impacts and uncertainty escalating and extending into 2026 amid insufficient fiscal or monetary policy offsets. Lower levels of copper mine supply disruption and softer EV and renewable power additions growth leave the market oversupplied and undermine investor sentiment.

Copper refined supply and demand balance, 2019-2026F – We see the market broadly balanced in 2025, before tightening into 2026

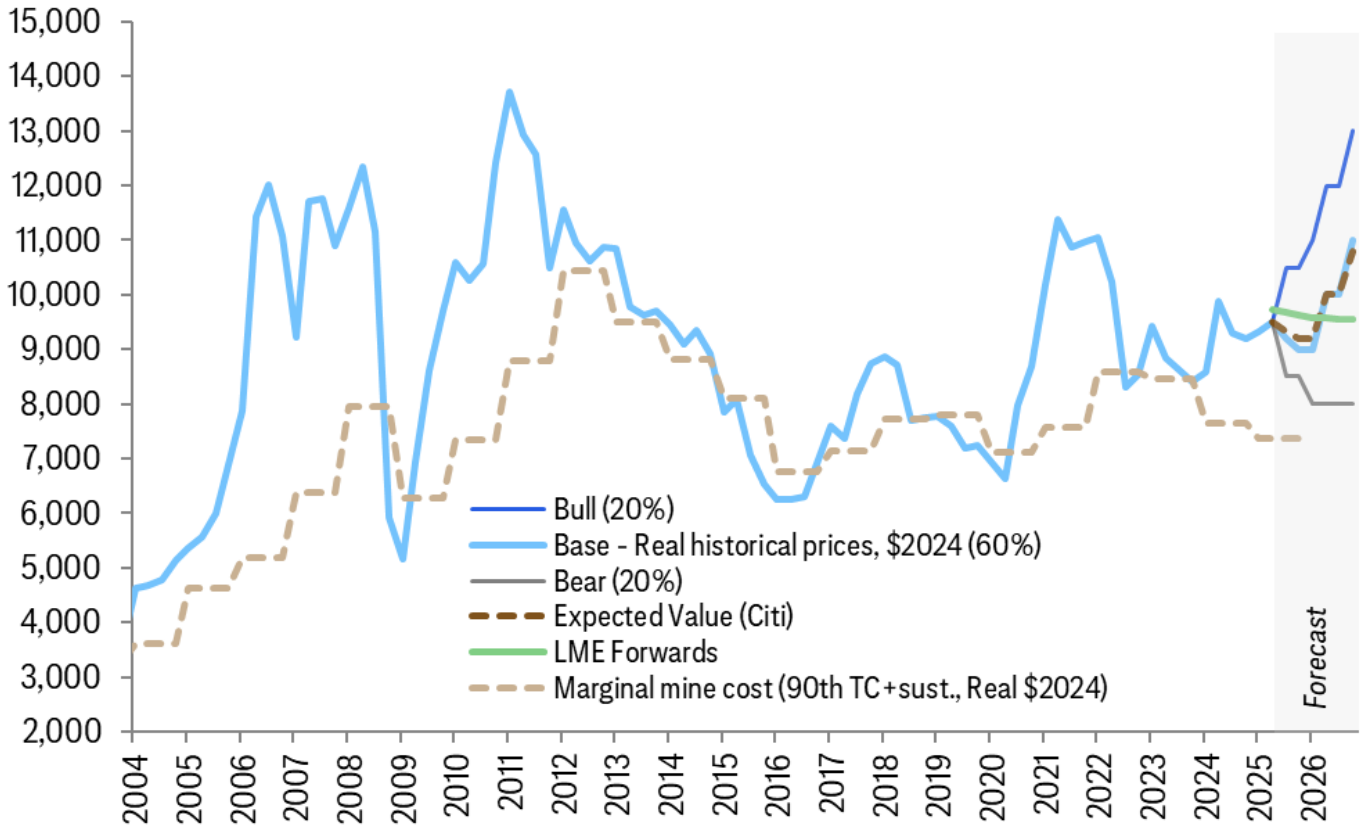
kt Cu	2019	2020	2021	2022	2023	2024	2025f	2026f
Mine Production	20,647	20,736	21,152	21,831	22,265	23,018	23,152	23,775
% Change	*-0.2%*	*0.4%*	*2.0%*	*3.2%*	*2.0%*	*3.4%*	*0.6%*	*2.7%*
Of Which Disr. Allowance (t)							724	1,614
Of Which Disr. Allowance (%)							*3.0%*	*6.4%*
Refined Production	23,654	23,596	24,429	25,092	25,554	26,482	26,873	27,368
% Change	*0.8%*	*-0.2%*	*3.5%*	*2.7%*	*1.8%*	*3.6%*	*1.5%*	*1.8%*
Refined Consumption	23,829	23,125	24,844	24,927	25,579	26,273	26,742	27,643
% Change	*1.5%*	*-3.0%*	*7.4%*	*0.3%*	*2.6%*	*2.7%*	*1.8%*	*3.4%*
End-Use Consumption	*25,020*	*24,281*	*26,086*	*26,173*	*26,858*	*27,587*	*28,079*	*29,025*
Surplus/Deficit	-174	472	-415	166	-25	209	131	-275
Av. Price (US$/t ex-US)	6,008	6,183	9,318	8,830	8,485	9,145	9,250	10,000

Ex-US copper pricing should see an eventual unwind in US copper import S232 frontloading, presenting a longer-term dip-buying opportunity



Copper – Medium-term bull trade to follow S232 unwind and tariff growth hit

Scenario forecasts	Scenario Weight	Unit	0-3 mth pt price	6-12 mth pt price	1Q25	2Q25f	3Q25f	4Q25f	2025f	1Q26f	2Q26f	3Q26f	4Q26f	2026f	2027f
Copper (Bull)	20%	$/t					10500	10500	**10500**	11000	12000	12000	13000	**12000**	**13000**
Copper (Base)	**60%**	$/t	**8800**	**9500**	9336	9500	9200	9000	**9260**	9000	10000	10000	11000	**10000**	**11000**
Copper (Bear)	20%	$/t					8500	8500	**8500**	8000	8000	8000	8000	**8000**	**7500**

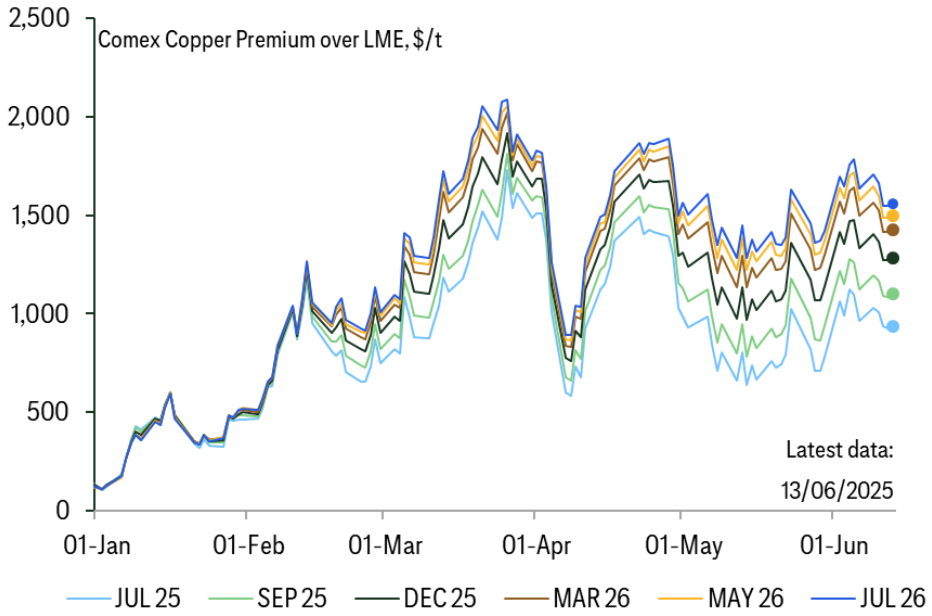


Copper – Base case is US imposes a 25% S232 copper import tariff in 3Q'25

On 25 February, the US announced a Section 232 investigation (White House) into US copper imports citing the metal's vital role in US defence, infrastructure, emerging technologies (inc. the energy transition), and vulnerability to rising reliance on copper imports.

- The copper S232 investigation could conclude as late as the statutory deadline of 22 November. We expect an accelerated timeline with a 25% tariff implemented in 3Q'25. An interim critical minerals S232 report is due 14 July, and we could get more clarity on copper then too.
- We see modest upside for the COMEX-LME arb to price a ~20% premium on forwards and ~15% on nearbys (a discount to a 25% levy)
- We expect S232 clarity to trigger significant LME flat price and spread weakness (by removing fear of more ex-US tightening) and tighter COMEX spreads.

The COMEX-LME basis is pricing an effective 11% tariff for Sep-25 (nearby) 16% tariff for July-26 (1 yr forward)



COMEX-LME basis is likely to price a discount to a 25% copper tariff post-implementation. We suggest arb pricing would settle around ~15% on nearby months and ~20% on 1yr forwards. Our reasoning:

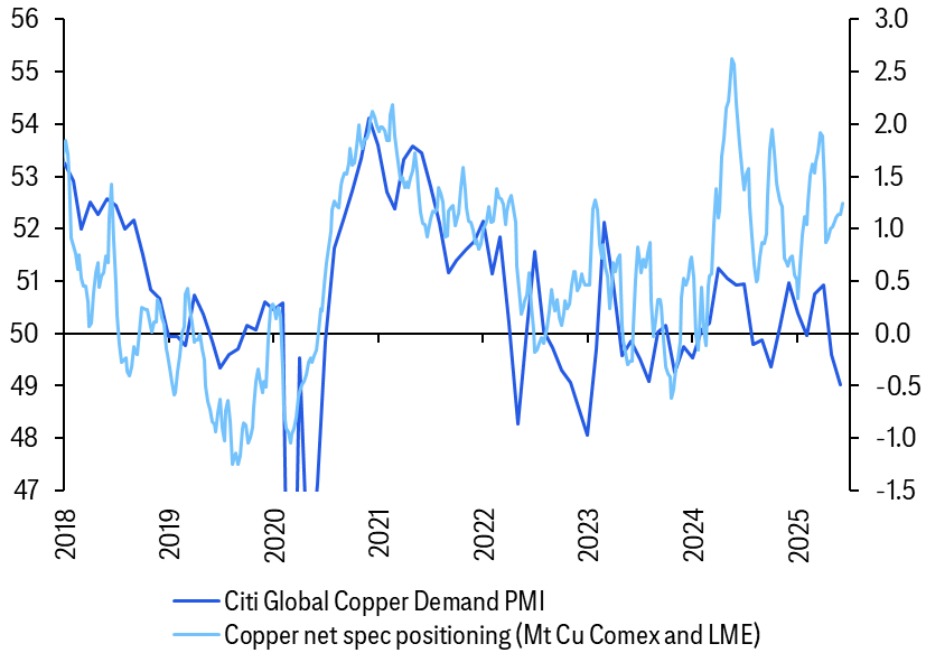
- US domestic inventory and weaker primary copper demand could substitute for US refined copper imports (typically 70ktpm) for 6+ months post-implementation
  - We think US excess refined copper imports since March can total~400kt by end 2Q'25 (~6 months of typical US imports)
  - Demand destruction from high US copper pricing
  - Greater domestic copper scrap use and potential incentivisation of high-grade copper scrap imports expected to be exempt from tariffs could cut demand for primary metal
- Market likely prices some probability that an S232 tariff is eventually reversed or undermined by exemptions.

A bullish arb tail risk is that the market more seriously prices the potential for a Section 232 copper levy of 50%. This follows the June hike to 50% on US aluminium and steel imports but is not our base case for copper. We think a higher rate would in any case most likely be a negotiating tool and vulnerable to country-level exemptions.

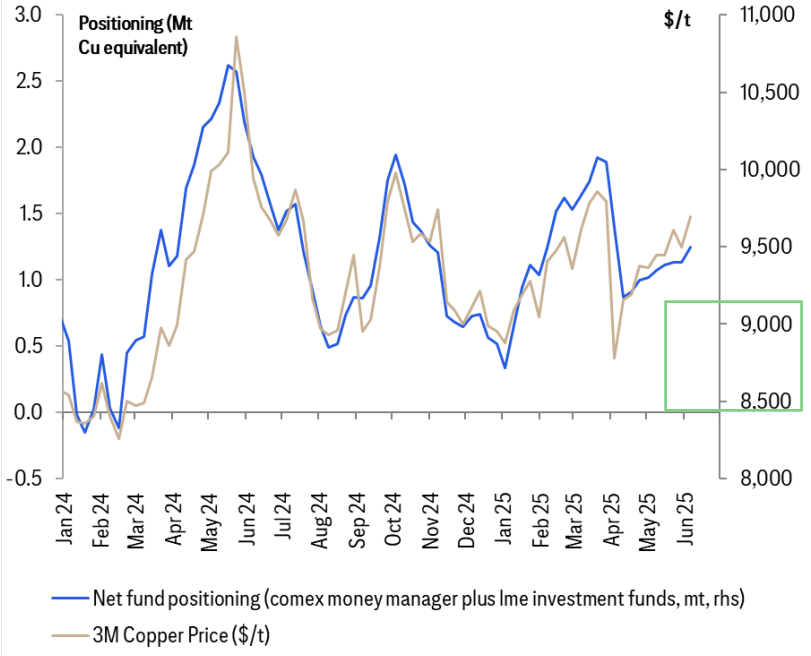
Copper – Fund net length has rebuilt, vulnerable to eventual tariff unwind

Copper price action is closely correlated with investor positioning. Funds are positioned less net long copper than in March but remain moderately bullish, helped by concern around physical market tightening from frontloading of copper shipments to the US and robust China demand. Copper positioning appears vulnerable to a further unwind in 3Q'25 from; 1. Section 232 clarity and a collapse in US import demand; 2. Softer end use copper consumption and manufacturing sentiment due to the growth implications of US tariff hikes; 3. Softer relative demand from China's solar sector following earlier frontloading.

Copper investor net fund positioning remains highly dislocated from deteriorating manufacturing sentiment indicators amid physical market tightness and elevated US imports linked to Section 232 tariff fears

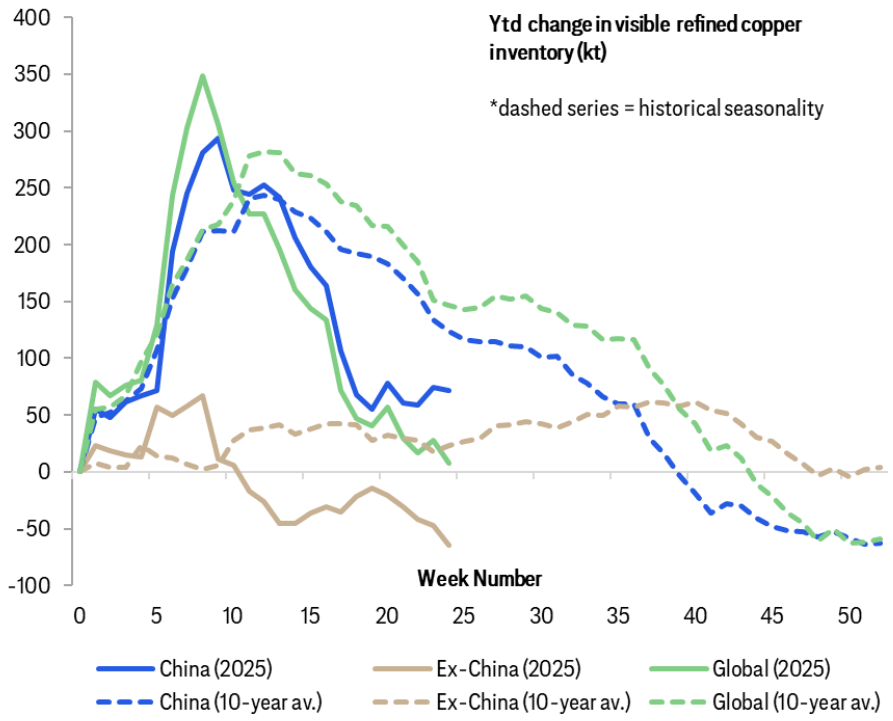


Fund net positioning length remains moderately elevated (5/10) A pullback to anywhere near-neutral could easily see copper sub-$9k/t (Base case is $8,800/t within three months)

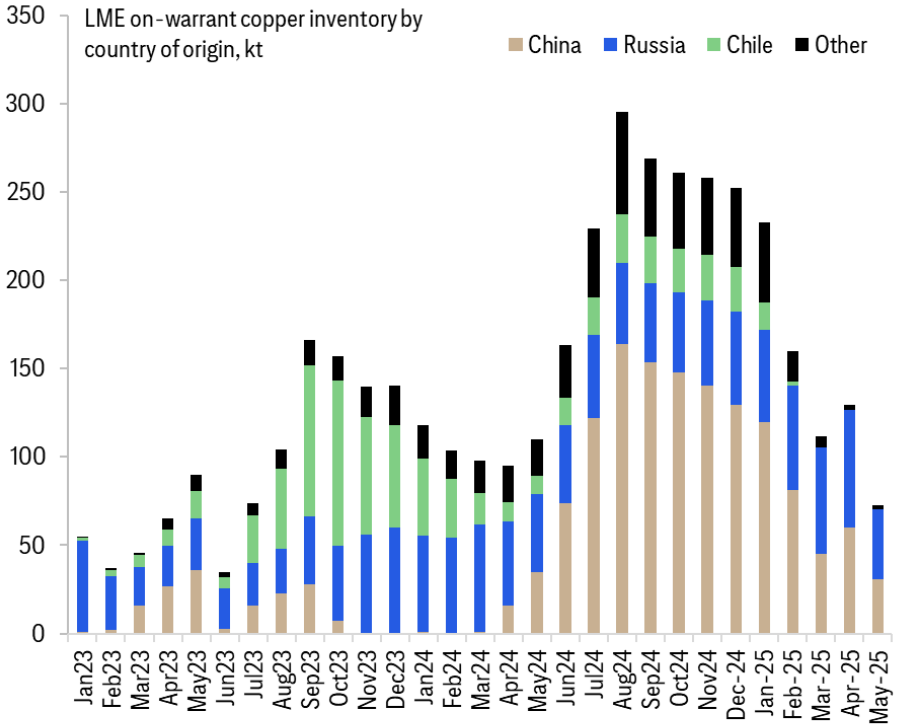


Copper - US arb can sustain near-term ex-US tightness until tariffs imposed

Global visible copper inventory is flat ytd, which is ~150kt lower ytd than is seasonally typical (-75kt in China, -75kt elsewhere). We think this will reverse through 2H'25 with softer consumption and a Section 232 unwind



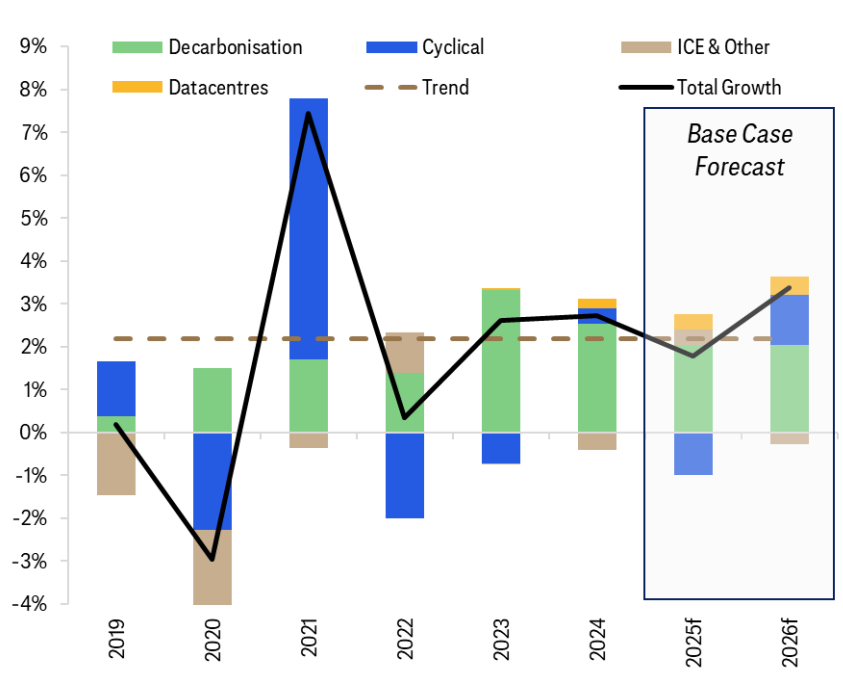
97% of LME on-warrant copper inventory was of Russia or China origin at end May. These units were drawn more aggressively in recent months on a combination of robust China demand and a need to replace units shipped to the US ahead of feared S232 tariffs.



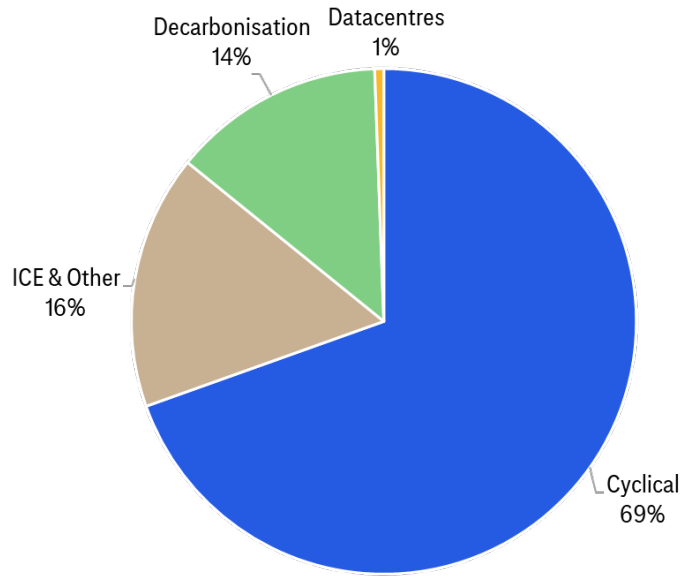
Copper – Energy transition still driving almost all demand growth, for now

- **The ~15% share of copper demand from decarbonisation and datacentres is driving ~100% of demand growth.**
- **An eventual broader recovery in global manufacturing (we think from 2026) and the ~70% of copper demand from traditional cyclical demand segments has the potential to drive total copper demand growth well above trend**

Contributions to global copper end use demand growth by segment – (Base case – 60% probability)



Share of total copper end use consumption by segment (2024)



We expect around-trend global copper end-use demand growth in 2025 (+1.8%). We expect US tariff growth headwinds, an anticipated US growth slowdown and a further (albeit easing) slowdown in China's property market will keep copper demand growth from traditional cyclical demand segments close to flat in 2025. An anticipated recovery in global cyclical copper end use demand growth from 2026 onwards is key to our medium-term bullish copper price view.

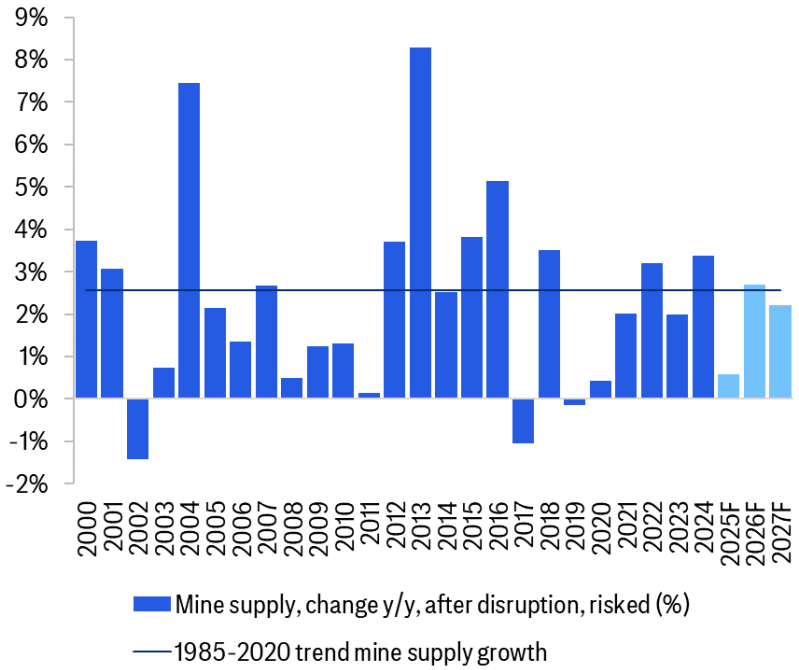
Source: Citi Research, Bloomberg, Wood Mackenzie, ICSG, BGRIMM

Copper – Negligible global mine supply growth in 2025

We still expect copper mine supply growth to be significantly constrained this year (+0.6% y/y assuming 3% disruption). Risks of further mine supply forecasts to the downside include delays to a restart to mining operations at Kakula East in DR Congo or any further delays or issues delivering major projects and expansions in Chile. Our base case continues to assume a late-2026 Cobre Panama restart (the mine remains risked equivalent to a project).

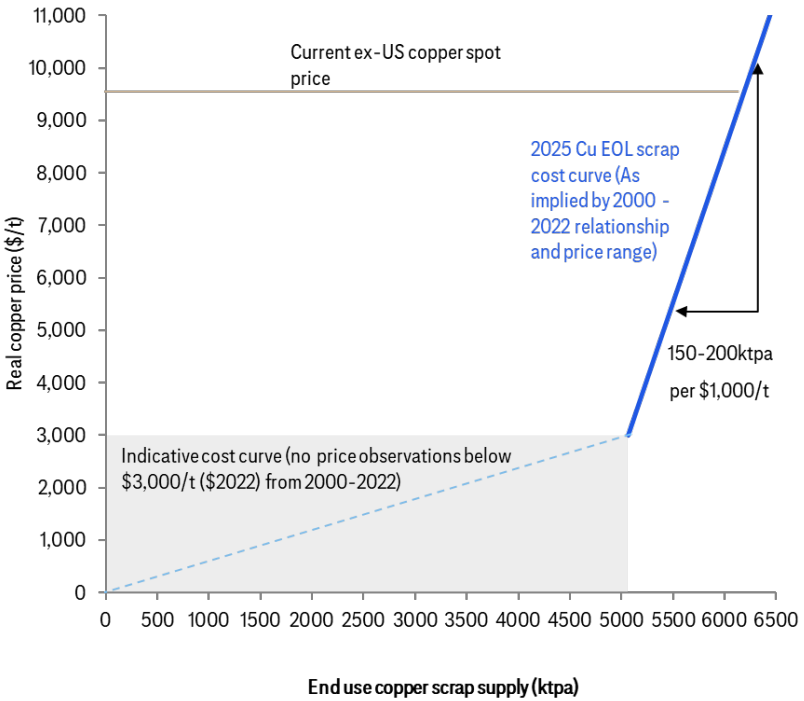
kt pre-disruption		2020	2021	2022	2023	2024	2025F	2026F	24-25F	Growth share
Africa		2717	2997	3,438	3,619	4,007	4,281	4,624	274	32%
Including:	DRC	1,706	2,008	2,458	2,653	3,037	3,184	3,379	147	17%
	Zambia	852	828	790	730	745	803	934	58	7%
	Botswana	0	10	32	78	80	100	100	20	2%
Latin America		8544	8666	8,514	8,827	8,731	8,983	9,522	252	29%
Including:	Chile	5775	5636	5,345	5,255	5,516	5,659	5,894	143	17%
	Peru	2136	2259	2,378	2,715	2,686	2,757	2,839	71	8%
	Panama	206	331	350	331	0	0	105	0	0%
North America		2495	2447	2,396	2,326	2,286	2,430	2,619	143	17%
Including:	Canada	544	485	444	419	411	454	548	43	5%
	US	1,222	1,258	1,252	1,191	1,122	1,193	1,309	71	8%
	Mexico	729	704	700	716	753	783	762	29	3%
CIS/Caspian		1860	1818	1,923	1,950	2,108	2,174	2,312	66	8%
Including:	Russia	875	862	965	982	1,102	1,174	1,260	72	8%
	Uzbekistan	129	132	130	135	155	205	255	50	6%
	Kazakhstan	738	721	742	755	733	668	638	-65	-8%
Asia/Middle East		3132	3291	3,553	3,558	3,876	3,968	4,250	91	11%
Including:	Mongolia	295	305	281	322	360	475	585	115	13%
	China	1,550	1,628	1,708	1,685	1,810	1,848	1,968	39	5%
	Iran	323	333	344	358	389	419	459	31	4%
	Indonesia	506	731	946	920	1,046	915	917	-131	-15%
Oceania		943	876	892	880	878	865	884	-12	-1%
Including:	PNG	86	70	72	85	100	100	130	0	0%
	Australia	857	806	820	795	778	765	754	-12	-1%
Europe		1045	1058	1,115	1,105	1,132	1,176	1,179	44	5%
Including:	Poland	393	391	392	390	379	396	406	17	2%
	Spain	181	136	122	123	112	119	144	7	1%
	Serbia	53	123	204	233	280	289	269	9	1%
Total before disr (incl all projects)		20,736	21,152	21,831	22,265	23,018	23,876	25,389	858	100%
Disruption allowance	%						*3.0%*	*6.4%*		
Disruption allowance	kt						724	1614		
Total post-disr (incl all projects)		20,736	21,152	21,831	22,265	23,018	23,152	23,775	134	
Mine supply growth	%pa	*0.4%*	*2.0%*	*3.2%*	*2.0%*	*3.4%*	*0.6%*	*2.7%*		

We expect a five-year low in copper mine supply growth in 2025 of ~0.6%.

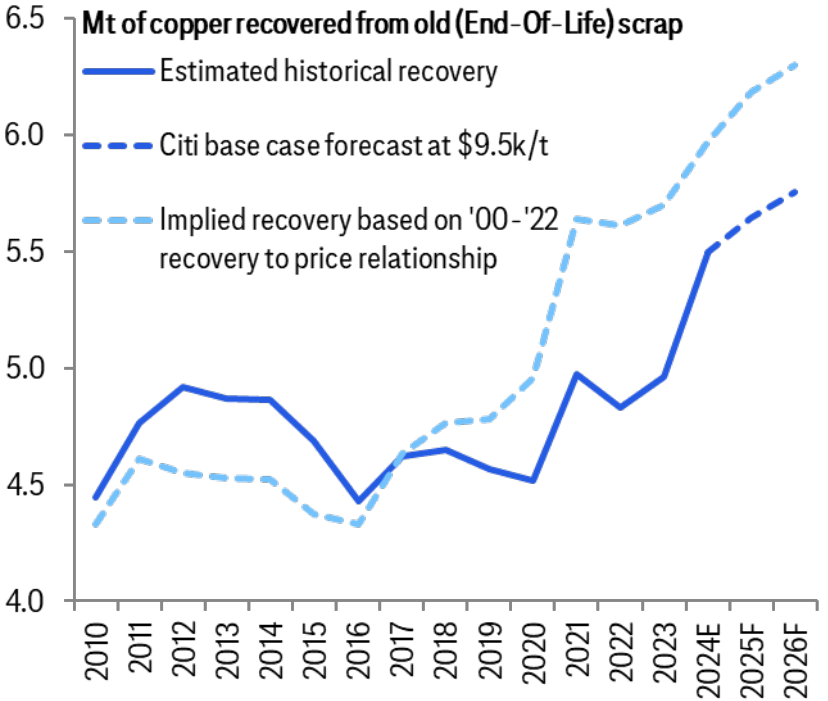


Copper – Price elasticity of supply driven by scrap

Historical scrap to real-price relationship implies EOL Cu scrap sensitivity of ~150-200ktpa per $1,000/t. Or roughly ~100-150ktpa smelter and refinery Cu scrap



However, global copper scrap recovery has lagged the historical price to scrap relationship in level terms since 2021



Source: Citi Research, Bloomberg, Wood Mackenzie, ICSG, BGRIMM

Aluminium – energy intensity limits supply, deficits widening through 2027

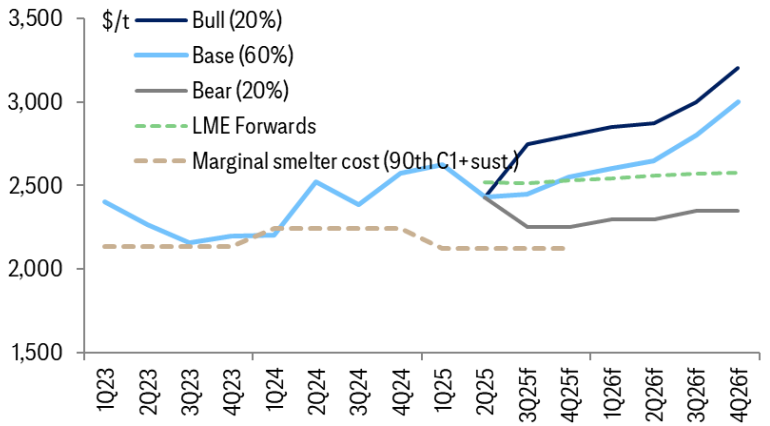
We expect aluminium prices to trade around $2,450/t in the near term , reflecting a broadly balanced market this year. Speculative positioning remains neutral, suggesting limited upside from investors flows. That said, we remain slightly cautious due to potential slower demand growth over the next three months, particularly as China enters a period of seasonal weakness. However, decarbonation-driven demand remains strong, especially in China, reinforcing our medium-to-long-term structural bull case. A dip in the next few months would present a buying opportunity.

- **In our base case (60% probability) aluminium averages $2,450 in 3Q'25 (and $2,550 in 4Q'25) . We model a balanced global market for 2025 .** Frontloaded demand during 1H'25 kept visible inventory low and supported the market, but we expect softer demand in the next three months in response to US tariff hikes and China entering its seasonal summer lull.
- **In our bull scenario (20% probability) prices average $2,750/t in 3Q'25 ($2,800/t in 4Q'25).** This assumes meaningful easing policies from China (e.g. July Politburo) lift the cyclical demand outlook and further drives decarbonisation demand. If President Trump reduces S232 tariffs on aluminium imports and/or the auto sector this could limit demand destruction and further support sentiment.
- **In our bear scenario (20% probability) prices slip to marginal cost support of $2,250/t.** This assumes Trump tariffs weigh heavily on US and global manufacturing activity. China exports of goods especially aluminium-heavy products (e.g. solar modules exports) slow significantly. China policy makers stay behind the curve . Meanwhile, further energy price weakness pressures demand through a deflationary cycle or further downside in alumina prices driving further downside in costs.

Primary aluminium supply and demand balance, 2021-2027F - We see a balanced market in 2025, shifting to deficit in future years basis current spot pricing

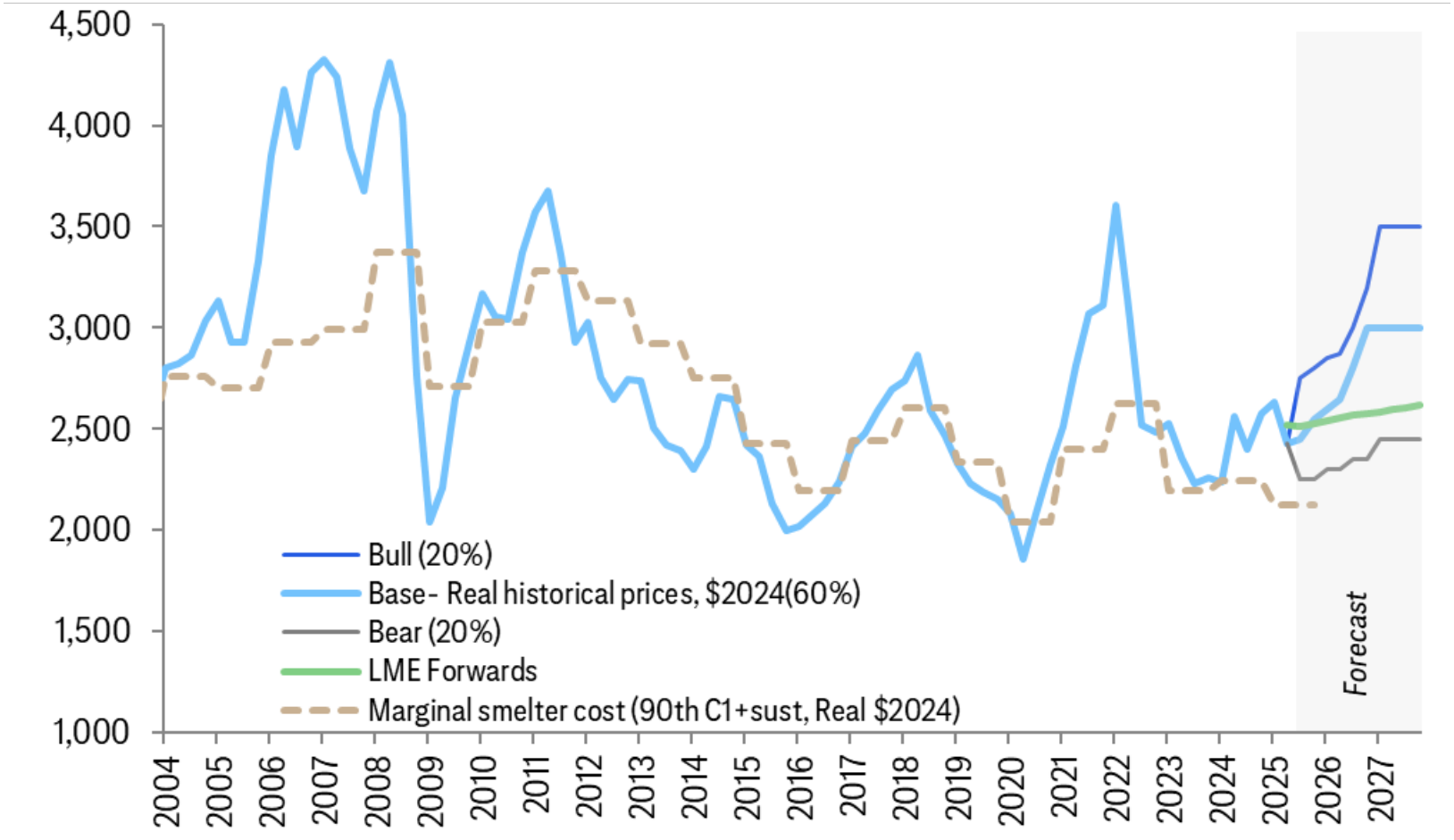
kt	2021	2022	2023	2024	2025F	2026F	2027F
Smelter Capacity (kt/y)	76,237	78,553	79,153	79,373	80,019	80,792	81,302
Primary Production	**67,402**	**68,843**	**70,696**	**72,777**	**73,866**	**75,286**	**76,277**
Capacity Utilization (%)	88%	88%	89%	92%	92%	93%	94%
Supply Incr (%)	4.1%	2.1%	2.7%	2.9%	1.5%	1.9%	1.3%
Of Which China	*38,524*	*40,085*	*41,593*	*43,069*	*43,503*	*43,678*	*43,691*
Supply Incr (%)	*4.8%*	*4.1%*	*3.8%*	*3.5%*	*1.0%*	*0.4%*	*0.0%*
Primary Consumption	**68,913**	**69,205**	**70,225**	**72,862**	**73,806**	**75,903**	**77,606**
Consumption Incr. (%)	9.6%	0.4%	1.5%	3.8%	1.3%	2.8%	2.2%
Of Which China	*40,144*	*40,812*	*42,903*	*44,966*	*45,590*	*46,362*	*47,140*
Consumption Incr (%)	*6.4%*	*1.7%*	*5.1%*	*4.8%*	*1.4%*	*1.7%*	*1.7%*
Surplus/Deficit	**-1511**	**-363**	**471**	**-85**	**59**	**-617**	**-1330**
US$/t	**2,476**	**2,707**	**2,255**	**2,425**	**2,510**	**2,765**	**3,000**

We see aluminium trading around $2,450/t during 3Q'25 before climbing to $2,550/t in 2H'25



Aluminium – we are very bullish on the medium to long term outlook

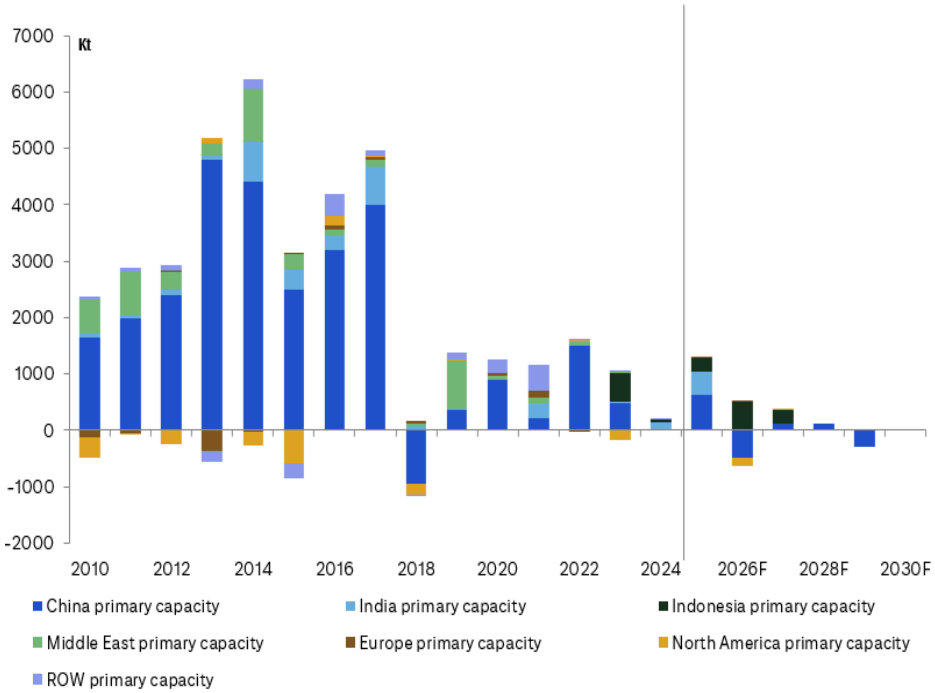
Industrial Metals	Scenario Weight	Unit	0-3 mth pt price	6-12 mth pt price	1Q25	2Q25f	3Q25f	4Q25f	2025f	1Q26f	2Q26f	3Q26f	4Q26f	2026f	2027f
Aluminium (Bull)	20%	$/t			2624	2430	2750	2800	2650	2850	2875	3000	3200	2980	3500
Aluminium (Base)	60%	$/t	2450	2650	2624	2430	2450	2550	2510	2600	2650	2800	3000	2765	3000
Aluminium (Bear)	20%	$/t					2250	2250	2390	2300	2300	2350	2350	2315	2450



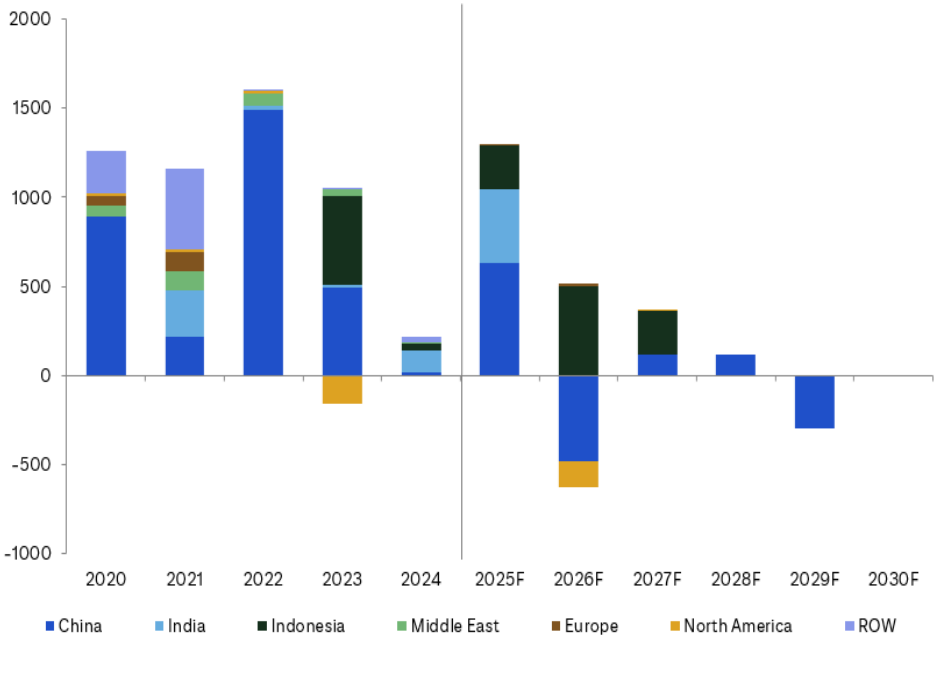
Aluminium – Primary supply growth capped in China, limited elsewhere

Global smelter capacity additions have slowed dramatically as China approaches the 45-mtpa hard capacity policy cap. An increase looks unlikely as the government prioritizes low-carbon energy intensity of growth. Indonesia and the Middle East are expected to drive modest capacity growth over the coming years, but demand growth will likely outpace new supply additions as global sentiment and growth eventually recover in 2026. Limited capacity additions indicate that higher prices will be required to drive greater secondary scrap use and/or incentivise the return of higher-cost smelters to meet the recovery in demand.

China dominated primary aluminium supply growth over the past decades but has limited room for further additions now



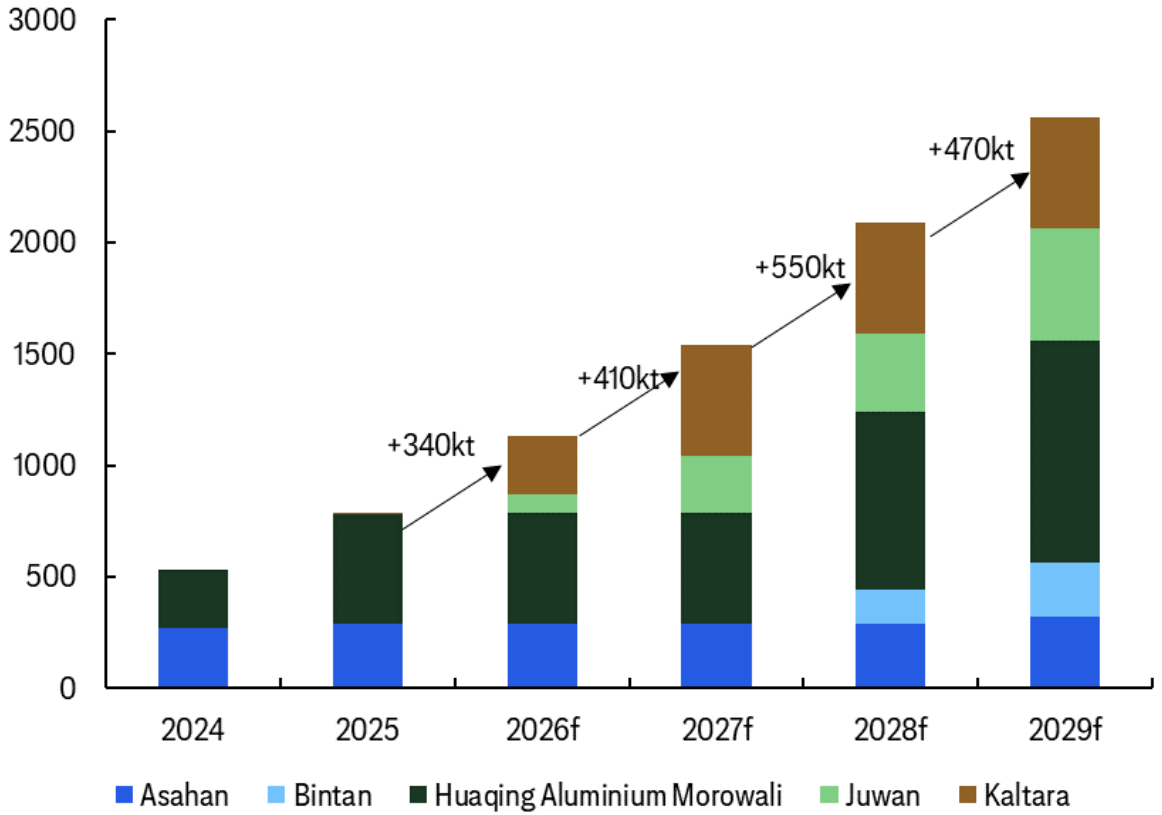
Asia (ex-China) and Middle east expected to drive modest capacity additions in the coming years with China approaching its 45-mtpa hard policy cap



Indonesian capacity key to balancing aluminium market post-China cap

As China's primary aluminium production growth slows under its 45Mt capacity ceiling, the role of Indonesia (where capacity is largely being developed by Chinese companies) become increasingly critical in keeping the global market broadly balanced over the next few years. This outlook also hinges on faster growth in secondary aluminium supply and demand, helping offset some of the demand for primary metal to meet underlying aluminium consumption growth.

We expect Indonesia's aluminium capacity ramp-up to support steady production growth of ~0.5Mt per year over the next three years. Juwan, a JV between Chinese Tsingshan and Xinfa Group, is now expected to come online in 2026-earlier than previously expected, likely due to access to power from Tsingshan's operations in Weda Bay. Together with the ramp up of Huaqing and Adaro Phase 1, these projects will account for the bulk of Indonesia's new supply over the period.



A faster acceleration of projects hinges on captive power investment

There are ambitious plans to build primary aluminium smelters in Indonesia due to both push (China's capacity cap) and pull effects (Indonesia's ban on bauxite export and to move up the aluminium value chain). Chinese producers may also see this as a critical step to diversify supply risk due to China's large reliance on bauxite supply from Guinea. As a base case, we expect~1.5 Mt of capacity in Indonesia by the end of 2025/early 2026.

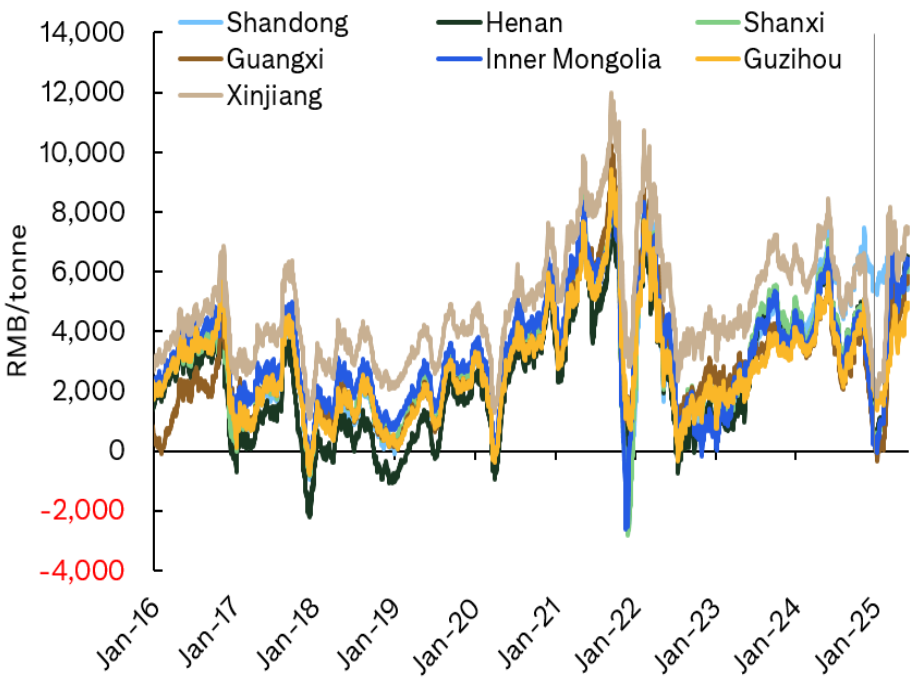
However, the pace of Indonesia's expansion is heavily dependent on access to affordable and reliable power (primarily from captive coal-fired generation) which presents ESG risks as well as regulatory and financing hurdles . Fully integrated smelting projects in Indonesia, supported by captive coal power, are estimated to require capex of US$2,500–$2,800 per tonne of aluminium capacity. Despite these substantial upfront costs, payback periods remain long — typically 8–11 years even under optimistic aluminium price scenarios (e.g., US$2,800/t). Among the projects we track, announced planned capacity adds up to >5Mt but is unlikely to materialise without aggressive investment in captive power from Indonesia and sustained higher aluminium prices.

Project / Smelter	Location	Type	Capacity end-2025(ktpa)	Notes	Targeted Capacity (ktpa)	First Productio
Huaqing	Sulawesi	Greenfield	500	JV of Huafeng and Tsingshan Group. Huafeng Group is a chemicals company and it has an aluminium fabricator base. Cell- 500kA. Design capacity 1Mtpa aluminium and 500 ktpa anode	1000	500-ktpa by 2023
Juwan	Weda Bay	Greenfield	500		500	2026
Kaltara	Kalimantan	Greenfield	250	Adaro Energy is planning to build a 500 ktpa aluminium smelter in Kaltara Industrial Park. Phase one 500-ktpa will initially use coal. Phases two and three include 500 kt capacity addition each. The company aims to use hydropower by 2029 and this is in line with the first power targets of the 1,375 MW hydropower project.	1500	2025+; likely 1Q25
) Kuala Tangjung	Sumatra	Brownfiled	300		320	
) Kalimantan	Kalimantan	Greenfield (possible)	0	500 ktpa smelter in North Kalimantan	500	2030
Bintan	Bintan Island	Greenfield (probable)	0	Construction of Phase 1 250-kt to commence next year. Possibly near the Bintan alumina refinery	500	2026+
Huayou		Greenfield (possible)	0	500 ktpa smelter	500	2030
	Kalimantan	Greenfield (probable)	0		600	2026+
SUM			***1550***		***5420***	

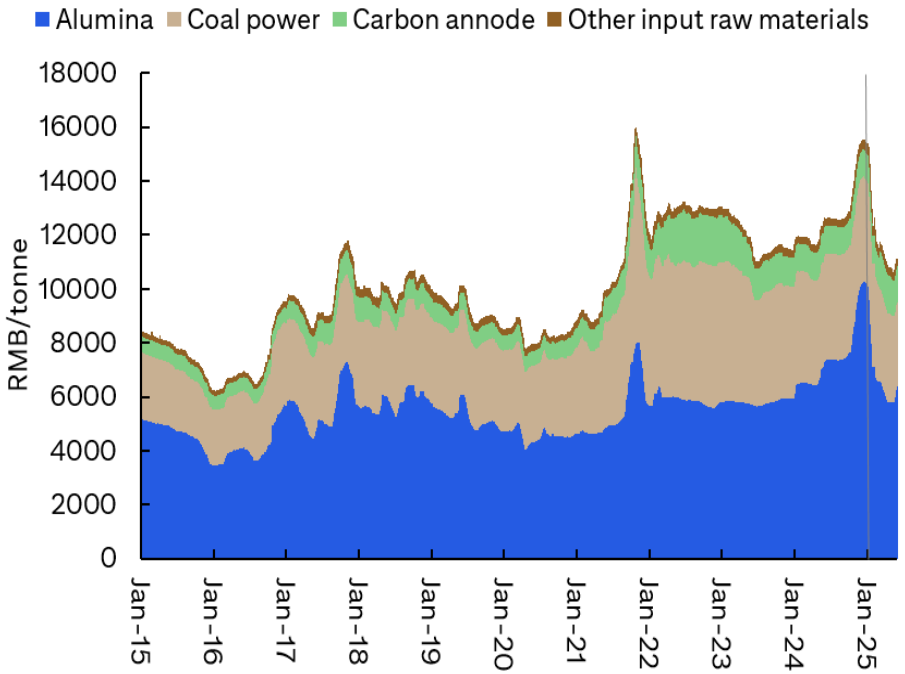
Smelter margins up on cost deflation, but demand remains key price driver

So far this year, lower coal and alumina prices have reduced aluminium production costs on a spot basis, improving smelter margins. This removes a key support for aluminium prices. However, we believe the primary driver remains the demand outlook. The lack of cost support combined with an expected demand slowdown in 3Q25 could create headwinds for prices. That said, the potential for further cost deflation is limited, and prices could recover if demand improves later this year, even with lower production costs.

Smelters margins have improved so far this year on spot terms after being squeezed by high alumina price last year



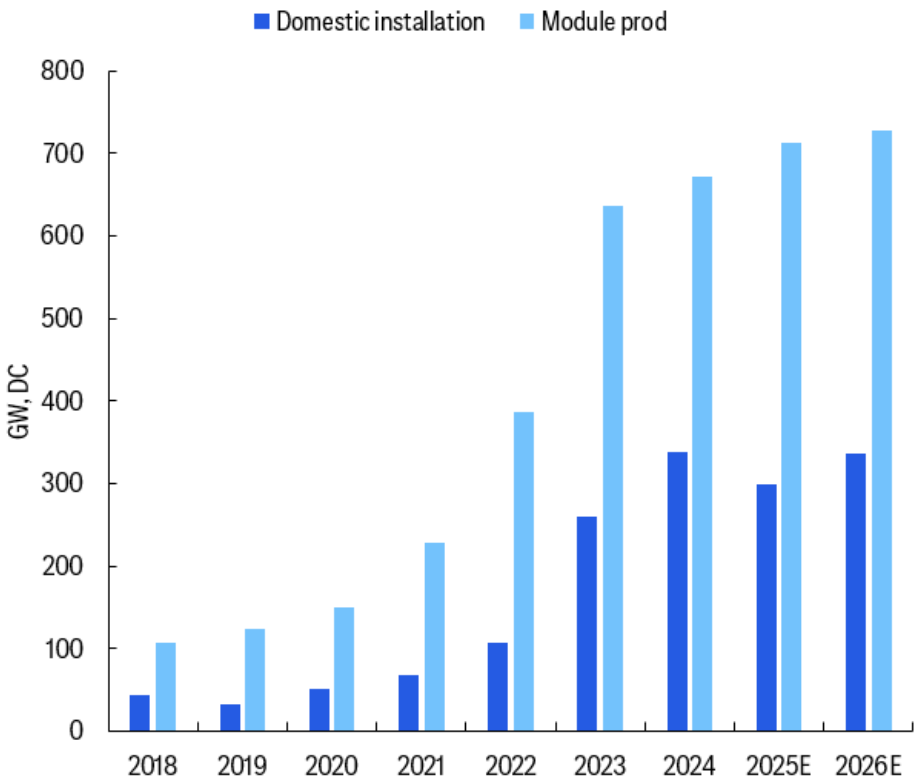
Key aluminium smelting cost variables: alumina and coal prices drive cost lower



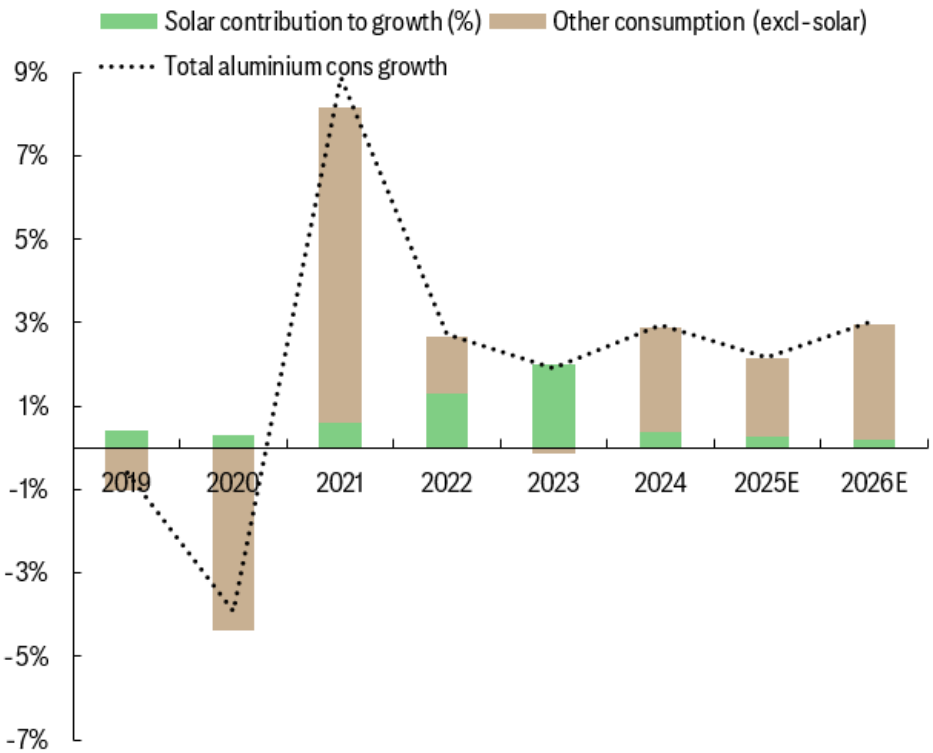
China solar installation slows, but module export keeps demand afloat

We have downgraded our China solar installations in 2025 and now project slower growth over the coming years. Solar installation activity is expected to decelerate in 2H25, mainly hit the growth of aluminium demand from mounting segment, which accounts for a smaller share of aluminium use (relative to frame) and has relatively lower intensity per GW. As a result of weaker installations demand this year, we estimate a loss of around 100kt aluminium consumption compared to 2024. Nevertheless, for the full year, we continue to model growth in module production, underpinned by resilient export demand.

China solar module production is expected to continue to drive aluminium demand in the frame segment

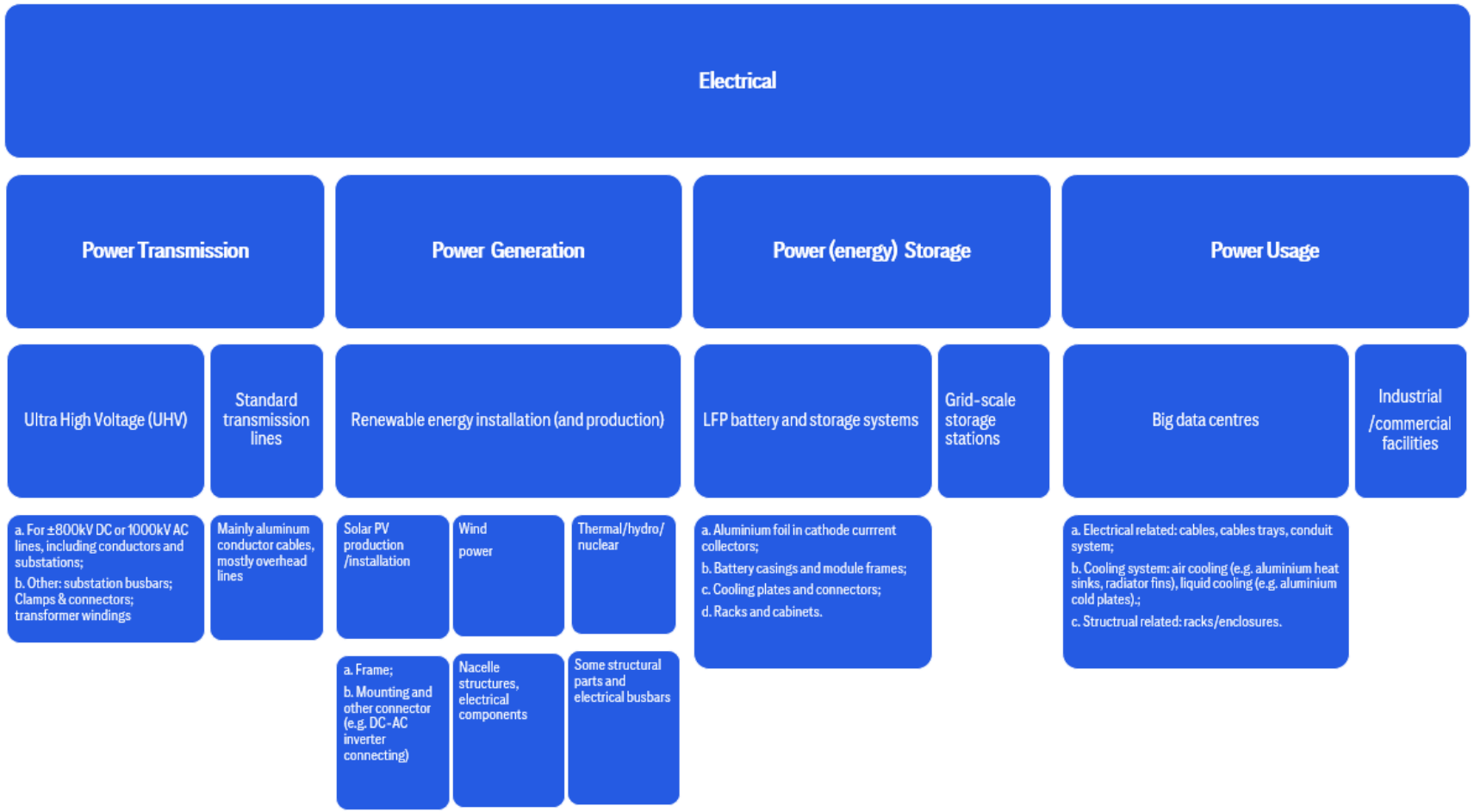


The global solar sector is still expected to contribute significantly to aluminium consumption growth



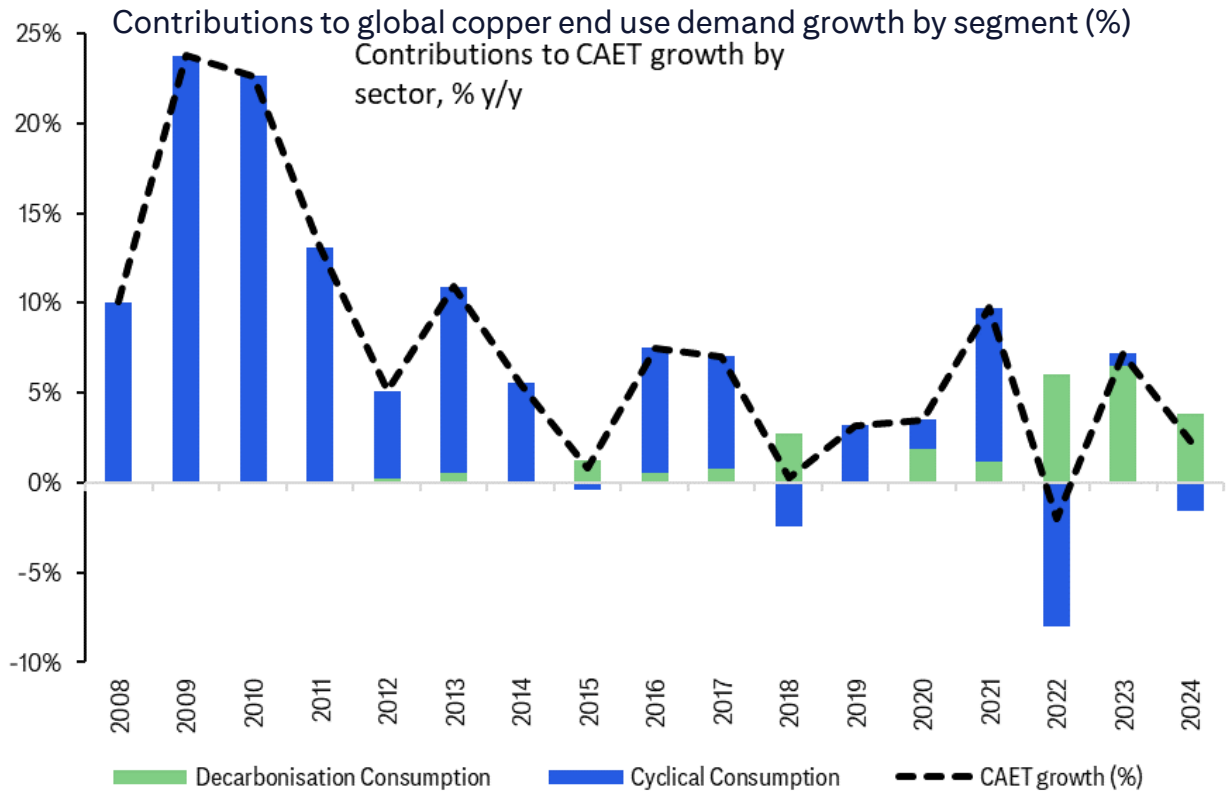
China's electrical sector powers aluminum demand: four pillars of growth

China's electrical sector has emerged as the key driver of aluminium demand growth, underpinned by strong policy momentum and evolving industrial priorities. We break this sector into four core pillars: power transmission, power generation, power storage, and power usage. Together, these segments form the backbone of China's energy transformation. The sector's robust expansion is primarily fuelled by the country's decarbonisation agenda and President Xi's strategic push for a "new productive force," which includes building out AI-driven data centres. These facilities require massive power consumption and, in turn, significant investment in electrical infrastructure—further reinforcing aluminium's critical role in enabling the transition.



Source: Citi Research, SMM, Mysteel, CRU, Wood Mackenzie

Decarbonisation to drive demand growth before 2026 cyclical upswing

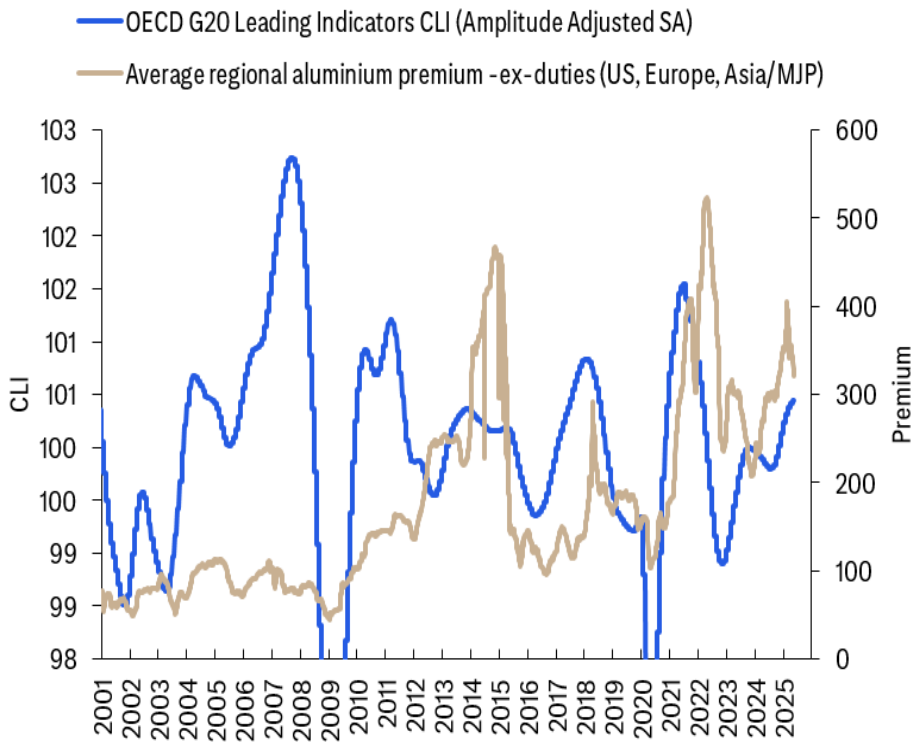


	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25
China Aluminium End-Use Tracker (CAET) - % change y/y	5.2%	-4.0%	-1.3%	4.0%	1.7%	-1.2%	0.2%	0.8%	2.3%	5.8%	4.5%	10.9%	4.5%	8.7%	1.1%	2.7%
China Aluminium End-Use Tracker (CAET) - % change ytd	*5.2%*	*0.4%*	*-0.2%*	*0.8%*	*1.0%*	*0.6%*	*0.6%*	*0.6%*	*0.8%*	*1.3%*	*1.6%*	*2.3%*	*4.5%*	*6.6%*	*4.9%*	*4.3%*
Transportation	55.9%	-17.8%	10.7%	10.9%	7.9%	0.5%	-0.9%	0.7%	1.6%	15.0%	19.6%	23.1%	2.7%	37.9%	12.3%	16.4%
Construction	-13.6%	-13.7%	-16.5%	-6.6%	-11.3%	-14.3%	-9.9%	-11.4%	-8.6%	-7.2%	-13.1%	3.0%	6.3%	-3.8%	-15.8%	-22.1%
Packaging	4.0%	4.0%	0.7%	7.9%	6.0%	3.2%	-8.1%	5.2%	-2.8%	5.5%	15.5%	11.7%	-3.6%	-3.6%	0.8%	0.9%
Foil stock	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	9.1%	3.2%	3.2%	3.2%	3.2%
Electrical	11.9%	10.0%	4.0%	0.3%	7.4%	5.1%	7.8%	9.8%	14.2%	16.8%	17.7%	19.6%	12.5%	25.9%	10.7%	47.8%
Consumer durables	10.8%	10.8%	4.3%	13.5%	9.3%	4.9%	-3.4%	12.5%	10.8%	9.3%	8.1%	16.0%	8.4%	8.4%	4.1%	-2.1%
Machinery & Equipment	-2.9%	-2.9%	-3.1%	6.3%	-0.7%	-0.6%	8.2%	2.2%	3.2%	6.1%	1.9%	8.2%	-4.1%	-4.1%	1.1%	-1.5%
Other	7.0%	7.0%	4.5%	6.7%	5.6%	5.3%	5.1%	4.5%	5.4%	5.3%	5.4%	6.2%	5.9%	5.9%	7.7%	6.1%
Cyclical	3.1%	-4.3%	-3.7%	1.8%	-2.1%	-5.5%	-3.5%	-3.4%	-4.6%	-1.2%	-3.4%	4.6%	0.5%	3.0%	-5.5%	-6.5%
Decarbonisation	20.9%	-1.1%	9.9%	14.2%	17.8%	16.0%	15.0%	18.0%	29.3%	31.4%	32.4%	27.8%	29.4%	56.6%	28.7%	40.2%

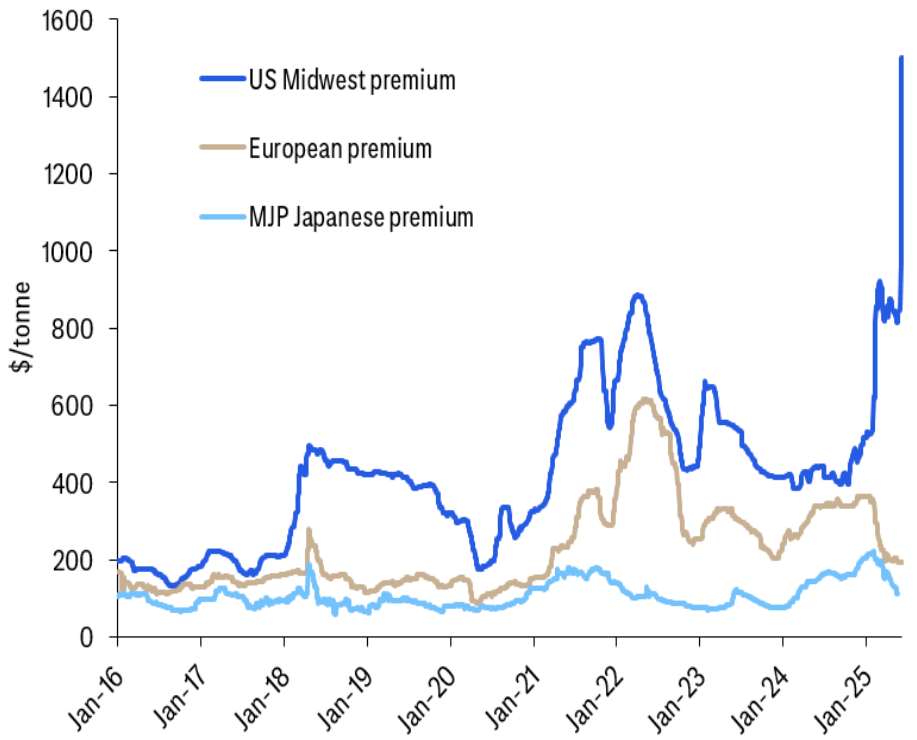
Aluminium – Global premiums split, US strength, ex-US strain

Regional aluminum premiums have diverged, with the US Midwest Premium (MWP) surging to unprecedented levels following the S232 tariff hike to 50%, while premiums in other regions remain under pressure due to increased supply and muted demand. We hold a neutral-to-bearish view on premiums ex-US. In Europe, premiums are facing significant headwinds from tighter LME spreads, falling Asian premiums, and the potential redirection of Canadian metal into the region. That said, potential tightness in the scrap market and developments in freight costs may offer some support.

Historically, the roll over in premiums coincides with the turn in the global business cycle-though premia usually have short cycles



Tariffs drive divergence in regional premiums

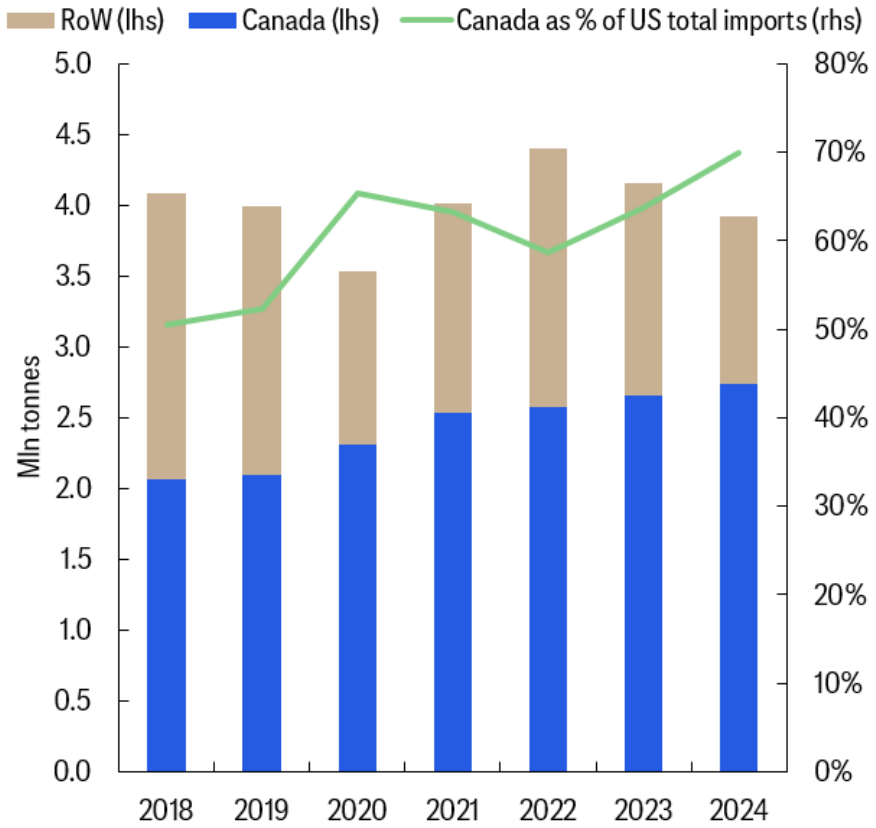


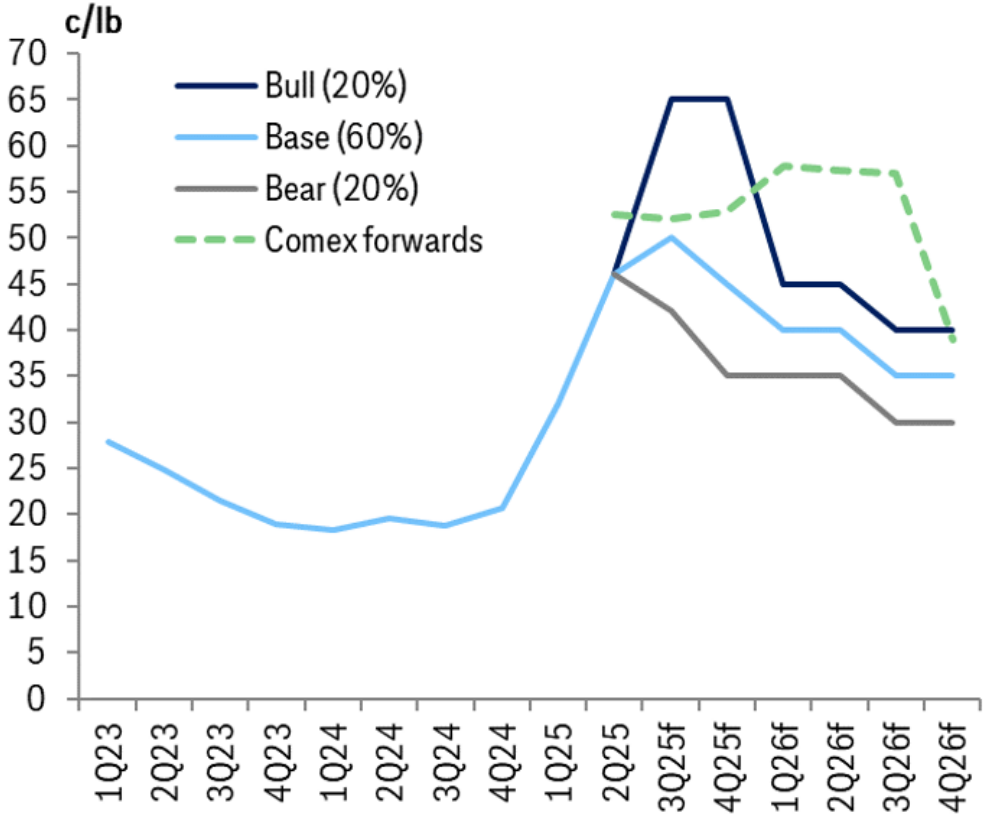
Source: Citi Research, Platts, Bloomberg

50% tariff drives up short term MWP, but downside risks build over time

News that the US and Mexico are close to reaching a deal (10-Jun, 2025, Reuters)-which would allow US to import steel from Mexico duty free under a capped volume-has prompted us to reassess the recent escalation in aluminium tariffs. It increasingly appears that the 50% tariffs on both steel and aluminium may be serving as leverage in trade negotiations. Unlike steel, aluminium is classified as a critical mineral by the USGS, making a full tariff removal less likely. However, a reduction to 25% or targeted exemptions appear plausible.

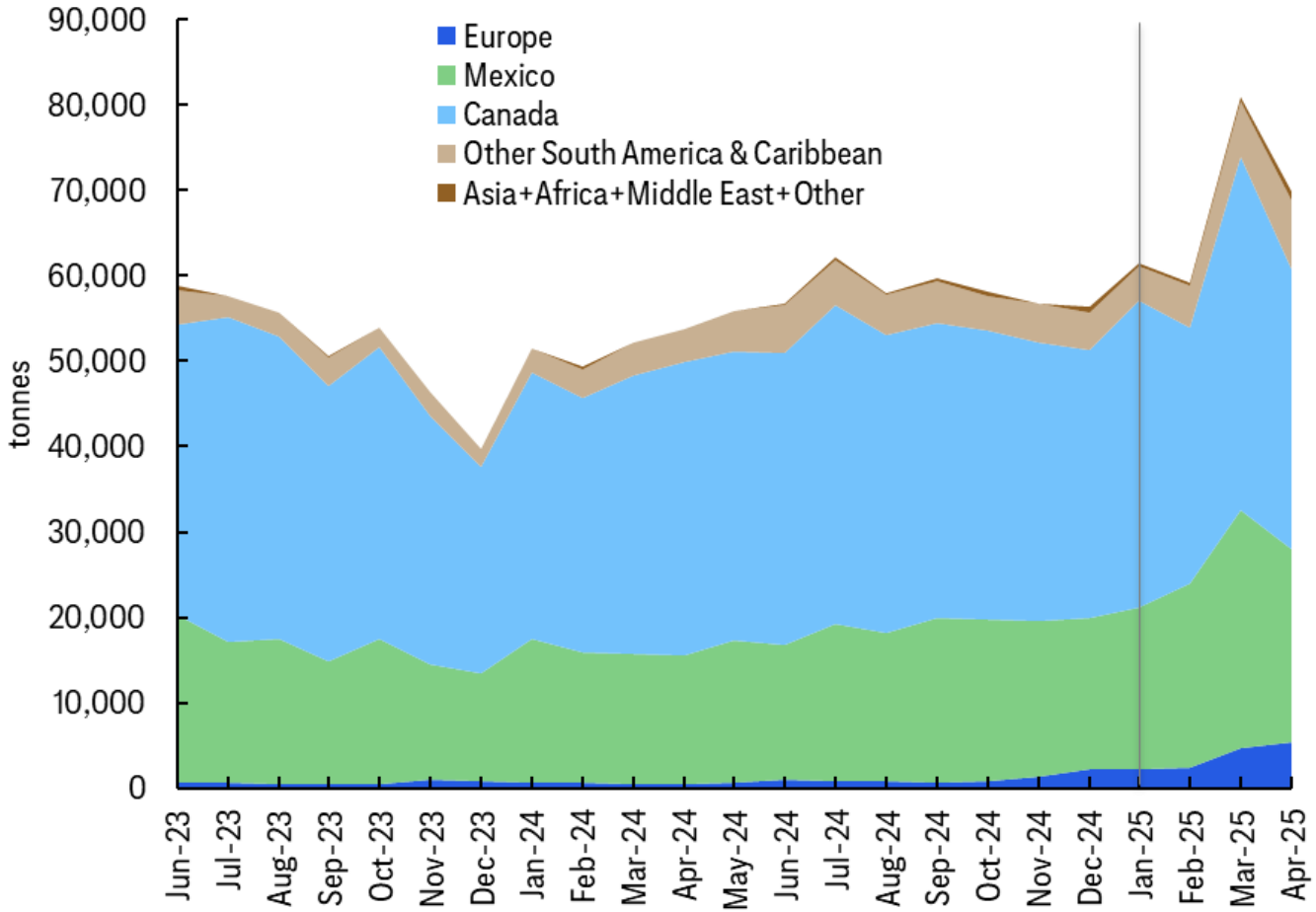
While we had previously expected the 50% tariff to remain in place for the next 12 months, the swift progress on the steel deal suggests that aluminium tariff relief could arrive sooner than anticipated. Our new base case assumes a possible shift within the next three months.





US aluminum scrap imports surge amid rising all-in aluminum prices

While primary aluminium imports are now subject to the 50% Section 232 tariff, we believe scrap is still excluded from this regime and instead falls under a 10% IEEPA reciprocal tariff. This makes scrap a much more effective input relative to primary metal, potentially driving increasing usage by downstream producers such as rollers. As the US competes aggressively for scrap, this may tighten availability elsewhere. US imports of scrap increased by 31% y/y during the first months of 2025. Imports from Europe surged by 580% in the first four months of 2025 (though from a much smaller base last year than Canada and Mexico).



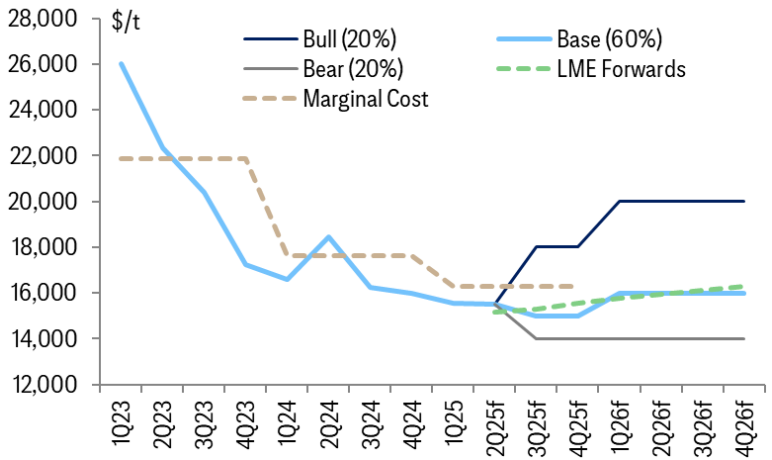
Nickel – Expected to trade slightly lower amid persistent oversupply

- **In our base case (60% probability) we see nickel drifting in a lower $14k-$15.5k/t range for the remainder of 2025.** Despite softer forecast 2025 supply growth amid ongoing ore supply pressures on Indonesian NPI producers, we see weaker battery demand growth (with rising LFP chemistry adoption and headwinds for US and European EV penetration growth) and stainless-steel production, with a Class 1 surplus still forecast. US tariff growth impacts are another price headwind. We see prices drifting lower on physical oversupply, but this is limited given producer cost pressure and the potential for supply cuts. Investor positioning is also near-neutral.
- **In our bear scenario (20% probability) prices average $14k/t through 2025 and 2026.** This assumes an incrementally bearish global growth backdrop with tariffs driving an extended period of business uncertainty and cyclical demand weakness. This scenario envisages tepid ex-China EV demand growth, and a further aggressive pivot to non-nickel LFP chemistry in batteries. If longer-term auto consumer hedging flow softens it could limit the markets capacity to finance surplus production as inventory and amplify pressure on the spot market. Price support from production restraint (due to cost or Indonesian policy) eases to lower levels amid cost deflation (e.g. from lower energy prices). Possible China supply-side reform could also hit stainless steel production.
- **In our bull scenario (20% probability) prices average $18k/t for the rest of 2025 and $20k/t for 2026.** This envisages nickel rallies with base metals on a stronger cyclical growth recovery (e.g. softer President Trump tariff hikes or stronger China stimulus, e.g. supporting stronger consumer good demand). Meaningful curtailments to Indonesian nickel ore output and NPI production represents another key upside risk. If nickel-base battery chemistry breakthroughs can reverse expectations around rising LFP battery share, then this could revitalise positive sentiment around the medium-term nickel narrative.

Nickel supply and demand balance, 2019-2026F

Refined nickel (kt contained)	2019	2020	2021	2022	2023	2024	2025f	2026f
Production (post-disruption)	2,456	2,553	2,700	3,145	3,457	3,670	3,775	3,939
% YoY	*10.7%*	*3.9%*	*5.8%*	*16.5%*	*9.9%*	*6.2%*	*2.9%*	*4.3%*
NPI (ex. matte conversion)	*955*	*1,114*	*1,300*	*1,579*	*1,787*	*1,806*	*1,804*	*1,833*
FeNi	*404*	*380*	*369*	*340*	*290*	*212*	*220*	*226*
Sulphate (ex. class 1 conversion)	*149*	*150*	*203*	*363*	*463*	*510*	*581*	*641*
Class 1 metal	*948*	*908*	*828*	*863*	*917*	*1,143*	*1,170*	*1,239*
Base disruption applied (%)							*2.0%*	*3.0%*
Base disruption applied (kt)							*77*	*122*
Consumption	2,474	2,546	2,835	2,956	3,218	3,457	3,618	3,823
% YoY	*3.7%*	*2.9%*	*11.3%*	*4.3%*	*8.8%*	*7.4%*	*4.7%*	*5.6%*
Battery precursors	*156*	*195*	*293*	*404*	*475*	*522*	*582*	*666*
Stainless steel	*1,715*	*1,819*	*1,935*	*1,917*	*2,071*	*2,207*	*2,279*	*2,377*
Other uses	*603*	*532*	*607*	*636*	*672*	*729*	*757*	*779*
Refined Surplus/Deficit	-18	6	-135	188	239	213	157	117
Class 1 S&D			-149	5	48	140	127	115
Sulphate S&D			64	74	41	37	48	29
Class 2 S&D			-50	110	150	36	-17	-27

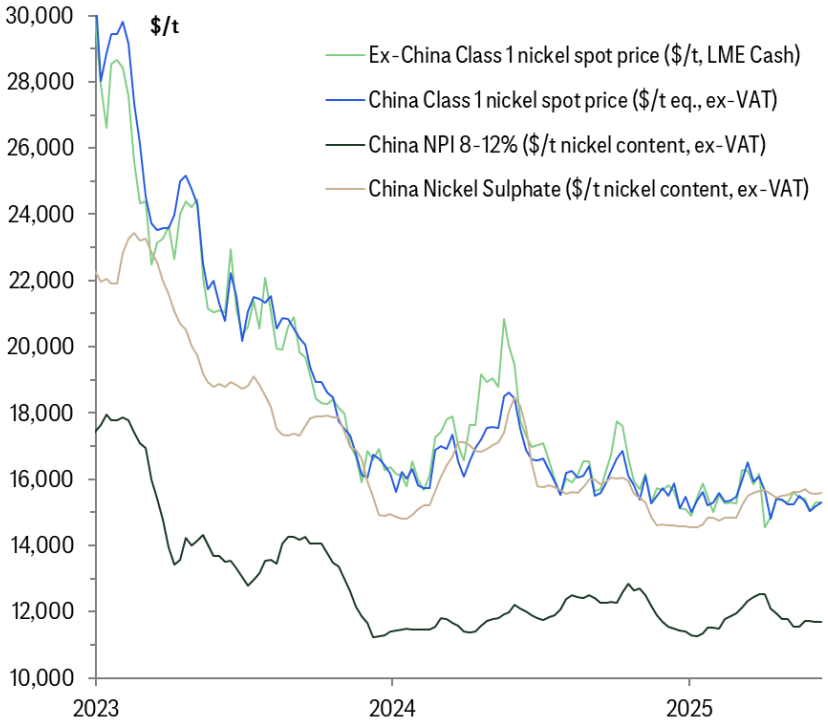
We see modest further downside for nickel pricing amid surplus conditions, demand headwinds and need for more supply restraint



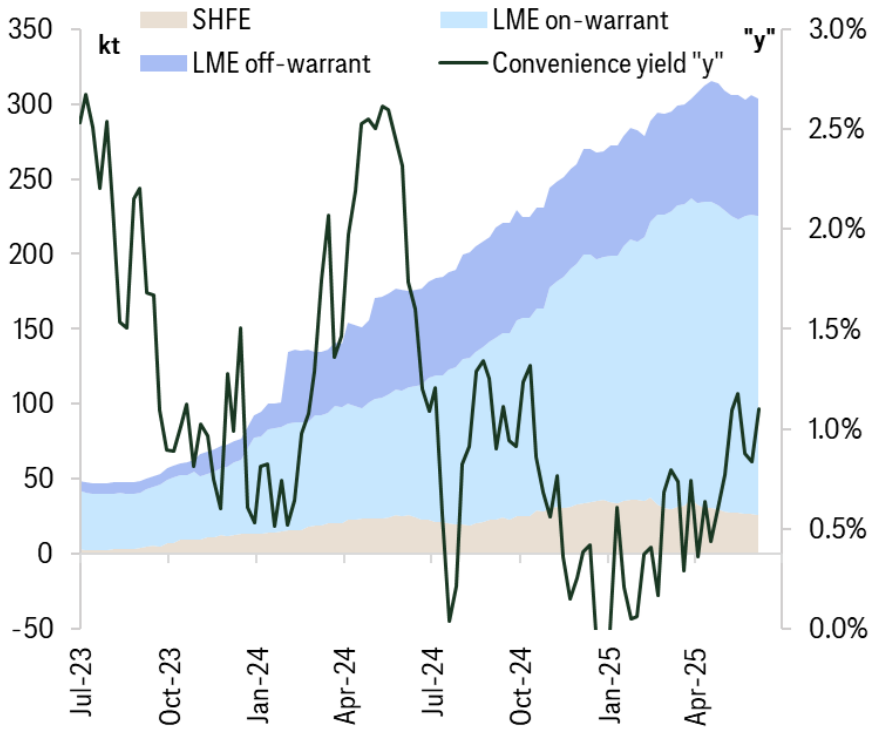
Nickel – Softer EV demand sentiment risks incentive to finance inventory

The sustainability of the nickel market's willingness to finance continued inventory builds and support spot pricing is a price vulnerability. The nickel market has demonstrated the capacity and willingness to finance substantial Class 1 inventory builds over the last year, underpinned by longer-term consumer buying interest that has kept the curve trading close to full finance and spot pricing supported around $15k-$16k/t amid a Class 1 nickel surplus. We think the market is vulnerable to softer EV-demand sentiment (both in terms of EV penetration, ex-China OEM market share, and nickel-based chemistry market share) and an associated reduction in medium-term hedging demand and a tighter curve structure, with less willingness to finance excess nickel inventory and more pressure on near-term pricing.

Both Class 1 and NPI nickel pricing has been reasonable stable over the last year versus prior history despite the surplus of physical nickel units.



Visible Class 1 nickel stock builds have stalled since April, but we still see nickel as an oversupplied market subject to some modest further downside.



Source: Citi Research, Bloomberg, LME, SHFE

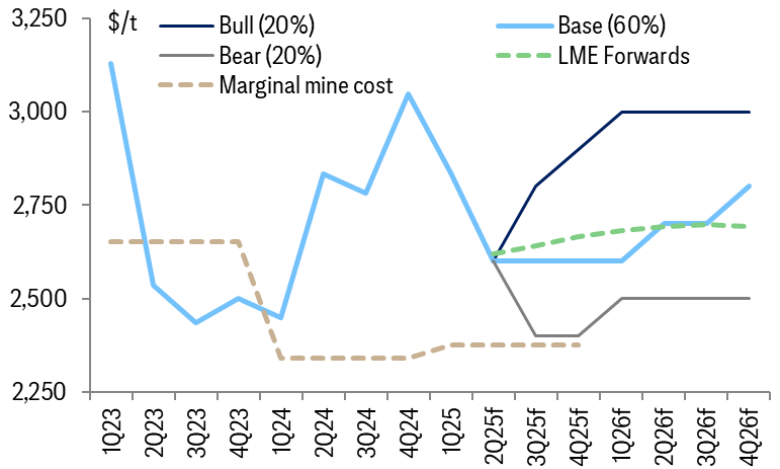
Zinc – Robust supply and looming tariff headwinds to drive prices lower

- **In our base case (60% probability) zinc falls as low as $2,500/t over the next three months and average $2,600/t for the remainder of the year.** We believe most of the fundamental 2025 downside in zinc (that we first called in Dec-24) has played out; prices are~10% lower ytd and investor positioning has fallen close to neutral. We think zinc can drift lower through 3Q'25 on sluggish global growth and greater confirmation of easing physical refined balances as stronger mine supply flows through increasing to refined production. We see some upside for pricing in 2026 ($2,700/t average) assuming a recovery in global growth expectations, stronger demand growth, and weaker mine supply growth (including a reduction of~180kt from Antamina).
- **In our bear scenario (20% probability) prices ease to average ~$2,400/t for the remainer of 2025, close to marginal mining costs.** This envisages a more bearish global growth and consumption environment (e.g. from more aggressive US tariff escalation and a limited fiscal or monetary policy offset) and/or stronger mine supply growth with lower disruption. Any China steel sector supply-side reform could act to constrain demand growth further.
- **In our bull scenario (20% probability) prices climb to average $2,900/t by 4Q'25 and $3,000/t through 2026.** This envisages stronger consumption and manufacturing sentiment, with sustained China demand strength and a softening of tariff headwinds. Investors reallocate to industrial metals and rebuilt zinc length. Disruptions and delays to zinc mine supply growth fail to alleviate pressures on refined zinc output threatening a physical deficit that drives pricing higher. Any US import tariff on zinc following the ongoing critical minerals 232 investigation drives potential frontloading of US zinc imports in 2H'25 and substantial hikes to US physical premiums.

We see the global refined zinc balance (2019-2026f) swinging back into a modest surplus in 2025 amid robust mine supply growth

kt	2019	2020	2021	2022	2023	2024	2025f	2026f
Base Mine Supply	12,785	12,277	12,881	12,695	12,310	12,285	13,222	13,801
+ Probables and Possibles (Risk Adjusted)							27	89
- Disruption Factor							4.0%	6.5%
Total baseline disruption of:							*529*	*897*
Total Mine Production	12,785	12,277	12,881	12,695	12,310	12,285	12,720	12,993
Mine Supply (% chg.)	*0.4%*	*-4.0%*	*4.9%*	*-1.4%*	*-3.0%*	*-0.2%*	*3.5%*	*2.1%*
Total Metal Supply	13,540	13,702	13,832	13,512	13,761	13,525	14,001	14,264
Refined Supply (% chg.)	1.4%	1.2%	1.0%	-2.3%	1.8%	-1.7%	3.5%	1.9%
Consumption	13,798	13,252	14,057	13,673	13,523	13,719	13,877	14,154
Consumption (% chg.)	-2.2%	-4.0%	6.1%	-2.7%	-1.1%	1.4%	1.1%	2.0%
Refined Surplus/Deficit	-258	450	-225	-162	238	-195	124	110
Concentrate S&D	256	-375	152	334	-255	10	-17	20
Total Refined + Conc S&D	-2	75	-73	172	-17	-185	107	130

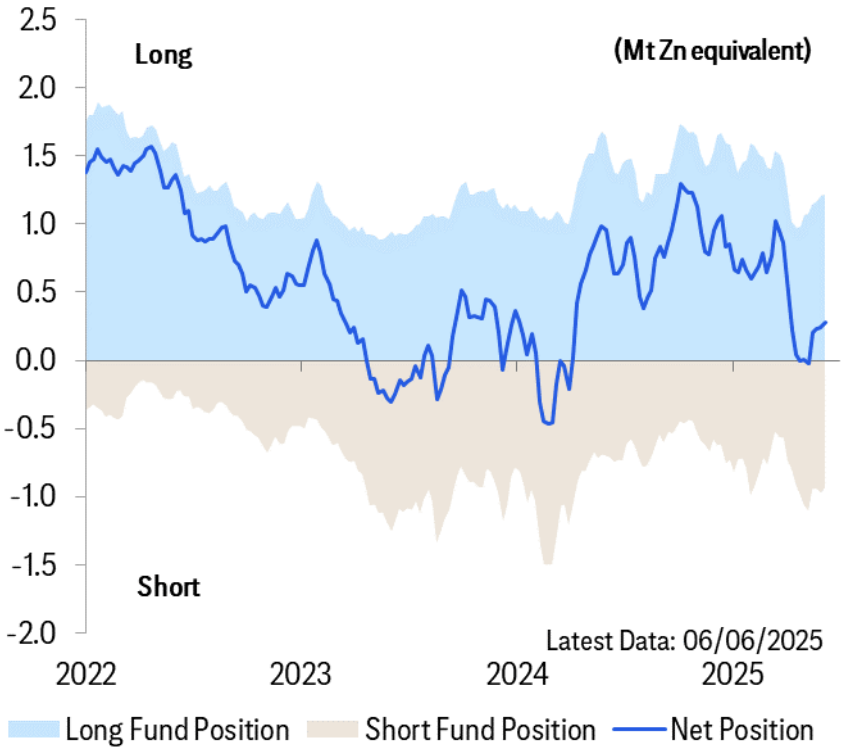
Price risks skew lower through 2025 amid macro-headwinds and solid mine supply growth, but we see limited downside versus spot



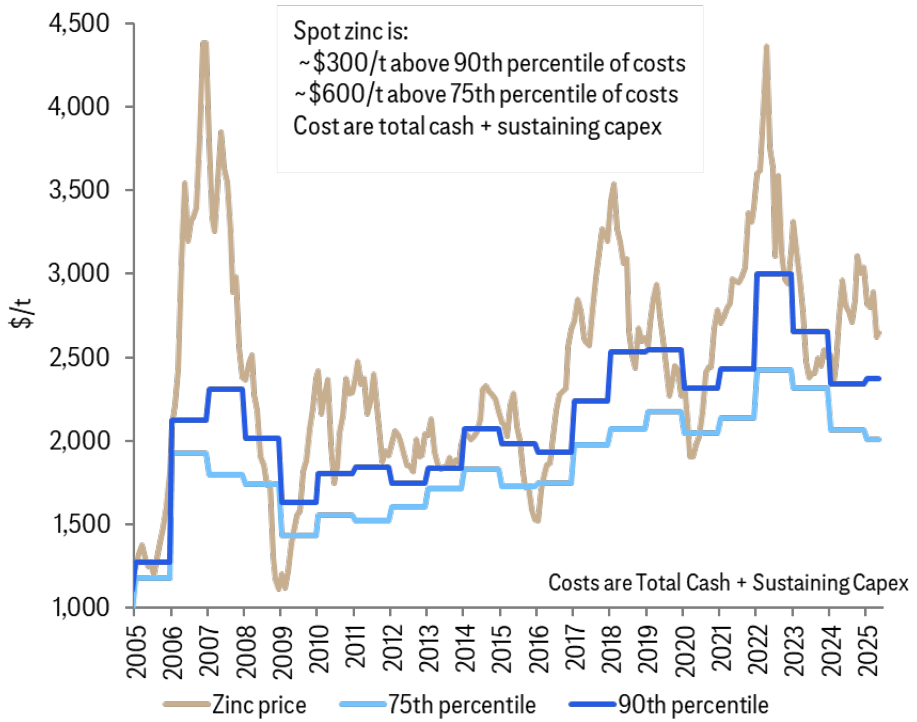
Source: Citi Research, Bloomberg, Wood Mackenzie, ILZSG, BGRIMM, LME

Zinc – Potential for further price downside, but this is now more limited

Fund net long zinc positioning is close to neutral following a substantial pullback from the March peak



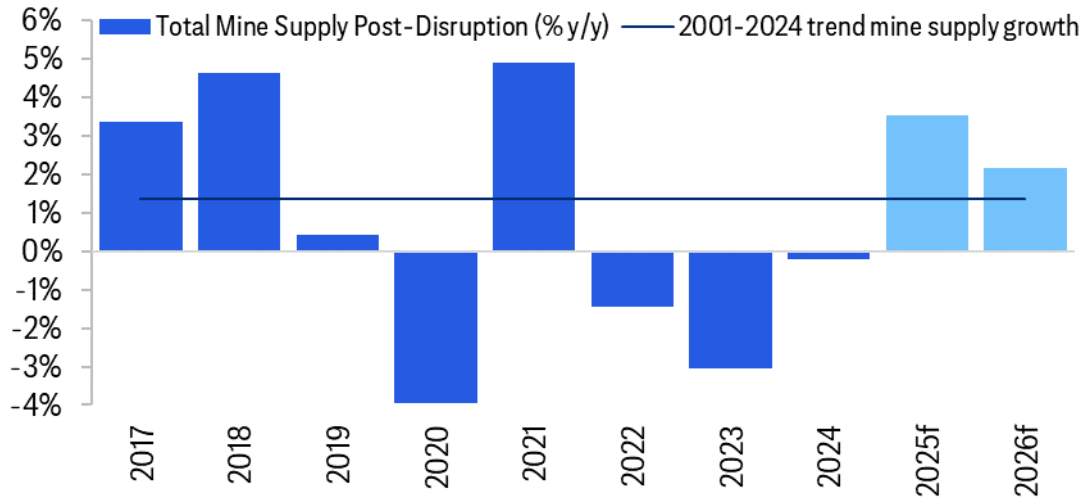
Zinc is now trading at a narrower, but still material, premium to marginal mining costs.



Source: Citi Research, Bloomberg, Wood Mackenzie, LME

Zinc – Robust mine supply growth remains a key 2025 market driver

We expect above-trend mine supply growth through 2025 after severall years of contraction due to project delays and cost-related closures



Growth driven by a concentration of project ramp ups, mine restarts, and return to more zinc-intensive mine sequencing

Mine	Country	2023	2024	2025f	2026f	2024-2025f	Growth Share
Antamina	Peru	463	266	444	266	178	19%
Kipushi	DR Congo	0	50	200	270	150	16%
Huoshaoyun	China	0	180	280	280	100	11%
Gamsberg	South Africa	174	114	200	260	86	9%
Tara	Ireland	53	6	90	100	84	9%
Ozernoye	Russia	0	0	50	100	50	5%
Korbalikhinsky	Russia	0	60	100	100	40	4%
Chungar	Peru	51	40	70	80	30	3%
Vares	Bosnia and Herzegovina	0	3	30	40	27	3%
Alpamarca	Peru	6	5	30	35	25	3%
Subtotal (pre-disruption)		***747***	***724***	***1494***	***1531***	***770***	***82%***
Other (pre-disruption)		11563	11561	11728	12270	167	18%
Global (pre-disruption)		**12310**	**12285**	**13222**	**13801**	**937**	**100%**
Global disruption allowance				***4.0%***	***6.5%***		
Prob. & Poss. Projects				27	89		
Global post-disruption		**12310**	**12285**	**12720**	**12993**	**435**	
y/y			***-0.2%***	***3.5%***	***2.1%***		

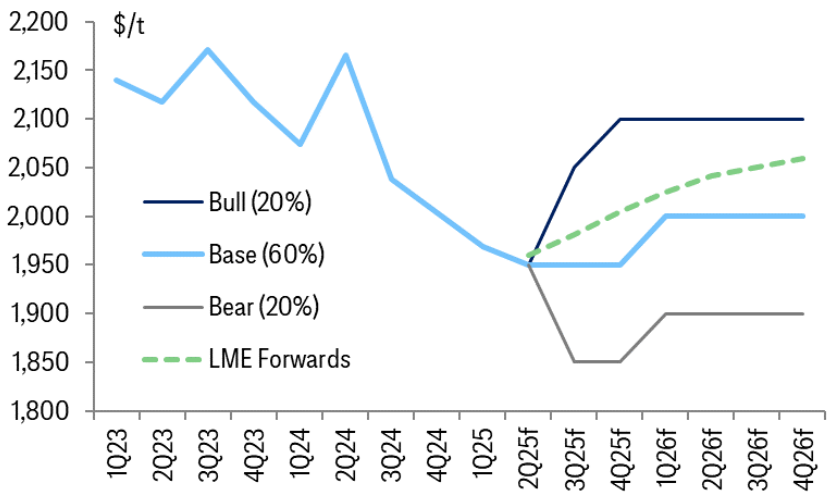
Lead – We expect rangebound trading between $1,900-$2,000/t

- **Our base case (60% probability) sees lead trading mostly between $1,900/t and $2,000/t for the remainder of 2025 and to the bottom of this range within the next three months.** We assume some renewed price weakness on global growth and tariff headwinds in the coming months but with limited downside given already bearish net investor positioning. Medium-term bullish price prospects are limited by surplus expectations on robust supply growth and no structural bullish demand narrative beyond expectations for a global growth pickup through 2026 which we eventually see supporting pricing.
- **Bull case (20% probability) – Lead climbs to average $2,100/t by 4Q'2025** with underperforming mine supply growth and a strong pickup in global growth expectations and investor allocation to base metals. Demand for lead-acid battery e-bikes in China remains strong and conventional autos demand outperforms ex-China, perhaps helped by some alleviation of higher US auto tariff import barriers.
- **Bear case (20% probability) – Lead averages $1,850/t through 2H'2025** amid a steeper global growth slowdown in response to stronger US trade tariff hikes, driving a further investor flight from base metals. Any concerted policy efforts to phase out lead-acid battery use in favour of lithium-ion batteries (e.g. a future EU lead ban) presents a medium-term downside risk. Lead acid batteries can practically be replaced with lithium-ion batteries in most auto applications including ICE, the main barrier is upfront cost (although Li-ion costs are falling) and a lack of incentive to change established practises.

Global refined lead balance, 2020-2026F

kt	2020	2021	2022	2023	2024	2025f	2026f
Total mine production	4,207	4,215	4,169	4,205	4,227	4,337	4,422
% y/y	*-8.4%*	*0.2%*	*-1.1%*	*0.9%*	*0.5%*	*2.6%*	*2.0%*
Concentrate balance	**-19**	**-116**	**-14**	**-121**	**44**	**5**	**106**
Ex-China refined production	7,086	7,085	7,177	7,395	7,351	7,432	7,481
Ex-China refined consumption	6,900	7,128	7,331	7,327	7,321	7,397	7,440
Ex-China balance (pre trade)	**186**	**-42**	**-154**	**69**	**30**	**35**	**41**
China refined production	5,734	5,893	5,848	5,881	5,839	5,979	6,158
China refined consumption	5,724	5,773	5,494	5,866	5,849	5,951	6,114
China balance (pre-trade)	**10**	**120**	**354**	**15**	**-11**	**28**	**44**
Global refined production	**12,820**	**12,979**	**13,026**	**13,276**	**13,190**	**13,411**	**13,639**
Change yoy (%)		*1.2%*	*0.4%*	*1.9%*	*-0.7%*	*1.7%*	*1.7%*
Global refined consumption	**12,624**	**12,901**	**12,825**	**13,192**	**13,170**	**13,348**	**13,554**
Change yoy (%)		*2.2%*	*-0.6%*	*2.9%*	*-0.2%*	*1.3%*	*1.5%*
Global Balance	**196**	**78**	**201**	**84**	**19**	**63**	**85**
Price (US$/t)	1,825	2,200	2,160	2,135	2,070	1,950	2,000

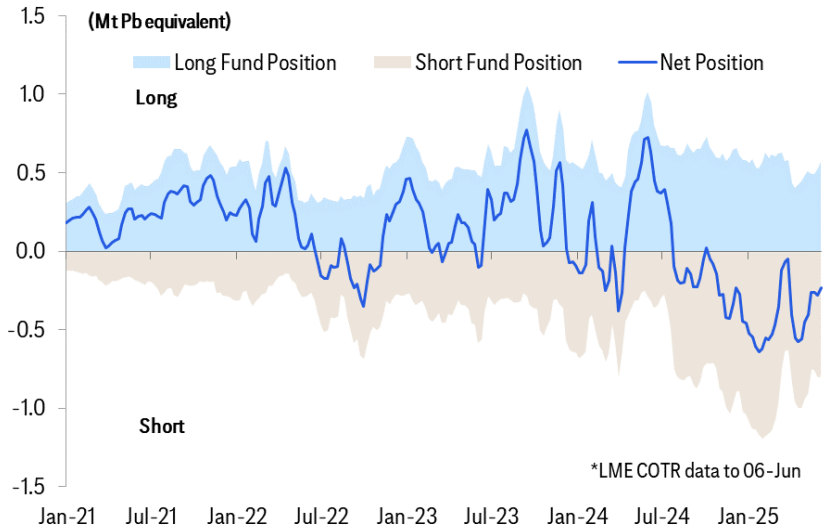
We see very modest lead price downside for 3Q'25



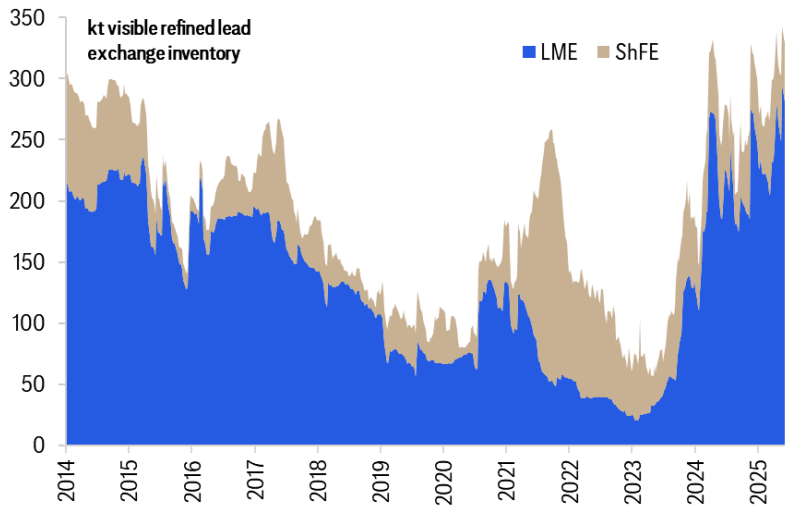
Source: WBMS, Wood Mackenzie, ILZSG, LME, Bloomberg, Citi Research

Lead – Positioning moderately short, visible inventory is high

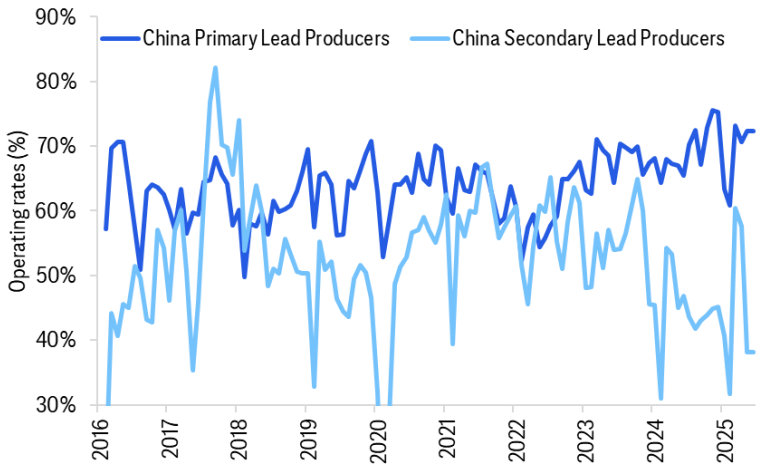
Fund net positioning remains bearish, but less than Jan and Mar peaks



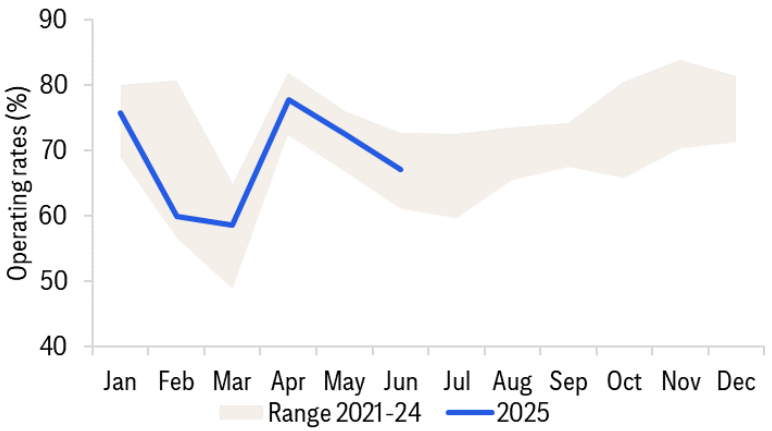
Visible refined lead inventory remains close to decade highs



China primary smelters operating at high rates, but secondary smelters are struggling



China's lead acid battery plant operating rates have remained within the typical seasonal range

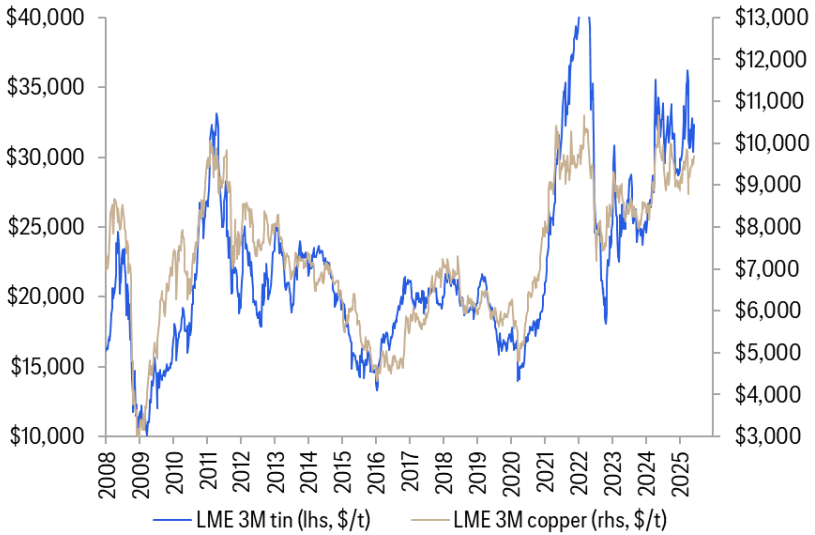


Source: WBMS, Wood Mackenzie, ILZSG, LME, ShFE, Bloomberg, Citi Research

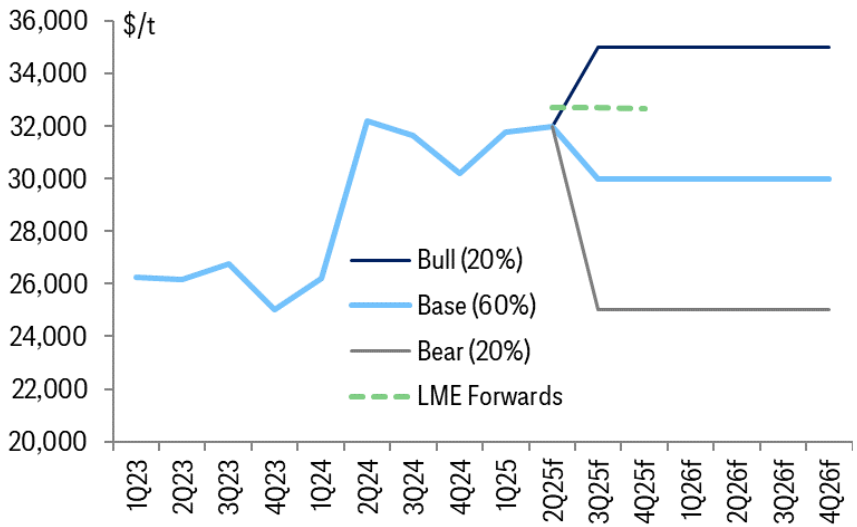
Tin – Price likely to fall with copper as supply recovers

- **In our base case (60% probability) tin eases to $28k/t over the next three months and averages $30k/t for the rest of 2025 and through 2026.** We assume DR Congo and Indonesian tin supply shipments continue recent strength and for mine operations in Wa County, Myanmar to slowly restart and ramp up gradually over the next six months. Tin is exposed to price downside in copper linked to a Section 232 unwind given the close historical price relationship with its sister metal. Investor positioning remains similarly elevated (~4/10) with scope for further downside.
- **In our bull case, copper climbs to average $35k/t for the rest of 2025 and 2026.** This envisages either a resurgence of supply issues(e.g. renewed escalation of conflict in DRC that forces a fresh closure of the Bisie Mine, further delays to a restart to Myanmar's mining operations, or other disruptions in Indonesia.) and/or a more positive global growth and manufacturing environment that underpins consumption growth. If tin is tariffed under the US Section 232 critical minerals investigation there is potential for frontloading of shipments through 2H'25 and support for US physical premiums.
- **In our bear scenario (20% probability) prices average $25 k/t for the remainder of the year.** This assumes a deeper contraction in global manufacturing activity and consumption in response to US trade tariff hikes (likely in association with copper prices closer to $8,500/t), a swift return of mine operations in Myanmar and continued strength in Indonesian and African tin shipments.

Tin is tracking close to its close historical ratio of ~3.1x copper prices



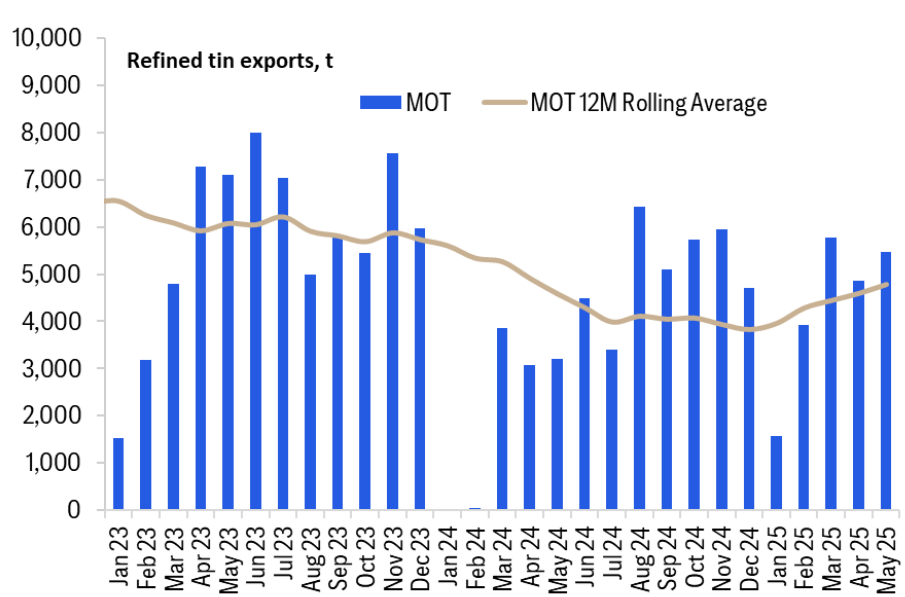
We see tin price downside from recovering tin supply and correlations with expected copper price weakness through 3Q'25



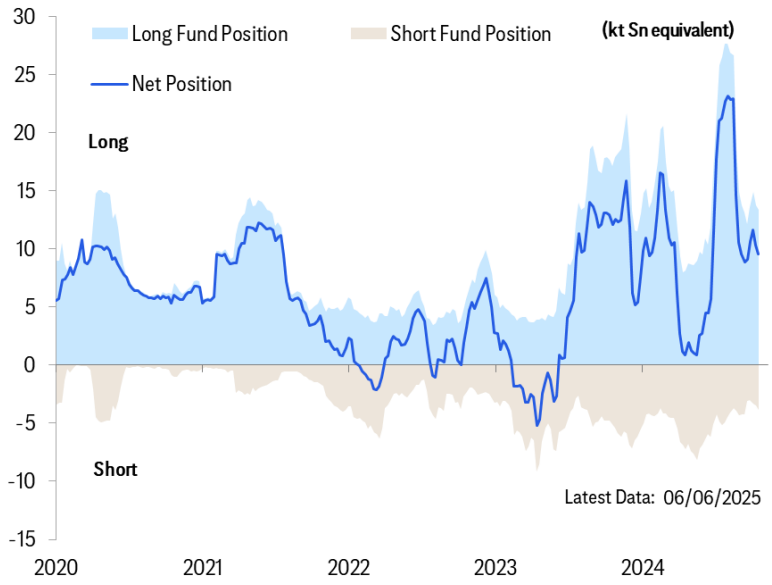
Source: Citi Research, Bloomberg, LME

Tin – Supply gradually ramping up, investor positioning can fall further

Indonesian tin exports are up year-on-year and rising on a 12-month rolling basis



Tin positioning length remained moderately elevated with scope to unwind with copper though 3Q'25

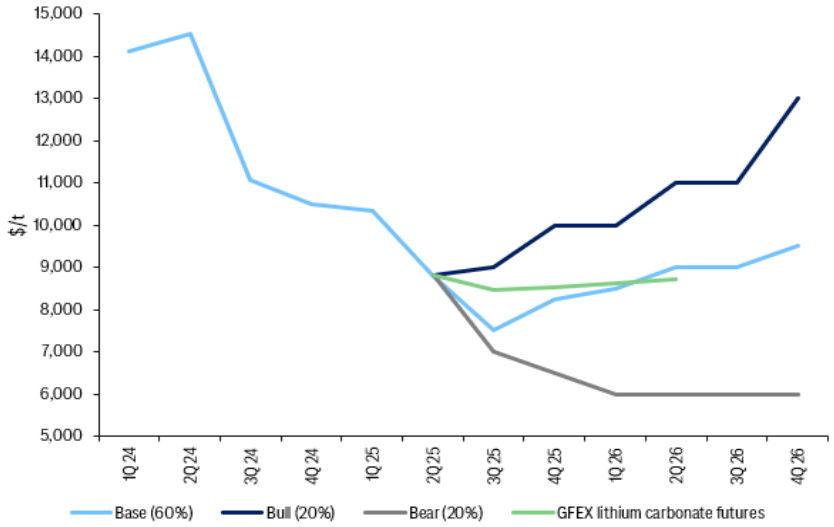


Source: Citi Research, Bloomberg, LME, SHFE, Indonesia MOT

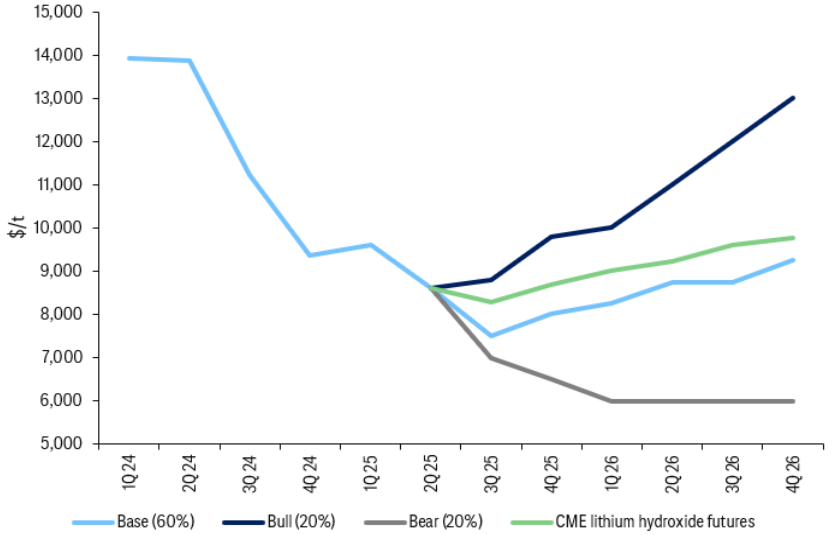
Lithium – We see price decline to $7k/t to drive required supply curbs

- **Base Case (60% probability) – We see lithium prices drifting lower until this triggers a material mine supply response. We maintain our 0-3mth pt price target of $7k/t for lithium salts – China carbonate (incl.VAT) and hydroxide CIF Asia. We downgrade our 0-3mth pt price for spodumene (SC6) to $600/t (previously $700/t).** We think price action will temporarily stabilise in June (with Chinese futures trading in a CNY60-63k/t range) before further price weakness heading into summer amid weak seasonality. We expect excess lithium supply, an associated build-up of lithium inventories in China and an uncertain demand outlook for ex-China EVs (particularly in the US) to continue to pressure prices. Prices are ~20%lower ytd but supply curtailments have been limited and insufficient so far.
- **We downgrade our CY25/26/27 forecasts for lithium salts and spodumene (SC6) by an average 13%/27%/20%.** Our new forecasts for CY25/26/27 for carbonate (China incl. VAT) are $8,700/$9,000/$12,000/t, hydroxide CIF Asia is $8,400/$8,800/$11,500/t and SC6 IS $720/$750/$950/t. Our expectation for prices recovering into 2026/27 is largely predicated on materialisation of supply cuts in response to cost pressure on producers.
- **In our bull scenario (20% probability) lithium salt prices touch $13k/t by 4Q'26** on faster rebalancing of the market and stronger global battery demand with global policy measures supporting quicker adoption of e-mobility and storage batteries.
- **In our bear scenario (20% probability) lithium salt prices touch $6k/t by 1Q'26** pushing prices deeper into the Latin American brine cost curve. This scenario assumes a weaker than expected global EV demand, and/or intense supply competition resulting in increased supply from China, Africa and Latin America.

Lithium Carbonate Price Scenarios



Lithium Hydroxide Price Scenarios



Source: Citi Research, Bloomberg, CME, GFEX

Lithium – Market building surplus, low prices will pressure suppliers

Our updated balances suggest that the lithium market has been building large surpluses over the last 2-3 years with quantum of surplus this year to be around 6% of total supply. On paper, we see lithium market continue building surplus over next 2 years as well. Visible inventories in China remain elevated at ~135kt LCE. Anecdotal evidence suggests inventories of lithium concentrates to be around 500-700kt which depending on the lithium content would translate to an additional 50-70kt LCE. We also suspect some of the lithium exports out of Africa have not been fully captured in most of the S&D balances/trade statistics. Only a persistent lower price environment for extended period will result in rebalancing amidst an uncertain global macro-economic environment. Key risks to our balances include faster than expected ramp up of Manono deposit in Africa.

Lithium market to remain in surplus this year and in subsequent years assuming current spot pricing

Summary (LCE kt)	2023	2024	2025F	2026F	2027F
Total Demand (A+B+C)	**1,101**	**1,352**	**1,553**	**1,846**	**2,173**
Of which Automotive	635	801	994	1,285	1,528
Automotive including supply chain (A)	727	919	1,104	1,364	1,600
Energy Storage Systems (incl stocking) (B)	188	243	254	281	367
Industrial (incl portables) (C)	185	190	195	200	206
% change y/y in total demand	*32%*	*23%*	*15%*	*19%*	*18%*
Total Supply (D+E)	**1,155**	**1,465**	**1,645**	**1,900**	**2,223**
Operational (1)	1,073	1,397	1,548	1,728	1,959
Highly Probable (2)	0	0	27	92	161
Probable (3)	0	0	1	6	22
Possible (4)	0	0	0	0	2
Total Mine Supply (1+2+3+4) - (D)	**1,073**	**1,397**	**1,576**	**1,827**	**2,143**
Total Recycling Supply - (E)	83	68	70	73	80
% change y/y in total supply	*45%*	*27%*	*12%*	*15%*	*17%*
Surplus/(Deficit)	*55*	*114*	*93*	*55*	*50*
Balance as a % of supply	*5%*	*8%*	*6%*	*3%*	*2%*

Lithium – Short COMEX lithium hydroxide July'25, gain to date ~15%

We recommended producers and investors short July'25 CME lithium hydroxide (launched on Apr 23, 2025) as we expect lithium spot prices to drift lower. We see a softening EV/ESS cell outlook (in part due to growing trade frictions between the US and China), and ample lithium supply driving prices lower until miners/converters react with material supply curbs. Lithium chemicals tested $5-$7k/t lows in the pre-pandemic era, and we expect this to repeat. The gain to date on the trade ~15%. More details on the trade idea are available through the below link and our recent trade performance is summarised below. *Note: Futures trading involves substantial risk of loss*

For risks and rationale, please see – Metal Matters - Weak lithium fundamentals to drive prices lower to $7k/t. We recommend investors sell Jul'25 CME lithium hydroxide

Trade performance on our short lithium recommendation

			Initiation	Latest					
Trade idea --> Softening battery outlook likely to drive lithium prices lower			**23/04/2025**	**16/06/2025**	**Return ($/t)**	**Return (%)**	**Target underlying price**	**Target underlying return**	**Stop loss**
Implementation	***Go short July 2025 lithium hydroxide futures on Comex (LFAN5 Comdty)***	@	9,590	8,200	**1,390.0**	**14.5%**	7,000	27%	11,000

As of 16th June 2025, 12:00 UKT
Note: Futures trading involves substantial risk of loss

5. Bulks:

Staying neutral across the complex

Bulks – We lack conviction on price direction amid ongoing trade friction

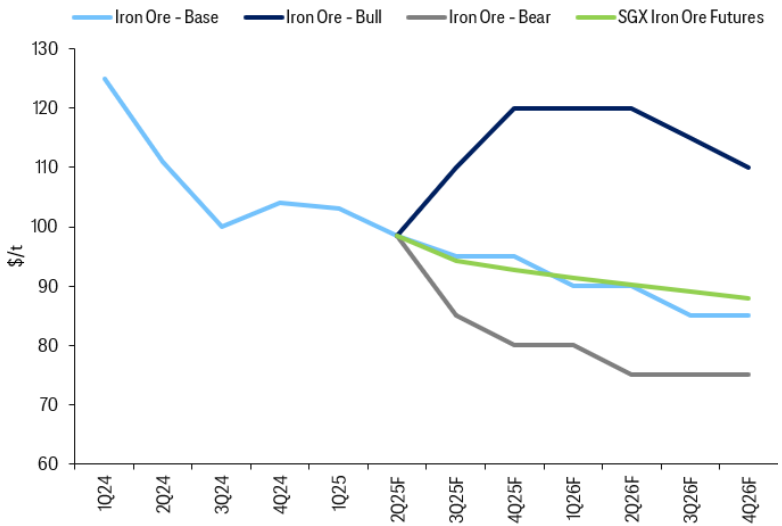
Bulk commodities		0-3 mth pt price	6-12 mth pt price	1Q25	2Q25f	3Q25f	4Q25f	2025f	1Q26f	2Q26f	3Q26f	4Q26f	2026f	2027f
Iron Ore NEW	$/t	**90**	**85**	103	98	95	95	**98**	90	90	85	85	**88**	**85**
Iron Ore - (OLD)		**100**	**90**	103	100	90	90	**96**	95	95	90	90	**93**	**85**
Coking Coal NEW	$/t	**170**	**200**	185	186	180	190	**185**	200	195	190	195	**195**	**200**
Coking Coal (Spot) - (OLD)		**160**	**200**	185	180	180	190	**185**	200	195	190	190	**195**	**200**
Thermal Coal (NEWC) NEW	$/t	**105**	**105**	108	100	105	110	**106**	110	105	105	110	**108**	**105**
Thermal Coal (NEWC) - (OLD)		**100**	**105**	108	100	100	110	**105**	110	105	105	110	**108**	**120**
Manganese Ore NEW	$/dmtu	**4.00**	**4.50**	4.70	4.59	4.25	4.40	**4.48**	4.25	4.50	4.25	4.50	**4.38**	**4.30**
Manganese Ore (OLD)		**4.75**	**4.50**	4.70	4.75	4.25	4.25	**4.49**	4.25	4.50	4.25	4.50	**4.38**	**4.30**

Source: Citi Research, Bloomberg,, S&P Global Platts

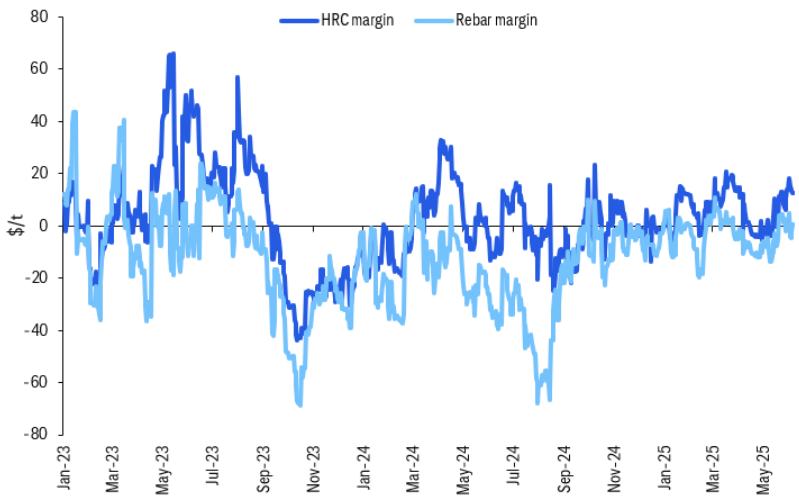
Iron Ore – We see prices trading rangebound with a downward bias

- **Base Case (60% probability) - We see iron ore prices trading in a tight range of $90-$100/t with a downward bias. We downgrade our 0-3mth pt price to $90/t and 6-12mth pt price to $85/t (previously $100/t and $90/t). We see iron ore prices averaging $95/t in 2H'25.** Steel demand in China is likely to remain weak over the coming months over the upcoming summer seasonal lull. China's property market weakness showing no signs of a turnaround while manufacturing activity faces increased trade headwinds. We expect steel mills in China will curtail output by undertaking maintenance activities resulting in softer iron ore demand. However, elevated Chinese steel exports and cost support will likely limit near term iron ore price downside.
- **Bull Case (20% probability) - We see iron ore prices rising to $120/t by 4Q'25.** This scenario assumes China introduces steel-intensive policy easing at the July Politburo meeting. Policy measures that accelerate domestic consumption to offset the headwinds from weaker goods exports could be launched. Higher domestic demand leads to no significant output cuts while ex-China demand picks up the slack left by lower Chinese steel exports, potentially shifting iron ore balances to a small deficit. Higher domestic steel consumption results in improved steel margins supporting iron ore prices.
- **Bear case (20% probability) - We see iron ore prices touching to $80/t by 4Q'25.** This scenario assumes China implements supply-side reforms, cutting 50Mt of crude steel output in 2025, with cuts continuing into subsequent years. The output cuts will result in lower Chinese steel exports while ex-China steel output remains muted with no meaningful supply response from the iron ore producers. This results in the iron ore market building a large surplus (4-5% of total supply) forcing prices to trade deeper into the cost curve.

Iron Ore Price Scenarios



Steel margins preventing large declines in iron ore prices



Source: Citi Research, Bloomberg, S&P Global Platts

Iron Ore – A likely balanced market this year; China output cuts a major risk

- **Our updated S&D balances suggest that the iron ore market will remain largely balanced in 2025. Simandou's start up is unlikely to dent balances this year. However, global trade uncertainty and implementation of potential China supply side reforms will negatively impact iron ore balances.** High tariffs on steel imports (in the case of the US) and record Chinese exports are reshaping global steel trade flows. Prolonging of the ongoing trade discord could ultimately impact global steel output and iron ore demand. We see China crude steel output falling 1.5% y/y this year and global crude steel output broadly flat y/y. However, if China undertakes supply side reforms, China output could fall and iron ore surpluses could widen.
- **We see cost support for iron ore prices in the range of $90-$95/t in the near term.** Non-mainstream supply remains price elastic and 4M'25 supply from non-mainstream sources fell 16% y/y. With prices trading sub $100/t, we expect more supply cuts from non-mainstream sources to offer price support. More details here and here.

Citi Iron Ore S&D balances

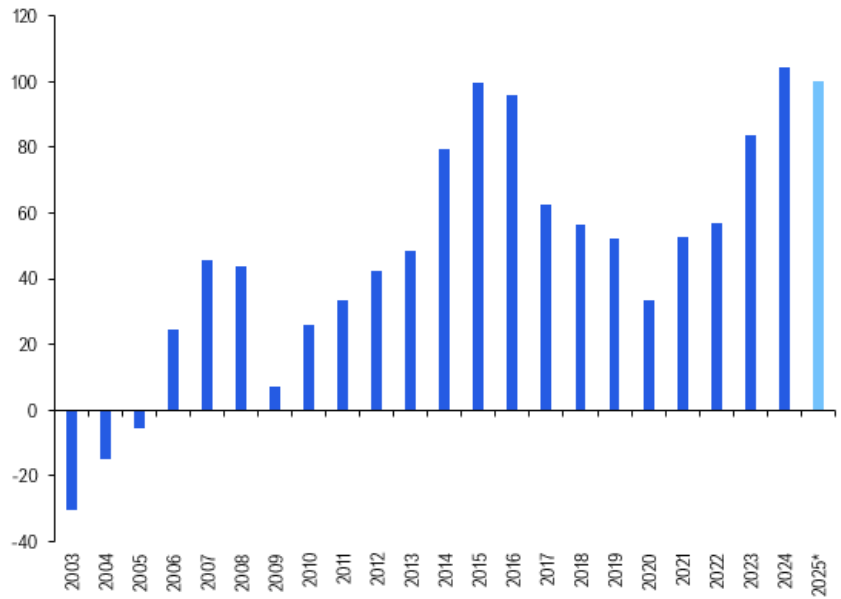
Mt	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025	Q2 2025	Q3 2025	Q4 2025	2024	2025E	2026E	2027E
Supply (Exports)												
Australia	210	236	226	229	208	234	233	234	902	909	944	951
Brazil	84	95	110	99	85	95	101	106	389	387	406	410
India (net exports)	14	10	5	4	6	5	6	7	33	22	18	17
South Africa	16	15	16	15	16	14	14	14	62	57	51	55
Canada	13	13	18	16	13	15	15	15	61	58	60	60
Guinea - Simandou											50	90
Others	60	61	58	60	58	54	51	55	240	218	195	176
Total Seaborne Exports (pre-disruption)	397	430	435	423	385	416	419	431	1,685	1,652	1,724	1,759
Disruption Allowance / Curtailments					0	-10	-15	-15		-40	-90	-120
Total Seaborne Exports (post disruption/risking)	397	430	435	423	385	406	404	416	1,685	1,612	1,634	1,639
Ex-China Demand (Imports)												
Japan	24	24	25	24	24	24	24	24	96	97	98	100
Korea	17	17	17	18	16	17	17	17	69	68	69	70
Taiwan	6	5	4	5	5	5	5	5	20	20	20	20
EU	25	28	26	27	23	30	27	28	107	109	118	120
Others	25	32	29	30	26	28	30	31	116	116	120	123
Total Seaborne Imports	97	105	102	104	94	105	104	106	408	410	424	434
Trade data reconciliation	8	-20	-11	-20	8	-22	-12	-17	-43	-42	-44	-45
China Imports / RoW Balance (62% Fe)	302	294	300	310	278	273	281	285	1,206	1,117	1,137	1,133
Chinese Market												
Crude Steel Production (Citi estimate)	256	270	238	241	259	258	240	234	1,005	990	973	963
Scrap Use	43	49	35	25	43	36	36	36	152	152	150	160
Total Demand (62% Fe)	341	355	325	345	346	354	325	316	1,366	1,341	1,317	1,285
Balance Pre-Domestic Production	-39	-61	-24	-35	-67	-81	-44	-31	-160	-224	-180	-152
Domestic Production (62% Fe)	66	66	61	57	62	63	61	58	250	245	242	237
Market Balance	27	5	37	22	-5	-18	17	27	90	21	62	84
% seaborne exports + Chinese supply	6%	1%	7%	5%	-1%	-4%	4%	6%	5%	1%	3%	5%

Source: Citi Research, Bloomberg, TDM, China Customs, Company Reports

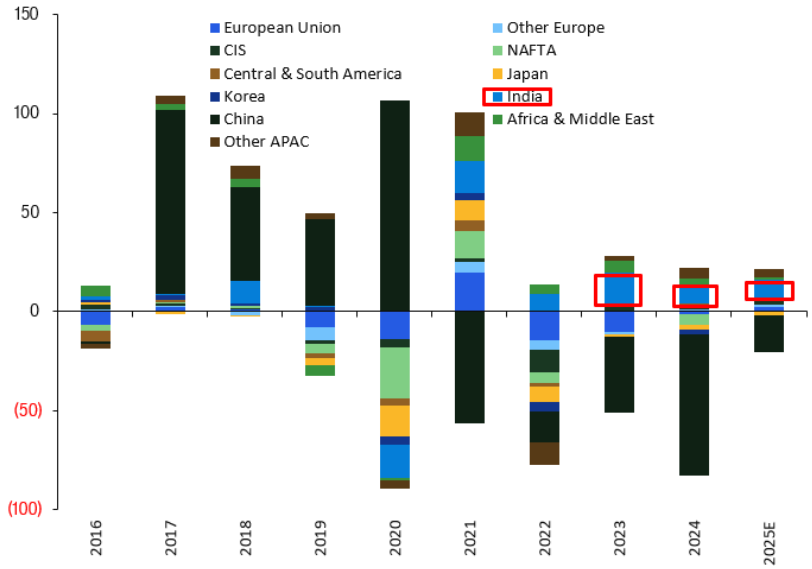
Steel output growth to stagnate in 2025, Chinese exports ~100Mt

- **Global steel production to stagnate, ex-China growth of 1.5% to be offset by China weakness –** We expect 1.85bn tonnes of crude steel production in CY25, broadly flat y/y. This will be lower than the 1.96bn tonnes in CY'21 and broadly in-line with the 1.88bn tonnes in CY'19 – the sixth year of stagnation of steel production. The mix shift towards more production ex-China (mostly India and S.E Asia) will continue to offset small declines in China.
- **Net exports from China to remain high at 100m tonnes (exports: 107mn, imports: 7mn) in 2025 from 104mn tonnes last year –** Half of 2025 has passed and there has been no significant steps towards implementation of the 50Mt of capacity cuts expected under supply side reform 2.0 in China. Price differentials for China vs ex-China have remained high, and exports are annualizing over 100Mt. Even with some capacity cuts in 2H'25 the full impact on exports will be felt in imports only by 2026 . We forecast 100Mt of net exports in 2025 and 80mn tonnes in 2026.

China net steel exports to remain high this year



Contribution to global steel apparent demand by different regions

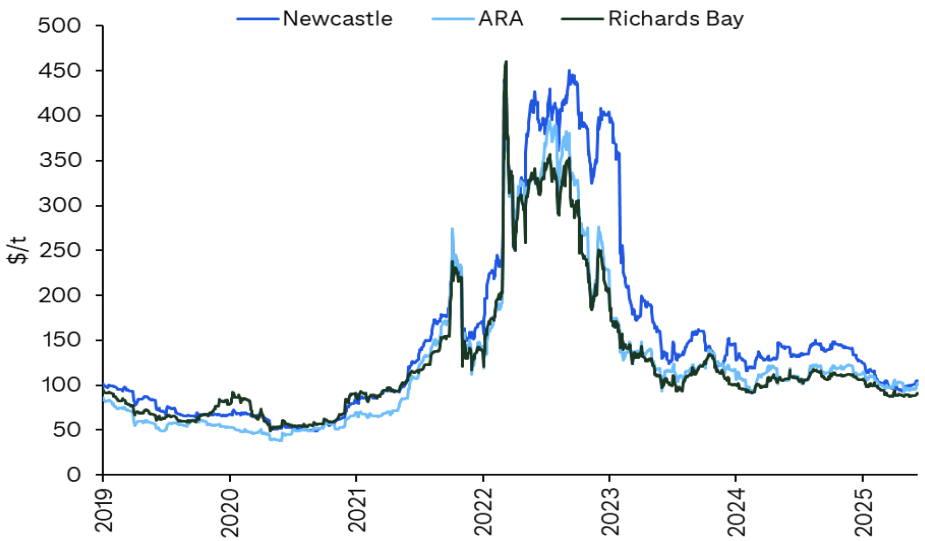


Source: Citi Research, Worldsteel, NBS, *Citi estimates 151

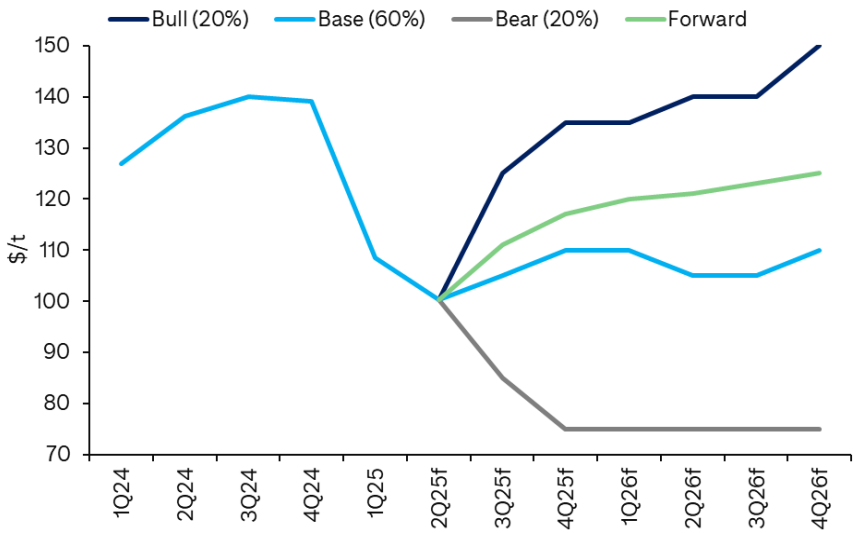
Thermal Coal – Northern summer demand to offer price support

- **Base Case (60% probability) – We expect Newcastle 6,000-kcal/kg thermal coal prices to trade in a tight range of $100-$110/t over the next 3 months. We upgrade our 0-3mth pt price to $105/t from $100/t.** Seaborne thermal coal demand has been subdued due to continued rise in renewables generation, retirement of coal plants in Western Europe, and strong domestic coal output in some key coal importers. However, onshore stockpiles both in China and India remain high. Summer demand in the Northern hemisphere, lower supply post the end of Australian financial year and drawdowns of existing stockpiles could drive prices higher.
- **Bull Case (20% probability) – Newcastle 6,000-kcal/kg thermal coal prices can touch $125/t by 3Q'25** aided by a combination of an exceptionally hot summer, weaker than expected renewables generation, coal production and supply curtailments by miners and/or increased LNG prices.
- **Bear Case (20% probability) – Newcastle 6,000-kcal/kg thermal coal prices can fall to $85/t by 3Q'25** on resilient coal supply and increased stockpiles, stronger than expected renewables/nuclear power generation, increased LNG supply, and a potential Russia/Ukraine ceasefire deal that could see Russian coal flowing into key seaborne coal markets.

Global 6,000-kcal/kg thermal coal benchmark prices



Newcastle-6000 price forecasts and bull/bear scenarios



Source: Citi Research, Bloomberg

Thermal Coal – Low price environment to pile pressure on exporters

- **Global seaborne thermal coal demand will be lower y/y in 2025 due to high domestic coal production in key importing countries (China, India etc) and an increased share of renewables power generation.** China's domestic coal production for 4M'25 is up 8% y/y while inventory of thermal coal at Chinese ports are around 36% y/y. Imports of thermal coal by China are down 6% ytd as domestic utilities prioritise drawdowns from domestic stockpiles. India's coal output rose 4% y/y in Apr'25 and 3% ytd with coal stockpiles at Indian power plants reaching 57-mt as of end May representing 21 days of coal use (highest since 2020). This combined with higher renewable power generation has curbed the appetite for seaborne demand.
- **Global seaborne thermal coal supply is slowing this year after growing 4% last year. Although supply continues to outpace demand, we expect the current low-price environment to push producers to further curtail output.** Supply side adjustments have been limited year to date. Wet weather in Australia and Indonesia have curtailed exports to an extent. Persistent lower pricing over the next few months will further result in curtailments helping rebalance the seaborne market.

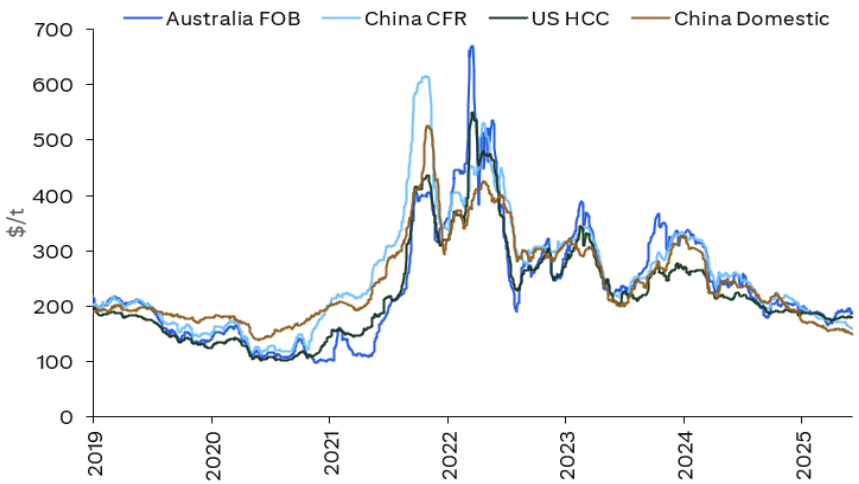
Seaborne Thermal Coal S&D Balances

mt	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	Q4 2026	2021	2022	2023	2024	2025	2026
Supply (exports)														
Indonesia	121.0	132.7	143.2	144.3	127.1	131.7	132.0	131.3	427.9	458.7	505.9	547.5	541.2	522.2
Australia	47.0	47.6	54.8	56.1	50.2	54.7	55.2	55.6	198.8	178.3	198.1	208.6	205.5	215.8
Russia	29.6	29.0	29.1	28.6	29.9	30.1	29.3	29.4	150.6	138.7	128.7	118.2	116.3	118.6
South Africa	17.6	15.5	14.1	16.3	14.7	15.7	13.8	16.2	62.8	61.8	68.2	66.8	63.5	60.3
Colombia	11.5	10.3	12.2	13.7	12.9	10.7	11.1	9.1	55.7	51.9	53.5	54.3	47.7	43.9
United States	11.3	10.2	10.4	8.7	9.6	8.9	9.8	9.7	36.1	35.4	41.8	46.1	40.6	38.0
Other	9.5	10.1	9.1	9.2	9.3	9.9	8.3	9.5	30.4	37.6	39.7	35.7	38.0	37.1
Total	**248**	**255**	**273**	**277**	**254**	**262**	**260**	**261**	**962**	**962**	**1,036**	**1,077**	**1,053**	**1,036**
Demand (imports)														
China	71.8	74.5	96.0	98.0	74.0	84.0	88.0	84.4	250.6	207.7	310.3	364.9	340.3	330.4
Japan	30.2	24.5	26.5	27.0	25.0	24.5	28.0	27.9	124.6	126.8	111.3	116.4	108.2	105.4
India	41.3	44.2	41.8	43.4	42.1	45.9	42.2	38.2	147.0	165.5	174.6	172.9	170.6	168.4
Korea	17.8	16.4	22.5	23.5	20.5	18.0	20.4	21.0	90.7	92.2	88.2	79.8	80.2	79.9
Taiwan	9.5	11.9	13.9	14.1	10.6	11.3	12.6	12.5	57.1	55.1	51.9	51.0	49.4	47.0
Europe	17.5	11.1	12.6	12.7	12.9	11.2	9.9	10.2	85.8	96.2	84.7	57.0	54.0	44.2
Other	55.3	59.8	66.4	66.6	58.7	59.3	66.6	69.0	216.7	202.1	218.1	234.2	248.1	253.5
Total	**243**	**242**	**280**	**285**	**244**	**254**	**268**	**263**	**972**	**946**	**1,039**	**1,076**	**1,051**	**1,029**
Market Balance	**4.2**	**13.2**	**-6.9**	**-8.4**	**9.9**	**7.7**	**-8.1**	**-2.3**	**-10.3**	**16.7**	**-3.2**	**0.8**	**2.1**	**7.2**
% of seaborne market	2%	5%	-3%	-3%	4%	3%	-3%	-1%	-1%	2%	0%	0%	0%	1%

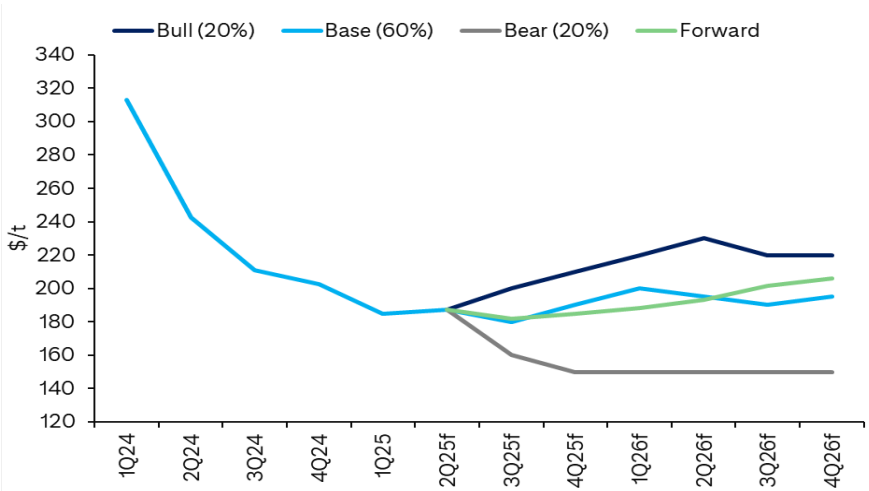
Coking Coal – Prices to trade lower owing to weak seasonality

- **We expect Australian premium hard coking coal (PHCC) to trade rangebound in the next few weeks before moderating lower into 3Q'25 as Indian demand eases. Our new 0-3mth pt price is $170/t (previously $160/t).** Seaborne coking coal prices have been resilient over the last quarter despite a downward trajectory observed across the rest of the ferrous complex. The price strength has largely been aided by a tight supply of Australian PLV cargoes owing to supply disruptions. Indian steel mills have largely restocked and last-minute restocking may support prices in the next few weeks. With both China and India entering the off season, the pace of steel demand and consequently requirement for met coal will likely slow. In addition, global trade uncertainty, increased steel tariffs, increased China domestic coal supply and expectations of further coke price cuts could further pressure prices.
- **We see coking coal prices likely to move higher by 4Q'25 aided by steel mills restocking ahead of peak winter season. Our 6-12mth pt price is unchanged at $200/t.** Price upside beyond $200/t remains capped without meaningful improvement in sentiment across the global steel/ferrous complex. Although, tight supply from Australia has supported prices, steel mills in India/Southeast Asia have the optionality to source and blend different coals from Canada, Russia and US. In addition, strong domestic China/Mongolian supply has rendered Australian cargoes unviable for Chinese mills. With CFR China prices trading at a discount to Australian FOB prices, any widening of the spread could see Chinese cargoes being offloaded into the seaborne market resulting in downward pressure for coking coal prices.

Global coking coal benchmark prices



Australia PHCC price forecasts and bull/bear scenarios



Source: Citi Research, Bloomberg

Coking Coal – Physical balances susceptible to global ferrous sentiment

- **We see muted global seaborne coking coal demand this year owing to an uncertain trade environment. Increased tariffs, anti-dumping investigations and excess steel capacity that has negatively impacted the ferrous sentiment.** We see India as a bright spot for coking coal demand. However, 3Q could be seasonally weak; The monsoon which could mean lower met coal demand. Beyond India, steel outlook in major seaborne coking consumers remains clouded by US trade tariffs, Chinese steel exports and lower economic growth.
- **We expect global trade uncertainty and increased tariff regime to result in a reshuffling of global coking coal and coke trade flows. Availability of US and Canadian flows means steel mills in Asia (ex-China) can exercise pricing power.** Australian supply disruptions have been offset to some extent by US, Canada and Russian cargoes in the spot market. Moranbah North, and Grosvenor remain idle impacting shipments of premium hard coking coal. If the longwall disruptions continue for longer, we expect to see some risk to our price forecasts. US-China trade relations has resulted in met coal cargoes being diverted to India/Southeast Asia countries. Canadian coals are also being offered at a discount to Asian steel mills. The Russian government has also approved financial support in the form of rail tariff discount and other subsidies which means Russian flows could continue for the remainder of the year.

Seaborne Coking Coal S&D Balances

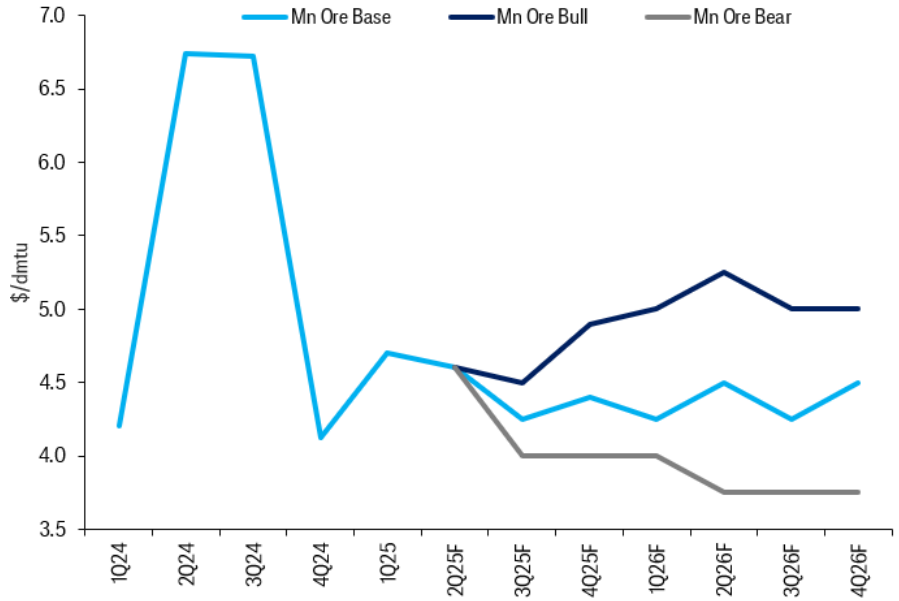
mt	Q1 2025	Q2 2025	Q3 2025	Q4 2025	Q1 2026	Q2 2026	Q3 2026	Q4 2026	2021	2022	2023	2024	2025	2026
Supply (exports)														
Australia	32.7	38.7	40.7	40.6	36.4	40.0	39.9	39.4	167.0	160.5	151.3	152.9	152.7	155.7
United States	11.4	11.2	10.7	11.3	10.6	10.0	9.4	9.9	37.8	39.5	43.2	49.1	44.7	39.9
Canada	7.1	6.9	7.0	6.9	7.6	7.7	7.6	7.7	27.2	27.6	30.8	30.5	27.9	30.7
Russia	12.0	14.7	17.3	18.1	16.3	15.9	16.8	17.5	43.3	57.4	61.3	57.2	62.2	66.5
Other	6.6	6.3	7.1	6.0	6.3	6.5	7.1	6.4	16.9	17.4	21.7	27.2	25.9	26.2
Total	**70**	**78**	**83**	**83**	**77**	**80**	**81**	**81**	**292**	**302**	**308**	**317**	**313**	**319**
Demand (imports)														
Japan	11.3	12.1	12.4	12.5	11.9	12.1	12.0	12.0	57.9	56.2	53.8	49.3	48.3	48.0
China	20.2	14.7	15.5	14.7	12.4	11.8	13.1	12.4	48.7	48.0	65.7	76.1	65.1	49.8
India	19.1	20.6	19.9	22.3	20.7	20.1	19.8	22.2	71.8	68.6	72.4	74.9	81.8	82.8
Korea	7.4	8.3	8.5	8.6	8.1	8.4	8.3	8.3	34.7	33.0	32.8	35.7	32.8	33.1
Brazil	3.2	4.1	3.4	3.1	3.5	3.7	3.4	3.2	14.7	13.7	13.5	13.9	13.9	13.8
Ukraine	0.2	0.6	0.4	0.6	0.1	0.4	0.2	0.4	2.3	0.5	0.4	1.0	1.9	1.0
European Union	8.1	9.7	10.0	9.7	9.1	9.3	9.6	9.3	39.2	38.8	40.0	38.6	37.5	37.3
Other	9.4	13.2	12.5	12.9	12.6	14.5	13.4	13.7	39.3	41.7	39.8	44.4	48.0	54.3
Total	**79**	**83**	**83**	**84**	**78**	**80**	**80**	**81**	**308**	**301**	**318**	**334**	**329**	**320**
Market Balance	**-9.1**	**-5.5**	**0.3**	**-1.5**	**-1.2**	**-0.2**	**0.9**	**-0.6**	**-16.3**	**1.8**	**-10.2**	**-17.0**	**-15.8**	**-1.1**
% of seaborne market	-13%	-7%	0%	-2%	-2%	0%	1%	-1%	-6%	1%	-3%	-5%	-5%	0%

Source: Citi Research, Wood Mackenzie, Bloomberg

Manganese Ore – We see prices to trade further lower in the coming months

- **Base Case (60% probability) – We see manganese ore prices declining to $4/dmtu over the next 3 months before consolidating at lower levels.** Ore prices are down ~12% from this year's peak with spot trading at $4.3/dmtu. List prices by producers have been further lowered to $4.2-$4.3/dmtu. With weak summer seasonality, our expectations of lower Chinese crude steel output, likely maintenance at downstream alloy smelters and ramping up of shipments from GEMCO mine in Australia, we expect prices to decline lower to $4/dmtu (our new 0-3mt pt price). We expect ore inventories at port to build over the summer capping any price upside.
- **Bull case (20% probability) - We see manganese ore averaging $5/dmtu by 1Q'26,** supported by strong China steel demand especially from long steel products), stronger alloy output, restocking by mills and smelters, steel intensive policy easing measures by China, and/or further supply disruptions.
- **Bear case (20% probability) - We see manganese ore averaging $4/dmtu by 2H'25,** driven by weaker steel demand in both China and the rest of the world, China alloy smelter cuts, and/or improved supply from major producers.

Manganese Ore Price Scenarios



Weak alloy fundamentals leading to decline in ore prices

6. Agriculture: Coffee and cocoa price bounces are short opportunities, while sugar remains rangebound

Grains fail to gain any momentum, where exports and biofuel policies could present a significant bull/bear risk skew

Sugar Outlook – prices could stabilize at current levels for longer, shifting to more neutral price outlook

Heightened volatility and neutral pricing

We remain neutral for ICE sugar, as production in both Brazil and India is set to grow meaningfully. While sugar mills in Brazil are operating in full swing, harvest season in India and Pakistan is over and all eyes are on the crop development. With normal weather conditions, the broad consensus is that sugar supply could grow significantly y/y, and trade flows ease versus our previous expectations. We expect prices to settle at $0.18/lb in 3M and $0.19/lb in 12M. Our global supply and demand balances for sugar remained unchanged and reflect supply changes in major producing countries. There are still too many unknowns the market is dealing with. We also note a significant upside risk skew to our forecast as supply from Brazil/India/Thailand could still underperform and lean towards a bullish scenario versus a bearish one.

Citi Research ICE sugar price forecasts

ICE Sugar	0-3M	6-12M	Q1 2025	Q2 2025E	Q3 2025E	Q4 2025E	1Q2026E	2Q2026E	3Q2026E	4Q2026E	2024	2025E	2026E
USd/lb	18.0	19.0	19.4	17.7	18.0	18.0	19.0	20.0	21.0	21.0	20.8	18.3	21.0
Changes from last report													
USd/lb	-1.5	-1.5	0.0	-1.3	-2.0	-2.0	-2.0	-1.0	0.0	0.0	0.0	-1.3	0.0

Global Sugar s/d balances

(mttq, Oct/Sep)

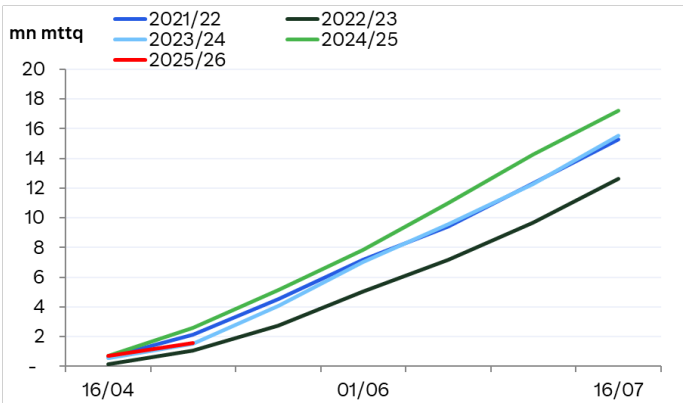
Production - Key Players	2020/21	2021/22	2022/23	2023/24e	2024/25e	2025/26e	Change 23/24-24/25	Change 24/25-25/26
CS Brazil	34.5	28.2	38.6	41.8	39.7	40.0	(2.1)	0.3
India	30.9	35.6	32.5	31.6	26.0	30.5	(5.6)	4.5
EU	13.8	15.6	13.7	14.9	16.1	14.9	1.2	(1.2)
China	10.6	9.5	8.9	9.9	10.8	10.7	0.9	(0.1)
Thailand	7.3	9.7	10.6	8.6	9.8	11.3	1.2	1.5
Russia	5.0	5.8	6.0	6.8	6.5	6.4	(0.3)	(0.1)
USA	7.7	7.6	7.7	7.5	7.8	7.8	0.3	0.0
Mexico	5.6	6.0	5.1	4.6	5.0	5.2	0.4	0.2
Australia	4.0	3.6	4.0	4.1	3.8	3.8	(0.3)	0.0
Pakistan	5.7	7.9	6.7	6.8	6.1	6.4	(0.7)	0.3
Others	40.9	40.9	40.3	41.4	42.0	42.0	0.6	0.0
Global Production	165.4	170.0	174.0	177.6	173.6	179.0	(4.0)	5.4
Global Consumption	169.2	172.2	174.7	177.1	178.4	178.8	1.3	0.4
World Surplus/(Deficit)	(3.7)	(2.2)	(0.7)	0.5	(4.8)	0.2		

Source: Citi Research, European Commission, GP, ISMA, TRS, UNICA, USDA, Industry Sources

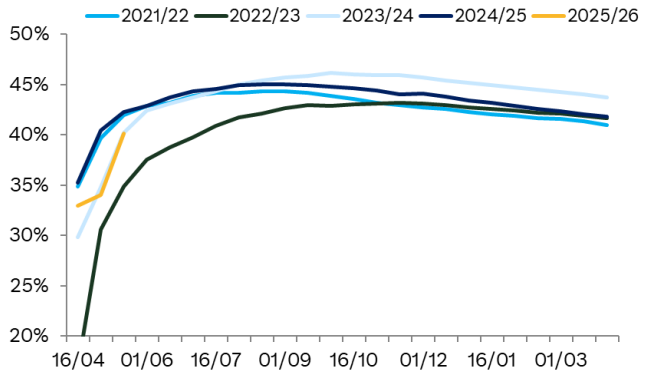
Production trends in Brazil are strong so far

The UNICA 1H May 25/26 crop year report for CS Brazil came out positive, indicating a high sugar mix of 51.5%, higher than last season's peak. In turn, the report showed millers crushed 42.3m tons of cane vs 45.1m tons the same period last year. Sugarcane production is still expected to fall this season, however healthy soil moisture from rainfall is set to make sugar production stronger in 2H25. We continue to keep a close eye on 2H of May on the sugar mix, and lower yields from the last year's unfavorable drought towards the early stage of the crop.

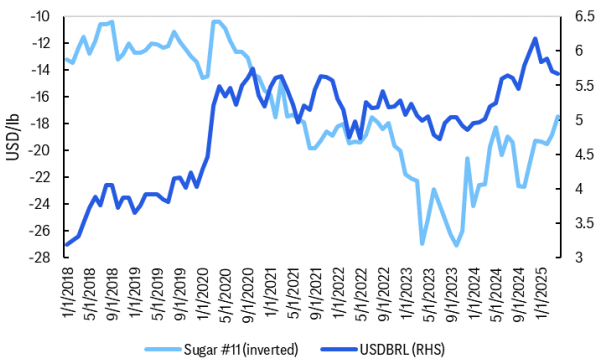
CS Brazil sugar cumulative production is on track for another strong year



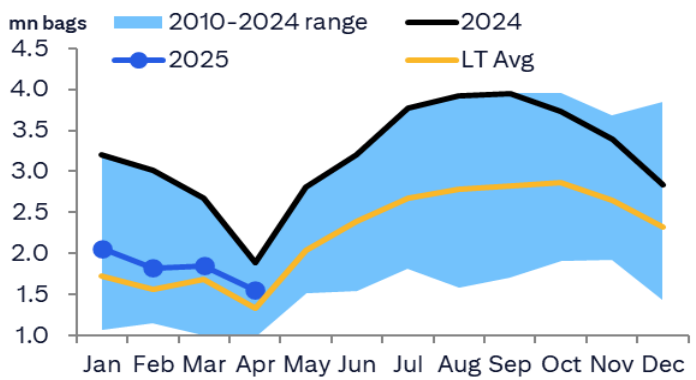
CS Brazil cumulative sugar mix have fallen y/y, as more sucrose is diverted to ethanol production



Sharp devaluation of the Real makes lower NY11 prices look attractive in Real terms



Brazil Monthly sugar exports for 2025 starting out lower than 2024 indicating a forming deficit this crop year



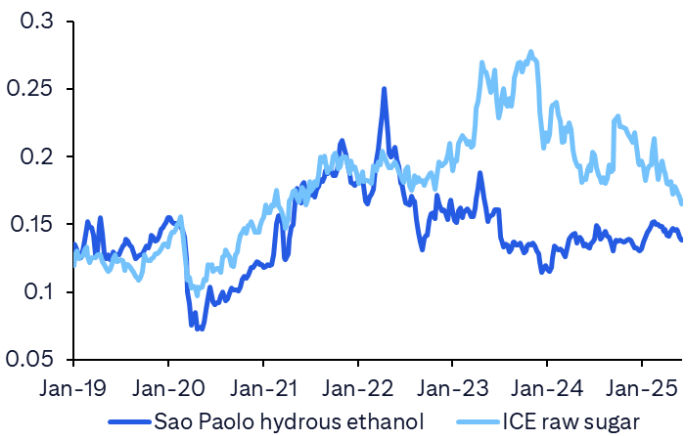
Source: Citi Research, Bloomberg, UNICA, ICE

Ethanol blending mandates could further increase in the EM

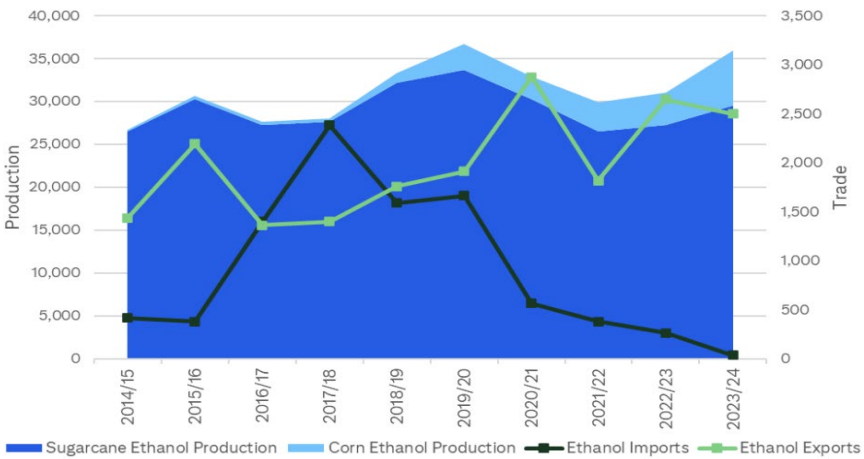
As global oil prices continue to fall, Brazil lowered its gasoline prices, but the recent oil rally strengthened the Brazilian Real. The strengthening currency, is raising ethanol parity level where hydrous is now around 15 c/lb and anhydrous is now 16.7 c/lb. Domestic ethanol demand should be supported by these lower prices. We continue to watch the CS Brazil ethanol parity as it serves as an important price floor for sugar prices in additional to the Chinese import parity. Additionally, the sugar industry (led by the NFCSF) has pushed for revising the ethanol procurement price and extending blending targets to greater than 20% since sugar's market share within the ethanol market has declined significantly (MSN, June 2, 2025). This amendment is necessary to support producers amid the rising sugarcane costs and sugar stock surpluses as any further decline in sugar price could force Brazil's sugar production to drop significantly.

India, Brazil, and Indonesia are increasing their ethanol blending requirements this year, which would divert much of sugar production into biofuel production. India's ethanol program is aiming for a blend rate of 20% in gasoline in 2025. This diversion of sugarcane towards ethanol production could tighten sugar supplies and potentially hinder exports.

Sao Paolo hydrous ethanol vs ICE sugar prices ($/lb, in sugar equivalent terms)



Brazil's ethanol production and trade (mn L)

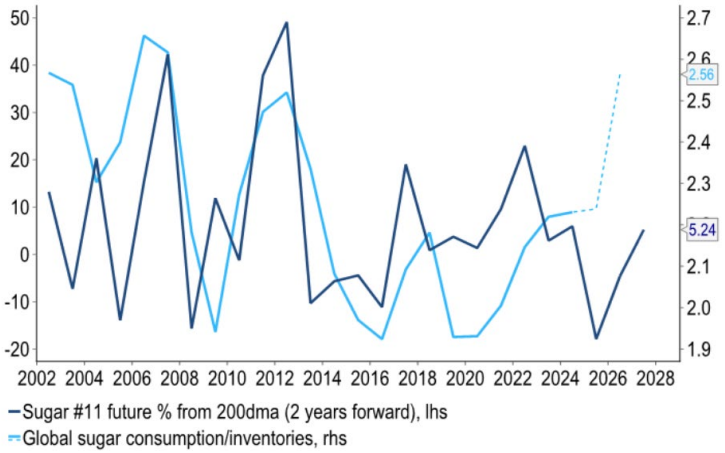


Source: Citi Research, USDA, UNICA, Energy Intelligence, Bloomberg

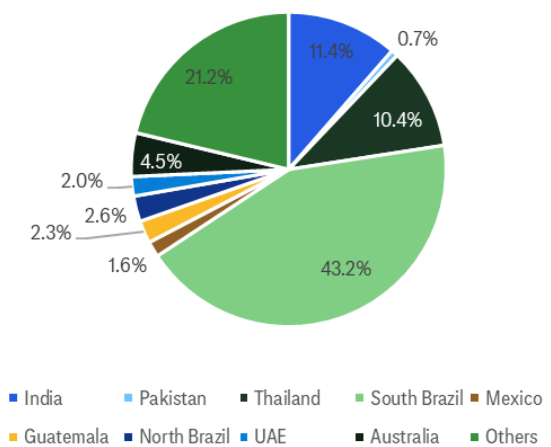
Trade and balances remain fragile while surrounded by bullish risks

While outlook improved for global trade balances, risk of further tightness remains. The right balances paired with the increasing threat of tariffs, the market could see a significant rebalancing and redistributed trade flows, and most certainly associated with the premium.

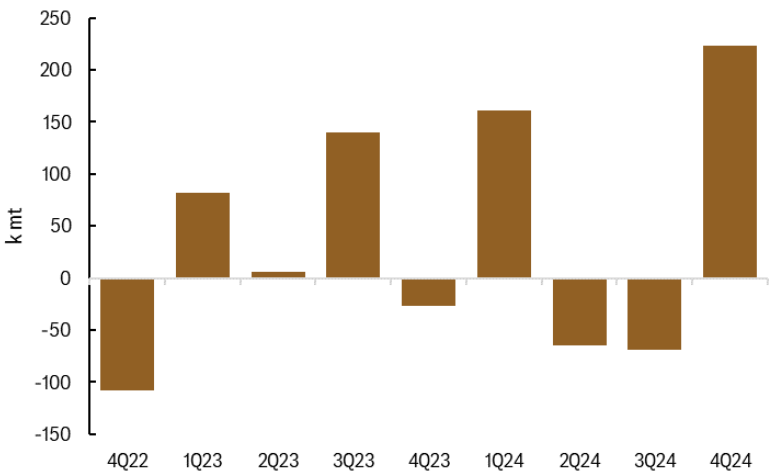
Sugar tends to price rising consumption/inventories ratio ~2 years in advance, such that if our deficit scenario materializes, sugar prices may see considerable upside



Share of select major exporters to the global markets of sugar, 5-year average



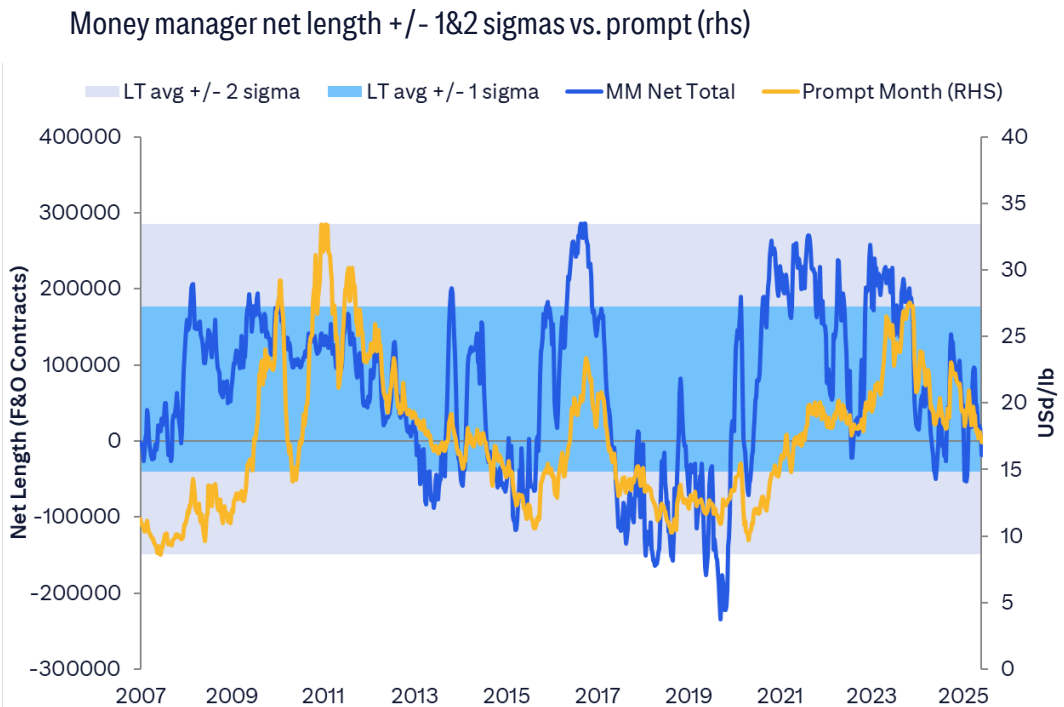
Quarterly net trade balance of raw sugar



Source: Citi Research, Bloomberg, UNICA, ICE

Spec Positioning

Sugar Net MM positioning continues to stay slightly elevated from the 2025 lows however has been steadily declining throughout 1H'25.



Source: Citi Research, Bloomberg

Coffee Outlook - coffee prices could re-test highs, before retracing on the back of higher supply

Coffee prices peaking as demand curtails & supplies replenish

We revise our 0-3M price to $3.75/lb and our 6-12M to $3.50/lb on the back of near-term volatility regarding tariffs. Furthermore, coffee will continue to trade rangebound on headlines, but fundamentals will continue to push the price on its bearish trajectory as supply recovers. In our last report, we noted coffee prices retesting highs. Now, as Brazil's harvest numbers are shaping up to be in recovery for both Arabica and Robusta, coffee prices have sold off to reflect the increasing supply. Despite below-average rain flow in the first few months of the year, rains since March 2025 have normalized to support strong production within coffee producing regions who have reported improvements in harvest. As previously mentioned, demand is beginning to slow, specifically in coffee producing regions. Brazil has seen a decline in local consumption of -5% y/y in Q1 and -16%y/y in April'25. Besides slowing demand from producers passing on coffee prices to consumers, large buyers of coffee for the US, are waiting to hear of any tariff exemptions, both these factors driving the price of coffee down.

Citi Research ICE coffee price forecasts

ICE Coffee	0-3M	6-12M	Q1 2025	Q2 2025E	Q3 2025E	Q4 2025E	Q1 2026E	Q2 2026E	Q3 2026E	Q4 2026E	2025E	2026E
USD/lb	375	350	376	375	370	350	340	330	325	310	368	326
Changes since last forecast												
USD/lb	(45)	(25)	-	(25)	-	-	-	-	-	-	(6)	-

Global coffee balances

(in mn 60 kg bags)

Production - Key Players	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25E	2025/26E	23/24 - 24/25 Change	24/25 - 25/26 Change
Brazil	61.8	63.6	56.5	63.2	68.2	67.0	63.6	(1.17)	(3.43)
Colombia	13.8	13.1	12.5	10.9	12.6	13.8	13.7	1.23	(0.08)
Vietnam	29.4	29.1	31.4	28.9	27.7	28.6	29.8	0.97	1.17
Indonesia	11.2	11.7	12.0	11.6	9.1	11.7	12.3	2.63	0.60
Ethiopia	7.0	7.5	7.1	6.9	8.0	8.2	8.1	0.13	(0.05)
India	5.3	5.8	6.4	3.2	6.6	6.4	6.6	(0.19)	0.24
Honduras	6.2	5.5	5.4	5.5	5.3	5.3	5.3	-	-
Uganda	5.9	6.1	5.5	5.8	6.5	7.0	7.5	0.51	0.54
Mexico	3.8	3.9	3.7	3.5	3.9	3.9	3.9	-	-
Others	27.5	24.7	24.6	26.5	25.6	23.8	28.5	(1.73)	4.68
Global Production (Oct/Sep)	**171.8**	**171.0**	**165.0**	**165.8**	**173.3**	**175.6**	**179.3**	**2.4**	**3.7**
Global Consumption (Oct/Sep)	**166.4**	**167.2**	**172.1**	**172.2**	**172.6**	**173.7**	**176.2**	**1.1**	**2.5**
World Surplus/(Deficit)	**5.4**	**3.7**	**-7.1**	**-6.4**	**0.6**	**2.0**	**3.1**	**1.3**	**1.2**

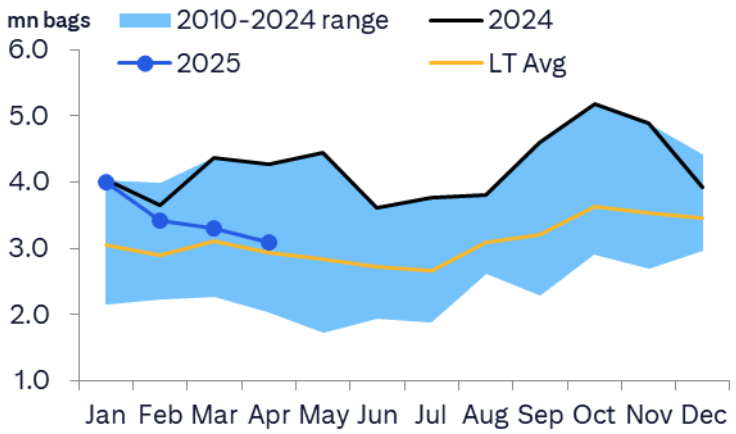
Trade Idea: Sell March 2026 (KCH6) Arabica; Buy March 2026 (DFH6) Robusta

We established a short position in Mar26 Arabica coffee futures (KCH6) and a long position in Mar26 Robusta coffee futures (DFH6) for a net cost of $1.42/lb (KCH6 at $3.62/lb and DFH6 at 4839/mt or $2.19/lb) as of May 1st, 2025. This trade has a maturity date of March 31, 2026 and mids were used for pricing. As of June 16th (8AM EST), the spread is at $1.46/lb and unrealized loss is 2% (see Global Macro Trade Ideas Radar - Our Most Compelling Trade Ideas for risks and rationale). Arabica and Robusta coffee prices continue to diverge, as Arabica prices increased significantly, up ~22% YTD, while Robusta prices have been lagging and increased only marginally above $1.5/lb and hit an all-time high, up 67% YTD. The Arabica premium over Robusta has skyrocketed from $0.95/lb at the start of the year to the current $1.5+/lb spread for the near-term contracts. This is a record level spread widening, driven by the extreme speed of divergence.

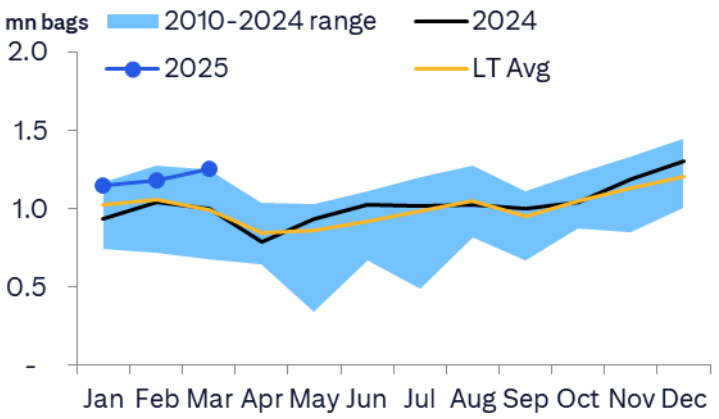
Arabica-Robusta spread has widened in the past few months pricing in Arabica fears, not considering increasing Robusta demand

Trade flows are robust with no signs to subside

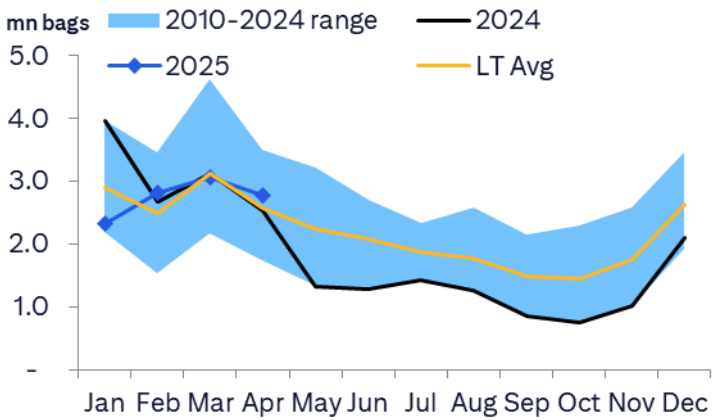
Brazil exports in 2025 starting out on the higher end of the average range in a 10-year lookback



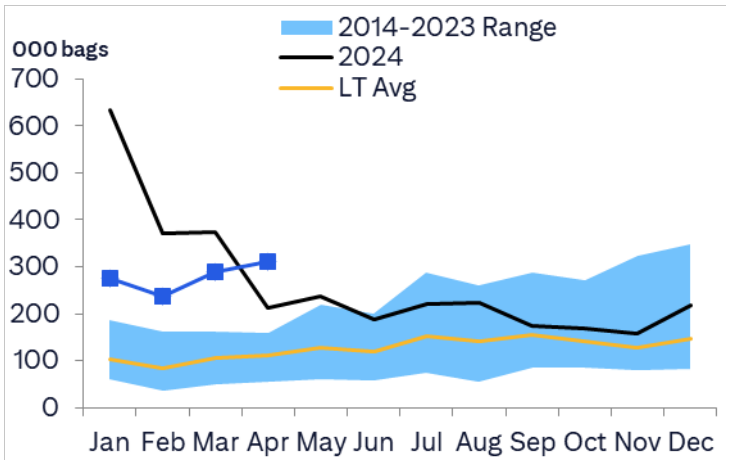
Colombian exports increasing Y/Y showing supply recovery from the extended drought in coffee producing regions



Vietnamese exports have been rebounding m/m, while cumulatively Oct-Feb exports are the lowest since 2020/2021 in part due to effects of La Nina's impact on the Robusta crop and delayed harvest



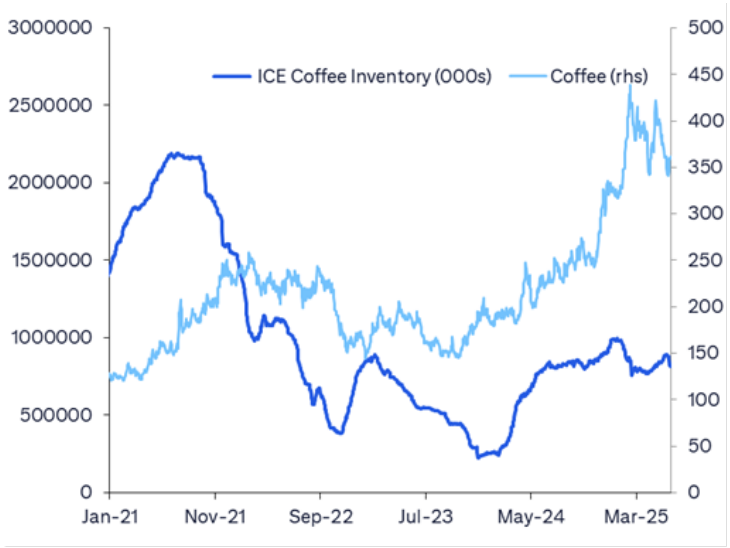
Chinese Imports reflecting demand growth slowing



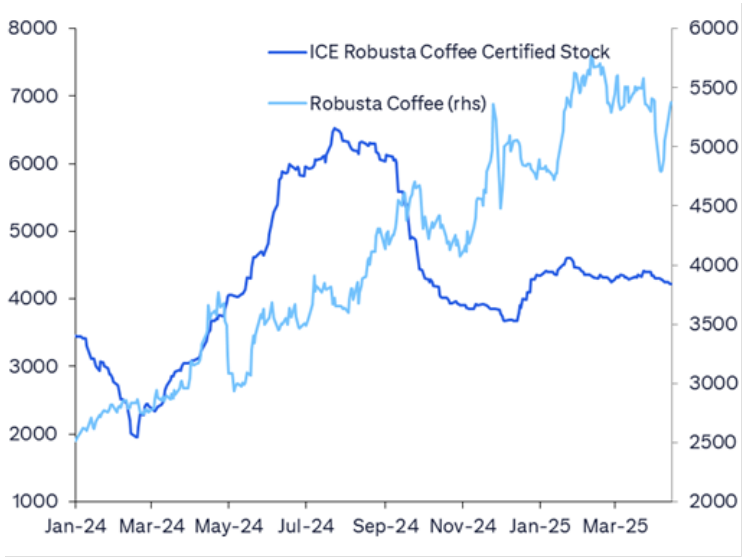
Source: Brazil Ministry of Agriculture, Vietnamese Govt, Chinese Govt, Citi Research

Positioning weakens as MM gross longs are at the lowest yearly level

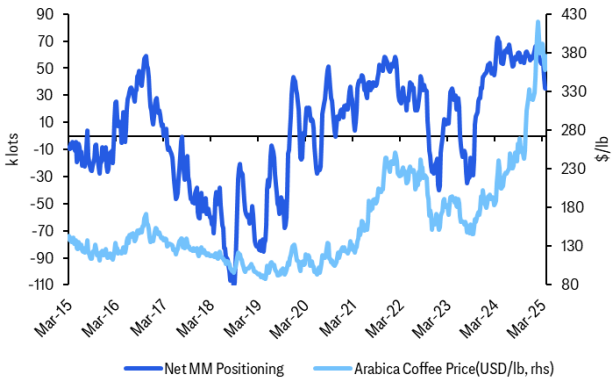
Arabica Inventories



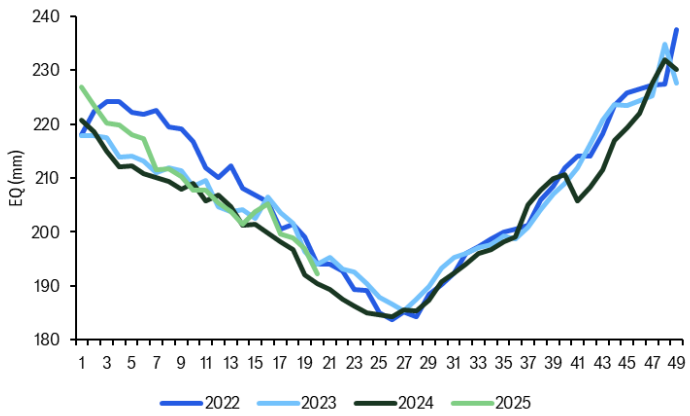
Robusta Inventories



Money Managers Net positioning versus coffee prices



Total coffee consumption in the US has been lower y/y, and below historical levels, mainly driven by lower coffee pod consumption based on the 4-week moving average trend (4WMA)



Cocoa Outlook – next grindings data could be even more disappointing, keeping the demand contraction

Downward pressure continues for prices amid increasing supply

We recommend short rallies in cocoa prices and remain tactically bearish. We keep our price outlook and continue to expect lower prices to persist for ICE cocoa, as grindings data continues to stay soft, while production, ex-West African region, has been growing with increasing areas planted. We expect $8,500 in 3M and $7,000 in 12M, as prices stayed in a relatively tight range. We remain optimistic on production in 2025/26 and expect it to grow by 132k mt y/y.

Citi ICE cocoa price forecasts*

ICE Cocoa	0-3M	6-12M	Q1 2025E	Q2 2025E	Q3 2025E	Q4 2025E	Q1 2026E	Q2 2026E	Q3 2026E	Q4 2026E	2024E	2025E	2026E
USD/MT	8,500	7,000	9,668	8,700	8,000	7,500	7,000	6,500	6,500	6,000	8,212	8,467	6,500

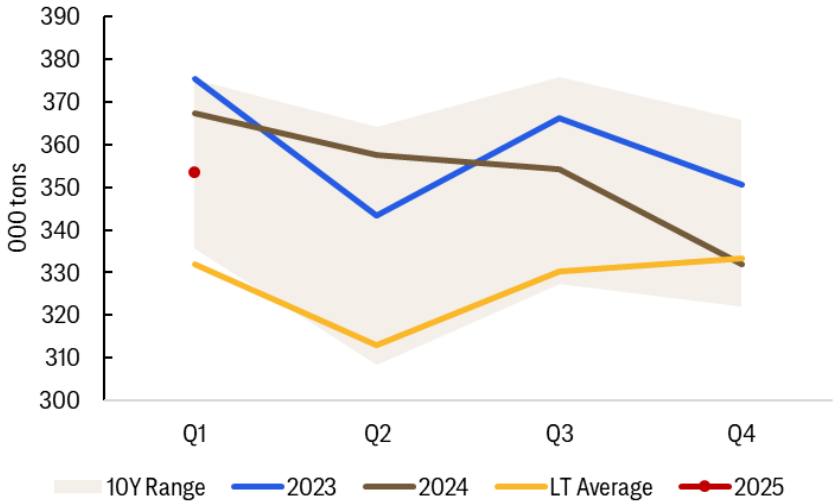
World cocoa s/d balances (subject to revision)

Production (in mmt)	20/21	21/22	22/23	23/24	24/25	25/26	Change 23/24-24/25	Change 24/25-25/26
Ivory Coast	2.248	2.121	2.241	1.725	1.815	1.800	0.090	(0.015)
Ghana	1.047	0.683	0.690	0.475	0.580	0.560	0.105	(0.020)
Nigeria	0.305	0.280	0.310	0.340	0.335	0.350	(0.005)	0.015
Cameroon	0.292	0.295	0.320	0.300	0.335	0.345	0.035	0.010
Indonesia	0.218	0.228	0.159	0.208	0.220	0.240	0.012	0.020
Brazil	0.190	0.215	0.233	0.198	0.200	0.240	0.002	0.040
Ecuador	0.359	0.375	0.450	0.427	0.510	0.535	0.083	0.025
Peru	0.115	0.134	0.141	0.177	0.183	0.190	0.006	0.007
Rest of World	0.425	0.439	0.496	0.557	0.675	0.725	0.118	0.050
Global Production	**5.199**	**4.770**	**5.040**	**4.407**	**4.853**	**4.985**	**0.446**	**0.132**
Global Grindings	**4.852**	**4.993**	**5.068**	**4.837**	**4.729**	**4.776**	**(0.108)**	**0.047**
World Surplus/(Deficit)	**0.295**	**(0.271)**	**(0.078)**	**(0.474)**	**0.075**	**0.159**		

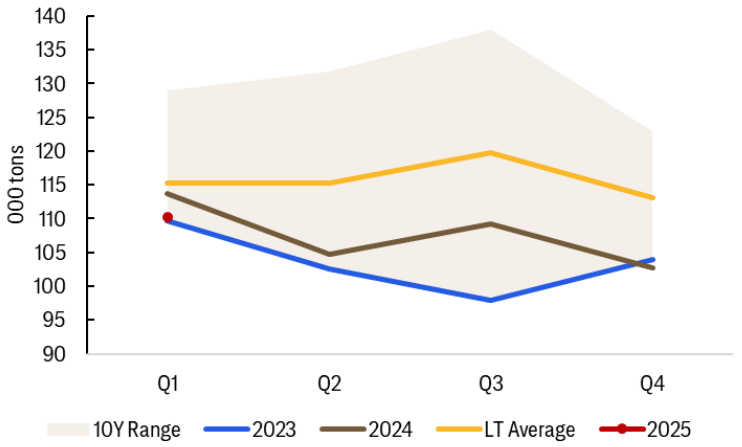
Source: ICCO, Industry Reports, Citi Research, *subject to revision; some figures may round

Global grindings data was weak in 1Q and is set to fall even further

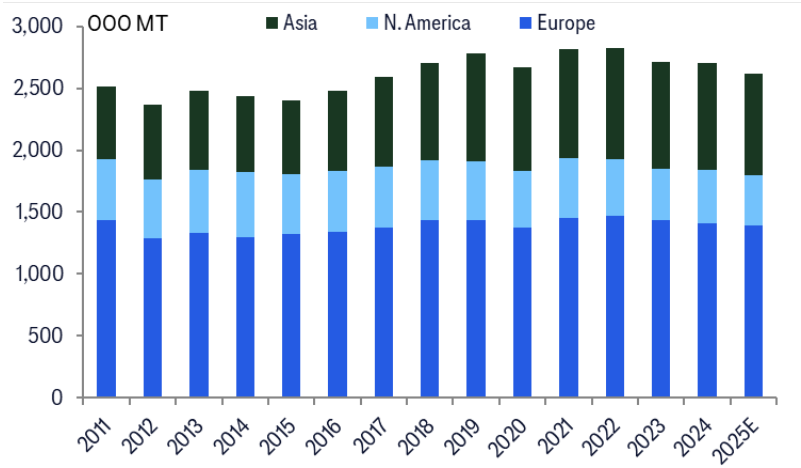
Europe cocoa grindings have declined the most in the 1Q



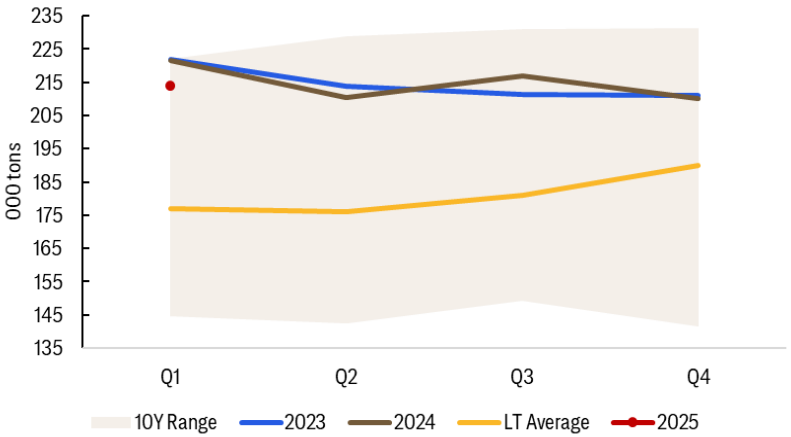
North America cocoa grindings have also fallen over 3% y/y



Total Grindings, annual comparison



Asia cocoa grindings have declined by 3.4% y/y

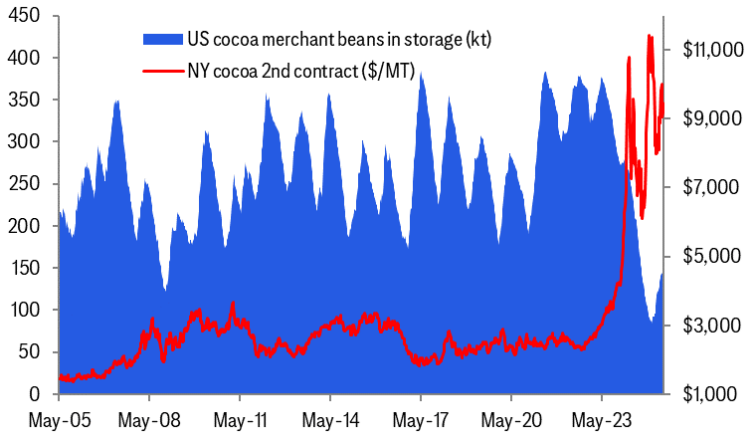


Source: ICCO, Industry Reports, Citi Research

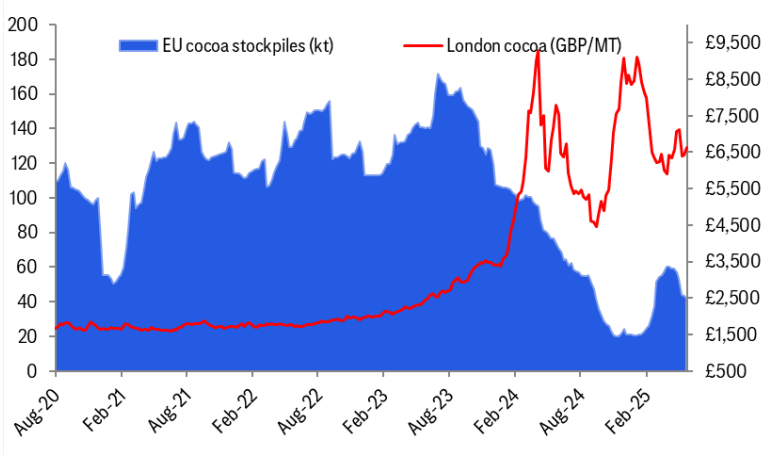
Inventories starting to replenish bouncing from record low levels

Observable inventories both in New York and London have been growing since hitting bottom in January. In mid-June, certified inventories are 59kt higher ytd (down 79kt y/y) to 149kt, while inventories in London are up 21kt ytd (down 32kt y/y) to 42kt. ICCO projects that global identifiable stocks would grow by 142kt in 2024/2025, to be close to 1.5mt, while we expect to grow by ~80kt to 1.4mt.

US Inventories are at record low levels, but production in LatAm has been increasing and contributing to the recent build in inventories (supplies from Ecuador)



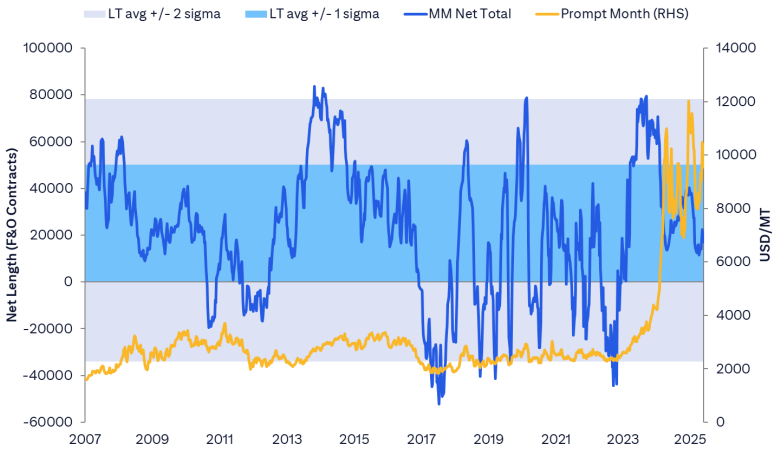
Inventories in London are in a much bigger slump and 20kt seems to be a define threshold level



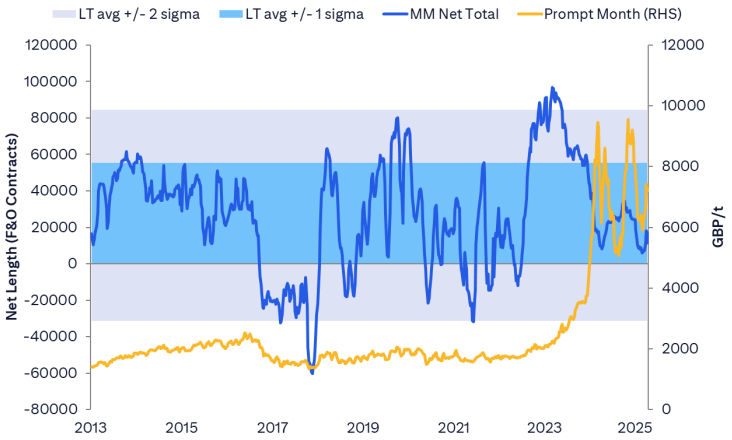
MM is weakening as funds have been liquidating longs at a record pace

Financial positioning for cocoa both in London and New York has been weakening as money managers have been liquidating gross longs per the recent data release. Concurrently, liquidity and volumes have deteriorated in the last three months. Per latest COT reporting, the net money manager (MM) positioning for NY cocoa have stayed in the tight range.

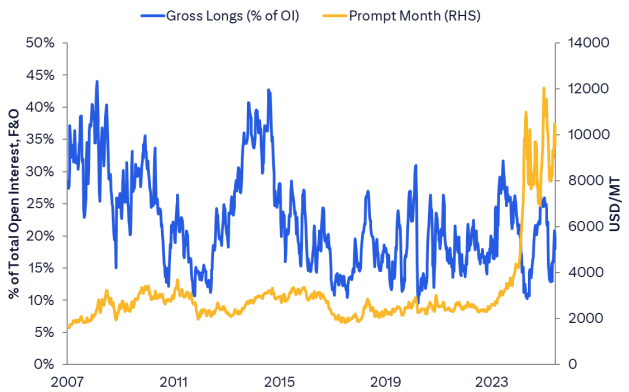
Money manager net length - NY Cocoa



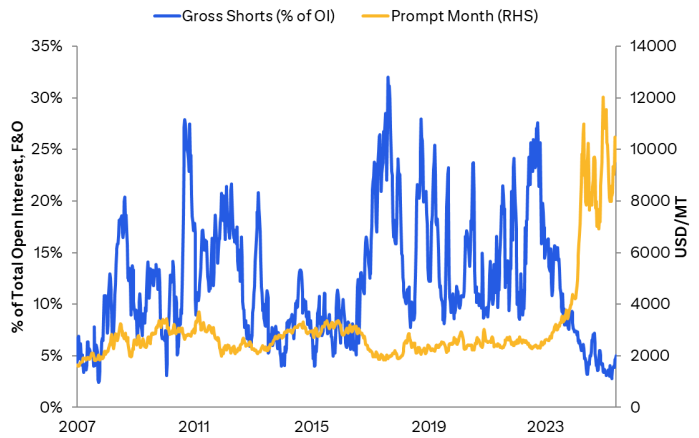
Money manager net length - London Cocoa



NY Cocoa normalized MM gross longs have dived



NY Cocoa normalized MM gross shorts have been in downtrend



CBOT Outlook – expecting grains to be more neutral as resilient exports/trade agreements and biofuel policies dictate the tape

CBOT grains and oilseeds price outlook is neutral 2H'25

We revised prices and update S/D for soy and corn on the back of stronger than expected export levels and trade agreements between the US and RoW (including China). Recent news on the proposed increase in Renewable Volume Obligations (RVO) to 5.61bln gallons of biomass-based diesel from the 3.35bln gallons required this year (67% jump) would serve as a price floor for soybeans and increase soybean oil share in excess of 50% versus soybean meal (Bloomberg, 06/13/2025). At the time of writing, it is still unclear if small refineries will be granted an exemption from this ruling, and if not exempt it could represent another bullish case for soybeans. We still view agricultural products as being instrumental in any trade or tariff discussions, and hence those flows/prices are more exposed to the changing environment. We have a neutral-bullish view for soy and corn, while keeping our wheat price forecast neutral. We now expect $10.75/bu for soy and $4.50/bu for corn in 3M, and a slightly higher price at $11/bu and $4.60/bu in 12M, respectively. Besides trade policies, there has been good progress on planting this year (above average) for corn/soy.

Citi Grains Market Outlook (base case)

Contract	Unit	0-3M	6-12M	Q1 2025E	Q2 2025E	Q3 2025E	Q4 2025E	Q1 2026E	Q2 2026E	Q3 2026E	Q4 2026E	2024E	2025E	2026E
CBOT Corn	USd/bu	450	460	474	463	450	450	460	460	460	460	424	459	460
CBOT Soybeans	USd/bu	1,075	1,100	1027	1036	1075	1075	1100	1100	1125	1125	1103	1,053	1,113
CBOT Wheat	USd/bu	550	525	556	528	525	525	500	500	500	500	572	534	500
Changes from last report*														
CBOT Corn	USd/bu	10	10			0	10	10	0	0	0		3	3
CBOT Soybeans	USd/bu	50	50			25	0	50	25	25	25		6	31
CBOT Wheat	USd/bu	0	0			0	0	0	0	0	0		0	0

CBOT price outlook scenarios in 2025/2026

Contract	Unit	Bear	Base	Bull
Implied probabili		10%	70%	20%
CBOT Corn	USd/bu	400	459	550
CBOT Soybeans	USd/bu	925	1,053	1200
CBOT Wheat	USd/bu	450	534	650
hanges from last repo				
CBOT Corn	USd/bu	0	0	25
CBOT Soybeans	USd/bu	0	0	25
CBOT Wheat	USd/bu	0	0	0

CBOT price outlook scenarios account for trade disputes/tariffs

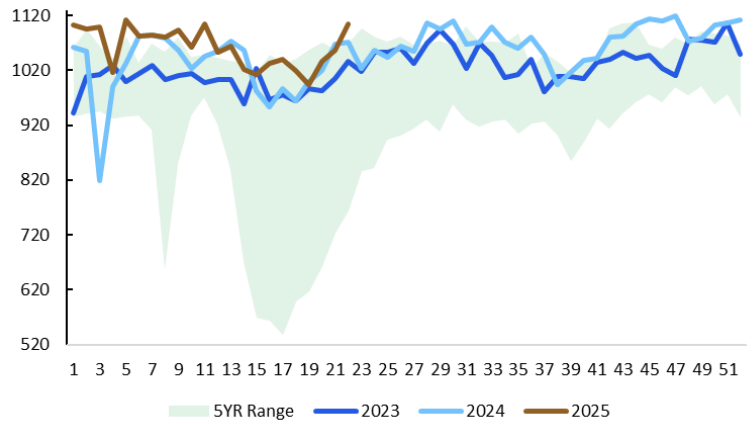
- **CBOT Soybeans – Increasing RVO by 67% in 2026 should be supportive for soybeans prices and it is less likely that prices would trade below $10/bu in the near term. We revised soybean oil share assumptions, which is supportive for our soybean demand estimations. While there is no decision made about small refinery exemptions, and if those are granted, the upside price momentum could be capped. We have revised up our export forecast for new crop and now expect it to be at 1700mln bushels, which is lower y/y by 100mln bushels, but much higher versus what we previously expected. It appears that US-China trade deal for 90-days and lower effective tariff rate is beneficial for US basis (versus Brazil) and would allow soybean exports to hold up.** We also don't rule out a possibility for any additional agreements to be made between two countries that would stimulate even higher exports from the US. The risk skew has changed significantly and is now leaning bullish. As of now, weather have been favorable for plantings and 66% of soybeans were planted last week, versus 50% historical seasonal average. However, with the National Weather Service issuing their 90-day outlook with elevated chances of above-normal temperature and below normal rainfall through August, that could provide further support to prices (NOAA).
- **CBOT Corn – We also tweak our corn view, where earlier this year we expected lower corn prices in line with our soybean outlook and on the back of lower exports. We now expect corn prices to be further neutral, with both pull and push factors.** Revised balances in Figure 3 points to historical carryout levels, due to increasing production levels and relatively stale demand factors. However, increasing ethanol blending mandates could provide some stimulus, along with its potential to be more competitive in international markets from future trade agreements (for example the recent trade agreement between the US/UK). Additionally, within Brazil, close to 20mt of corn is now being used for ethanol blending, which is set to double in the next 4-5 years. Such a trend would limit the country's ability to export and in turn would be beneficial for US exports. In 2026, we now expect corn prices to average around $4.6/bu level.
- **CBOT Wheat – We left our wheat prices unchanged as our views expressed here still hold. The USDA projects 2024/25 US wheat to have larger supply, due to improving yield, unchanged domestic use, and higher ending stocks.** Total supply is projected to be above 2.8bn bu in 2024/25 and 2025/26, due to increasing production in part attributed to improving yields.

Global Commodities - CBOT Outlook: Expecting grains to be more neutral as resilient exports and trade agreements dictate the tape

Increasing demand for corn from ethanol blending will not subside

Both US ethanol production and exports have been growing and at record levels, k b/d

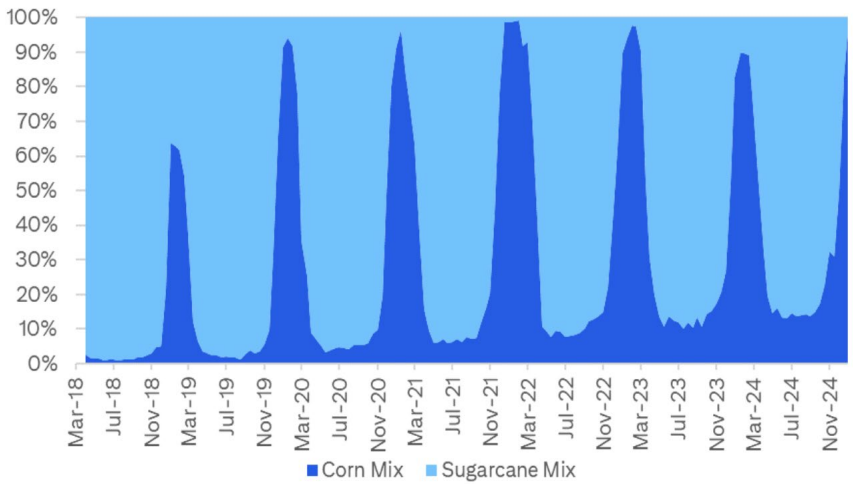
Weekly ethanol production in the US has been robust in the last two months, seasonally, k b/d



Select countries with ethanol mandates and share of global demand

Country	Share of global demand (%)	Main Production Feedstock	Ethanol Fuel Mandate and Target
US	55	Maize/Corn	Mandata - E10
Brazil	28	Sugarcane/Corn	Mandate - E27, target - E30
India	5	Sugarcane/Molasses	E12 reached, target - E20
EU	5	Corn Kernels/Sugar Beet/Wheat Kernels	Limited to E7
China	5	Corn Kernels/Rice	E10
Thailand	1	Molasses/Cassava	Implicit blend mandate at E12

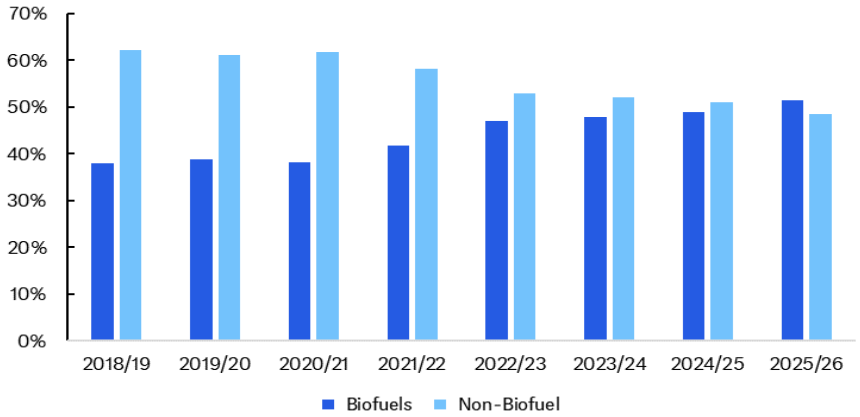
Brazil's Corn Ethanol Share of Ethanol Production



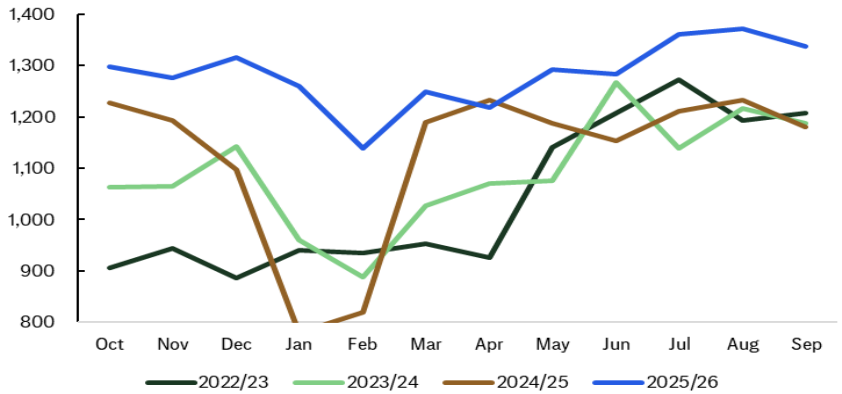
Source: Citi Research, EPA, USDA, EIA, Citi Research

Soybean oil usage increased lately, thanks to RD/SAF production gains

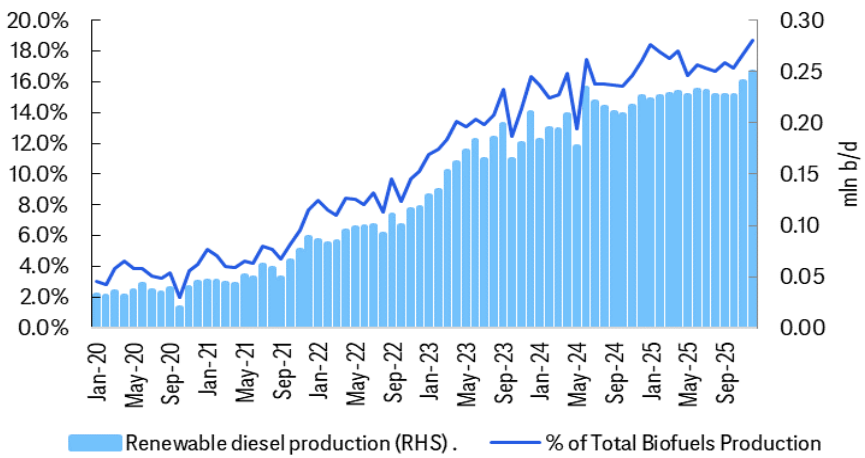
Share of soybean oil allocated to biofuel production is on par now non-biofuel use in the US



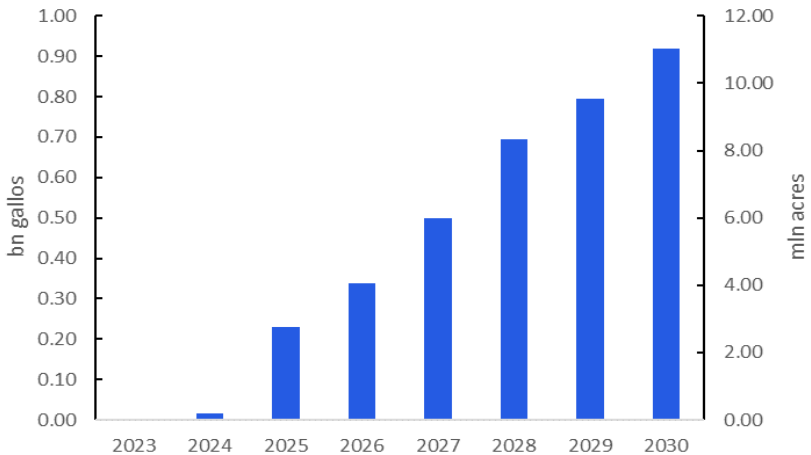
Soybean oil usage and demand for soybeans driven by biofuel production in the US also positive, mln lbs



Renewable diesel has been a clear leader in supply growth within the biofuels complex



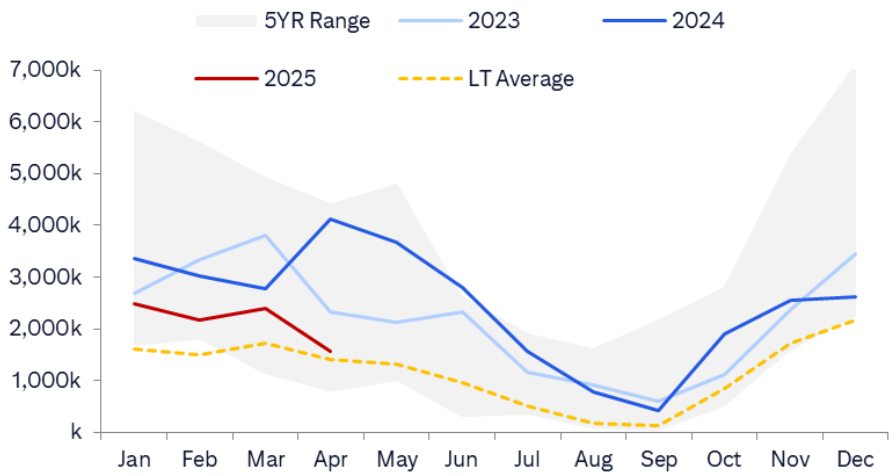
US soybean-based SAF production outlook is set to increase in the coming years



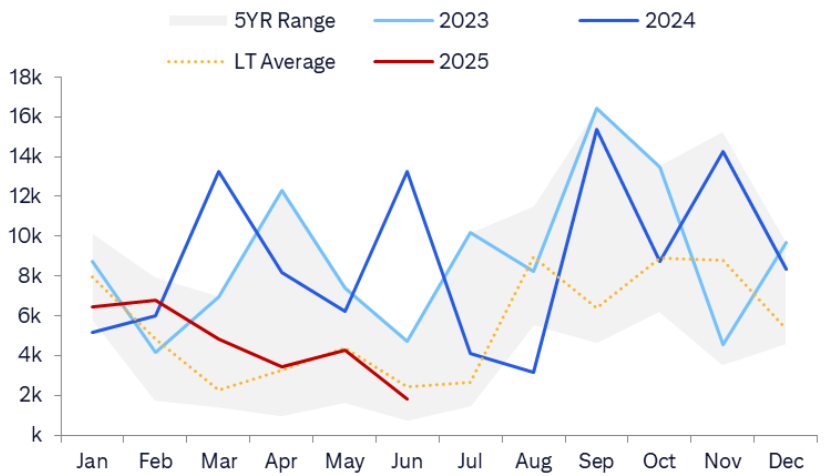
Source: Citi Research, EPA, USDA, EIA,BNEF, Citi Research

Russia/Ukraine ceasefire would ease logistics in the Black Sea region

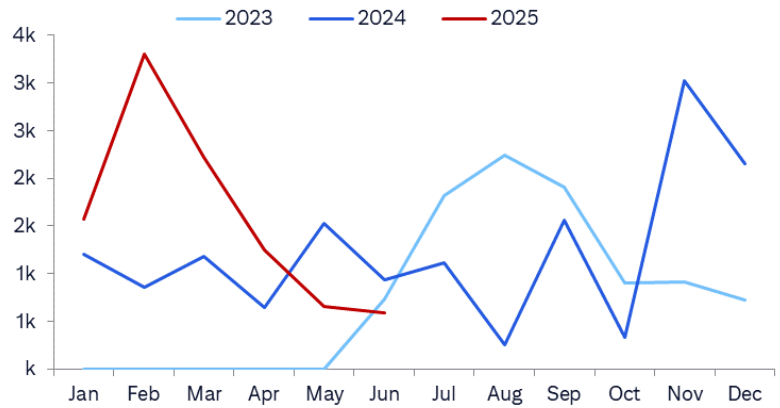
Ukrainian corn exports have been struggling due to the railway glut and inability to export all supplies



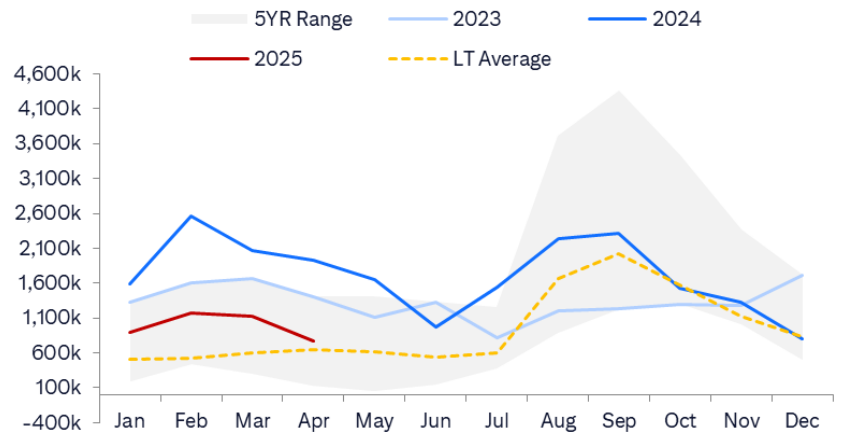
Russian wheat exports have been soft as more supplies are allocated for domestic used amid lower production levels



Russian corn exports have been higher this year, mainly from crop growing in occupied territory in Ukraine



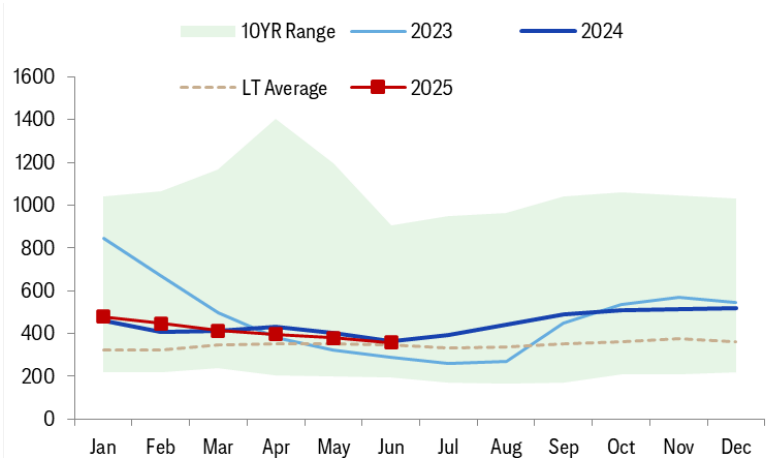
Ukrainian wheat exports have also struggled. In the ports of Odessa, average daily unloading volumes have declined, while the number of railcars arriving at the ports has risen.



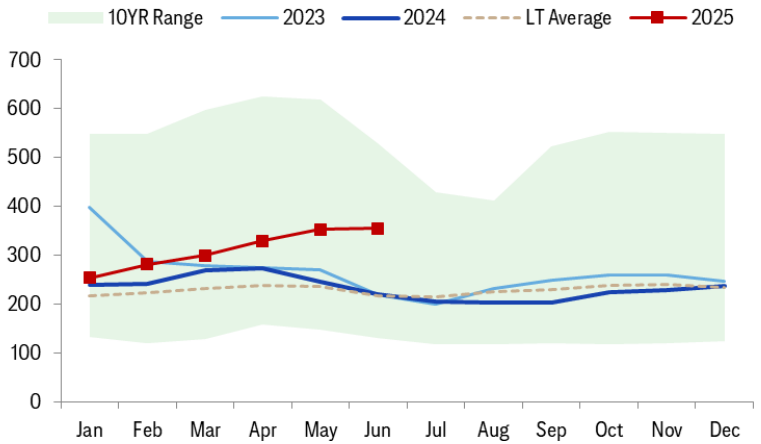
Fertilizers prices are finding support amid lack of progress on R/U ceasefire

Fertilizer prices have stabilized since the 2022 highs, trading sideways through 2024. Diammonium phosphate prices are ending the year in the higher end of the 10yr range. There is a higher likelihood for fert/chem input costs to further decline from here, as gas prices in Europe could trade lower.

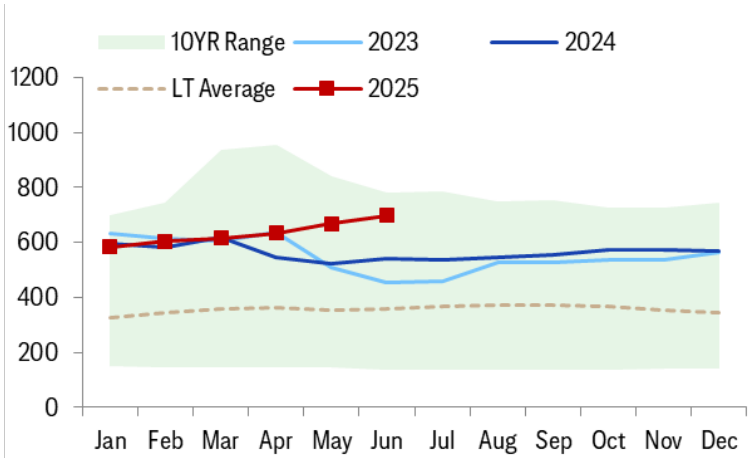
Ammonia price seasonality ($/st)



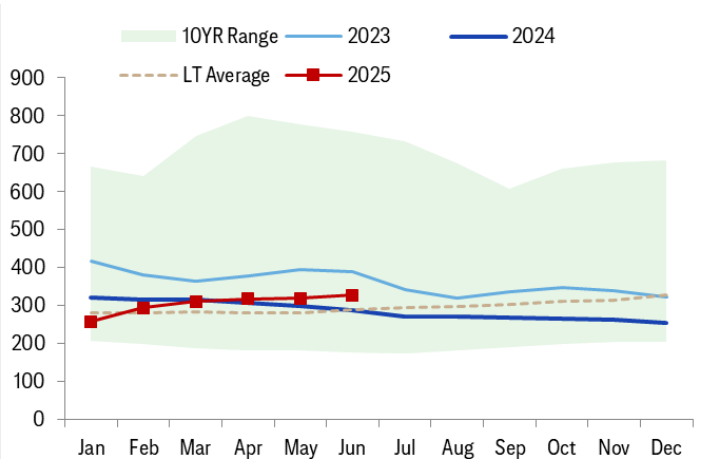
Urea Ammonium Nitrate (UAN) ($/st)



Diammonium phosphate prices ($/st)



Potash price seasonality ($/st)



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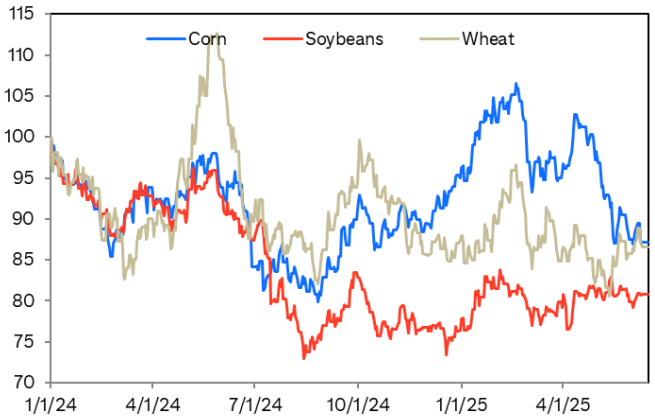
Source: Green Markets, Citi Research

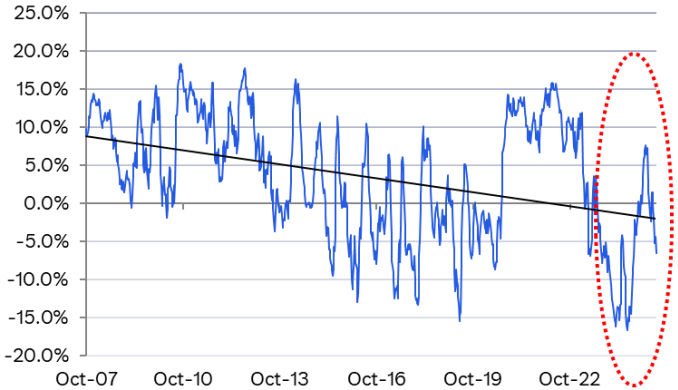
MM positioning turns more neutral net short corn/wheat, while long soy

Wheat 2M futures continue to trade higher vs corn and soy. Open interest remains flat while massive net short money managers (MM) positioning for wheat and corn could spike prices, if there is a squeeze. As ethanol consumption increases, and exports remain robust, MM continue to favor CBOT corn versus the rest of the complex.

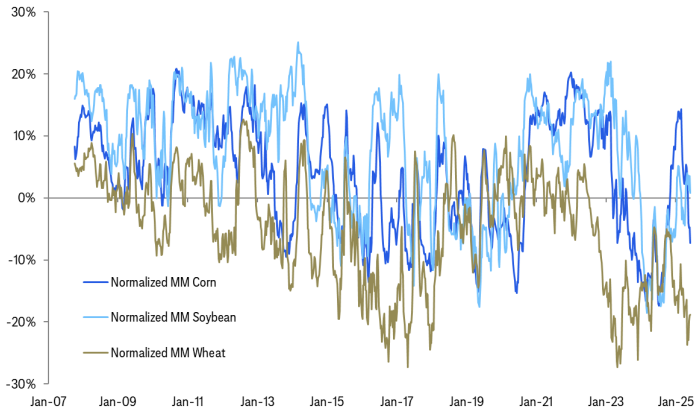
CBOT corn, soy, wheat 2M futures (01/01/24 = 100)



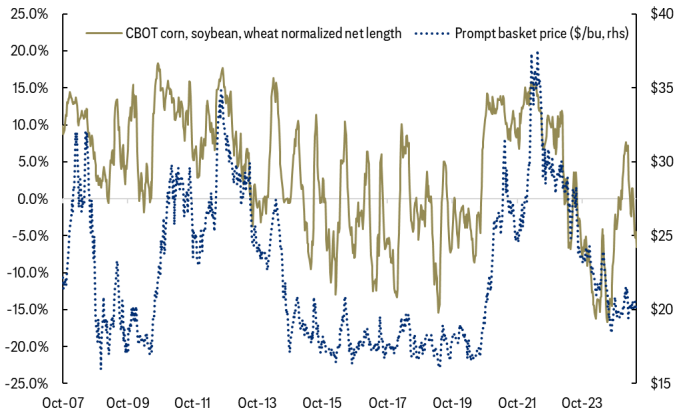
CBOT corn, soy, wheat MM net long (short) contracts versus open interest



CBOT corn, soy, wheat MM normalized net position



CBOT complex net position and prompt basket price



Source: Bloomberg, CFTC, Citi Research

US corn balances still look loose but less so as demand is robust

Millions of Acres Millions of Bushels	USDA					Citi Estimate	
	20/21	21/22	22/23	23/24	24/25	24/25	25/26
Area Planted	90.7	93.3	88.2	94.6	90.6	90.6	95.5
Area Harvested	82.3	85.3	78.7	86.5	82.9	82.9	87.1
Percent Harvested	91%	91%	89%	91%	92%	92%	91%
Yield per Harvested Acre	171.4	176.7	173.4	177.3	179.3	179.3	181.5
Beginning Stocks	1,919	1,234	1,377	1,361	1,763	1,763	1,505
Production	14,111	15,074	13,651	15,342	14,867	14,867	15,603
Imports	24	24	39	28	25	25	25
Total Supply	16,055	16,332	15,067	16,731	16,655	16,655	17,133
Feed and Residual	5,602	5,715	5,487	5,804	5,650	5,600	5,900
Ethanol Usage	5,028	5,328	5,176	5,478	5,500	5,600	5,600
Food, Seed and Industrial	6,466	6,769	6,558	6,869	6,890	7,000	7,000
Total Domestic Usage	12,068	12,484	12,045	12,673	12,640	12,600	12,900
Exports	2,753	2,471	1,661	2,292	2,600	2,550	2,450
Total Demand	14,821	14,955	13,706	14,965	15,240	15,150	15,350
Ending Stocks	1,234	1,377	1,361	1,763	1,415	1,505	1,783
Stocks-to-Use ratio (%)	8.3%	9.2%	9.9%	11.8%	9.3%	9.9%	11.6%

US soybean balances largely dependent on tariff policy

Millions of Acres Millions of Bushels	USDA					Citi Estimate	
	20/21	21/22	22/23	23/24	24/25	24/25	25/26
Area Planted	83.4	87.2	87.5	83.6	87.1	87.1	83.5
Area Harvested	82.6	86.3	86.2	82.4	86.1	86.1	82.6
Percent Harvested	99%	99%	99%	99%	99%	99%	99%
Yield per Harvested Acre	51.0	51.4	49.6	50.6	50.7	50.7	53.0
Beginning Stocks	525	257	273	264	342	342	430
Production	4,216	4,465	4,270	4,162	4,366	4,366	4,381
Imports	20	16	25	21	25	20	15
Total Supply	4,761	4,738	4,568	4,447	4,733	4,728	4,826
Crush	2,141	2,204	2,212	2,287	2,420	2,410	2,500
Seed	101	102	97	78	72	78	86
Residual	1	2	4	45	42	35	27
Total Domestic	2,243	2,308	2,313	2,410	2,534	2,523	2,613
Exports	2,261	2,157	1,992	1,695	1,850	1,775	1,700
Total Demand	4,504	4,465	4,305	4,105	4,384	4,298	4,313
Ending Stocks	257	273	263	342	349	430	513
Stocks-to-Use ratio (%)	5.7%	6.2%	6.1%	8.3%	8.0%	10.0%	11.9%

US all-wheat balances are more neutral out of CBOT complex

Millions of Acres Millions of Bushels	USDA					Citi Estimates	
	20/21	21/22	22/23	23/24	24/25	24/25	25/26
Area Planted	44.3	46.7	45.8	49.6	46.1	46.1	45.5
Area Harvested	36.7	37.1	35.5	37.1	38.5	38.5	37.6
Percent Harvested	83%	79%	78%	75%	84%	84%	83%
Yield per Harvested Acre	49.8	44.3	46.5	48.7	51.2	51.2	51.9
Beginning Stocks	1,028	845	673	569	696	696	798
Production	1,828	1,646	1,650	1,804	1,971	1,971	1,949
Imports	100	96	122	138	135	135	115
Total Supply	2,956	2,587	2,446	2,511	2,802	2,802	2,862
Food	961	972	973	961	968	968	976
Seed	64	58	68	62	64	64	63
Feed and Residual	94	88	77	85	120	120	120
Total Domestic Usage	1,119	1,118	1,118	1,108	1,152	1,152	1,159
Exports	992	796	759	707	845	845	860
Total Demand	2,111	1,914	1,877	1,815	1,997	1,997	2,019
Ending Stocks	845	673	569	696	805	805	843
Stocks-to-Use ratio (%)	40.0%	35.2%	30.3%	38.3%	40.3%	40.3%	41.7%

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Appendix A-1

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