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17 August 2023

European de-industrialisation risks, not elevated gas prices, is the core concern

Global commodities: The surge in European natural gas (TTF) prices thus far in August serves as a reminder of its inherent volatility. Yet, do they also serve as a harbinger of potential elevated winter prices? We believe not. While the advance in gas for delivery in one month may be top of investors' mind, the winter contracts have not materially budged, trading water within the same range since June – a testament that this recent spike may not markedly impact winter's trajectory. Her demand (and lower inventories), our base case is for a still rosy winter ahead. Whilst we do anticipate TTF rising to average EUR62/MWh in Q4 2023, our core concern is that the issue is less about gas prices but rather European de-industrialisation risks with the continent having to compete with the unparalleled US IRA.

Energy: Oil's impressive seven-week long rebound may lose some steam in the near term. Whilst Brent has surged ~20% from its June lows on tightening micro fundamentals, headwinds are emerging. Meanwhile, European (TTF) prices has retraced some of its gains from last week, allowing Asian spot (JKM) LNG prices to climb back above European (TTF) prices.

Base metals: Until China stimulus achieves material improvement in confidence and/or easing DM policy, we expect little potential for sustained near term gains.

Precious metals: We would argue for fading upside moves in gold price until a clear downward trend in yields and the USD emerges.

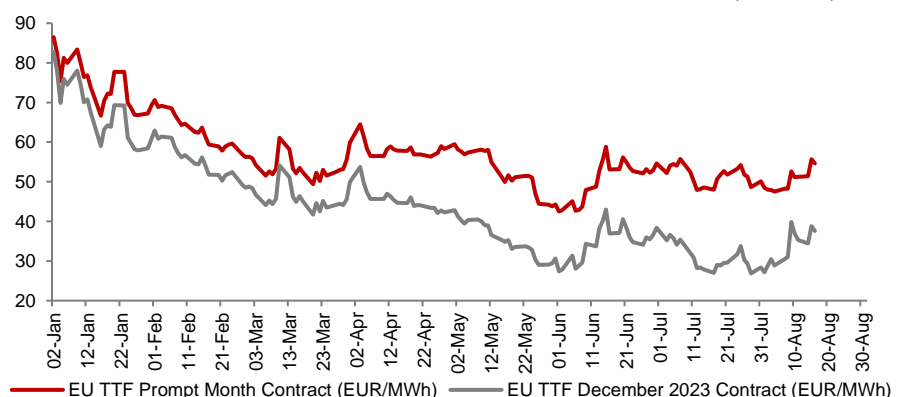
Bulk commodities: The persistent troubles in China's property market pose a threat to iron ore and thus far the myriad, piecemeal Chinese stimulus initiatives and reassuring rhetoric have failed to turn the tide.

Agriculture: Rice's precipitous rally has more room to run, as constrained supply meets robust demand.

Core indicators: Price performance and forecasts, flows, market positioning, timespreads, futures, inventories, storage and products performance covered below.

CHART OF THE WEEK: WINTER GAS FUTURES UNFAZED BY TODAY'S SURGE

EU NATURAL GAS FUTURES CONTRACTS, PROMPT MONTH VS DECEMBER 2023 (EUR/MWH)



Source: Bloomberg, MUFG Research

GLOBAL COMMODITIES (-1% W/W; -7.2% YTD)

European winter natural gas futures have not followed the spike in front month futures

The surge in European natural gas (TTF) prices thus far in August serves as a reminder of its inherent volatility. Yet, do they also serve as a harbinger of potential elevated winter prices? We believe not. While the advance in gas for delivery in one month may be top of investors' mind, the winter contracts have not materially budged, trading water within the same range since June – a testament that this recent spike may not markedly impact winter's trajectory. Granted, uncertainties surrounding the risks of Australian strikes at three major LNG facilities impacting global supply, the vagaries of weather forecasts as well as the complex state of European industrial demand are abundant. Though, with European gas storage levels remarkably robust at 89% full today – above the five year average and a whiskers away from the EU's end of September target of 90% – the continent remains in a rosy position to navigate the winter heating season ahead.

US natural gas prices have rallied in sympathy with European prices but fundamentals remain sound

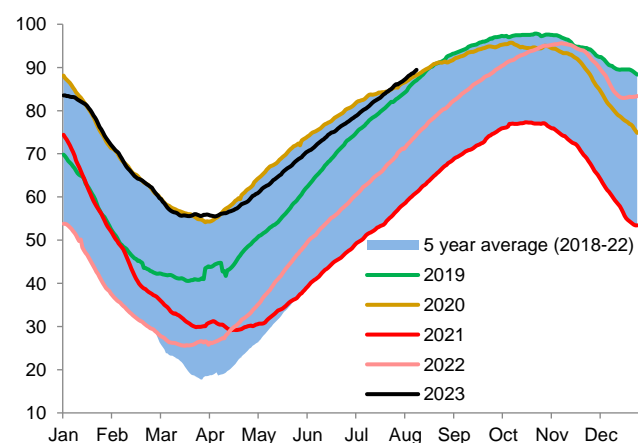
Even across the pond in the US, Henry Hub prices have rallied in sympathy with European TTF, but this has not been driven by fundamentals that remain benign. In essence, we do not see a strong near-term fundamental link between the two markets. To be clear, as long as global gas prices remain high enough to keep US LNG exports in the money to flow, which at the moment requires TTF at or above USD3.65/MMBtu (EUR11.5/MWh), they will flow. To be sure, a lower risk of European gas storage hitting congestion implies a lower risk that US LNG exports get cancelled and, hence, a lower risk the US market gets flooded with gas.

De-industrialisation risks, not higher gas prices, are the core concern for Europe, in our view

Whilst we do anticipate TTF rising to average EUR62/MWh in Q4 2023 on more normal winter temperatures (unlike the mild winter last year) and marginally lower demand destruction driving higher demand (and lower inventories), our core concern is that the issue is less about gas prices but rather European de-industrialisation risks with the continent having to compete with the unparalleled US Inflation Reduction Act (IRA) (see [here](#) and [here](#)). A prime example of European industrial demand that may be permanently lost due to relocation is the largest chemicals company, Germany's BASF, which has downsized across the continent and instead looking towards the US and China which are offering favourable tax incentives and access to green energy and regulatory fast-tracking – BASF is building a EUR10bn petrochemicals complex in China's Zhanjiang province which the company said was possible through the support of Chinese authorities. On net, we believe that the issue across the European continent is not about gas prices anymore, but rather the macroeconomic environment.

EUROPEAN GAS INVENTORIES ARE ABOVE THEIR FIVE YEAR AVERAGE SIGNALLING A ROSY WINTER AHEAD

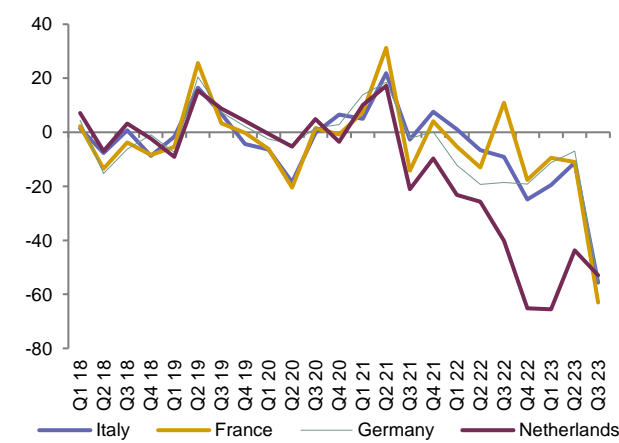
EU GAS INVENTORIES (% SHARE OF TOTAL)



Source: Bloomberg, MUFG Research

DESPITE LOWER EU GAS PRICES, GAS DEMAND HAS COLLAPSED – DE-INDUSTRIALISATION RISKS AROUND

NORTHWEST EU INDUSTRIAL GAS DEMAND (% Y/Y)



Source: Bloomberg, MUFG Research

ENERGY (0.5% W/W; -6.8% YTD)

Crude oil

Oil steadies as China fears counter tighter US supply

Oil prices steadied this week after worries over faltering Chinese economy were offset by datapoints on lower US inventories. The effects of weak data from Chinese economy and thereby the oil demand drove oil prices lower. In addition, stronger-than-expected US consumer demand data raised US Federal Reserve's policy tightening efficiency, causing the commodities complex to post losses, including oil.

China's July refinery runs kept output elevated to meet demand and the API confirms small crude build in the US

Oil-specific data from China was more supportive though, with it showing that refiners processed around 14.9mn b/d of crude oil in July, up more than 31% y/y. These numbers suggest that China drew down crude oil inventories after fairly strong builds in both May and June. Meanwhile, American Petroleum Institute (API) data released was also more constructive with US crude oil stocks falling by 6.2mn barrels over the last week, bigger drop than the market expectations, essentially meaning a tighter market.

The tentative US-Iran deal may have little to no impact on the currently tight oil supplies

The optimism over a possible deal between the US and Iran, following the release of four US citizens from an Iranian prison and the expected unfreezing of Iranian funds overseas has raised hopes for progress with the Iranian nuclear deal. In the past, the failure to make any progress or reach conclusion in recent years have left the market no confidence to an increase in Iranian oil supply. Despite the current sanctions, data points to increased supply from Iran already with the Chinese imports of crude from Iran reaching a decade-high in August with 1.5mn b/d (based on tanker-tracking market updates). Hence, even if the deal comes through, we still little to no relief to the currently tight market scenario.

Oil's winning run since late June may cool down in the short term

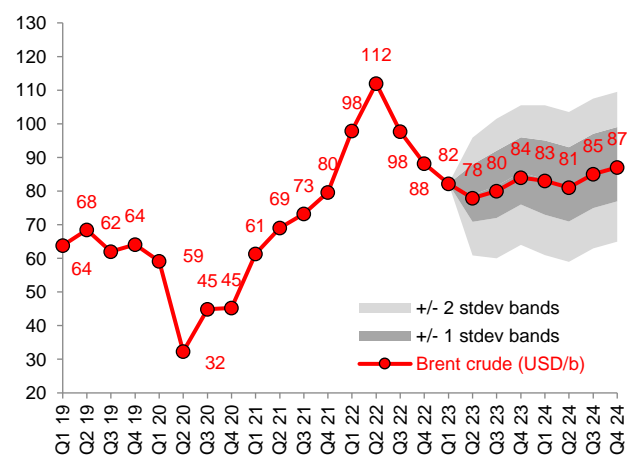
Looking ahead, we believe the impressive rebound in oil prices may lose some steam in the near term, as rising prices are expected to help boost production in the US. On the demand side, risks stem from lower than anticipated Chinese stimulus. Hedge fund managers are cutting net bullish bets after exuberance since end-June. Hence, we expect the current seven successive weeks' rally to cool down in the short term.

But in the long run, oil is slated for even higher gains

In the past, seven successive gains in oil prices have been witnessed seven other times since the turn of the century and in five of those, Brent prices was up 25% in the next 12 months horizon - a clear sign that such momentum are followed by even larger gains, which is in line with our bullish outlook for oil (see here).

WE ANTICIPATE BRENT OIL TO PRINT NORTH OF USD80/B IN H2 2023 AND 2024 ON SUPPLY TIGHTNESS

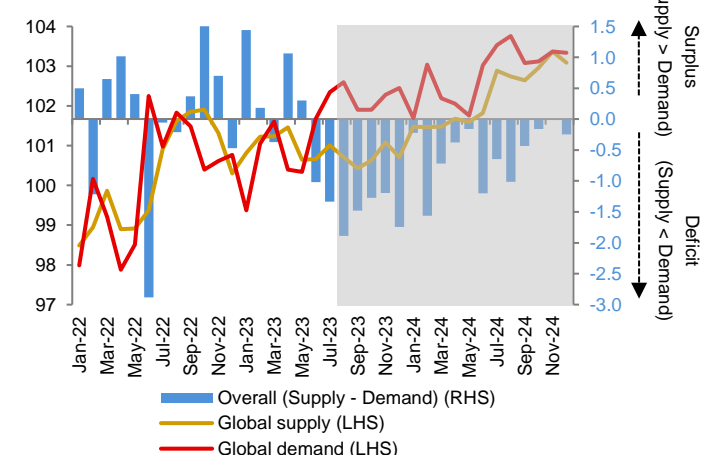
BRENT FORECASTS WITH STANDARD DEVIATION BANDS (USD/B)



Source: Bloomberg, New York Fed, MUFG Research

OIL MARKET FUNDAMENTALS POINT TO A DEEP DEFICIT IN H2 2023 ON HIGHER DEMAND AND WEAKER SUPPLY

CRUDE OIL SUPPLY, DEMAND AND OVERALL BALANCE (M B/D)



Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Natural gas

European natural gas (TTF) prices retrace some of the early week's losses due to robust gas storage

Despite the threat of Australian strikes causing jitters, the retracement of European natural gas (TTF) prices goes on to prove that market participants collective call for no strong immediate impact from industrial action. European gas storage units are currently more than 89% full, which has also helped limit gas gains. Further, Europe isn't heavily reliant on Australian gas. So, the effect might not be as strongly felt across the European landscape. Additionally, the recent price spike itself appears to be too little in the context of the broader market landscape as prices are ~ 90% below the 2022 peak and are lingering at ~60% lower than the levels seen prior to Russian Ukraine conflict. We believe that a more pronounced and consistent gains would be required to support winter risk premium.

Carbon markets

EU carbon prices set two-week high prices but slip back despite gains in gas

EU carbon prices hit two-week highs before falling back in thin trading as much of Europe observed a public holiday and traders awaited new Commitment of Traders data, while energy prices forged higher amid rising temperatures and concerns over LNG supplies. Forecasts of a heatwave in Europe this week and reduced wind production helped push the contract out of its recent narrow trading range, market participants agreed. We continue to see subdued demand as clean energy transition hopes are high.

BASE METALS (-3.3% W/W; -16.4% YTD)

Swelling LME inventories and contango pricing point to more weakness

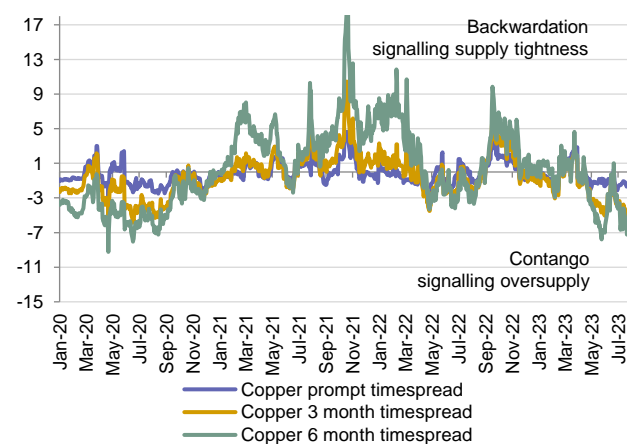
The last week saw Copper and zinc extending losses to reach lowest since June this year. LME inventories continue to climb higher with LME copper stocks increasing to a little over 90k MT – almost 36k MT increase since mid-July. Higher inventories, although eased the strain on buyers who've faced chronic constraints, have weighed on the LME copper cash-3M spread with it trading in a contango of USD56/Mt, compared to a contango of just USD7/Mt back in mid-July. Zinc inventories in LME warehouses also saw big increases and reaching the highest levels since April 2022. Looking ahead, until China stimulus achieves a material improvement in confidence and/or developed markets monetary policy adjusts to an easing cycle, we expect little potential sustained broad base metals near term upside.

FADING UPSIDE MOVES IN GOLD PRICE UNTIL A CLEAR DOWNWARD TREND IN YIELDS AND THE USD EMERGES
GOLD PRICES (USD/OZ)



Source: Bloomberg, MUFG Research

HIGHER INVENTORY SUPPLIES HAVE WEIGHED ON COPPER SPREADS WITH IT TRADING IN A CONTANGO
COPPER PRICES (USD/LB)



Source: Bloomberg, MUFG Research

PRECIOUS METALS (-0.9% W/W; 3.4% YTD)

Gold under pressure for the moment; but investment demand to support prices in medium term

Gold prices came under pressure this week after subdued Chinese macro data on retail sales and industrial production. Further, the July US retail sales data added to the list of US data that has indicated continued resilience of the US economy, suggesting the Fed's tightening action to date. Any further data raising fresh doubts over whether the Fed is really done with its tightening cycle, will likely put pressure on gold prices. Lately, with the increase seen in real yields lately, it is difficult to see any meaningful upside to gold prices in the short term. Gold has an inverse correlation with inflation-adjusted yields. As the US real yield rises, coupled with a strong USD buoyed by US FOMC continuing to hold the tightening efforts, gold ETFs continue on the bearish trend and currently witnessing negative flows as the current positioning is poised for losses. Against this backdrop, we continue to see any dips below USD1,900/oz as a buying opportunity, as we would argue for fading upside moves in the USD-denominated gold price until a clear downward trend in yields and the USD emerges. It's not gold's time to shine just yet.

BULK COMMODITIES (1.2% W/W; -5.3% YTD)

China concerns and lack of stimulus package ensures downward pressure for bulk commodities in the medium term

Although iron ore rallied momentarily after the People's Bank of China (PBoC) surprised with its MLF cut this week, the move will not move the needle significantly for the bulk commodity, in our view. Iron ore prices have been impacted by a myriad of negative economic signs coming from China, the world's biggest metals consumer, especially in its steel-intensive property market. Steel plants have been asked to engage in production cuts and these continue to weigh on the outlook for iron ore. 2023 has been a struggling year for the bulk commodity as enthusiasm over China's recovery from Zero-covid policy lacked recovery momentum. China's piecemeal stimulus initiatives and reassuring rhetoric have thus far failed to turn the tide.

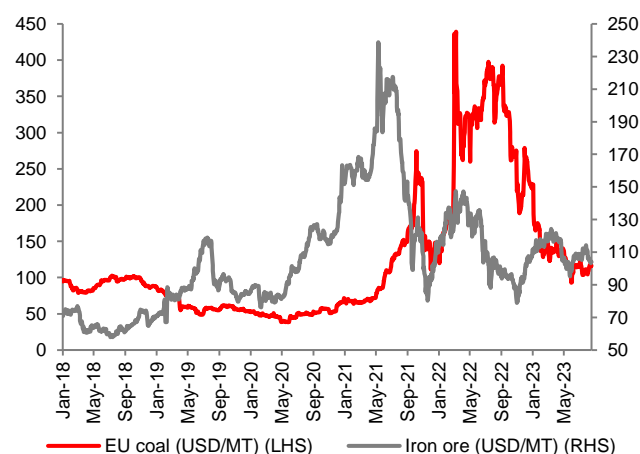
AGRICULTURE (-2.3% W/W; -5.0% YTD)

Asian rice prices reaches 15 year highs following supply threats from India's export ban and unfavourable weather conditions

Rice prices in Asia rose to highest levels in almost 15 years following threats from dry weather hitting supplies in Thailand when top exporter India has already banned exports over food security concerns. Rice, being a staple food for most of Asian and African population, could up the inflationary pressures and boost import bills for these

DISAPPOINTING CHINESE-LED EM DEMAND DRIVES YTD DECLINES IN BULK COMMODITIES

EU COAL AND IRON ORE: PRICES (USD/MT)



Source: Bloomberg, MUFG Research

RICE IN ASIA SOARS TO HIGHEST SINCE 2008 ON RISING THREATS TO SUPPLY

THAILAND WHITE RICE 5% PRICES (USD/MT)



Source: Bloomberg, MUFG Research

nations. The fresh threats to global rice supply are coming from Thailand, the world's second-biggest rice exporter, where the nation is bracing itself for a potential drought in 2024 with the onset of the El Niño weather pattern. Cumulative rainfall thus far is already ~40% below normal levels and the Government has urged farmers to reduce their rice planting to save water. Not just rice, but all agricultural commodities have seen price surges in 2023, following climate-related and various geopolitical events , and we expect this to continue adding inflationary pressures to the currently softening inflation prints globally.

Commodity prices – performance

	Commodity	Ticker	Unit	2022	2022/2023				Change %						
				31-Dec	25-Jul	01-Aug	08-Aug	15-Aug	Week	1 MTD	3 MTD	YTD	1 Year	3 Years	5 years
1	Bloomberg BCOM Total Returns	BCOMTR Index	Index	245.89	242.74	239.45	237.55	233.51	-1.70	-2.91	4.16	-4.87	-10.47	54.80	36.51
2	Bloomberg BCOM Spot Index	BCOMSP Index	Index	536.54	514.05	506.55	502.95	497.72	-1.04	-2.36	1.72	-7.23	-15.45	43.22	44.13
3	Energy	BCOMENSP Index	Index	423.92	376.64	382.40	393.22	395.11	0.48	2.80	17.81	-6.79	-33.45	68.01	27.28
4	US Natural Gas	NG1 Comdty	USD/MMBtu	4.475	2.73	2.56	2.777	2.659	-4.25	1.14	12.12	-40.47	-71.44	13.07	-8.39
5	EU Natural Gas	TZT1 Comdty	EUR/MMBtu	76.315	32.648	27.123	31.066	38.813	24.94	35.50	20.79	-49.64	-82.99	379.30	61.27
6	WTI Crude	CL1 Comdty	USD/b	80.26	79.63	81.37	82.92	80.99	-2.33	-1.14	14.13	0.76	-6.54	92.50	23.54
7	Brent Crude	CO1 Comdty	USD/b	85.91	83.64	84.91	86.17	84.89	-1.49	-0.91	13.18	-1.32	-8.19	89.24	18.69
8	Gasoline	XB1 COMB Comdty	USD/lb	245.95	285.33	287.3	284.51	284.76	0.09	-3.08	14.51	15.42	-2.14	128.08	42.83
9	EU ETS EUA	MO1 Comdty	USD/gal	81.49	90.89	84.16	83.44	86.19	3.30	0.58	1.16	5.77	-4.74	238.80	376.98
10	Metals	BCOMIN Index	Index	165.34	148.00	148.64	142.86	138.10	-3.33	-8.17	-4.00	-16.44	-12.96	21.97	18.35
11	Industrial Metals Index	BCOMINSP Index	Index	290.239	264.506	265.654	255.713	248.7314	-2.73	-7.50	-2.86	-14.30	-10.53	26.69	27.18
12	Copper	HG1 Comdty	USD/lb	381	390	391	377	367	-2.63	-8.42	0.44	-3.67	1.27	28.38	40.28
13	Aluminium	LA1 Comdty	USD/MT	2,350	2,211	2,221	2,153	2,114	-1.85	-6.34	-6.61	-10.05	-11.59	23.54	4.86
14	Zinc	LX1 Comdty	USD/MT	2,990	2,486	2,575	2,489	2,307	-7.30	-10.28	-8.36	-22.85	-36.68	-1.75	0.24
15	Nickel	LN1 Comdty	USD/MT	29,901	22,280	22,189	20,611	19,608	-4.87	-11.38	-8.74	-34.42	-10.62	36.97	53.30
16	Precious Metals Index	BCOMPRSP Index	Index	534.84	578.15	570.15	558.19	553.21	-0.89	-4.68	-3.83	3.43	9.46	-3.27	61.98
17	Gold	GC1 Comdty	USD/t oz	1,826	1,964	1,941	1,924	1,903	-1.12	-3.45	-5.94	4.18	6.80	-1.78	61.57
18	Silver	SI1 Comdty	USD/t oz	24.04	24.68	24.326	22.807	22.656	-0.66	-8.80	-4.05	-5.26	13.39	-12.70	54.80
19	Platinum	PL1 Comdty	USD/t oz	1074	968	940	904	892	-1.33	-6.93	-16.37	-16.90	-4.20	-6.98	13.73
20	Palladium	PA1 Comdty	USD/t oz	1,798	1,281	1,237	1,218	1,239	1.68	-3.30	-17.74	-31.40	-42.60	-42.46	41.00
21	Bulk Commodities	---	---	---	---	---	---	---	---	---	---	---	---	---	---
22	Hard Coking Coal	IAC1 Comdty	USD/MT	262.82	231.67	240.5	248	252.5	1.81	8.81	6.24	-3.93	8.52	134.34	38.74
23	Iron Ore	SCO1 Comdty	USD/MT	111.28	113.33	108.03	103.23	103.85	0.60	-7.57	-2.91	-6.59	-2.51	-13.54	54.50
24	Agriculture	BCOMAG Index	Index	68.82	72.34	67.97	66.55	65.02	-2.30	-3.68	-1.28	-4.99	-1.48	80.42	47.83
25	Agriculture Index	BCOMAGSP Index	Index	433.80	415.664	390.541	383.0092	376.7214	-1.64	-3.42	-7.15	-13.16	-10.26	53.24	48.46
26	Grain Index	BCOMGRSP Index	Index	327.54	298.03	269.21	264.38	258.22	-2.33	-4.72	-10.51	-21.16	-15.29	42.97	30.96
27	Soybean	S 1 Comdty	USD/bu	1,519	1,516	1,447	1,430	1,323	-7.47	-7.75	-2.22	-12.21	-8.29	47.62	50.62
28	Wheat	W 1 Comdty	USD/bu	792.00	760.25	652.25	656.25	598.50	-8.80	-9.28	-6.72	-23.74	-23.16	20.80	11.39
29	Corn	C 1 Comdty	USD/bu	678.50	557.50	497.00	485.75	464.00	-4.48	-7.29	-19.61	-31.13	-23.53	43.99	27.93
30	Soft Index	BCOMOSP Index	Index	345.72	373.17	372.83	363.07	356.52	-1.80	-3.59	-10.93	3.12	-8.03	55.93	69.88
31	Cotton	CT1 Comdty	USD/lb	83.37	88.55	86.87	86.20	86.20	0.00	0.74	3.23	3.24	-29.60	38.18	4.80
32	Coffee	KC1 Comdty	USD/lb	167.30	161.85	164.55	161.35	149.25	-7.50	-9.05	-21.33	-10.49	-31.73	30.56	47.25
33	Sugar	SB1 Comdty	USD/lb	20.04	24.69	24.39	23.45	23.77	1.36	-1.00	-8.44	19.11	30.65	82.21	131.75
34	Livestock Index	BCOMLISP Index	Index	218.93	236.07	239.20	237.41	230.79	-2.79	-2.82	2.89	5.42	7.78	57.52	56.78
35	Live Cattle	LC1 Comdty	USD/lb	154.83	178.30	179.50	179.70	179.10	-0.33	0.59	8.99	15.68	28.16	66.45	65.34
36	Lean Hogs	LH1 Comdty	USD/lb	87.70	101.65	103.68	102.10	78.20	-23.41	-24.90	-9.23	-10.83	-22.25	45.29	49.02
37	USD Index	DXY Index	Index	103.52	101.35	102.30	102.53	103.21	0.66	1.19	0.49	-0.44	-3.23	10.71	6.64

Source: Bloomberg, MUFG Research

Commodity prices – quarterly and annual forecasts

Commodity	Ticker	Unit	15-Aug	Quarter Averages								Annuals				
			Spot	Q1-23	Q2-23	Q3-23	Q4-23	Q1-24	Q2-24	Q3-24	Q4-24	2022	2023	2024	2025	
1 Energy																
2	US Natural Gas	NGA Comdty	USD/MMBtu	2.66	2.80	4.84	2.90	3.10	3.40	3.60	3.75	4.15	4.61	2.82	3.73	4.50
3	EU Natural Gas	TZTA Comdty	EUR/MWh	38.81	54.38	74.55	88.00	74.00	52.00	78.00	105.00	84.00	106.35	68.84	79.75	68.00
4	EU ETS EUA	MOA Comdty	EUR/MT	87.13	89.92	86.47	84.00	90.00	92.00	83.00	97.00	105.00	83.57	87.48	94.25	110.00
5	WTI Crude	CLA Comdty	USD/b	80.99	76.32	88.62	76.00	79.00	78.00	77.00	81.00	83.00	81.01	76.95	79.75	86.00
6	Brent Crude	COA Comdty	USD/b	84.89	81.62	92.97	80.00	84.00	83.00	81.00	85.00	87.00	86.16	81.02	84.00	90.00
7 Industrial Metals																
8	Copper	LMCADS03 Comdty	USD/lb	8,200	9,507	8,150	8,350	8,400	8,800	9,200	9,800	10,150	8,792	8,465	9,488	10,350
9	Aluminium	LMAHDS03 Comdty	USD/MT	2,143	2,896	2,275	2,450	2,600	2,850	3,100	3,200	3,450	2,711	2,441	3,150	3,700
10	Zinc	LMZSDS03 Comdty	USD/MT	2,315	3,863	2,525	2,400	2,450	2,775	2,900	3,000	3,150	3,440	2,621	2,956	3,650
11	Nickel	LMNIDS03 Comdty	USD/MT	19,780	28,922	22,900	22,250	20,000	19,650	21,000	21,600	22,250	25,598	22,833	21,125	23,500
12 Precious Metals																
13	Gold	XAU Comdty	USD/t oz	1,935	1,918	1,955	2,045	2,030	2,015	2,085	2,100	2,030	1,856	2,000	2,058	1,950
14	Silver	XAG Comdty	USD/t oz	22.97	22.72	23.50	25.60	24.50	24.00	24.50	25.10	25.70	22.46	24.26	24.83	23.80
15	Platinum	XPT Comdty	USD/t oz	892	1,002.78	1,035	1,005	970	1,090	1,175	1,250	1,300	940.84	1,003	1,204	1,260
16	Palladium	XPD Comdty	USD/t oz	1,239	1,562	1,926	1,480	1,450	1,415	1,550	1,600	1,750	2,021	1,473	1,579	1,800
17 Bulk Commodities																
18	Hard Coking Coal	IACA Comdty	USD/MT	252.50	321.87	308.86	290.00	295.00	305.00	320.00	315.00	295.00	291.13	294.22	308.75	355.00
19	Iron Ore	SCOA Comdty	USD/MT	103.85	124.77	141.61	105.00	100.00	98.00	105.00	100.00	115.00	121.33	111.19	104.50	112.50
20 Agriculture																
21	Soybean	BOA Comdty	USD/bu	1,305	1,503	1,393	1,500	1,515	1,450	1,420	1,480	1,525	1,429	1,499	1,469	1,490
22	Wheat	W A Comdty	USD/bu	623.75	733.77	1019.17	730.00	775.00	810.00	840.00	820.00	850.00	876.51	737.19	830.00	910.00
23	Corn	C A Comdty	USD/bu	475.50	656.43	643.92	705.00	685.00	710.00	725.00	700.00	680.00	658.70	676.61	703.75	715.00
24	Cotton	CTA Comdty	USD/lb	85.10	83.34	92.18	72.00	78.00	80.00	85.00	82.00	86.00	92.79	78.34	83.25	85.00
25	Coffee	DFA Comdty	USD/lb	2433	2,022	2,054	2,030	1,960	1,950	1,975	1,980	2,000	2,039	2,048	1,976	2,005
26	Sugar	SBA Comdty	USD/lb	23.77	19.91	18.26	21.60	20.80	20.20	20.35	19.60	19.65	17.60	21.08	19.95	19.40

Source: Bloomberg, MUFG Research

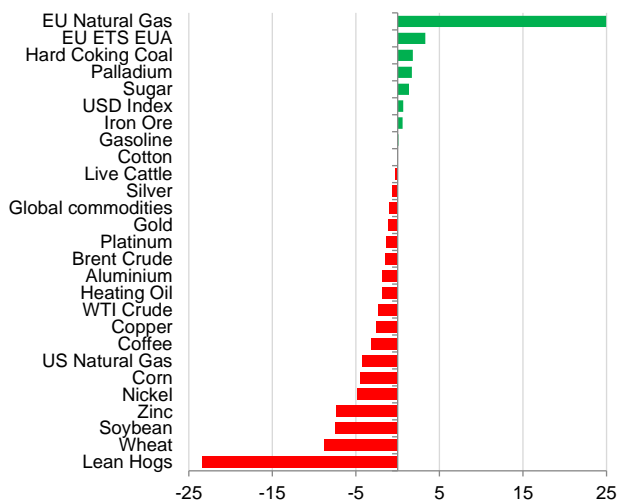
Commodity prices – 6-12 month forward outlook, vs. spot/nearby forwards

	Bullish	Neutral-to-bullish	Neutral	Neutral-to-bearish	Bearish
1 Energy	---	Brent, WTI	EU ETS EUA	---	EU/US nat gas
2 Base Metals	---	---	Nickel	Aluminium, Copper, Zinc	---
3 Precious Metals	---	---	Gold, Silver	Platinum	Palladium
4 Bulk Commodities	---	Hard Coking Coal	Iron ore	---	---
5 Agriculture	---	Corn, Wheat	Soybean	---	Cotton, Coffee, Sugar

Core indicators – commodities flows and returns

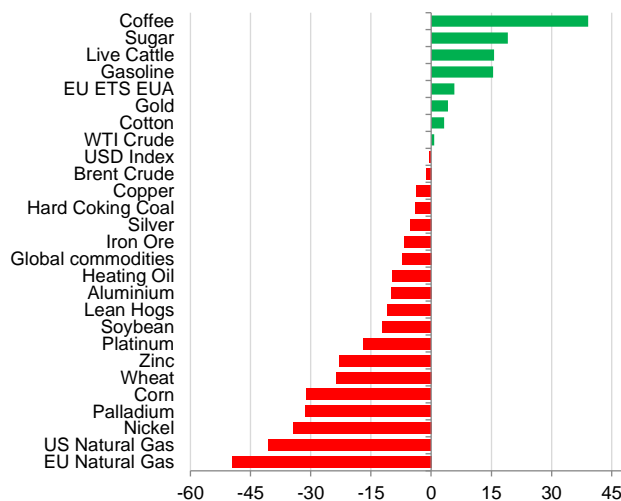
COMMODITIES MARKET PRICE RETURNS

WEEK ENDING 15 August 2023 (% W/W)



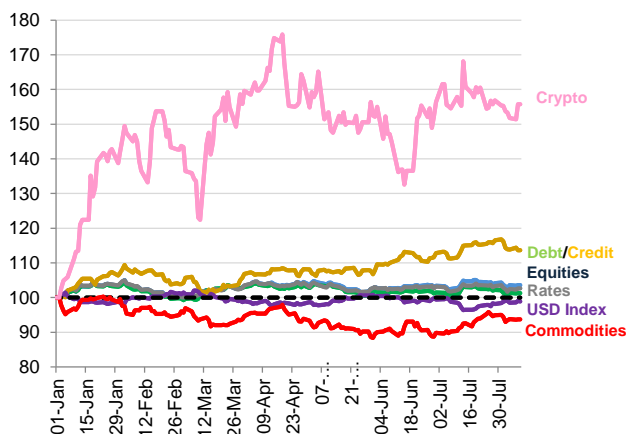
COMMODITIES MARKET PRICE RETURNS

YEAR-TO-DATE 2023 (%)



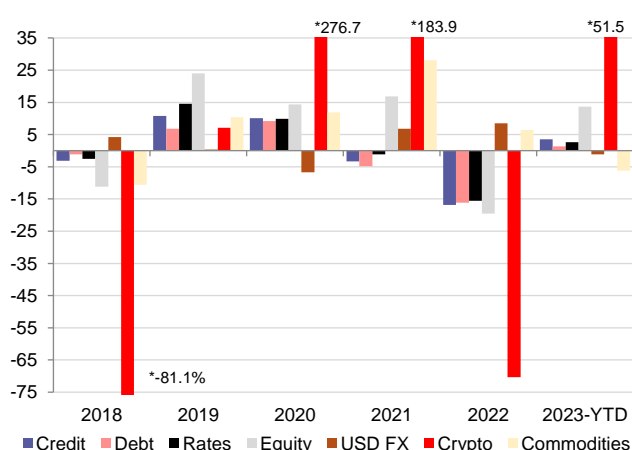
USD-DENOMINATED GLOBAL ASSET MARKET RETURNS

REBASED 1 JANUARY 2023 = 100



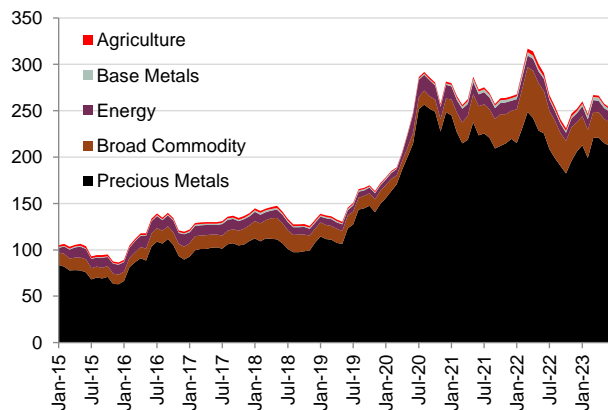
USD-DENOMINATED GLOBAL ASSET MARKET RETURNS

ANNUALISED PERFORMANCE (%)



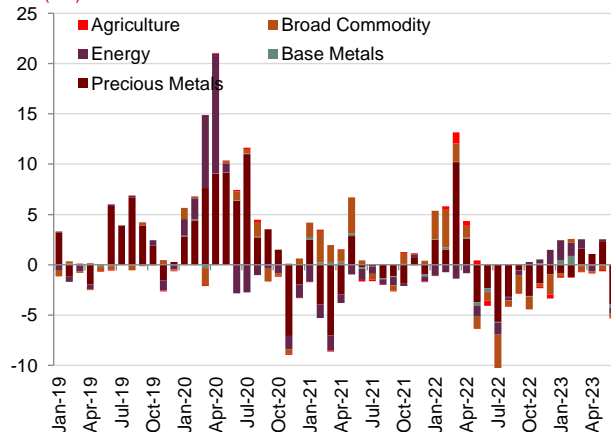
COMMODITIES ETF COMBINED CUMULATIVE AUM

USD (BN)



COMMODITIES ETF COMBINED CUMULATIVE FUND FLOWS

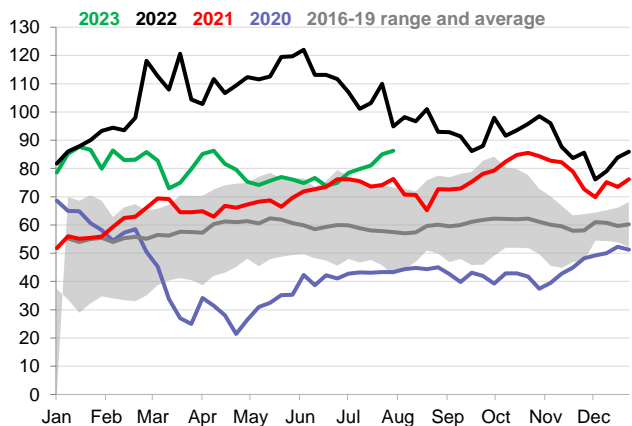
USD (BN)



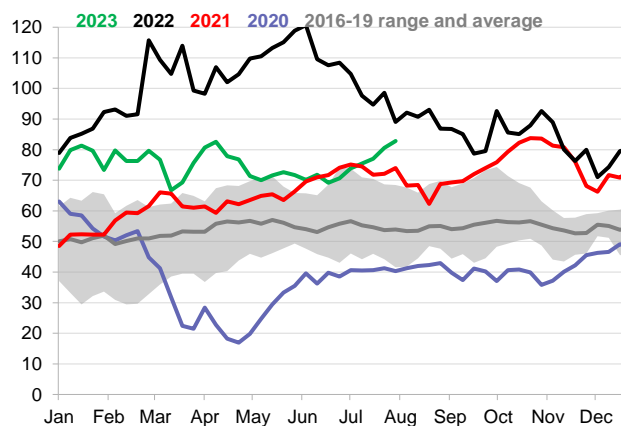
Source: Bloomberg, MUFG Research

Core indicators – prices

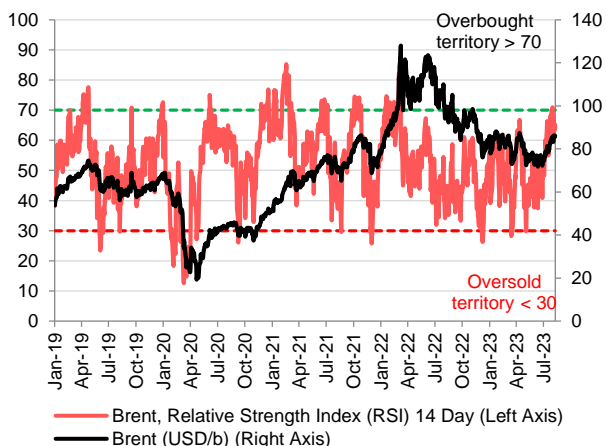
BRENT SPOT
USD/B



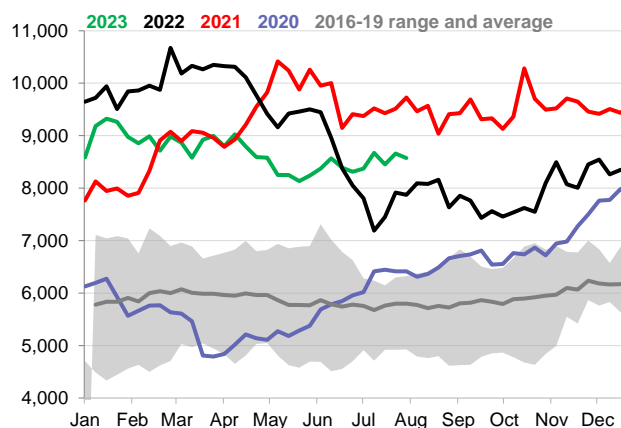
NYMEX WTI SPOT
USD/B



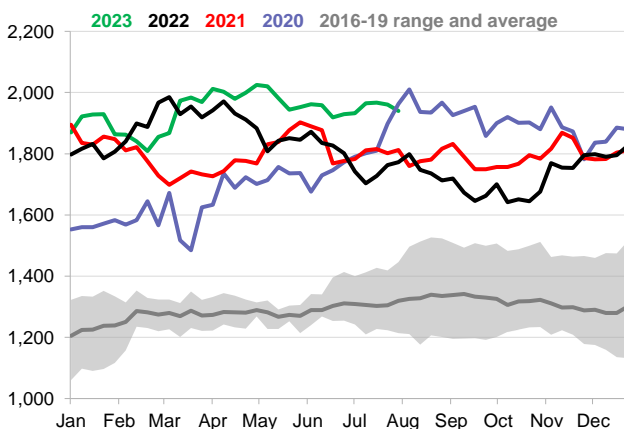
14 DAY RELATIVE STRENGTH INDEX (RSI) AND WTI
USD/B AND 0-100 INDEX (<30 = OVERSOLD; >70 = OVERBOUGHT)



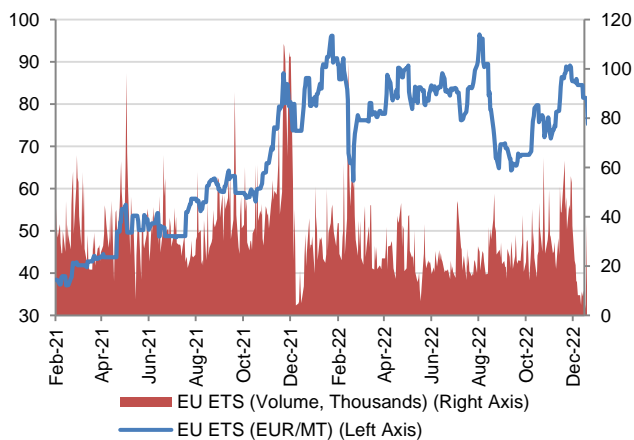
COPPER SPOT
USD/LB



GOLD SPOT
USD/T OZ



EU CARBON PRICE AND VOLUME
EUR/T AND EUA'S (THOUSAND VOLUME)

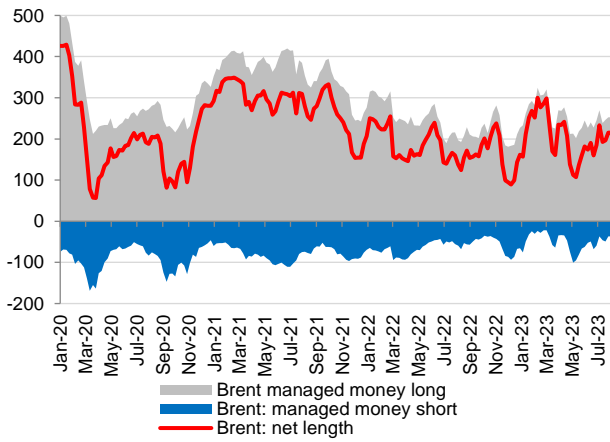


Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – market positioning

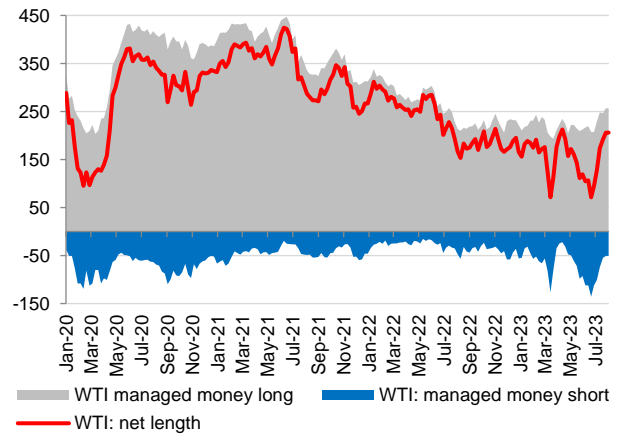
BRENT CRUDE MANAGED MONEY

CONTRACTS (THOUSANDS)



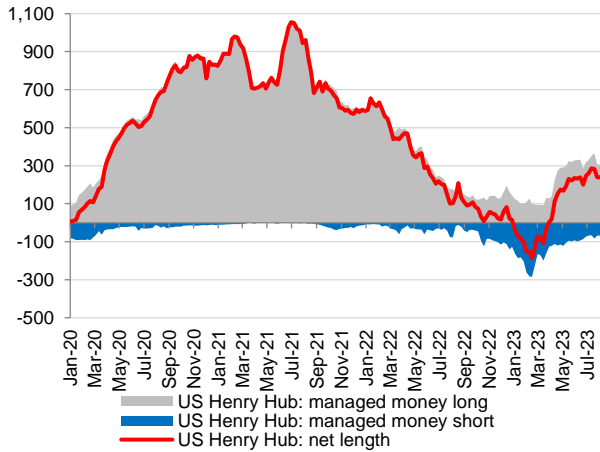
WTI CRUDE MANAGED MONEY

CONTRACTS (THOUSANDS)



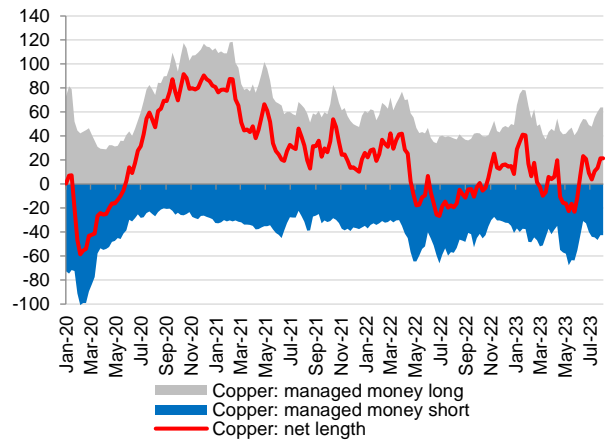
US HENRY HUB NATURAL GAS MANAGED MONEY

CONTRACTS (THOUSANDS)



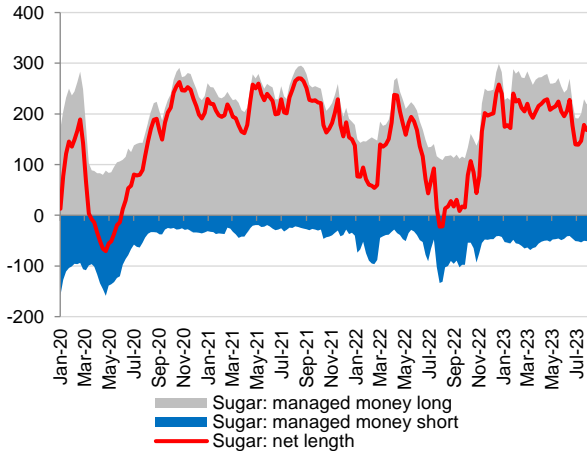
COPPER MANAGED MONEY

CONTRACTS (THOUSANDS)



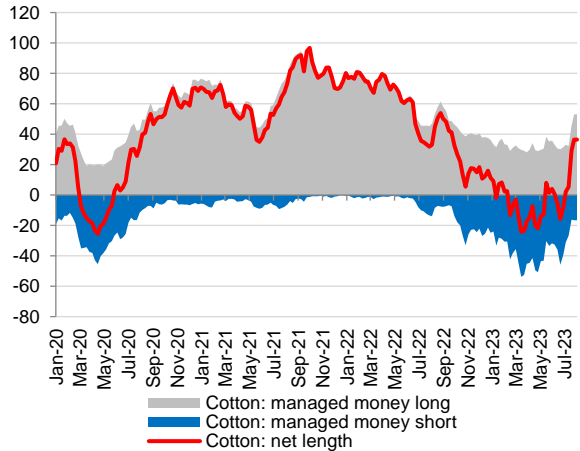
SUGAR MANAGED MONEY

CONTRACTS (THOUSANDS)



COTTON MANAGED MONEY

CONTRACTS (THOUSANDS)

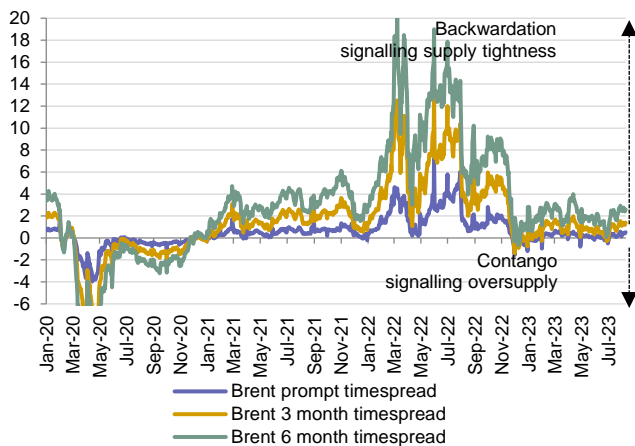


Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – timespreads and futures

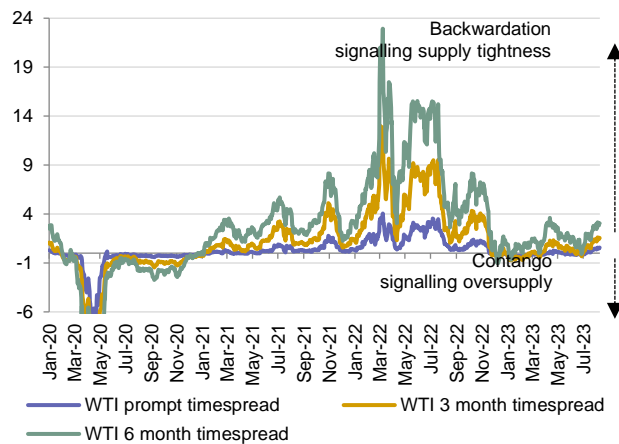
BRENT TIMESPREADS – FRONT, 3 AND 6 MONTHS

USD/B



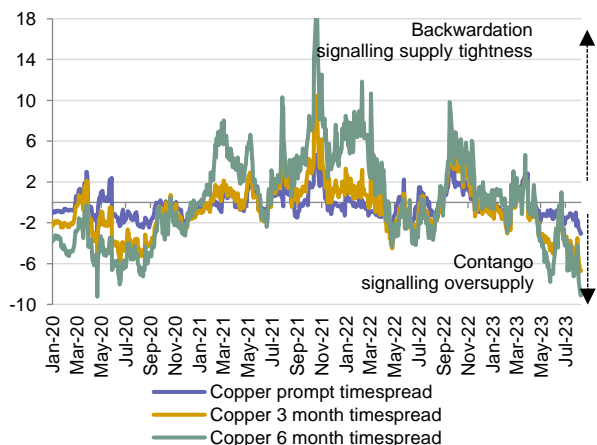
WTI TIMESPREADS – FRONT, 3 AND 6 MONTHS

USD/B



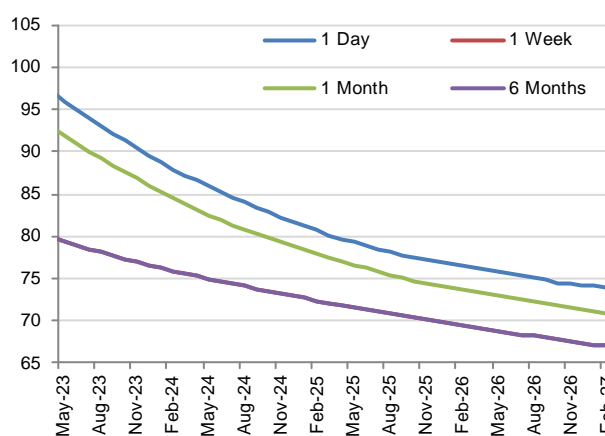
COPPER TIMESPREADS – FRONT, 3 AND 6 MONTHS

USD/B



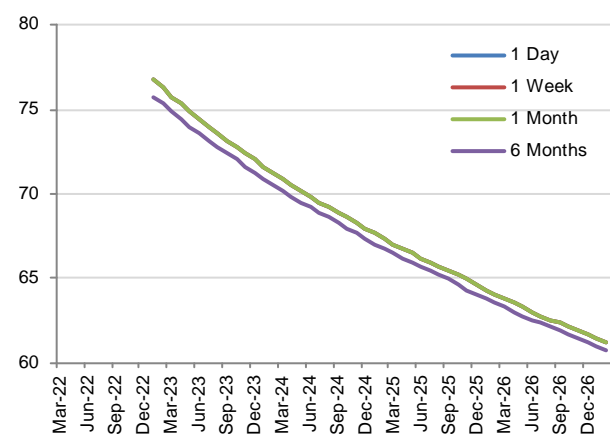
BRENT FUTURES CURVE

USD/B



WTI FUTURES CURVE

USD/B



BRENT-DUBAI SPREAD

USD/B

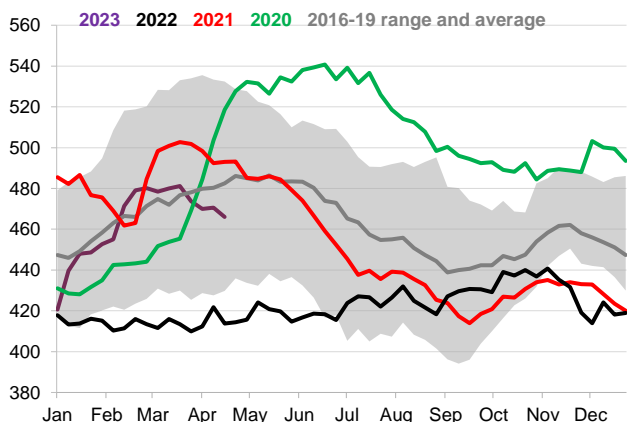


Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – inventories, storage and products

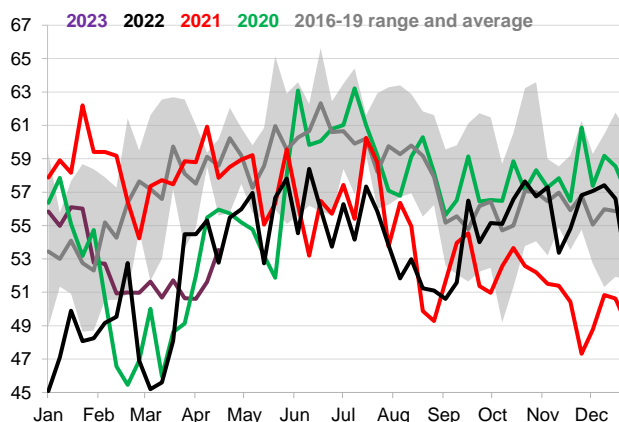
US CRUDE INVENTORIES

MILLION BARRELS



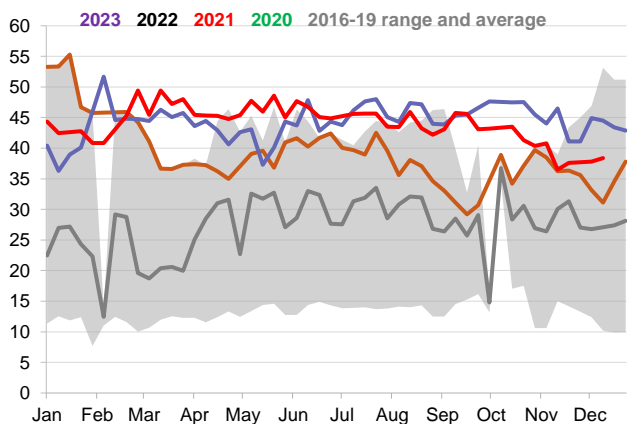
ARA CRUDE INVENTORIES

MILLION BARRELS



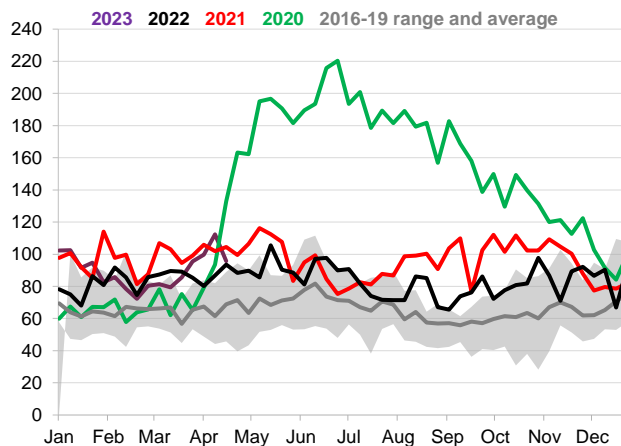
CHINA SHANDONG CRUDE INVENTORIES

MILLION BARRELS



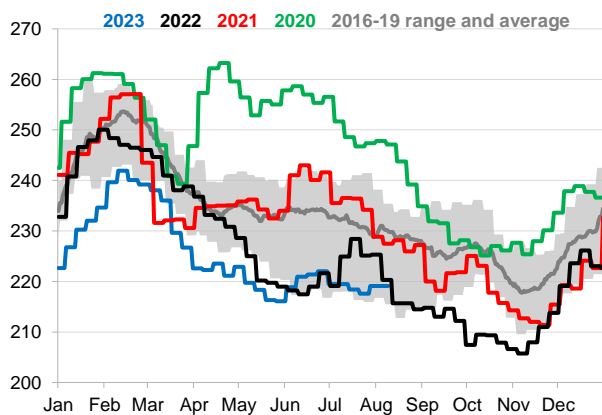
GLOBAL CRUDE FLOATING STORAGE

MILLION BARRELS



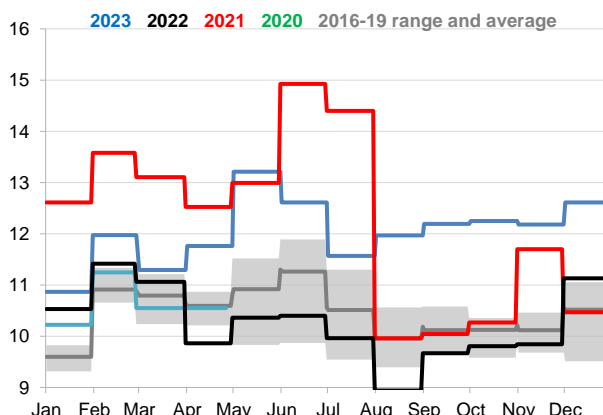
US GASOLINE INVENTORIES

MILLION BARRELS



JAPAN GASOLINE INVENTORIES

MILLION BARRELS



Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Global oil supply/demand balance (thousands b/d and y/y change)

As of December 2022	2019 (tho. b/d)	2020 (tho. b/d)	2021 (tho. b/d)	2022 (tho. b/d)	2023 (tho. b/d)	2020 (%)	2021 (%)	2022 (%)	2023 (%)
Demand									
North America	25,245	22,124	23,777	24,703	24,955	-3,122	1,654	926	252
LatAm	6,654	6,275	6,578	6,732	6,855	-379	304	154	123
Europe	15,093	13,147	13,772	14,591	14,707	-1,945	625	819	116
CIS	4,722	4,417	4,724	4,948	5,007	-305	306	224	59
Asia	27,931	27,382	28,708	29,627	30,751	-549	1,326	919	1,124
Middle East	8,241	7,745	7,922	8,176	8,223	-496	177	254	47
Africa	4,251	4,129	4,324	4,429	4,623	-122	195	105	194
Total OECD Demand	47,854	42,029	44,559	46,415	46,910	-5,825	2,530	1,856	494
Total Non-OECD Demand	52,218	50,332	52,647	54,343	55,900	-1,887	2,315	1,697	1,557
Total Global Demand	100,072	92,361	97,206	100,759	102,810	-7,711	4,845	3,553	2,051
Supply									
North America	25,767	24,752	25,205	26,666	27,744	-1,014	453	1,461	1,078
US shale	9,923	9,194	9,009	9,748	10,550	-729	-187	741	801
Other US	8,306	8,276	8,619	9,153	9,344	-30	343	534	191
Total US	18,229	17,470	17,627	18,902	19,894	-759	157	1,275	992
LatAm	4,794	4,841	4,831	5,116	5,279	47	-10	285	163
Europe	3,477	3,685	3,527	3,632	3,757	208	-158	105	125
CIS	14,643	13,504	13,763	14,481	14,778	-1,139	259	718	296
Asia	7,694	7,510	7,437	7,391	7,234	-184	-74	-45	-157
Middle East	3,012	3,013	3,089	3,187	3,202	1	75	99	15
Africa	1,487	1,390	1,309	1,293	1,257	-97	-81	-16	-37
Total Non-OPEC	65,004	62,530	63,128	66,043	67,655	-2,474	598	2,915	1,612
Total OPEC Crude	30,166	26,340	27,089	29,697	30,452	-3,826	748	2,609	755
Total OPEC NGL	5,234	4,978	5,126	5,353	5,431	-256	148	228	78
Total OPEC Supply	35,400	31,318	32,214	35,050	35,883	-4,081	896	2,836	832
Total OPEC+ Supply	46,105	41,049	42,039	45,415	46,435	-5,056	990	3,376	1,020
Ecuador	531	479	494	459	437	-52	14	-34	-22
Venezuela	875	508	555	803	830	-367	47	248	28
Algeria	1,023	898	908	939	935	-125	10	31	-5
Congo	333	288	265	253	232	-44	-23	-12	-21
Gabon	213	189	184	184	180	-24	-5	0	-3
Angola	1,389	1,262	1,116	1,014	959	-127	-146	-102	-55
Nigeria	1,731	1,577	1,391	1,502	1,552	-154	-185	111	50
Eq. Guinea	110	113	101	100	94	3	-12	-1	-6
Libya	1,086	366	1,151	1,154	1,266	-720	785	4	112
Iran	2,362	2,157	2,683	2,700	2,883	-205	527	17	183
Iraq	4,712	4,044	4,026	4,427	4,514	-668	-17	401	87
Kuwait	2,682	2,437	2,414	,669	2,713	-245	-23	255	44
Saudi Arabia	9,944	9,184	9,083	10,420	10,596	-760	-101	1,336	176
UAE	3,177	2,840	2,717	3,073	3,260	-336	-124	356	187
Total Global Supply	100,404	93,848	95,342	101,093	103,538	-6,555	1,494	5,751	2,445
Imbalance (Supply – Demand)	332	1,488	-1,863	335	729	---	---	---	---
OECD Commercial Stocks	65	377	-1,084	47	389	---	---	---	---
5yr Avg OECD Days of Demand	61.5	62.3	63.0	63.0	63.0	---	---	---	---

Source: Bloomberg, BP, EIA, IEA, GS, JODI, NBS, OPEC, Various Government Sources, MUFG Research

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