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Commodities are the best hedge against Fed hikes

Global commodities: With four Fed hikes currently priced in for 2022, investors are seeking protection. Commodities are anchored physical assets driven by demand "levels" while financial assets (equities, bonds and credit instruments) are driven by growth "rates". This distinction matters as Fed hikes impact growth rates (driving financial assets) – not demand levels (driving spot assets like commodities) so long as the level of demand exceeds the level of supply. This carves out a scarcity premium in commodities which remain the best hedge during periods of rising rates.

Energy: Oil remains in boisterous form, with Brent rallying to the highest level since 2014, underpinned by a powerful bull market driven by resilient demand, ebbing Omicron concerns, several supply disruptions, lingering OPEC+ production shortfalls, heightened geopolitical tensions, low inventories as well as low spare capacity amid a dearth of structural underinvestment (see here and here).

Base metals: Resilience continues, with a combination of macro tailwinds ahead of next week's Fed meeting, China's more green-led growth measures and broader fundamentals, pushing the prices of most subgroups higher thus far in 2022.

Precious metals: Bearish impact of higher yields and a strong USD is keeping gold prices in-check – rate hikes make path of least resistance lower. Meanwhile, silver, and platinum decoupling from gold looks firm, benefitting from end user demand.

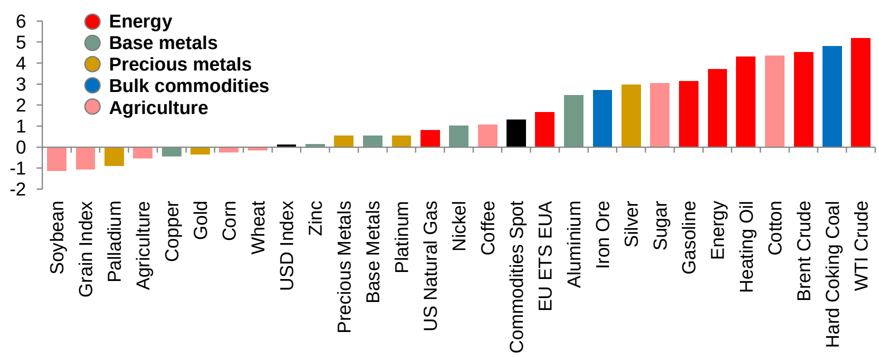
Bulk commodities: While China's steel output is slowly improving, iron ore has been rallying, given easing environmental curbs beyond the Winter Olympics and is pricing in more stimulus, while steel mills are restocking ahead of the Lunar New Year.

Agriculture: Mix start to 2022 – standout is raw sugar which has climbed to a two week high on fund buying and oil's rally propelling Brazil cane into ethanol output.

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

WEEKLY COMMODITIES PERFORMANCE: PERFECT STORM IN ENERGY MARKETS CONTINUES WITH THE SUBGROUP OUTPERFORING LAST WEEK

BLOOMBERG COMMODITY PRICE RETURNS, WEEK-ON-WEEK TO 19 JANUARY 2022 (%)



Source: Bloomberg, MUFG Research

COMMODITIES (1.3% W/W; 6.5% YTD): BEST HEDGE TO RATE HIKES

Commodities remain the best hedge against Fed rate hikes stemming from unanticipated inflation

2022 has started with another sharp bond sell-off driven by real yields, reflecting expectations for a more hawkish Fed. As we have historically catalogued, commodities remain the best inflation hedge against rising rates (see here). To put this into context, commodities are driven by demand "levels" while financial assets (equities, bonds, and credit instruments) are driven by "growth" rates. This distinction matters as Fed hikes impact growth rates – not today's demand levels.

Commodities are not vulnerable to rising Fed rates

To put this into context, unanchored financial assets price in forward expectations of earnings and growth, and are thus a good hedge of anticipated inflation. Once inflationary expectations become alarming enough to create concerns of rate hikes, though, financial assets no longer act as a good inflation hedge. Commodities are spot, anchored physical assets, that do not depend on forward growth rates (that are the most sensitive to rate hikes) but on the level of demand relative to the level of supply today. As a result, they hedge short-term unanticipated inflation, created when the level of aggregate demand is exceeding supply in the late stages of the business cycle. With this in mind, as spot assets, commodities are not vulnerable to rising rates. That is, although higher interest rates slow down the growth rate of demand, this is extraneous for commodity returns so long as demand remains above supply – where scarcity pricing in commodities is created and will only cease after the market tightness has been resolved which absent a recession, remains a low probability.

Rising real rates are associated with a shift towards backwardation in the commodities complex

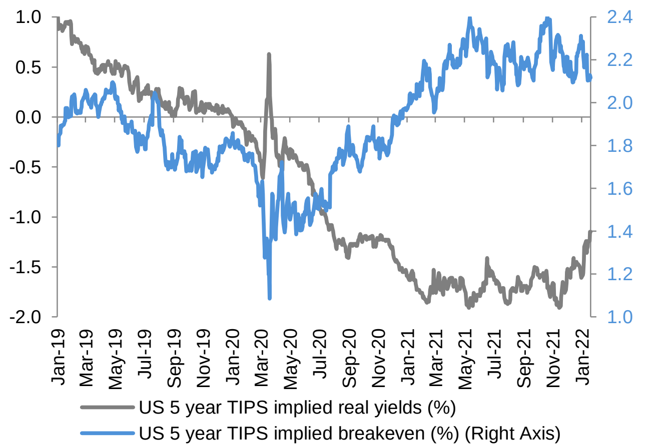
Whether real rates are rising or falling does not matter for commodity spot returns as long as the nominal curve is steepening. Also, rising real rates tend to signal tighter physical fundamentals, supporting a shift to steeper backwardation (bullish structures where near-dated contracts trade at a premium to later-dated ones) for commodities. Given that the current inflationary backdrop is driven by a distribution of demand for physical goods, commodities therefore remain the best hedge.

Commodities have outperformed all other major asset classes when examining the nine Fed hiking cycles since the 1970s

Our examination of the nine Fed hiking cycles since the 1970s, signals that commodities outperformed all other major asset classes, especially in the 1970s and 2000s, which were categorised as commodity supercycle periods. We believe that this may be the case again. As we outlined in our annual commodities thesis (see here), our conviction is resolute that the less popular carbon-intensive commodities become by greening the economy (and broader ESG considerations), the more they will cost, causing sharply higher (and more volatile) commodity prices, through renewed deficits and depleting inventories – intensifying the supply scarcity premium.

EXPECTATIONS OF A HAWKISH FED IS DRIVING UP REAL YIELDS PUSHING INVESTORS TO SEEK PROTECTION

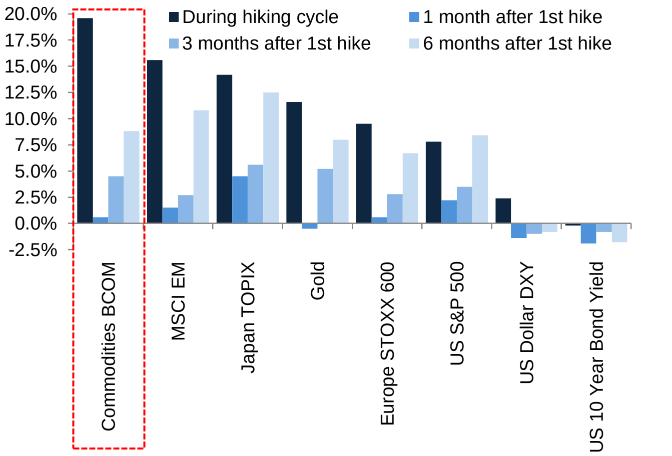
US 5 YEAR TIPS IMPLIED BREAKEVENS AND IMPLIED REAL YIELDS (%)



Source: Bloomberg, MUFG Research

COMMODITIES OUTPERFORM ALL MAJOR ASSET CLASSES DURING THE 9 FED HIKES SINCE 1970

TOTAL RETURNS BY EXAMINING THE 9 FED HIKING CYCLES SINCE 1970



Source: Bloomberg, MUFG Research

ENERGY (3.7% W/W; 12.5% YTD): SUPPLY-SIDE RISKS IN FOCUS

Crude oil

Oil is breaking new highs with remaining markets tight and in deep backwardation

Oil's dizzying start to the year continues, underpinned by a powerful bull market. A confluence of resilient demand, ebbing Omicron concerns, several supply disruptions, lingering OPEC+ production shortfalls, heightened geopolitical tensions, low inventories as well as low spare capacity amid a dearth of structural investment (see here and here), has propelled Brent prices to their highest level since 2014. As we telegraphed last week (see here), the actuality of triple-digit prices before 2022 is out is now firmly in view, with clear upside risks to our end Q4 2022 Brent USD92/b, and WTI USD89/b forecasts.

Supply-side risks in focus, keeping sentiment bullish

We are only three weeks into the new year and the list of supply-side disruptions is building. The latest is an explosion along the Ceyhan pipeline which carries a sizable 450m b/d of crude oil from Northern Iraq to the Mediterranean Sea through Turkey. Encouragingly, the outage was short-lived and operations are reportedly back to normal. Beyond this, geopolitical tensions are rising following a deadly attack on oil storage facilities in the UAE – which adds risk premia to other centres of geopolitical risks in Ukraine, Russia and Kazakhstan. Finally, there are also apprehensions over expectations for cold weather conditions across Texas over the coming days – seasonally bad weather impacts oil and gas production in the state (2021 was particularly acute).

OPEC continues to undershoot its monthly targets, accentuating dwindling spare capacity

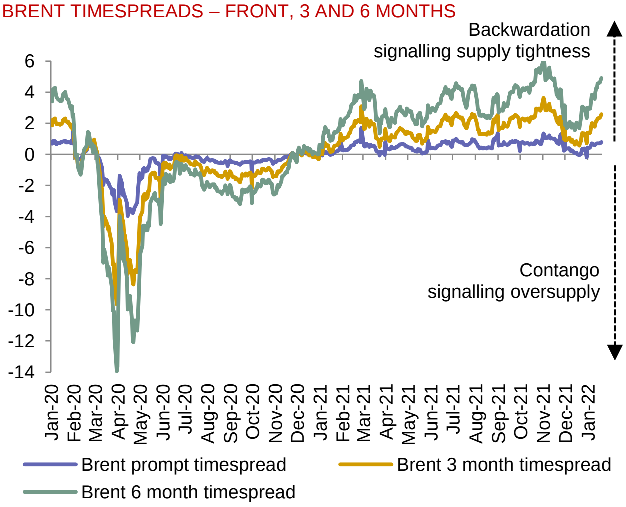
Elsewhere, OPEC's latest monthly report released on 18 January indicated that the group's production in December increased by only 166k b/d m/m to 27.9m b/d. Under the current OPEC+ agreement, OPEC members could have increased output by 240k b/d m/m – a testament that some of the group's members, notably Angola, Libya Nigeria and Russia, do not have the capacity to increase output further.

Pulse signals some respite in prices is expected over the near-term

Looking ahead, crude's relentless rise highlights still strong inflationary pressures coursing through the global economy, which will complicate matters for central banks. Other risks stem from the US administrations' gasoline challenge which is making a comeback, raising the odds of further interventions. Meanwhile, US shale is coming back, albeit steadily (see here), while all eyes are on China to see if Omicron can breach COVID-19 defences that have so far proved mostly impenetrable. With oil market technicals in firm overbought territory, we expect some near-term respite with prices hovering at levels where some demand destruction takes place (see here).

BRENT TIMESPREADS SIGNALS A TIGHTER MARKET GIVEN SHARP BACKWARDATION LEVELS

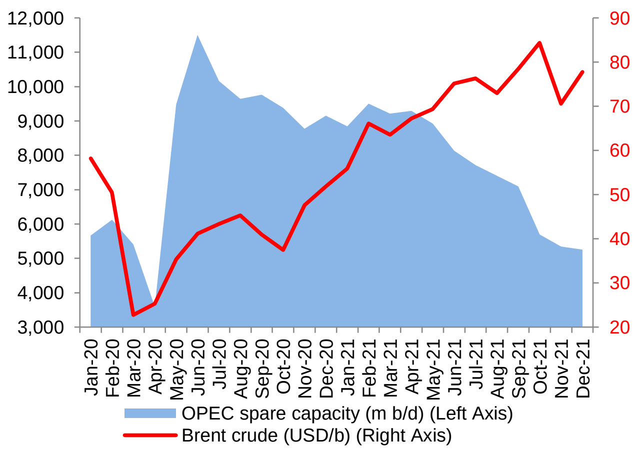
BRENT TIMESPREADS – FRONT, 3 AND 6 MONTHS



Source: Bloomberg, Corporate Financials, MUFG Research

OPEC SPARE CAPACITY CONTINUES TO RUN WORRINGLY THIN – SHRINKING CUSHION IS BULLISH

OPEC SPARE CAPACITY (M B/D) AND BRENT CRUDE (USD/B)



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

Natural gas

European and Asian gas prices remain supportive

Global gas markets remain extremely volatile. A combination of warm weather, higher LNG imports and a sharp decline in power load in Europe has offered robust support to European (TTF) and Asian (JKM) gas prices thus far this month. We believe near-term upside risk to prices remains given that the January disappointment in Russian exports to northwest Europe more than offsets the positive surprise in LNG imports. Should the January rally materialise further, and assuming normal weather for the remainder of winter, we expect the combination of sustained higher European LNG imports, consistent with the JKM-TTF premium average well below USD1/MMBtu thus far this month, in conjunction with seasonally lower winter weather risks to bring European (TTF) gas prices gradually lower. We acknowledge however that the lack of a January rally would in turn create clear upside risk to prices into the end of winter. Near-term however, risks to supply remain.

Carbon markets

EU parliament's proposed CBAM changes could cause frictions with industry, and in-turn prove bullish carbon prices

The EU parliament's rapporteur on its carbon market reform proposals under the "Fit for 55" programme has launched a combative review of the proposed carbon border adjustment mechanism (CBAM) – a mechanism to protect EU corporates from the risk of carbon leakage. The concerns surround the potential expansion of scope, speeding entry into force, re-allocating revenues and centralising governance. From a carbon price perspective, the expectation of a future CBAM will likely increase demand for EU emission allowance, contributing to rising prices. Though, should they be implemented in full, then an accelerated start date and removal of free allocation could raise prices further. Separately, in telling comments, Japan's environment minister Yamaguchi stated this week that the country needs more capital to invest in innovative technology's to help it achieve its decarbonisation target, with a potential solution being a consideration of a new form of sovereign debt for funding. Japan has kicked off conversations for a new "clean energy strategy" which has shelved plans to introduce a carbon tax this year.

BASE METALS (0.6% W/W; 3.0% YTD): MARCH HIGHER CONTINUES

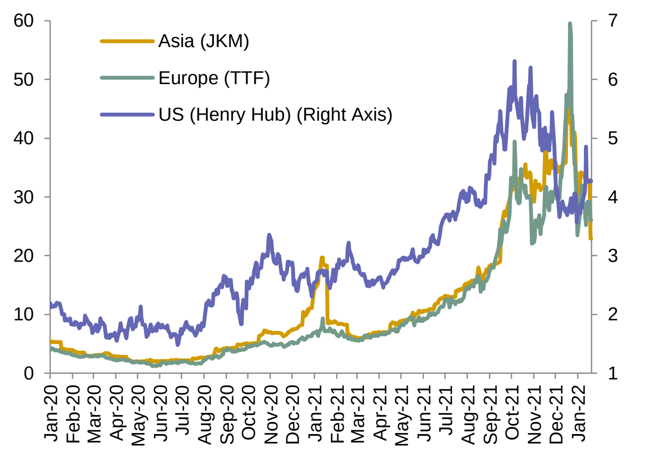
Aluminium

Relentless surge in Aluminium continues

Aluminium supply constraints due to the European power market, risk stemming from the Indonesian coal embargo, and substantial LME cancelled warrants have sent

GLOBAL GAS PRICES REMAIN ACUTELY VOLATILE WITH PRICES WHIPSAWING OVER THE WINTER THUS FAR

GAS PRICES, US (HENRY HUB), EUROPE (TTF), ASIA (JKM), USD/MMBTU



Source: Bloomberg, MUFG Research

EXPECTATIONS OF A FUTURE CBAM COULD PROPEL CARBON PRICES FURTHER OVER THE MEDIUM-TERM

KEY AMENDMENTS PROPSOED BY THE EU ON CBAM PROPOSALS

Issue	EU commission proposal	EU parliament recommended amendments
Scope	Direct emissions for steel, cement, aluminum and fertilisers	Adds organic chemicals and hydrogen – expands to indirect emissions
Timeline	Transitional phase where no levies are charges (2023-25), then phase-out	Shortens transitional phase (2023-24), phase-out phase (2025-28)
Revenue	Earmarked to fund CBAM scheme	Part assistance to EMs outside the EU
Governance	Decentralised across members	Centralised CBAM authority

Source: Bloomberg, EU Commission, MUFG Research front-end prices to a three month high – and up 8% thus far in 2022 (best performing base metal). The last few weeks of 2021 saw a multitude of aluminium supply curtailments. Of notee was Alcoa's plan to shut down its 228k pta San Ciprián smelter by the end of January until 2024, as it plans to invest in the facility and work to secure a long term power agreement. Meanwhile, Norsk Hydro is reducing capacity at its Slovalco smelter to 60% of capacity due to very high electricity prices. Given these developments our models point to a tighter balance and thus from a price perspective we maintain our constructive bullish outlook on aluminium prices and see further upside through H1 2022 with both China and ex-China supply remaining constrained.

Nickel

Stellar start to the year for nickel continues given the tight market

Nickel prices have surged to their highest level in more than a decade, surpassing USD22k/MT and up 6% thus far this year, primarily owning to the ongoing inventory drawdown and the tightness in the market. The current price level compares with the industry's marginal cost of ~USD17k/MT. The nickel forward curve is the only one across base metals peers in a significant cash-to-3 month backwardation, signalling real physical market tightness. Importantly on the demand side of the equation, China's stainless steel production – a key demand driver – is gradually recovering as the country's power shortage abates. Our modelling estimates envisage global nickel demand moderating and expanding by 7% this year, (compared with 16% in 2021) as more Indonesian supply comes to market.

Copper

Copper has thus remained flat but set to outperform on the push towards decarbonisation in 2022

Copper has lagged other base metals so far in 2022, given its sensitivities to macro trends. Copper fell sharply after the more hawkish FOMC minutes on 5 January whilst in contrast a weaker USD after fed Chair Powell's less hawkish testimony on 11 January drove prices tentatively above USD10,000/MT though it has so far failed to maintain its year-to-date gains. Elsewhere, although the Omicron wave in China poses a risk to Q1 2022 GDP growth, there is more scope for front-loaded infrastructure stimulus, with copper a key beneficiary with China's green agenda, in line with our core annual conviction for base metals (see here).

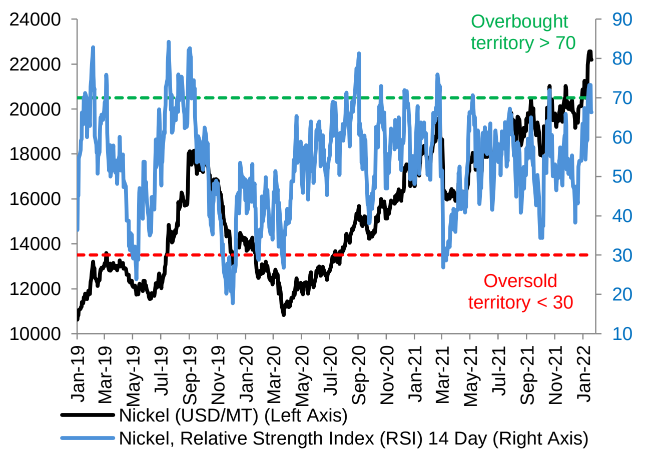
Zinc

Zinc has traded flat so far in 2022 but the deficit indicates prices will rise

As with copper, zinc has had a muted performance thus far in 2022 remaining broadly flat. However, with zinc spreads likely tightening before the spring owing to

NICKEL PRICES HAVE BEEN ON A TEAR LAST MONTH, PUSHING THE 14 RSI INTO OVERBOUGHT TERRITORY

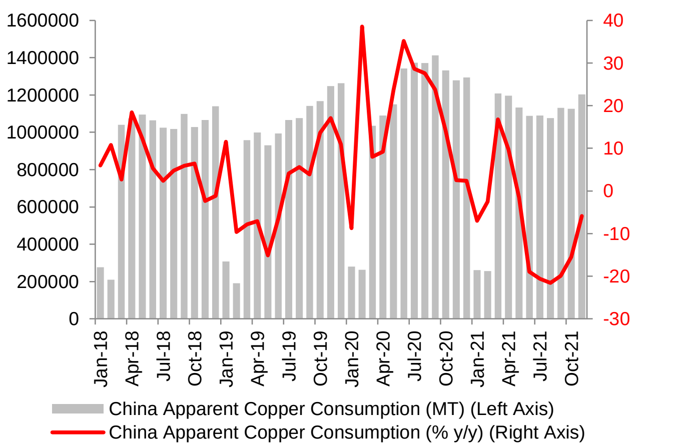
NICKEL RELATIVE STRENGTH INDEX VS. NICKEL PRICE (USD/MT)



Source: Bloomberg, MUFG Research

CHINA'S COPPER CONSUMPTION IS PICKING UP MILDLY BUT SET TO SURGE ON GREENING THE ECONOMY

CHINA APPARENT COPPER CONSUMPTION (MT, % Y/Y)



Source: Bloomberg, China Customs, MUFG Research prospects of European zinc smelter cuts, we believe that the emergence of a physical deficit in zinc – the size of which equals current LME stocks – this year will be price supportive. This could result in a backwardation forward as LME stocks are cancelled to fill the deficit. Upside could also come from further power-related zinc smelter closures in Europe and supply bottlenecks (stemming from Omicron) as well as disruptions to Chinese smelter output.

PRECIOUS METALS (0.6% W/W; -0.3% YTD): USD AND HIGHER YIELDS

Gold

Gold is bearish on higher yields and a weaker USD

Gold is being worn lower by higher yields and a stronger USD. Gold forwards continue to be lent aggressively although ETF demand has been slightly down in the last week. Looking ahead, we expect many of the factors undercutting gold in 2021 to carryover and help shape prices in 2022. While the global economy is slowing, it's likely to remain above trend over the next couple of years, and this, along with higher yields, is detracting from the need to own bullion as a perceived safe haven. The rise in inflation is buoying retail demand but institutional investors remain reluctant to add to holdings. ETF outflows reflect a shift in investor attitudes to gold but these may be stabilising. Gold may come under pressure but we believe a price floor is close at hand. Real rates will remain negative and a possible rise in trade and geopolitical risks could aide gold. Financial market instability due to asset price rises could also spark quality asset demand for gold. Separately, geopolitics do not usually drive gold prices but risks may be high enough in this regard that they are lending a more supportive hand to bullion than usual. On net, with the era of ultra-loose monetary and fiscal policies ending, gold prospects are bearish.

Silver

Silver comes to life and shows potential for a divergence with gold with more gains

Silver has taken a hit from higher yields but physical demand for bars remain strong in India as well as on fresh short covering, with prices up 3% thus far this week, breaching the 50 day and 100 day moving average, potentially setting the stage for further advances. Of note was the fact that the move higher took place on 18 January when the USD was up, signals the strength of the rally.

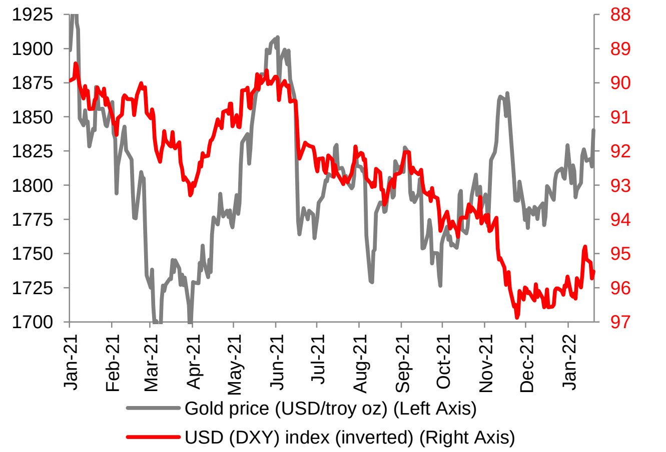
Platinum and palladium

Slow start to 2022 for PGMs but both set to outperform on autos

The slow start to the year for platinum group metals (PGM) continues with prices trading range bound. PGMs have attracted end user buying and light short covering

A STRONGER USD AND TIGHTENING GLOBAL LIQUIDITY WILL CREATE SIZABLE HEADWINDS FOR GOLD

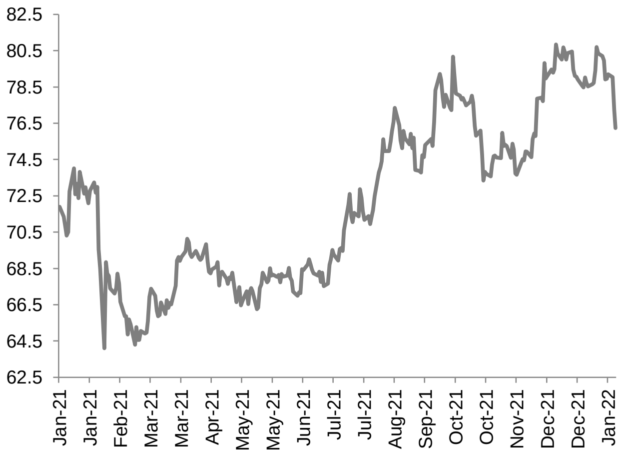
GOLD PRICE (USD/OZ) VS USD (DXY) INDEX (INVERTED)



Source: Bloomberg, MUFG Research

GOLD / SILVER RATIO HAS FALLEN TO THE LOWEST IN TWO MONTHS, HIGHLIGHTING THE DECOUPLING

GOLD / SILVER CROSS RATIO (%)



Source: Bloomberg, MUFG Research

with the subgroup, alongside silver, decoupling from gold, benefitting from end user demand. Going forward, higher automotive demand will impact PGM supply-demand balances, with 2022 platinum surplus narrowing and move to deficit by 2023, whilst palladium deficit is set to narrow in 2022, rising only negligibly in 2023 as alternative vehicles and platinum substitution undercut demand. More broadly, platinum demand looks set to rise notably this year, in line with a marked recovery in global auto demand as the microchip shortage should begin to be remedied later in 2022. The shortage may not be fully resolved until 2023, limiting platinum auto demand growth until then. Auto recycling supply should grow, but be capped by the high prices of second-hand vehicles. Platinum stands to gain, however, from substitution with palladium and tightening emissions regulations.

BULK COMMODITIES (3.8% W/W; 13.4% YTD): RUNAWAY WON'T LAST

Iron ore

Runaway iron ore prices is too high relative to fundamentals

While China's steel output is slowly improving but still at a low level, the iron ore price has been rallying, as the market expects the environmental curbs to be eased beyond the Winter Olympics and is pricing in more ex-property stimulus, while steel mills are restocking ahead of Lunar New Year. Since early December, iron ore has rallied USD20/MT to USD127/MT. We anticipate further upside from here, especially when China's steel mills will start ramping from March onwards. However, despite the recent price rebound, investors remain divided on iron ore's near-term fortunes – we stick to our expectations for now that iron ore prices are expected to follow a U-shaped profile this year with Chinese credit easing prompting property starts and sales to bounce back in H2 2022 following major declines in H1 2022.

Coal

Coal prices are up so far in 2022 but we anticipate incremental weakness stemming from projected declines in Chinese steel output

While most of the focus and debate in the dry bulks is on the iron ore and thermal coal markets, the Australian hard coking coal price has reached a new all-time high. Putting the current spot price of USD399/MT in context, this is now ~220% above the industry marginal cost, further removed from cost support levels than the other bulks as well as the base metals. This record price level is mostly driven by constrained supply, with a so far wetter than usual summer impacting the availability of Australian spot cargoes. In combination with healthy ex-China demand supported by restocking requirements, these seasonal supply disruptions are keeping the market very tight. However, as disruptions will ease and other supply ramps as well, we expect the price to normalise rather quickly from Q2 2022 onwards.

AGRICULTURE (-0.5% W/W; 3.8% YTD): MIXED PERFORMANCE

Mixed performance for the agricultural commodity subgroup continues

The agriculture commodity subgroups mix start to 2022 continues with the big macro themes still the main market drivers near-term. Standout has been raw sugar which climbed to the highest in level in two weeks on the back of fund buying and the crude oil rally likely propelling Brazil cane into ethanol production. Cotton futures have climbed with no new cotton entering ICE monitored depots since 10 December, with the stockpile ebbing amid disrupted global supply chains and strong US demand for fibre. Meanwhile, CBOT wheat prices has had a strong start to the year, with reports of lower supplies from Russia offering price support. CBOT corn and soybeans continue to trade flat with trade data released from China showed that soybean imports increased 18% y/y in December, while full-year imports were down 3.8% y/y.

Commodity prices – performance

				2021	2021/2022				Change %						
	Commodity	Ticker	Unit	31-Dec	29-Dec	05-Jan	12-Jan	19-Jan	Week	1 MTD	3 MTD	YTD	1 Year	3 Years	5 years
1	Bloomberg BCOM Total Returns	BCOMTR Index	Index	211.80	213.70	214.82	219.49	222.40	1.32	6.49	1.65	6.49	31.98	32.96	26.50
2	Bloomberg BCOM Spot Index	BCOMSP Index	Index	502.25	506.75	509.39	520.95	527.88	1.33	5.10	0.00	5.10	29.04	54.29	55.90
3	Energy	BCOMENSP Index	Index	368.86	376.83	376.95	400.34	415.29	3.73	12.59	-5.02	12.59	57.87	46.09	56.00
4	US Natural Gas	NG1 Comdty	USD/MMBtu	3.73	4.06	3.72	4.25	4.28	0.80	9.60	-19.65	9.60	60.57	17.40	21.38
5	WTI Crude	CL1 Comdty	USD/b	75.21	75.98	76.99	81.22	85.43	5.18	16.35	5.48	16.35	65.18	62.66	70.35
6	Brent Crude	CO1 Comdty	USD/b	77.78	78.94	80.00	83.72	87.51	4.53	14.32	4.51	14.32	59.07	41.82	64.18
7	Gasoline	HO1 Comdty	USD/lb	222.85	224.71	227.63	235.74	243.18	3.16	11.00	-0.08	11.00	60.82	70.26	61.20
8	EU ETS EUA	MO1 Comdty	USD/gal	80.22	78.86	84.55	81.03	82.38	1.67	1.99	49.99	1.99	147.94	231.39	1473.46
9	Metals	BCOMIN Index	Index	172.89	172.15	174.85	177.04	177.85	0.46	4.77	0.63	4.77	33.83	58.79	59.67
10	Industrial Metals Index	BCOMINSP Index	Index	303.57	302.26	307.01	310.91	312.65	0.56	2.99	-2.85	2.99	32.60	63.21	69.12
11	Copper	HG1 Comdty	USD/lb	9,721	9,568	9,768	9,720	9,676	-0.45	-0.46	-5.10	-0.46	21.38	59.88	67.72
12	Aluminium	LA1 Comdty	USD/MT	2,803	2,840	2,834	2,961	3,035	2.47	8.26	-3.56	8.26	54.70	62.27	65.73
13	Zinc	ZNC1 Comdty	USD/MT	3,580	3,557	3,648	3,579	3,584	0.15	0.11	-3.88	0.11	34.79	37.87	29.46
14	Nickel	LN1 Comdty	USD/MT	20,874	20,128	21,250	21,966	22,193	1.03	6.32	10.74	6.32	23.20	88.42	118.87
15	Precious Metals Index	BCOMPRSP Index	Index	530.97	525.81	526.35	526.38	529.30	0.55	-0.32	1.75	-0.32	-2.69	43.89	47.81
16	Gold	GC1 Comdty	USD/t oz	1,829	1,810.20	1,814.60	1,818.50	1,812.40	-0.34	0.72	4.07	0.72	0.08	43.59	53.28
17	Silver	SI1 Comdty	USD/t oz	23.35	23.11	23.06	22.81	23.49	2.98	3.55	1.24	3.55	-4.50	57.02	42.22
18	Platinum	PL1 Comdty	USD/t oz	964.40	979.40	970.40	973.80	979.30	0.56	6.47	-1.70	6.47	-5.66	28.70	7.77
19	Palladium	PA1 Comdty	USD/t oz	1,912	1,998	1,860	1,922	1,905	-0.91	5.88	-3.64	5.88	-14.40	51.64	169.52
20	Bulk Commodities														
21	Hard Coking Coal	XW1 Comdty	USD/MT	341.76	341.00	360.50	380.67	399.00	4.82	17.72	2.37	17.72	249.85	106.32	118.66
22	Iron Ore	SCO1 Comdty	USD/MT	112.50	684.50	680.50	700.00	719.00	2.71	9.14	22.98	9.14	-35.73	37.99	13.11
23	Agriculture	BCOMAG Index	Index	60.79	61.48	62.20	61.96	61.63	-0.54	3.75	10.06	3.75	25.37	47.19	10.95
24	Agriculture Index	BCOMAGSP Index	Index	406.67	411.30	416.07	414.52	411.92	-0.63	1.29	8.18	1.29	17.22	62.61	47.57
25	Grain Index	BCOMGRSP Index	Index	293.87	299.80	300.45	298.11	294.99	-1.05	0.38	9.15	0.38	8.95	52.92	55.09
26	Soybean	S 1 Comdty	USD/bu	1,328.75	1,359.25	1,378.75	1,376.75	1,361.25	-1.13	4.23	12.79	4.23	-0.05	51.08	29.41
27	Wheat	W 1 Comdty	USD/bu	770.75	783.50	770.00	770.25	769.00	-0.16	2.66	7.51	2.66	17.70	52.82	86.84
28	Corn	C 1 Comdty	USD/bu	593.25	604.75	609.50	601.00	599.50	-0.25	3.24	15.51	3.24	16.44	60.45	67.24
29	Soft Index	BCOMOSSP Index	Index	394.34	392.73	400.68	399.96	409.59	2.41	3.87	9.61	3.87	48.89	80.76	30.61
30	Cotton	CT1 Comdty	USD/lb	112.60	110.05	116.39	116.02	121.08	4.36	10.23	15.11	10.23	52.95	67.98	70.75
31	Coffee	KC1 Comdty	USD/lb	226.10	225.60	231.75	237.05	239.60	1.08	7.92	19.46	7.92	91.90	132.49	61.86
32	Sugar	SB1 Comdty	USD/lb	18.88	18.96	18.75	18.11	18.66	3.04	1.22	1.27	1.22	18.70	46.66	-5.30
33	Livestock Index	BCOMLISP Index	Index	196.83	197.38	194.02	195.41	204.81	4.81	4.05	11.10	4.05	20.84	18.41	22.28
34	Live Cattle	LC1 Comdty	USD/lb	138.90	138.48	137.83	137.68	137.68	0.00	0.04	11.16	0.04	22.61	9.82	14.81
35	Lean Hogs	LH1 Comdty	USD/lb	81.48	82.63	80.15	77.85	81.60	4.82	0.83	6.14	0.83	23.58	34.18	25.56
36	USD Index	DXY Index	Index	95.67	96.20	96.26	95.62	95.73	0.11	-0.11	1.95	-0.11	5.60	-0.80	-5.52

Source: Bloomberg, MUFG Research

Commodity prices – quarterly and annual forecasts

				19-Jan	Quarter Averages							Annuals			
	Commodity	Ticker	Unit	Spot	Q4-21	Q1-22	Q2-22	Q3-22	Q4-22	Q1-23	Q2-23	2021	2022	2023	2024
1	Energy														
2	US Natural Gas	NG1 Comdty	USD/MMBtu	41.0	4.82	3.93	3.84	3.73	3.84	3.88	3.82	3.72	3.84	3.90	3.76
	EU Natural Gas	TZTA Comdty	EUR/MWh	96.50	96.50	74.00	70.00	65.00	77.50	72.00	60.00	47.76	71.63	64.00	60.00
	EU ETS EUA	MO1 Comdty	EUR/MT	68.78	68.78	75.00	77.00	73.00	86.50	83.00	88.00	53.46	77.88	90.00	104.00
3	WTI Crude	CL1 Comdty	USD/b	87.16	77.07	70.90	68.50	67.20	79.70	83.40	85.20	68.00	71.58	85.80	90.20
4	Brent Crude	CO1 Comdty	USD/b	88.71	79.66	74.50	72.30	70.40	82.10	86.70	88.40	70.85	74.83	89.20	93.40
5	Base Metals														
6	Copper	HG1 Comdty	USD/lb	9,676	9,584	9,800	9,600	10,400	10,850	10,500	10,800	9,292	10,163	10,750	11,250
7	Aluminium	LA1 Comdty	USD/MT	3,035	2,761	2,875	2,500	2,800	3,285	3,250	3,400	2,477	2,865	3,150	3,385
8	Zinc	ZNC1 Comdty	USD/MT	3,584	3,336	3,400	3,450	3,200	3,850	3,500	3,550	3,022	3,475	3,450	3,800
9	Nickel	LN1 Comdty	USD/MT	22,193	19,770	20,450	20,600	21,000	22,050	22,250	22,400	18,457	21,025	22,300	21,800
10	Precious Metals														
11	Gold	XA1 Comdty	USD/t oz	1,812	1,819	1,796	1,895	1,750	1,713	1,694	1,638	1,799	1,763	1,650	1,580
12	Silver	SI1 Comdty	USD/t oz	23.49	22.81	23.35	22.80	22.00	21.50	21.20	20.50	25.16	21.88	20.20	19.50
13	Platinum	PL1 Comdty	USD/t oz	979.30	973.80	997.16	980	1,025	1,040	1,110	1,125	1,089	1,039	1,165	1,190
14	Palladium	PA1 Comdty	USD/t oz	1,905	1,922	1,941	1,930	2,050	2,150	2,155	2,200	2,391	2,071	2,260	2,305
15	Bulk Commodities														
16	Hard Coking Coal	XW1 Comdty	USD/MT	399.00	315.77	373.00	395.00	340.00	320.00	290.00	275.00	213.98	357.00	285.00	220.00
17	Iron Ore	SCO1 Comdty	USD/MT	126.68	108.30	90.00	95.00	102.00	105.00	90.00	80.00	159.83	98.00	102.00	113.00
18	Agriculture														
19	Soybean	S 1 Comdty	USD/bu	1,361	1,254	1,300	1,370	1,380	1,270	1,200	1,160	1,375	1,330	1,215	1,176
20	Wheat	W 1 Comdty	USD/bu	769.00	801.73	780.00	790.00	785.00	705.00	770.00	750.00	683.47	765.00	799.55	757.46
21	Corn	C 1 Comdty	USD/bu	599.50	567.65	595.00	605.00	600.00	570.00	550.00	500.00	581.69	592.50	542.42	503.32
22	Cotton	CT1 Comdty	USD/lb	121.08	112.14	111.00	109.00	106.00	96.00	90.00	88.00	93.43	105.50	84.00	80.00
23	Coffee	KC1 Comdty	USD/lb	239.60	220.46	220.00	215.00	225.00	220.00	180.00	190.00	168.75	220.00	232.00	250.00
24	Sugar	SB1 Comdty	USD/lb	18.66	19.51	18.00	17.00	18.50	18.30	19.00	20.00	17.86	17.95	18.00	16.00

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	Carbon prices	---	Brent, WTI, Natural Gas	Gasoline	
2	Base Metals	Aluminium, Copper, Zinc, Nickel	---	---	---	---
3	Precious Metals	Platinum, Palladium	---	---	---	Gold, Silver
4	Bulk Commodities	---	---	---		Iron Ore, Hard Coking Coal
5	Agriculture	---	---	---	Coffee, Sugar	Soybean, Wheat, Corn, Cotton

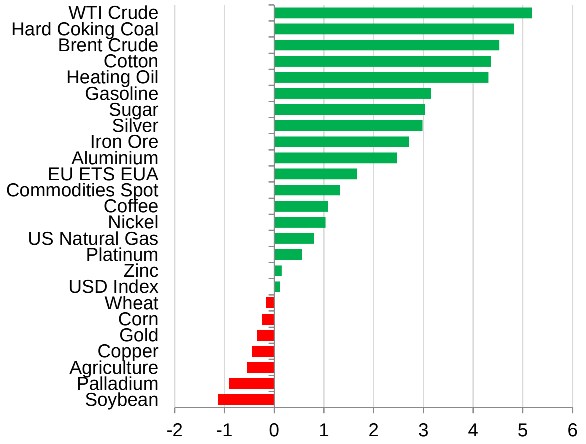
Source: Bloomberg, MUFG Research

MUFG

Core indicators – commodities flows and returns

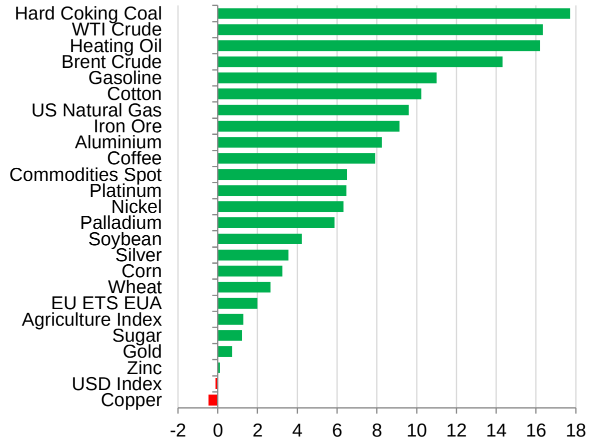
COMMODITIES MARKET PRICE RETURNS

WEEK ENDING 19 January 2022 (% W/W)



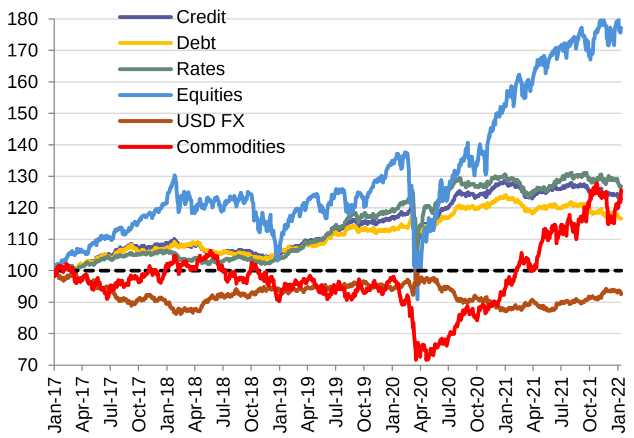
COMMODITIES MARKET PRICE RETURNS

YEAR-TO-DATE 2022 (%)



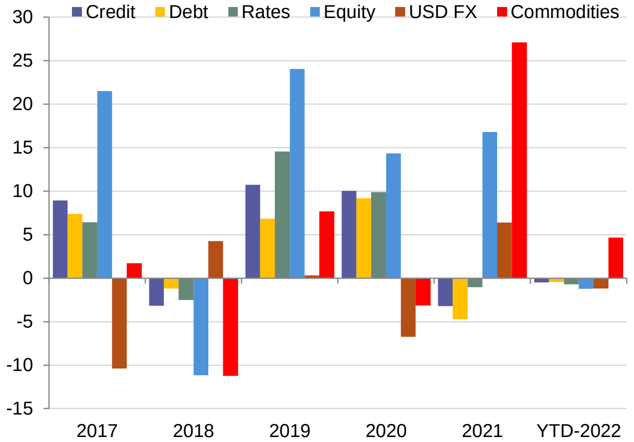
USD-DENOMINATED GLOBAL ASSET MARKET RETURNS

REBASED JANUARY 2019 = 100



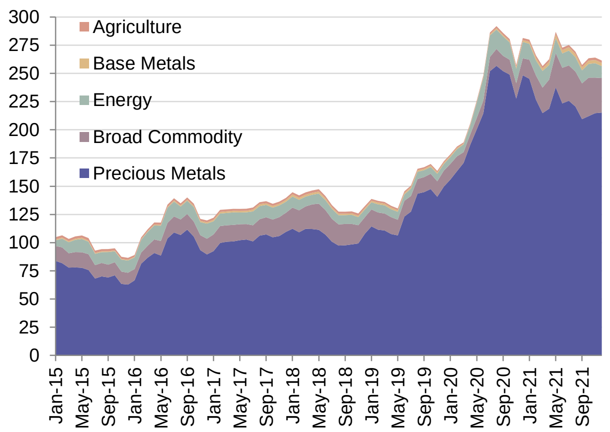
USD-DENOMINATED GLOBALL ASSET MARKET RETURNS

ANNUALISED PERFORMANCE (%)



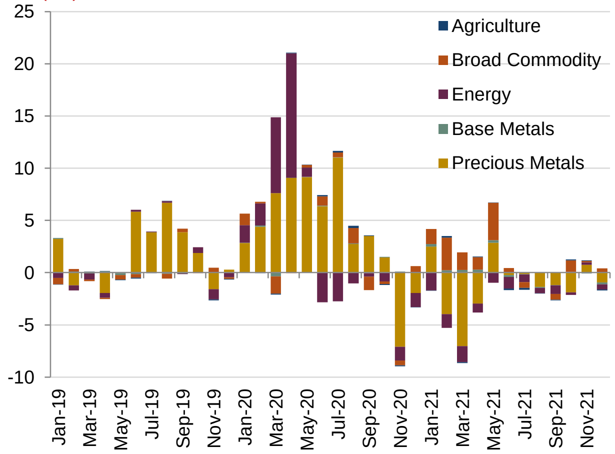
COMMODITIES ETF COMBINED CUMULATIVE AUM

USD (BN)



COMMODITIES ETF COMBINED CUMULATIVE FUND FLOWS

USD (BN)

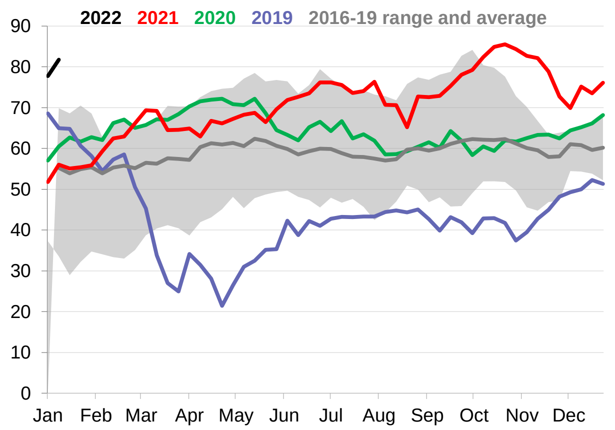


Source: Bloomberg, MUFG Research

Core indicators – prices

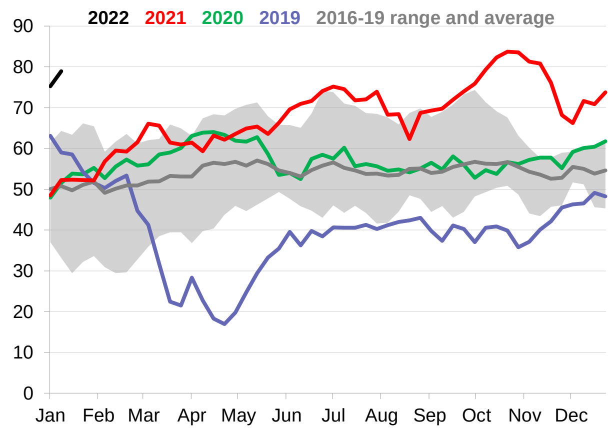
BRENT SPOT

USD/B



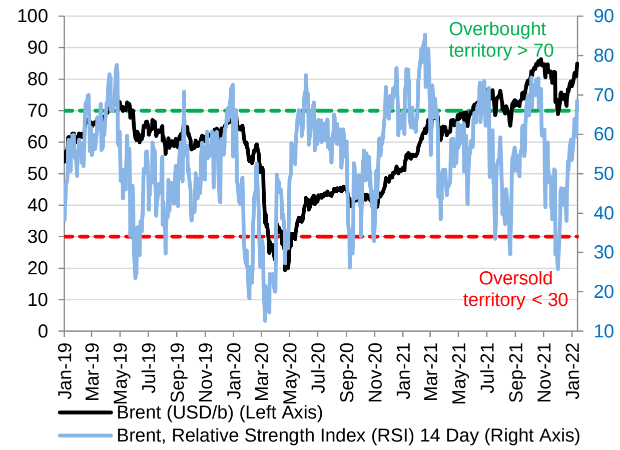
NYMEX WTI SPOT

USD/B



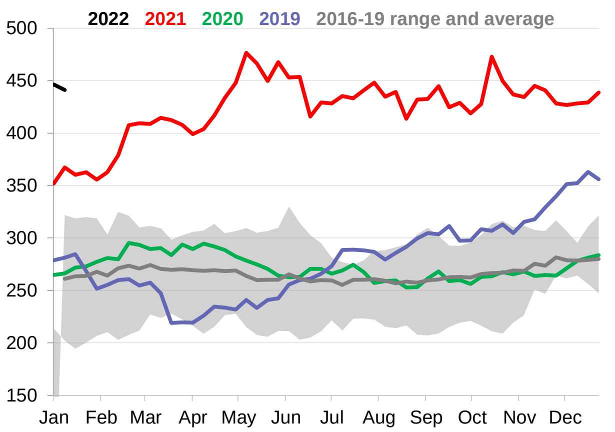
14 DAY RELATIVE STRENGTH INDEX (RSI) AND WTI

USD/B AND 0-100 INDEX (<30 = OVERSOLD; >70 = OVERBOUGHT)



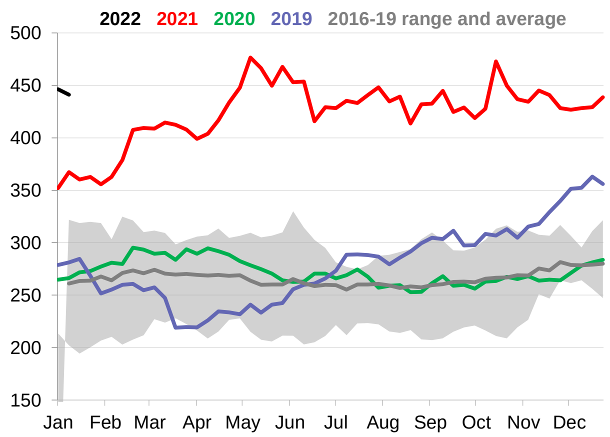
COPPER SPOT

USD/LB



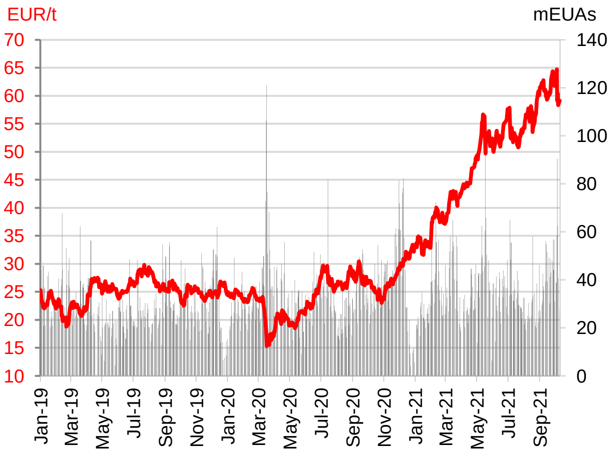
GOLD SPOT

USD/T OZ



EU CARBON PRICE AND VOLUME

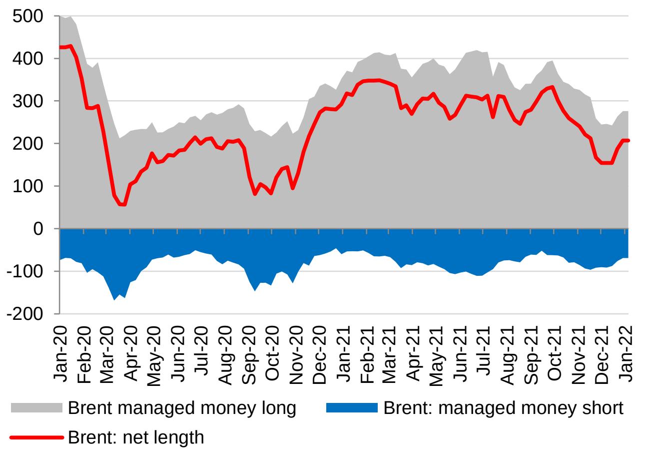
EUR/T AND EUA'S (THOUSAND VOLUME)



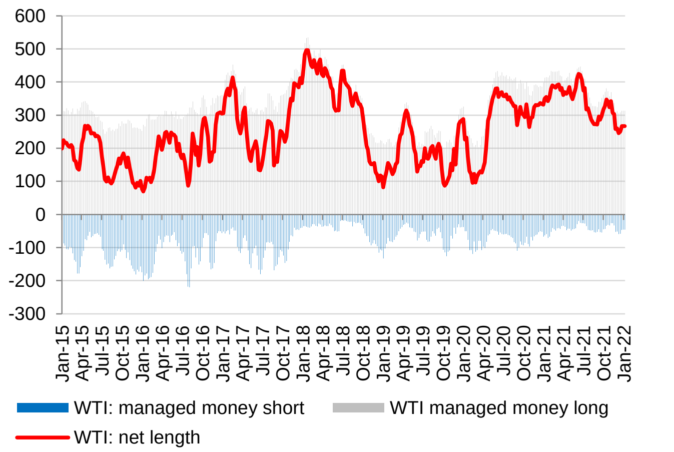
Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – market positioning

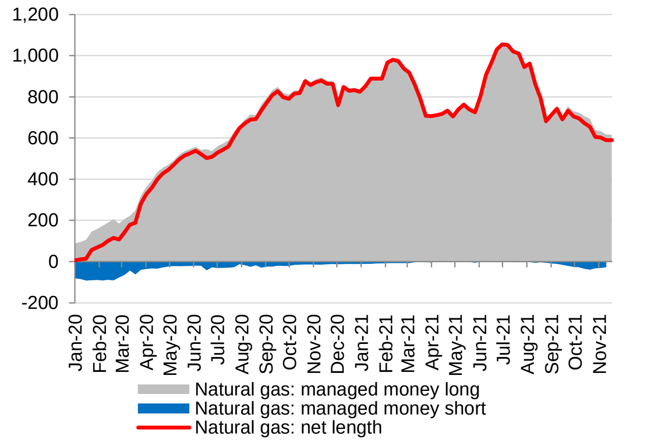
BRENT CRUDE MANAGED MONEY
CONTRACTS (THOUSANDS)



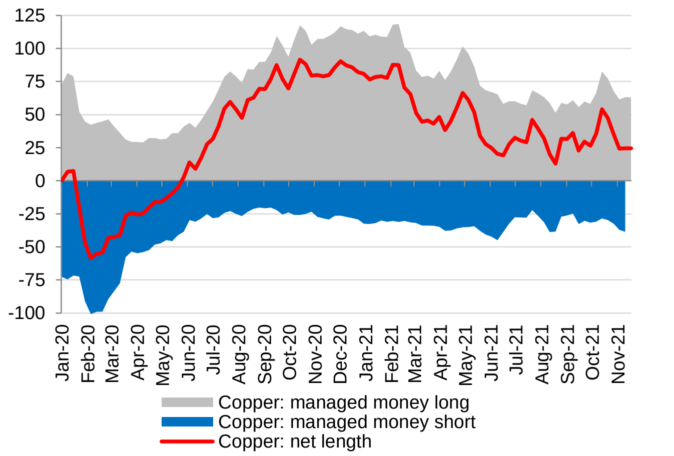
WTI CRUDE MANAGED MONEY
CONTRACTS (THOUSANDS)



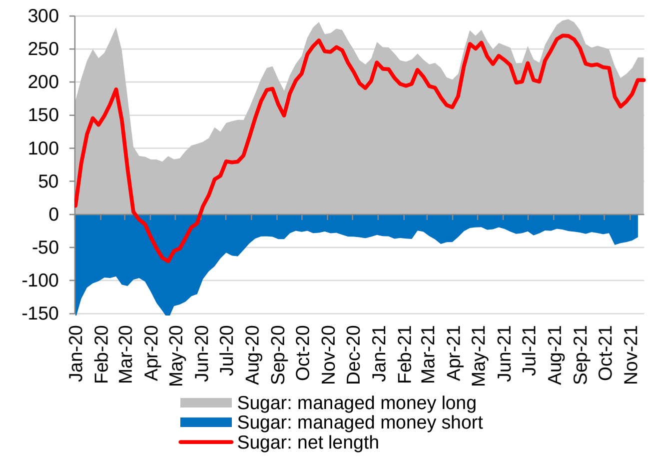
HENRY HUB NATURAL GAS MANAGED MONEY
CONTRACTS (THOUSANDS)



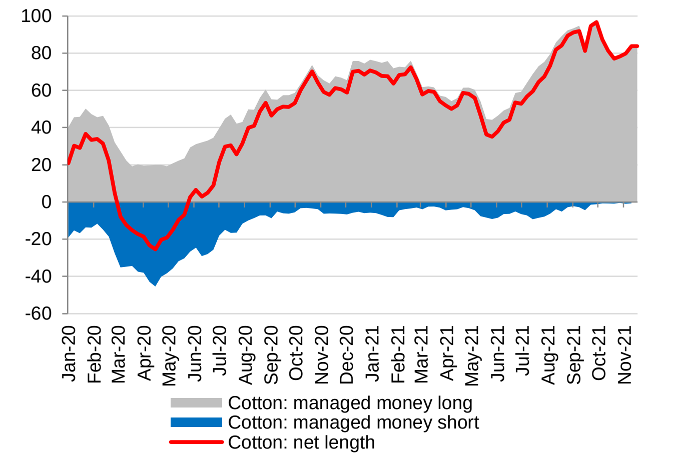
BRENT NET LENGTH MANAGED MONEY
CONTRACTS (THOUSANDS)



SUGAR MANAGED MONEY
CONTRACTS (THOUSANDS)



COTTON MANAGED MONEY
CONTRACTS (THOUSANDS)

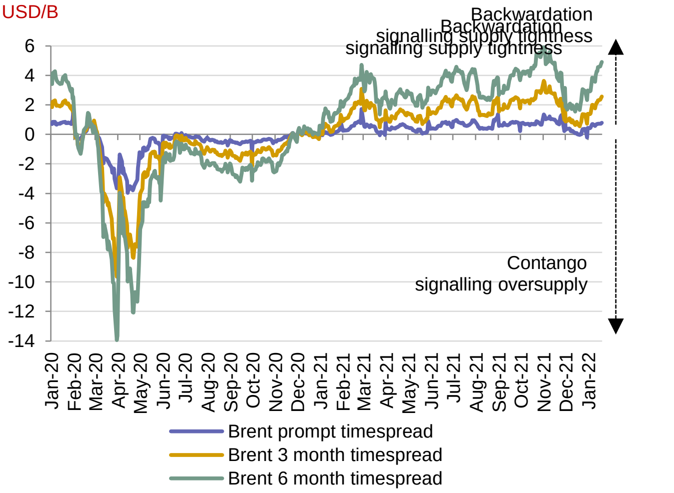


Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – timespreads and futures

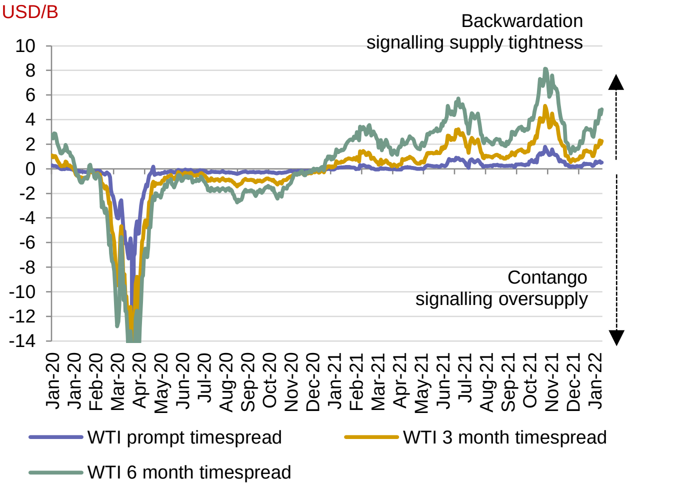
BRENT TIMESPREADS – FRONT, 3 AND 6 MONTHS

USD/B



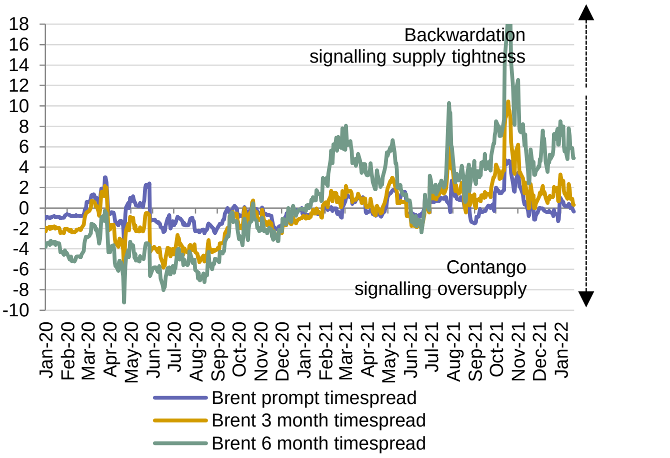
WTI TIMESPREADS – FRONT, 3 AND 6 MONTHS

USD/B



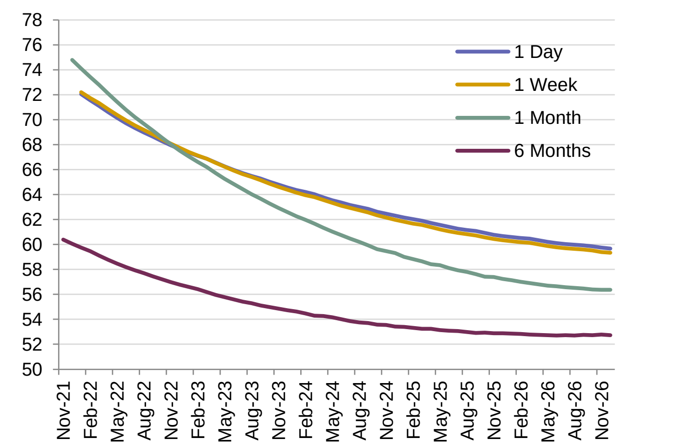
COPPER TIMESPREADS – FRONT, 3 A ND 6 MONTHS

USD/B



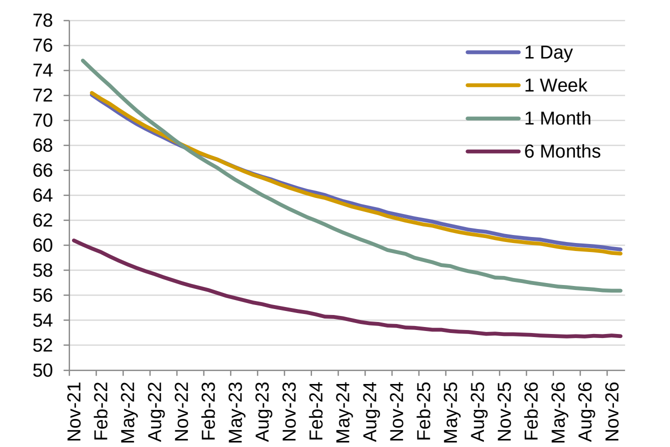
BRENT FUTURES CURVE

USD/B



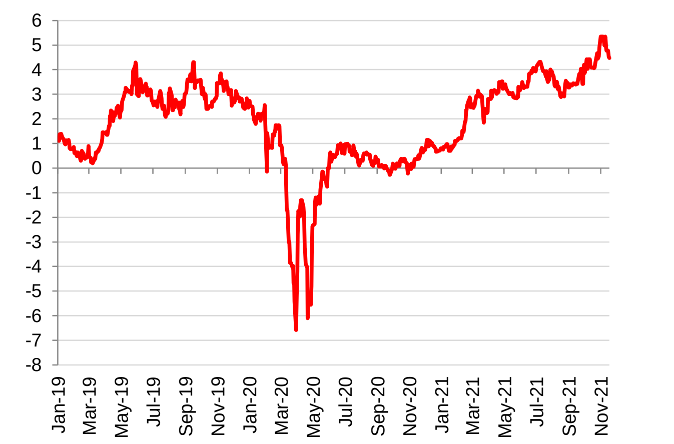
WTI FUTURES CURVE

USD/B



BRENT-DUBAI SPREAD

USD/B

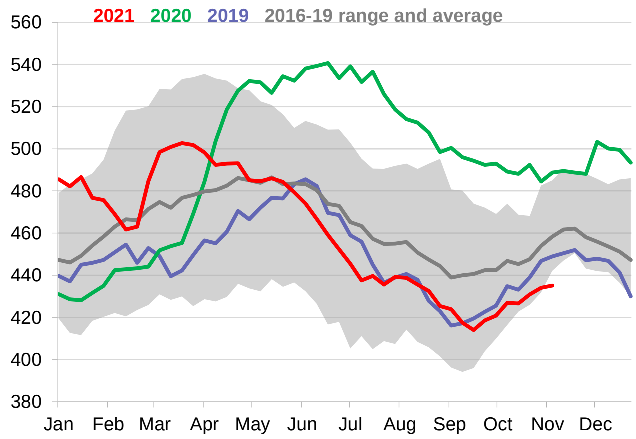


Source: Bloomberg, EIA, IEA, OPEC, MUFG Research

Core indicators – inventories, storage and products

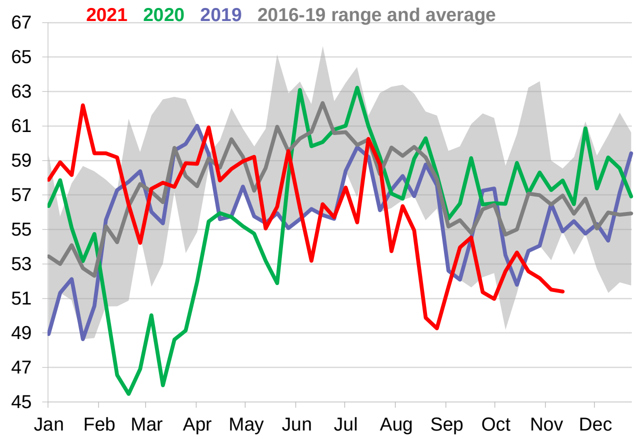
US CRUDE INVENTORIES

MILLION BARRELS



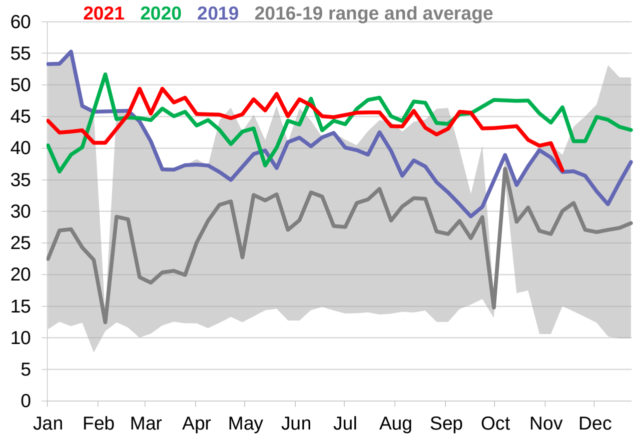
ARA CRUDE INVENTORIES

MILLION BARRELS



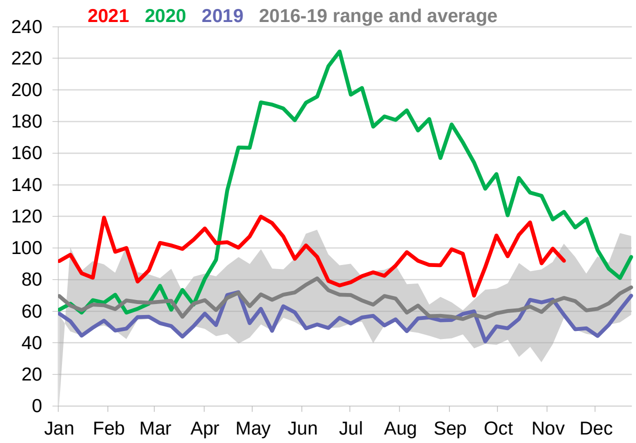
CHINA SHANDONG CRUDE INVENTORIES

MILLION BARRELS



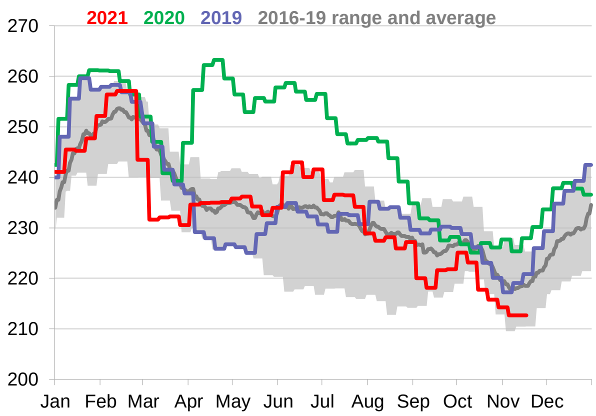
GLOBAL CRUDE FLOATING STORAGE

MILLION BARRELS



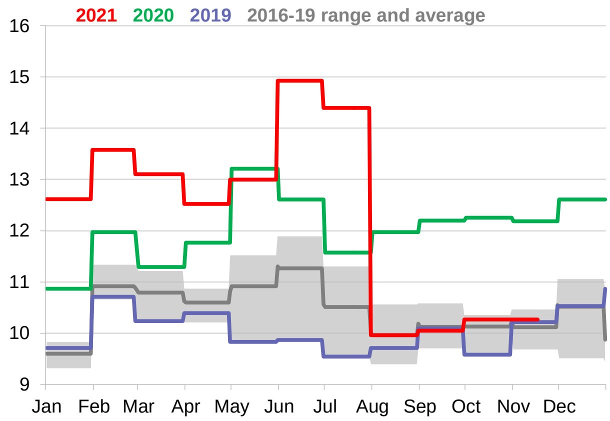
US GASOLINE INVENTORIES

MILLION BARRELS



JAPAN GASOLINE INVENTORIES

MILLION BARRELS



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

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