

Commodity Monthly Monitor

Commodities a mixed bag as Chinese data weighs on sentiment

21 July 2023 — 21 August 2023



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Authors



Nitesh Shah
Head of Commodities
& Macroeconomic

Research, Europe



Aneeka Gupta

Director, Macroeconomic Research



Mobeen Tahir

Director, Macroeconomic Research & Tactical Solutions

Summary

The annual inflation rate in the US ticked up in July to 3.2%, up from 3% in June, but below forecasts of 3.3%. This marked a break following twelve consecutive months of declines. The good news is that the US economy is still not in recession. If the Federal Reserve (Fed), or even markets, were presented today's reality as a scenario twelve months ago, they might both have happily taken it. Whether or not the Fed makes additional rate increases this year it is certainly most of the way there with its tightening cycle and a hard landing, at least until now, has been avoided.

The comparatively less good news is that risk assets have largely taken a measured, or perhaps even conservative, approach so far this year. Parts of the equity market may be an exception due to idiosyncratic forces such as the boom in artificial intelligence. The same is not true for all parts of the risk spectrum.

Commodities, being a diverse bunch, have continued to show their own divergence in performance. Overall, broad commodities were down 1.2% last month but, within the group, energy was a bright spot (up 6.8%) while all other sectors were down: industrial metals down 2.7%; precious metals down 4.4%; and agriculture down 6%.

Disappointing Chinese economic data has heavily impacted the industrial metals sector, particularly due to the grim state of China's real estate industry. With industrial metals falling 2.7% last month and retreating by 15.2% over six months, the sector's poor performance is closely tied to the near-crisis situation in China's real estate sector. The government's crackdown on excessive borrowing and housing speculation has led to over 50 Chinese developers defaulting on debt payments, causing a chain reaction of reduced consumer spending, job losses, and plummeting business confidence. This turbulence has cast a shadow on industrial metals, evident in the 2.8% drop in Copper (COMEX) and aluminium prices, among others. Amidst these challenges, nickel, a vital component in electric vehicle batteries, faced a 5.7% decline last month as its significant demand from stainless steel production was hit hard by China's persistently high steel

output and sluggish demand. The uncertainty surrounding China's steel production cuts further weighed down nickel prices, as market sentiment remains cautious.

Nonetheless, The International Energy Agency (IEA) continues to express optimism regarding China's oil demand, attributing the surge in global oil demand to strong air travel during summer, increased oil usage in power generation, and a boost in Chinese petrochemical activity. Predicting a rise of 2.2 mb/d to 102.2 mb/d in 2023, China is expected to contribute over 70% of this growth. Despite the post-pandemic recovery slowing down and factors like lacklustre economic conditions and electric vehicles dampening usage, the growth is projected to moderate to 1 mb/d in 2024. Meanwhile, OPEC+ (The Organization of the Petroleum Exporting Countries and its partners) cuts, particularly Saudi Arabia's voluntary reductions, are tightening the oil market, while markets appear to be paying more attention to lately.

Despite the surge in nominal 10-year Treasury yields to levels not seen since 2007, gold has managed to hold its ground in recent months. This resilience is particularly notable considering the bond sell-off and hawkish sentiment from the Federal Open Market Committee (FOMC). While the price of gold has fluctuated recently, even briefly dipping below the psychologically significant \$1900/oz mark, it has remained stronger than expected given the bond market's signals. Despite facing headwinds from a stronger US dollar, gold's performance in the past month reminds of its defiance against the challenges it faced in 2022.

The resurgence of the El Niño weather phenomenon, with a predicted 90% chance of continuing in late 2023, poses concerns for agricultural commodities. El Niño's disruptive effects on weather patterns, from heatwaves to heavy rainfall, could impact regions like Asia-Pacific, South and East Africa, and the Americas, leading to potential disruptions in agricultural production. This, in turn, might influence prices of commodities such as cocoa, soybean oil, sugar, and grains. Given historical trends, the market's sensitivity to disruptions is amplified by existing low global agricultural inventories.

Performance

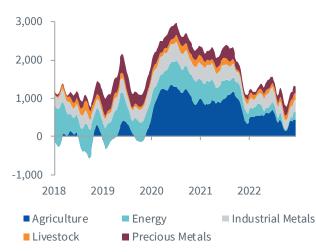
Performance*	- 1 Mth	- 6 Mth	- 12 Mth
All Commodities	-1.2%	-0.1%	-10.7%
Energy	6.8%	8.9%	-32.8%
Industrial Metals	-2.7%	-15.2%	-7.4%
Precious Metals	-4.4%	3.9%	11.4%
Agriculture	-6.0%	-4.0%	4.2%
MSCI World	-4.0%	6.3%	5.3%
US Aggregate Bond	-2.5%	-0.5%	-4.0%

^{*}Bloomberg TR Indexes for basket returns, data to Monday 21 August 2023. Source: WisdomTree, Bloomberg.

Historical performance is not an indication of future performance, and any investments may go down in value.

CFTC Net Speculative Positioning

(in '000 contracts)



Source: WisdomTree, Commodity Futures Trading Commission (CFTC), Bloomberg. **Historical performance is not an indication of future performance, and any investments may go down in value.**

- + Gold defies bond sell-off once again, but US dollar appreciation and pull-back in sentiment weakened the metal. All precious metals fell in the past month, but there are signs of bargain-hunting providing support once again for silver, platinum, and palladium.
- + Industrial metals continue to face headwinds as Chinese data disappoints. Industrial metals remained weak last month as Chinese property sector woes weighed on the outlook for the sector. Markets are expecting most metals to be well supplied for the rest of the year.
- + Seasonal forces and investor sentiment drive weakness in agricultural commodities. Despite Russia's withdrawal from the Black Sea grains deal and its attacks on Ukrainian ports, Ukraine's grains are finding their way into international markets easing concerns and, in turn, causing prices to retreat. Sentiment, as measured by speculative positioning, has been weighed down for many agricultural commodities.
- + Energy was the only commodity sub-sector to post gains in the past month. Oil demand, driven by China is an area of strength, but a slowing Chinese economy could weaken this. However, OPEC's resolve to keep markets tight is strong. Petroleum product markets heating oil and gasoline are especially tight with inventory significantly below normal and prices have hit 'golden crosses': technical analyst parlance for bullish conditions.

Commodity Monthly Matrix¹

Commodity	Current Price ²	Returns (-1 Mth)	Price vs 200 days MA	Inventories ³ (- 3 Mths)	Positioning ⁴ (- 1 Mth)	Roll Yield ⁵	21 Aug Score	21 July Score
WTI Oil	80.7	6.7%	6.2%	-3.4%	15.9%	0.7%	2	3
Brent Oil	84.5	6.1%	4.3%	4.9%	78%	0.4%	2	2
Natural Gas	2.63	-4.5%	-17.0%	31.2%	1%	-4.0%	0	1
Gasoline	2.77	1.1%	8.5%	-0.1%	3%	8.6%	2	2
Heating Oil	3.12	17.0%	11.0%	-15.0%	49%	0.8%	2	1
Carbon	86.6	-2.7%	0.8%	-	-	-0.4%	(1)	(1)
Wheat	5.99	-17.6%	-13.8%	-1.9%	-12%	-4.2%	(2)	0
Corn	4.69	-12.7%	-24.6%	0.1%	-602%	-2.7%	(3)	(3)
Soybeans	13.7	-8.4%	-6.7%	-3.2%	-45%	0.6%	1	2
Sugar	0.23	-5.1%	3.6%	-	-3%	-1.3%	(4)	(2)
Cotton	0.84	-1.7%	1.6%	-1.3%	106%	0.9%	4	2
Coffee	1.48	-6.6%	-14.8%	-3.0%	-108%	-2.2%	(3)	1
Soybean Oil	0.68	0.5%	12.2%	8.7%	9%	3.6%	0	0
Cocoa	3,355	-1.0%	15.3%	-	-9%	-2.7%	(3)	1
Aluminium	2,110	-2.8%	-8.8%	-20.7%	-17%	-0.8%	(2)	(2)
Copper (COMEX)	3.71	-2.8%	-4.8%	45.7%	-562%	-0.2%	(4)	(3)
Copper (LME)	8,271	-2.5%	-3.7%	3.6%	-21%	0.0%	(4)	(2)
Zinc	2,309	-3.0%	-17.4%	96.2%	24%	-0.3%	0	(1)
Nickel	19,925	-5.7%	-17.9%	-5.5%	-3%	-0.4%	(2)	0
Lead	2,190	3.7%	2.7%	84.8%	5%	0.8%	1	(1)
Tin	25,527	-11.7%	-1.9%	28.8%	1%	-0.3%	(1)	1
Gold	1,893	-3.8%	-0.8%	-	-40%	-0.1%	(4)	(1)
Silver	23.3	-6.1%	0.0%	-	-88%	-0.2%	(4)	(1)
Platinum	908	-4.9%	-9.2%	-	-105%	-0.3%	(3)	(1)
Palladium	1,228	-3.3%	-18.5%	-	-13%	-0.9%	(4)	1
Live Cattle	1.79	-0.7%	7.4%	-	-15%	-0.5%	(1)	1
Lean Hogs	0.81	-19.9%	-4.9%	-	-11%	9.4%	0	0
Feeder Cattle	2.47	0.7%	19.5%	-	-19%	-1.4%	0	0

The score matrix is designed to highlight significant changes in key variables but should not be viewed as predictor of performance. Source: WisdomTree. Information not available.

Green = returns positive, inventories falling, positioning rising, roll yield positive.

Red = the opposite. Black = neutral.

Historical performance is not an indication of future performance, and any investments may go down in value.

¹ Detailed explanation of the matrix calculations can be found at the end of this report.

 $^{^2\,}All\,prices\,are\,futures\,prices\,to\,Monday\,21\,August\,23.\,Broad\,sector\,returns\,based\,on\,Bloomberg\,Commodity\,Index\,family.$

³ % change in inventory over the past 3 months except for sugar and coffee which are based on past 6 months as data is updated bi-annually by USDA.

⁴ CFTC futures and LME COTR net positioning as at August 15 2023, % change from previous month.

⁵ Calculated as % difference between front month and second month futures prices on report date. Historical performance is not an indication of future performance and any investments may go down in value.

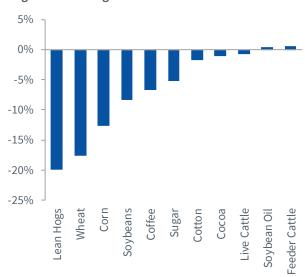
Sector Overview

Agriculture

- + The price of wheat was down 17.6% last month. Wheat prices have made sharp moves in recent months including a meaningful rally in July followed by a reversal in August. Despite the expiration of the Black Sea grains deal a month ago, Ukraine continues to export its grains smoothly, with shipments totalling 3.6 million tons since the start of the crop year in July. Wheat and corn exports have been significant, with 64% more wheat exported compared to the same period last year, despite the agreement being in effect since mid-July 2022. Notably, 1.33 million tons of grains have been exported in August even without the agreement. Ukraine is now testing an export corridor along the western Black Sea coast, aiming to use it more extensively for grain exports. While plans involve more ships using this route, concerns remain about potential Russian disruptions to port facilities or cargo ships, which could again cause wheat prices to rise. In its August WASDE report, the US Department of Agriculture (USDA) stated that the global outlook for wheat in 2023/24 is for reduced supplies, lower consumption, decreased trade, and lower stocks. But, for now, it appears that nerves in wheat markets have settled based on Ukraine's ability to export its crops.
- Lean hogs futures pulled back sharply last month in what is widely believed to be technical selling. The lean hogs futures market is also influenced by seasonal factors, such as consumer demand, weather, and disease outbreaks. The summer months typically see higher demand for pork products, such as bacon and ribs, while the winter months see lower demand and higher supplies. Broadly in line with the previous two years, lean hogs futures prices rose during June and July this year before falling sharply in August, also similar to 2021, and 2022. The notable difference this time is in net speculative positioning which did not quite accumulate to similar levels as the last two years before starting to pull back.
- The price of corn was down 12.7% last month. The USDA WASDE report for August states that 2023/24 US corn outlook is for reduced supplies, lower domestic use, smaller exports, and tighter ending stocks. But sentiment, in terms of net speculative positioning in corn futures, has been weak since the second quarter of this year with net positioning fluctuating between positive and negative territories. Once again, last month, net positioning became negative further pushing prices down.

In one of our recent blog posts titled, What does El Niño's return mean for commodities?, we highlight that the El Niño weather phenomenon is making a comeback, and the World Meteorological Organization predicts a 90% chance of it continuing in the latter part of 2023. El Niño affects weather across the Indo-Pacific region, leading to heatwaves and droughts. This return of El Niño could worsen the impacts of climate change in various parts of the world, including Asia-Pacific, South and East Africa, and the Americas. The phenomenon can cause dry conditions in some areas and heavy rainfall in others, disrupting agricultural production. It's likely to affect the prices of commodities like cocoa, soybean oil, sugar, and grains. The historical patterns of El Niño show that it has led to increased prices for certain agricultural products in the past. However, its effects are uncertain and can vary. This potential return of El Niño comes at a time when global inventories of many agricultural goods are already below average, making the market more sensitive to potential disruptions.

Agriculture - August Returns*

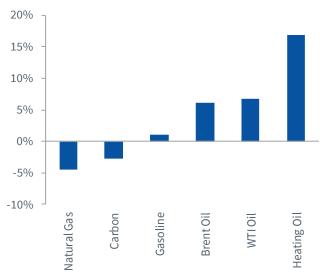


Energy

- + According to the International Energy Agency (IEA), world oil demand is scaling record highs, boosted by strong summer air travel, increased oil use in power generation and surging Chinese petrochemical activity. Global oil demand is set to expand by 2.2 mb/d to 102.2 mb/d in 2023, with China accounting for more than 70% of growth. With the post-pandemic rebound running out of steam and as lacklustre economic conditions, tighter efficiency standards, and new electric vehicles weigh on use, growth is forecast to slow to 1 mb/d in 2024. Russian oil exports held steady at around 7.3 mb/d in July, as a 200 kb/d decline in crude oil loadings was offset by higher product flows. Crude exports to China and India eased month on month but accounted for 80% of Russian shipments.
- + Global observed oil inventories declined by 17.3 mb in June, led by the OECD. Non-OECD stocks and oil on water were largely unchanged. OECD industry stocks fell by 14.7 mb, in line with the seasonal trend, to 2,787 mb. Industry stocks were 115.4 mb below the five-year average, with product inventories particularly tight. Preliminary data observed by the IEA suggest global inventories drew further in July and August.
- + Refiners are struggling to keep up with demand growth, as the shift to new feedstocks, outages and high temperatures have forced many operators to run at reduced rates. Tight gasoline and diesel markets have pushed margins to six-month highs. Heating oil (Ultra Low Sulphur Diesel) prices rose 17% in the past month, reflecting this tightness.
- + OPEC+'s aggressive cuts are continuing to tighten the oil market. Saudi Arabia's voluntary supply cuts have helped oil curves remain in backwardation.
- + Natural gas production as a byproduct of oil drilling activity in the US Permian Basin, has kept gas supplies high despite a decline in natural gas prices. The US Energy Information Administration expects production to average about 104 billion cubic feet per day (Bcf/d) through the end of 2024, compared with 103 Bcf/d in 2Q23. Flat production largely reflects continuing growth in associated natural gas production offset by declines in natural gas directed drilling.

While natural gas prices in Europe surged 40% in the past month (to 21 August 2023), US Henry Hub prices fell back 4.5%. Europe has become increasingly reliant on liquified natural gas (LNG) imports since the pipelines from Russia were shut off last year. The threat of strike activity at LNG operations in Australia have sent the global LNG prices higher as the predominantly Asian consumers of Australian LNG may have to seek alternative sources. The prospect of Europe having to compete with Asia for remaining sources, has driven LNG and European benchmark prices higher. The US will be the beneficiary, with greater demand for its resources. This is clearly not reflected in Henry Hub prices yet. We should note that despite the 40% gain in European gas prices in the past month, gas prices are still 88% below their peak in August 2022. Europe has filled its storage to the target of 90% two months earlier than its deadline, which should cushion against near-term supply disruptions.

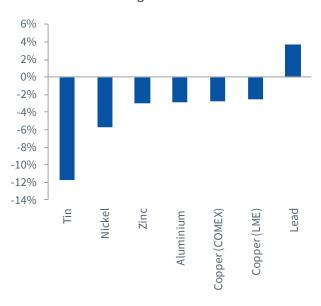
Energy — August Returns*



Industrial Metals

- + Industrial metals were the worst performing commodity sector last month and were down 2.7%. Over the last six months, the sector is down 15.2% and has created the biggest drag on the overall performance of commodities.
- + China's real estate sector, once the engine of its economy, is now teetering on the edge of crisis because of excessive borrowing, overbuilding, and a housing slowdown. The government's crackdown on risky practices and sudden intervention in 2020 to prevent a housing bubble have led to over 50 Chinese developers defaulting or failing to make debt payments in the last three years. The consequences include reduced consumer spending due to falling housing prices, disappearing jobs tied to housing, and decreased business confidence. While policymakers have taken modest steps to address the situation, the real estate turmoil has spread to financial institutions and the broader economy, prompting concerns of a larger crisis.
- + This is clearly weighing on sentiment towards industrial metals. Copper (COMEX) was down 2.8%, and aluminium down 2.8%. The only bright spot in the basket was lead, which was up 3.7% last month.
- Nickel was down 5.7% last month. Although nickel is widely known for its use in electric vehicle batteries, a growing market, it still draws around two-thirds of its overall demand from the production of stainless steel. China's steel market has been facing pressure in August due to continued high steel production despite sluggish end-user demand. Blast furnace utilisation rates have risen, but some local mills in key steelmaking provinces like Hebei and Jiangsu have not received official communication about output reductions. Uncertainty surrounds the extent of China's steel output cuts for the rest of the year, with expectations of smaller scale cuts targeting environmentally sensitive regions. Rising steel inventories are attributed to robust production and weak demand. Despite potential production cuts, market sentiment remains cautious due to these challenges, and steel prices have declined. This, in turn, is weighing on nickel.

Industrial Metals — August Returns*

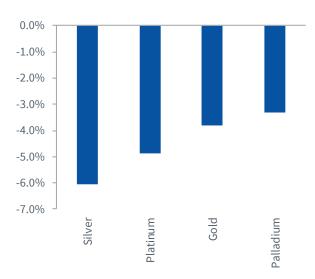


Precious Metals

- + Nominal 10-year Treasury yields have risen to the highest level since 2007. Just when we though the bond sell-off of 2022 was behind us, it came back with a vengeance. Hawkish Federal Open Market Committee (FOMC) minutes and a string of positive economic data from the US are casting doubts whether we have reached peak interest rates in the US. The Fed certainly has left the door open for further hikes and its decisions will be very data sensitive.
- + Relative to the bond market, gold is holding up well at USD1916/oz (on 23 August 2023). While gold prices temporarily fell below the psychologically important US\$1900/oz level, Treasury Inflation-Protected Securities (TIPS) prices had fallen much further and other-thingsbeing-equal, the bond market would indicate gold should be trading closer to \$1830/oz. Gold's resilience in the past month mirrors its defiance again the bond headwinds of 2022.
- + Gold has been facing US dollar headwinds as well in the past month. The Dollar Basket (DXY) has appreciated 2.1% in the past month (to 22 August 2023). With a more hawkish Fed, there is a greater risk of further dollar appreciation.
- + Central banks bought a net 55 tonnes of gold in June following three straight months of selling. The Central Bank of Türkiye's (CBRT) return to net buying in June helped reverse a temporary trend. Having been a significant net seller between March and May to meet local demand, it swung back to net buying in June, adding 11 tonnes to its official reserves.
- + Of all the precious metals, silver fell the most in the past month (-6.1%). Net speculative positioning fell 88% to a level one standard deviation below its 5-year average. However, we suspect that excessive shorts were being covered in the past week (data on this which is published by Commodity Futures Trading Commission on Fridays relating the to the Tuesday gone, will only confirm this after we publish). Since hitting an intra-day local low of US\$22.35/oz at 13.30 on 15/08/2023 silver prices have bounced up to US\$24.14/oz at 15.00 on 23/08/2023 (+8.0%). That low point seems to match the Fibonacci-implied support levels looking at year-to-date silver performance (the 38.2% retracement).

- + Silver inventory in London Bullion Market Association (LBMA) vaults, which fell precipitously in 2022 (-28%), has stabilised and gained 3% year to July 2023. Silver holding in exchange-traded commodities (ETCs) have only modestly declined in 2023 so far (4%) after a 15% decline in 2022.
- + The last week's bounce in silver price takes the gold-to-silver ratio back down to 81 (22/08/2023), from 84 (08/08/2023), fractionally higher than 80, where we were a month ago (21/07/2023).
- + Platinum and palladium also followed silver higher in the past week, but monthly prints have come in lower. Auto sales have largely been improving in the past year, with sales up 18% y-o-y in Europe (June) and US (July). However, China sales fell 1% y-o-y in July. Autos are the main source of demand for platinum group metals.

Precious Metals — August Returns*



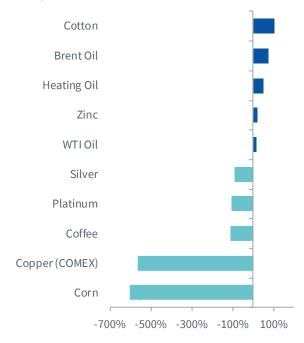
Technical Overview

as of 21 August 2023

Positioning

- + Net speculative positioning in silver fell 88%, one standard deviation below its 5-year average.
- + Net speculative positioning in platinum fell 104%, one standard deviation below its 5-year average.
- + While still net short, positioning in Brent has improved after a 15% rise in longs and 2% contraction in shorts.
- + Net speculative positioning in WTI futures rose by 16% reflecting the slow improvement in sentiment. However, positioning is still more than a standard deviation below 5-year average.
- + Positioning in heating oil futures is a standard deviation above 5-year average after rising by 49% last month. A combination of rising longs and contracting shorts drove the trend amid a 17% rally in heating oil in the past month.
- Speculative positioning in COMEX copper has been oscillating between positive and negative territories in recent months and entered negative territory again last month after briefly becoming positive.
- + Net speculative positioning for corn has been weak since the second quarter of this year and, once again, went into negative territory last month putting further downward pressure on prices.
- + Net speculative positioning for coffee is also negative and remains below the 5-year average.
- + On a relative basis, cotton was a bright spot among agricultural commodities last month. Although cotton's price was still down slightly overall, there was a significant improvement in net positioning which is now slightly above the 5-year average.

Top 5/Bottom 5 Change in CFTC Net Positions (over past month)*



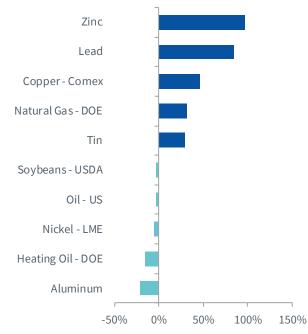
Source: Bloomberg

*CFTC futures net positioning as at report date, percent change from previous month. **Historical performance is not an indication of future performance and any investments may go down in value.**

Inventories

- + US oil inventories continued to decline by 3.8% over the past month (3.4% over the past 3-months). That appears in line with seasonal trends.
- + Natural gas inventory has risen 3.7% in the past month, in line with seasonal trends.
- + Heating oil inventory has fallen 15% and inventory is now than a standard deviation below 5-year average.
- + A build-up in industrial metal inventories over the last 3 months is consistent with market expectations of ample supply of the metals for the rest of the year, given relatively modest demand. Zinc inventory is up 96% while lead inventory is up 85% compared to 3 months ago.
- + COMEX copper inventory is up around 46% compared to 3 months ago. And, although copper held in COMEX is one of the smaller stores of the metal, when combining London Metal Exchange, Shanghai Futures Exchange and COMEX, copper inventory is still 27% above where it was 3 months ago.

Top 5/Bottom 5 Change in Inventories (over past 3 months)*



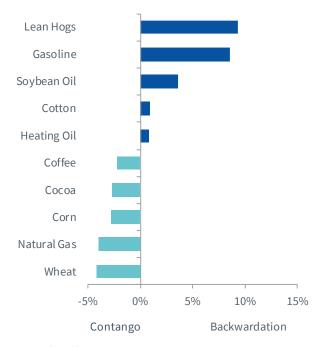
Source: Bloomberg

*Percent change in inventory based on 3-month change (in %). Historical performance is not an indication of future performance and any investments may go down in value.

Curve Dynamics

- + At 8.6%, the positive front month roll yield on gasoline futures appears larger than seasonally normal (although a positive front month roll is expected at this time of the year).
- + While not as steep as last year, the 0.8% positive roll yield on heating oil futures marks a break from the pre-2022 historic trend of contango in August.
- + Contango in the aluminium futures curve means the front month contract is offering a roll return drag of 0.7%.
- + Alongside a sharp decline in prices, lean hogs futures have also shed some of their backwardation over the last month. But, given how sharply prices at the front end of the futures curve had risen over June and July, lean hogs futures are still offering a positive roll yield of 9.4%.
- + Soybean Oil futures are currently offering a positive roll yield of 3.6% while cotton is also in backwardation offering a positive roll yield of 0.9%.
- In contrast, coffee, cocoa, corn, and wheat are all in contango and therefore currently offer a negative roll yield.

Top 5/Bottom 5 Roll Yields (front to next month)*



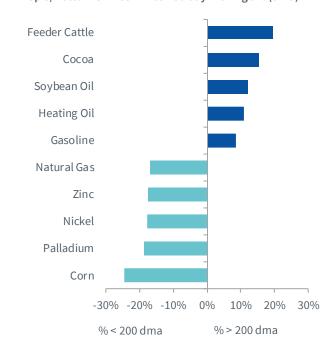
Source: Bloomberg

*Roll yields calculated as percent change between front month futures price and next month futures price on Aug 21, 2023. Historical performance is not an indication of future performance and any investments may go down in value.

Technicals

- + Palladium is trading 19% below its 200- day moving average (dma). Its price hit the lowest level since 2018 on 16 August 2023, but has bounced 4.8% up from that point by 22 August 2023.
- + Heating oil and gasoline are trading 11.0% and 8.5% above their respective 200-dmas. With the 50-dma moving above the 200-dma in August, heating oil has hit a 'golden cross' technical analyst jargon for a bullish outcome.
- + Nickel and zinc are trading 17.9% and 16.4% below their respective 200-dmas. Market pessimism about the cyclical economic environment is continuing to weigh on these metals.
- + Feeder Cattle are continuing their strong gains this year, benefitting from the weakness in corn futures prices (given their inverse relation), and are now trading 19.5% above their 200-dma.
- + Expectations for the cocoa market to remain in a deficit for a third year in a row, have helped sustain cocoa futures prices in an otherwise challenging month for the sector. Cocoa is now trading at 15.3% above its 200-dma.
- + Corn's 12.7% price drop last month has taken it to 24.6% below its 200-dma.

Top 5/Bottom 5 Price Diff to 200 day moving av. (dma)*



Source: Bloomberg

*Percent difference between the front month futures price and its 200-day moving average on Aug 21 2023. **Historical performance is not an indication of future performance and any investments may go down in value.**

Summary Tables

Prices

	Current	Unit	1 Month	3 Month	6 Month	1 Year
Energy		-				
WTI Oil	80.7	USD/bbl.	6.7%	12.8%	6.0%	-11.1%
Brent Oil	84.5	USD/bbl.	6.1%	11.7%	1.7%	-12.7%
Natural Gas	2.63	USD/MMBtu	-4.5%	1.8%	27.0%	-71.8%
Gasoline	2.77	USd/gal.	1.1%	7.6%	14.8%	-8.1%
Heating Oil	3.12	USd/gal.	17.0%	31.9%	11.6%	-15.8%
Carbon	86.6	EUR/MT	-2.7%	-1.4%	-10.8%	-11.3%
Agriculture						
Wheat	6.0	USd/bu.	-17.6%	-1.0%	-20.2%	-20.4%
Corn	4.7	USd/bu.	-12.7%	-15.4%	-31.0%	-25.0%
Soybeans	13.7	USd/bu.	-8.4%	4.8%	-11.5%	-8.0%
Sugar	0.23	USd/lb.	-5.1%	-9.2%	9.7%	29.4%
Cotton	0.84	USd/lb.	-1.7%	-2.6%	4.4%	-29.5%
Coffee	1.48	USd/lb.	-6.6%	-23.2%	-24.1%	-31.7%
Soybean Oil	0.68	USd/lb.	0.5%	43.8%	8.3%	0.1%
Cocoa	3,355	USD/MT	-1.0%	9.4%	22.8%	42.0%
Industrial Metals						
Aluminum	2,110	USD/MT	-2.8%	-7.1%	-13.5%	-11.8%
Copper	3.71	USd/lb.	-2.8%	-0.3%	-12.3%	0.8%
Copper (LME)	8,271	USD/MT	-2.5%	0.4%	-10.1%	2.1%
Zinc	2,309	USD/MT	-3.0%	-6.8%	-26.7%	-34.9%
Nickel	19,925	USD/MT	-5.7%	-6.1%	-26.1%	-10.2%
Lead	2,190	USD/MT	3.7%	4.0%	2.4%	7.0%
Tin	25,527	USD/MT	-11.7%	-0.5%	-6.9%	2.1%
Precious Metals						
Gold	1,893	USD/t oz.	-3.8%	-4.3%	3.3%	8.3%
Silver	23.3	USD/t oz.	-6.1%	-2.6%	6.6%	22.3%
Platinum	908	USD/t oz.	-4.9%	-15.8%	-3.7%	2.4%
Palladium	1,228	USD/t oz.	-3.3%	-19.8%	-19.1%	-42.3%
Livestock						
Live Cattle	1.79	USd/lb.	-0.7%	8.0%	8.6%	26.4%
Lean Hogs	0.81	USd/lb.	-19.9%	-2.9%	-9.5%	-13.4%
Feeder Cattle	2.47	USd/lb.	0.7%	19.6%	32.1%	36.0%

Performance of front month futures from 21 Aug 22 (1 Year), 21 Feb 23 (6 Month), 21 May 23 (3 Month) and 20 Jul 23 (1 Month) to 21 Aug 23. **Historical performance is not an indication of future performance and any investments may go down in value.**

Roll Yields*

	Unit	Exchange	21-Aug	1 Week	1 Month	3 Month
Energy						
WTI Oil	USD/bbl.	NYMEX	0.7%	0.7%	0.4%	-0.1%
Brent Oil	USD/bbl.	ICE	0.4%	0.8%	0.2%	0.2%
Natural Gas	USD/MMBtu	NYMEX	-4.0%	-3.6%	0.2%	-5.9%
Gasoline	USd/gal.	NYMEX	8.6%	9.3%	1.6%	4.3%
Heating Oil	USd/gal.	NYMEX	0.8%	0.7%	0.3%	0.4%
Carbon	EUR/MT	ICE	-0.4%	-0.4%	-0.2%	-0.3%
Agriculture						
Wheat	USd/bu.	CBOT	-4.2%	-4.0%	-2.8%	-2.0%
Corn	USd/bu.	CBOT	-2.7%	-2.5%	-1.7%	13.1%
Soybeans	USd/bu.	СВОТ	0.6%	2.8%	5.0%	5.2%
Sugar	USd/lb.	NYBOT	-1.3%	-0.9%	-0.3%	1.3%
Cotton	USd/lb.	NYBOT	0.9%	1.4%	0.7%	1.2%
Coffee	USd/lb.	NYBOT	-2.2%	-1.0%	0.2%	1.2%
Soybean Oil	USd/lb.	CBOT	3.6%	2.0%	5.1%	0.0%
Cocoa	USD/MT	NYBOT	-2.7%	-2.2%	0.3%	-0.4%
Industrial Metals						
Aluminum	USD/MT	LME	-0.8%	-1.2%	-0.7%	-0.4%
Copper	USd/lb.	COMEX	-0.2%	0.0%	-0.2%	-0.1%
Copper (LME)	USD/MT	LME	0.0%	-0.4%	-0.1%	-0.2%
Zinc	USD/MT	LME	-0.3%	0.5%	-0.1%	-0.1%
Nickel	USD/MT	LME	-0.4%	-0.6%	-0.4%	-0.2%
Lead	USD/MT	LME	0.8%	-0.9%	-0.2%	0.2%
Tin	USD/MT	LME	-0.3%	-0.5%	0.2%	0.3%
Precious Metals						
Gold	USD/t oz.	COMEX	-0.1%	-0.3%	-0.1%	-0.1%
Silver	USD/t oz.	COMEX	-0.2%	-0.3%	-0.1%	-0.1%
Platinum	USD/t oz.	NYMEX	-0.3%	-0.3%	-0.3%	-0.5%
Palladium	USD/t oz.	NYMEX	-0.9%	-0.9%	0.5%	0.5%
Livestock						
Live Cattle	USd/lb.	CME	-0.5%	-0.5%	-1.0%	0.9%
Lean Hogs	USd/lb.	CME	9.4%	29.2%	19.5%	-0.4%
Feeder Cattle	USd/lb.	CME	-1.4%	-1.6%	-1.3%	-12.1%

^{*}Roll return non-annualised from front month futures into second month on the date shown. 21 May 23 (3 Month), 21 Jul 23 (1 Month), 14 Aug 23 (1 Week). **Historical performance is not an indication of future performance and any investments may go down in value.**

CFTC Net Positioning¹

	Current	5 Yr Average	1 Month	6 Month	1 Year
Energy					
WTI Oil	277,248	428,362	239,292	255,347	274,993
Brent Oil ²	-18,508	63,014	-83,602	31,846	-1,054
Natural Gas	-96,439	-96,825	-97,822	-182,061	-121,198
Gasoline	58,655	64,294	57,043	59,484	47,732
Heating Oil	31,783	8,852	21,350	17,474	24,716
Agriculture					
Wheat	-48,293	-1,219	-43,097	-51,483	-13,533
Corn	-38,000	168,252	7,567	264,522	197,710
Soybeans	58,691	78,685	107,279	194,552	87,397
Sugar	157,103	114,466	161,211	228,517	26,214
Cotton	48,930	42,058	23,778	-7,516	46,979
Coffee	-20,144	10,254	-9,673	10,166	32,201
Soybean Oil	49,177	47,291	44,991	33,656	37,478
Cocoa	71,545	19,836	78,367	37,464	-17,273
Industrial Metals ³					
Copper (COMEX)	-26,690	5,459	-4,032	786	-26,484
Copper (LME)	50,647	44,041	63,946	57,708	32,904
Aluminum	115,693	163,804	138,911	161,544	152,240
Nickel	23,138	27,366	23,943	25,629	26,643
Zinc	35,765	48,576	28,949	42,924	24,044
Lead	53,639	51,693	51,070	51,372	36,749
Tin	10,009	8,035	9,954	7,122	7,116
Precious Metals					
Gold	119,802	197,426	200,311	121,800	144,036
Silver	5,051	29,142	43,845	10,200	3,311
Platinum	-764	18,175	16,684	2,761	3,114
Palladium	-9,504	2,614	-8,386	-5,153	-1,599
Livestock					
Live Cattle	119,595	83,978	140,326	125,452	82,451
Lean Hogs	29,777	45,181	33,306	8,482	73,816
Feeder Cattle	12,748	2,719	15,767	2,883	3,176

¹ Net positions in number contracts.

Historical performance is not an indication of future performance and any investments may go down in value.

² Brent 5-Yr average of net positions from January 2011 as positions were not reported by CFTC before then.

³ All Industrial metals positioning data (excluding copper) is sourced from LME COTR data in Bloomberg from 30 January 2018 (first available date) under post-MIFID rules.

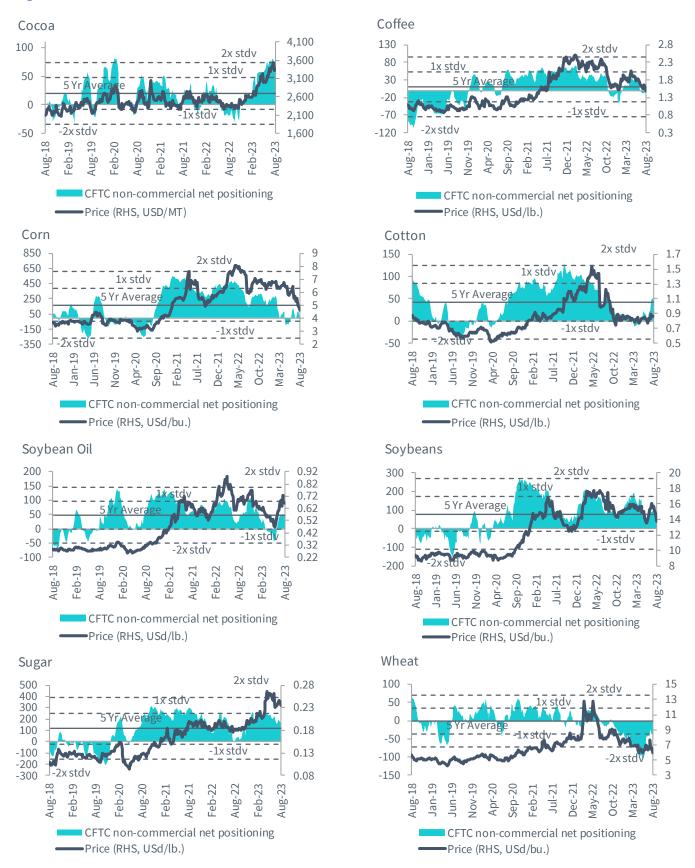
Inventory Levels*

	Current	5 Yr Average	1 Month	3 Month	6 Month
Energy				•	!
Oil - US	439,662	-1.4%	-4%	-3%	-8%
Oil - OECD Europe**	355	0%	0.9%	4.9%	4%
Natural Gas - DOE	3,065	3.7%	3%	31%	40%
Gasoline - DOE	216,158	-4%	-1%	0%	-10%
Heating Oil - DOE	7,126	-5%	4%	-15%	-4%
Industrial Metals					
Aluminium	587,604	-57%	-6%	-21%	-33%
Aluminium - LME	491,050	-53%	-4%	-12%	-16%
Aluminium - SHFE	96,554	-72%	-15%	-48%	-67%
Copper	174,845	-49%	-4%	-21%	-48%
Copper - LME	95,325	-38%	59%	4%	46%
Copper - SHFE	39,228	-70%	-50%	-62%	-84%
Copper - COMEX	40,292	-35%	-9%	46%	93%
Nickel - LME	37,014	-76%	-1%	-6%	-17%
Zinc	199,476	-4%	35%	96%	30%
Zinc - LME	145,550	12%	60%	210%	363%
Zinc - SHFE	53,926	-31%	-5%	-1%	-56%
Lead	110,025	-12%	21%	85%	7%
Lead - LME	56,225	-20%	9%	66%	124%
Lead - SHFE	53,800	-2%	36%	110%	-30%
Tin	14,501	66%	4%	29%	22%
Tin - LME	6,090	79%	28%	232%	96%
Tin - SHFE	8,411	58%	-9%	-11%	-4%
Agriculture					
Wheat - USDA	265,610	-7.4%	-0.3%	-1.9%	0.5%
Corn - USDA	297,920	-5%	0.5%	0.1%	0.2%
Soybeans - USDA	119,400	18%	-1.3%	-3.2%	-2.5%
Sugar - USDA	39,465	-20%	-	-	-11.3%
Cotton - USDA	91,600	6%	-3.1%	-1.3%	-0.7%
Coffee - USDA	31,582	-8%	-	-3.0%	-3.0%
Soybean Oil - USDA	4,927	4%	4%	9%	8%

^{*}Current inventories relative 1, 3, 6 months ago. The column "5-yr average" is the current inventory level relative to 5 years average inventory. For energy, 5-yr average is the average of the same month as report month over the past 5 years. SHFE started reporting inventory data from April 2015. ** (OECD) inventory data reported with 3-month lag with current = May 2023. **Historical performance is not an indication of future performance and any investments may go down in value.**

CFTC Net Positioning

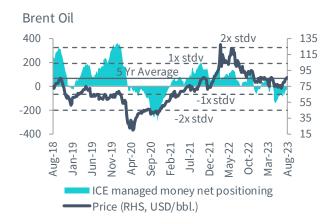
Agriculture

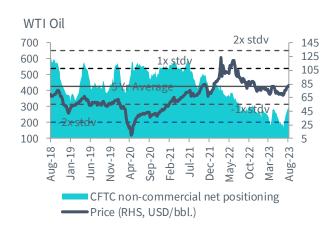


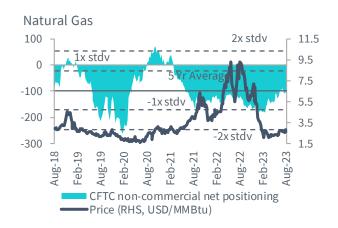
Source: Bloomberg, Wisdom Tree.

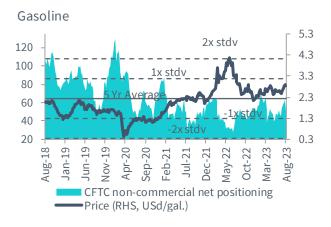
Note: positioning in '000 contracts. Standard deviation based on 5-year average CFTC non-commercial net positioning. All commodity futures price data is denominated in USD unless otherwise indicated. CFTC futures and LME COTR net positioning as at Jul 18 2023. **Historical performance is not an indication of future performance and any investments may go down in value.**

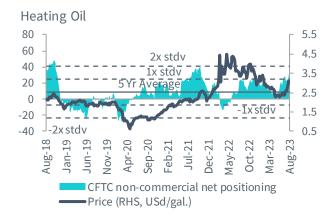
Energy







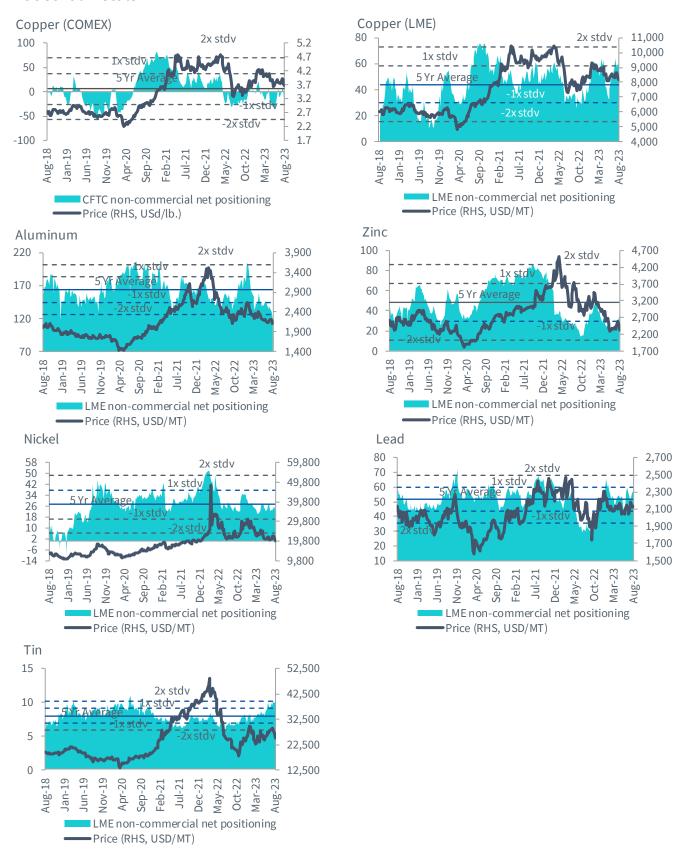




Source: Bloomberg, WisdomTree.

Note: positioning in '000 contracts. Standard deviation based on 5-year average CFTC non-commercial net positioning. All commodity futures price data is denominated in USD unless otherwise indicated. *Brent average of net positions from January 2011 as positions were not reported by CFTC before then. **Historical performance is not an indication of future performance and any investments may go down in value.**

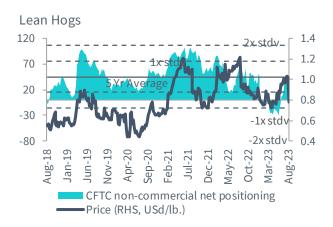
Industrial Metals

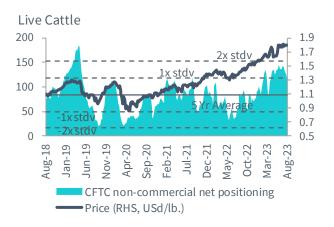


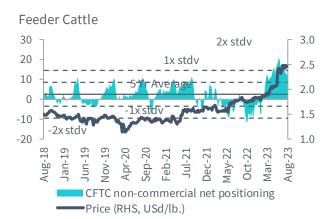
Source: Bloomberg, WisdomTree.

Note: positioning in '000 contracts. Standard deviation based on 5-year average CFTC non-commercial net positioning. LME non-commercial net positions from 30 January 2018 post MIFID II data and respective graphs represent daily data. All commodity futures price data is denominated in USD unless otherwise indicated. **Historical performance is not an indication of future performance and any investments may go down in value.**

Livestock



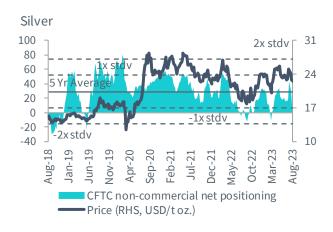


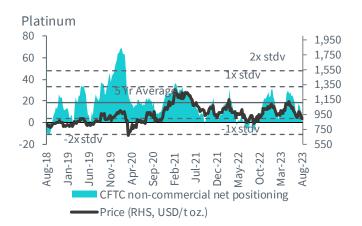


Source: Bloomberg, WisdomTree. Note: positioning in '000 contracts. Standard deviation based on 5-year average CFTC non-commercial net positioning. respective graphs represent daily data. All commodity futures price data is denominated in USD unless otherwise indicated. **Historical performance is not an indication of future performance and any investments may go down in value.**

Precious Metals







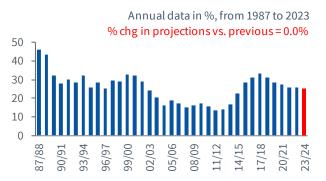


Source: Bloomberg, WisdomTree. Note: positioning in '000 contracts. Standard deviation based on 5-year average CFTC non-commercial net positioning. respective graphs represent daily data. All commodity futures price data is denominated in USD unless otherwise indicated. **Historical performance is not an indication of future performance and any investments may go down in value.**

Inventories

Agriculture



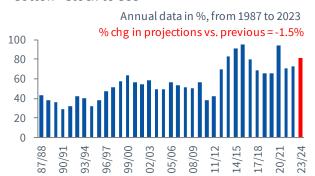


Coffee - Stock to Use

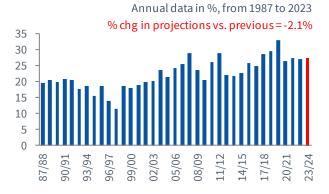




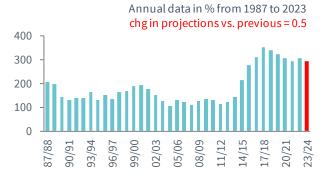
Cotton - Stock to Use



Soybeans - Stock to Use

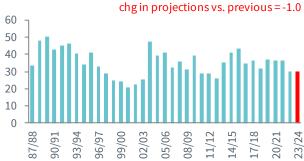


Corn - Ending Stocks



Coffee - Ending Stocks

Annual data in mln bags (60 kg), from 1987 to 2023

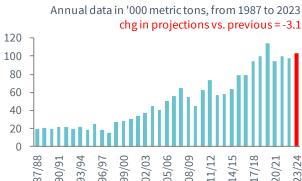


Cotton - Ending Stocks





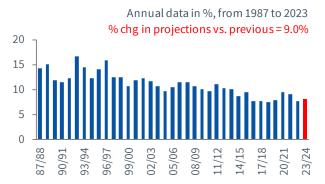
Soybeans - Ending Stocks



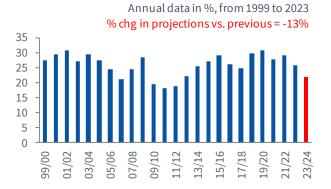
Source: USDA, Bloomberg, WisdomTree. Note: Ending stocks, inventories and stock to use data from the USDA are annual with monthly update of 2023/2024 estimates. Historical performance is not an indication of future performance and any investments may go down in value.

Agriculture

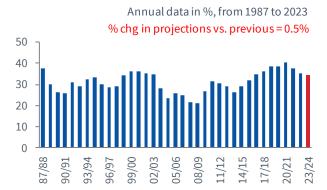
Soybean Oil - Stock to Use



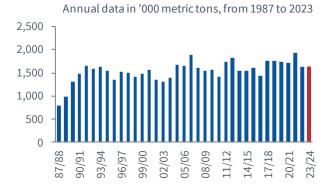
Sugar - Stock to Use



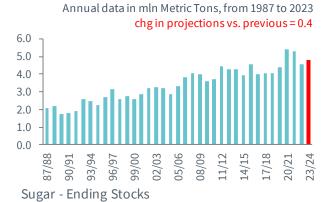
Wheat - Stock to Use



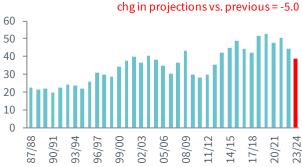
Cocoa - Inventory



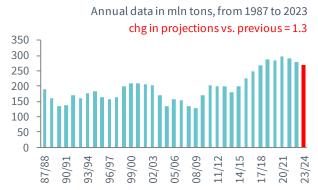
Soybean Oil - Ending Stocks



Annual data in mln Metric Tons, from 1987 to 2023



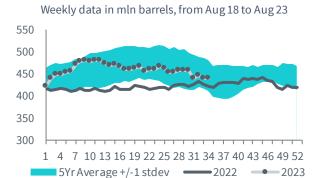
Wheat - Ending Stocks



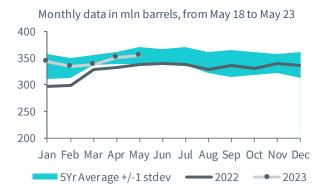
Source: USDA, Bloomberg, WisdomTree. Note: Ending stocks, inventories and stock to use data from the USDA are annual with monthly update of 2023/2024 estimates. Historical performance is not an indication of future performance and any investments may go down in value.

Energy

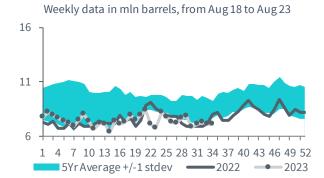
US Oil Inventory



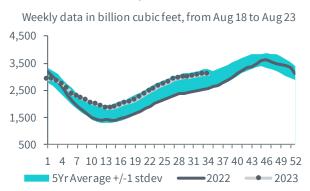
OECD Europe Oil Industry Inventory



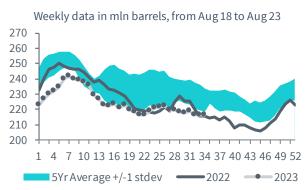
Heating Oil Inventory



Natural Gas Inventory

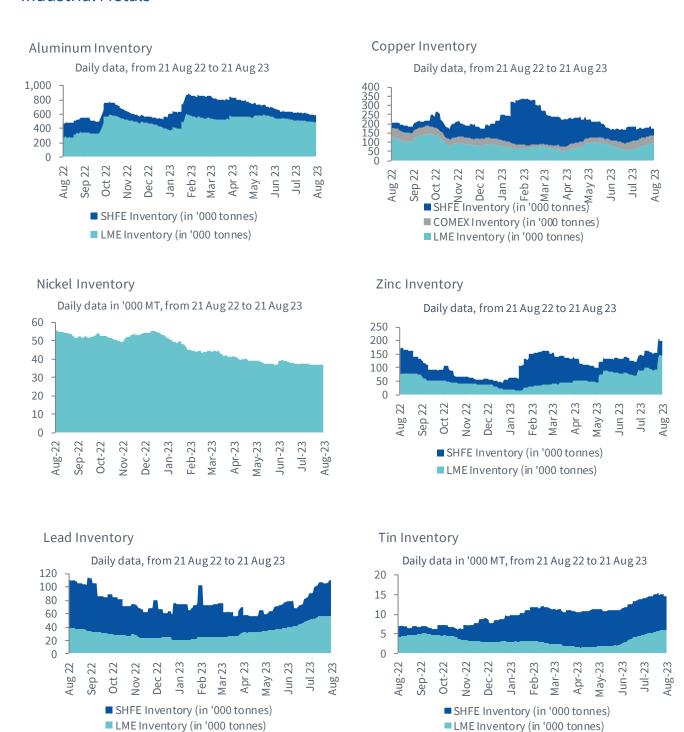


Gasoline Inventory



Source: Source: IEA / DOE, Bloomberg, WisdomTree. Note: "Oil - OECD Inventory" represents OECD industry stocks and is reported with a 3-month lag. Historical performance is not an indication of future performance and any investments may go down in value.

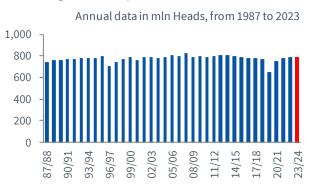
Industrial Metals



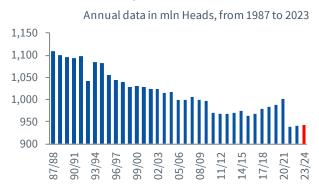
Source: Bloomberg, WisdomTree. Historical performance is not an indication of future performance and any investments may go down in value.

Livestock

Lean Hogs Inventory



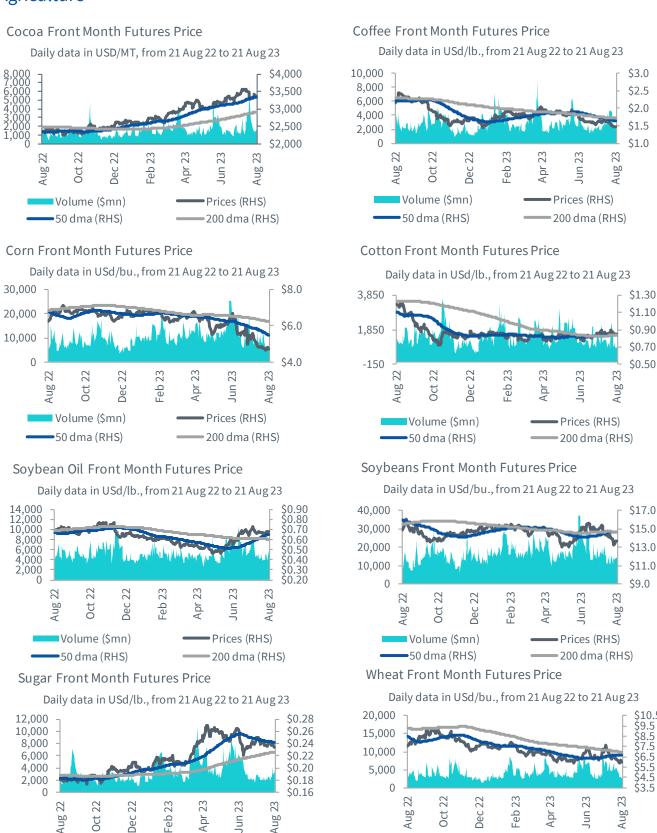
Live Cattle Inventory



Source: USDA, Bloomberg, WisdomTree. Note: Ending stocks, inventories and stock to use data from the USDA are annual with monthly update of 2023/2024 estimates. **Historical performance is not an indication of future performance and any investments may go down in value.**

Moving Average and Volumes

Agriculture



Source: Bloomberg, WisdomTree. Note: all commodity futures trading volume and price data is denominated in USD unless otherwise indicated. Historical performance is not an indication of future performance and any investments may go down in value.

Aug 🤇

Apr

Jun

Prices (RHS)

200 dma (RHS)

Oct

Volume (\$mn)

■50 dma (RHS)

Oct

■Volume (\$mn)

-50 dma (RHS)

eb :

λpr

Aug 3

Jun

Prices (RHS)

200 dma (RHS)

Energy

Brent Oil Front Month Futures Price

Daily data in USD/bbl., from 21 Aug 22 to 21 Aug 23



WTI Oil Front Month Futures Price

Daily data in USD/bbl., from 21 Aug 22 to 21 Aug 23



Natural Gas Front Month Futures Price

Daily data in USD/MMBtu, from 21 Aug 22 to 21 Aug 23



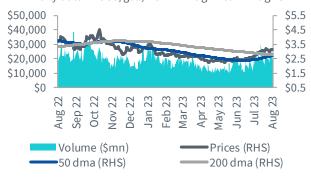
Gasoline Front Month Futures Price





Heating Oil Front Month Futures Price

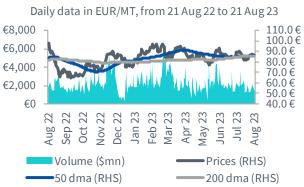




Source: Bloomberg, WisdomTree. Note: all commodity futures trading volume and price data is denominated in USD unless otherwise indicated. Historical performance is not an indication of future performance and any investments may go down in value.

Carbon

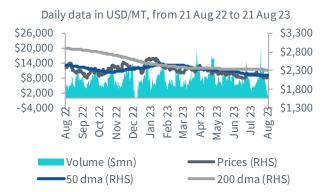
Carbon Front Month Futures Price



Source: Bloomberg, WisdomTree. Note: all commodity futures trading volume and price data is denominated in USD unless otherwise indicated. Historical performance is not an indication of future performance and any investments may go down in value.

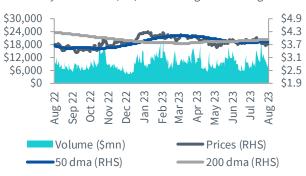
Industrial Metals

Aluminum Front Month Futures Price



Copper (COMEX) Front Month Futures Price





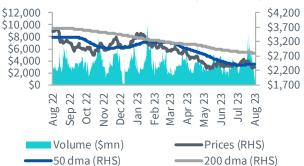
Nickel Front Month Futures Price

Daily data in USD/MT, from 21 Aug 22 to 21 Aug 23



Zinc Front Month Futures Price

Daily data in USD/MT, from 21 Aug 22 to 21 Aug 23



Lead Front Month Futures Price

Daily data in USD/MT, from 21 Aug 22 to 21 Aug 23 \$4,000 \$2,500 \$2,300 \$3,000 \$2,100 \$2,000 \$1,900 \$1,000 \$1,700 \$0 \$1,500 Mar 23 23 23 33 eb : May 70/ lan Iun ■Volume (\$mn) Prices (RHS)

Copper (LME) Front Month Futures Price

50 dma (RHS)

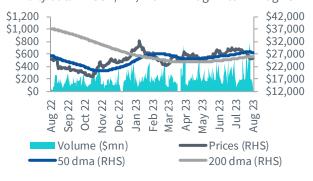
Daily data in USD/MT, from 21 Aug 22 to 21 Aug 23

200 dma (RHS)



Tin Front Month Futures Price

Daily data in USD/MT, from 21 Aug 22 to 21 Aug 23

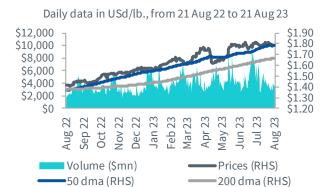


Livestock

Lean Hogs Front Month Futures Price



Live Cattle Front Month Futures Price



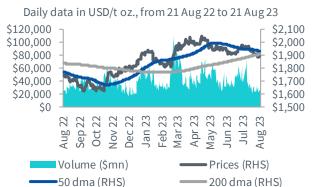
Feeder Cattle Front Month Futures Price



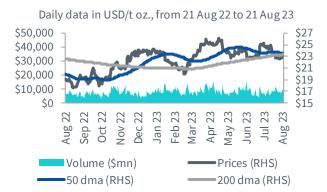


Precious Metal

Gold Front Month Futures Price



Silver Front Month Futures Price



Platinum Front Month Futures Price



Palladium Front Month Futures Price

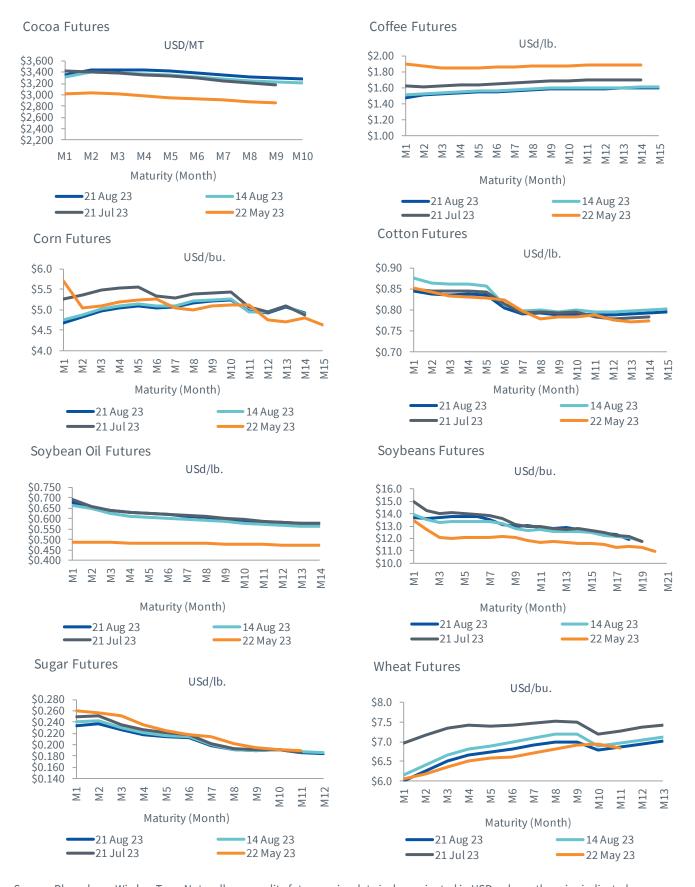
■50 dma (RHS)



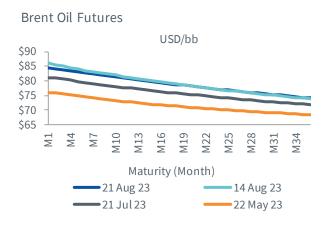
=200 dma (RHS)

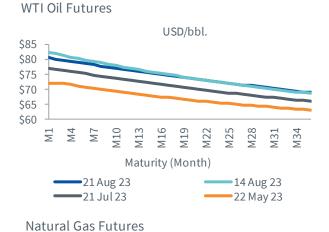
Future Curves

Agriculture

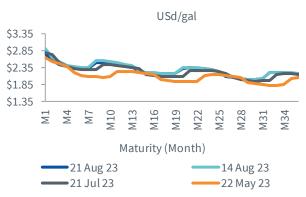


Energy









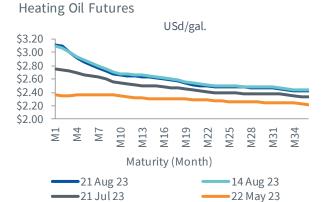


14 Aug 23

22 May 23

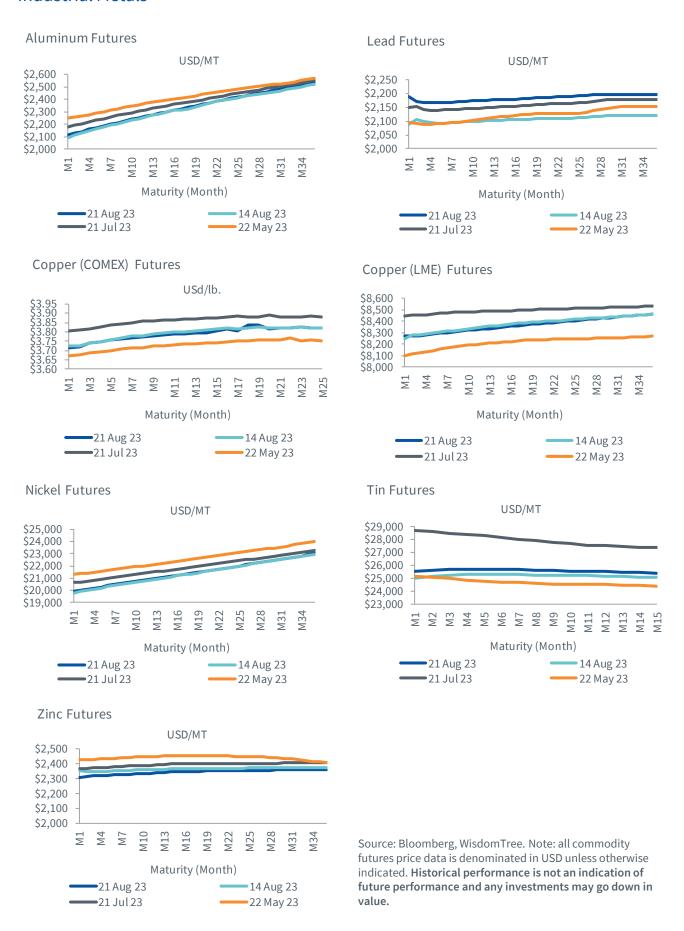
-21 Aug 23

-21 Jul 23

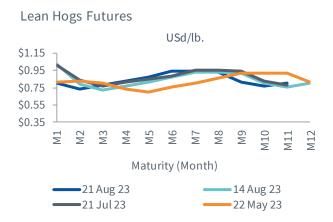


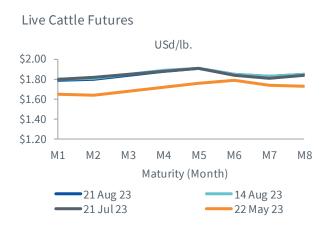
Carbon

Industrial Metals

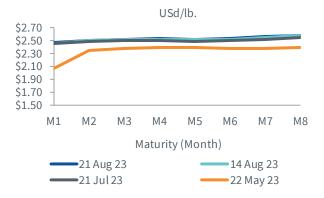


Livestock

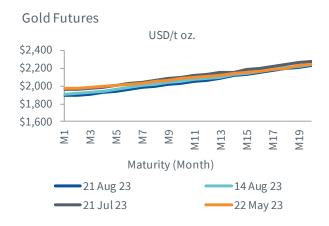


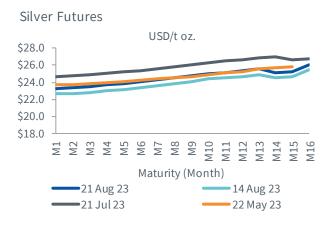


Feeder Cattle Futures



Precious Metals









Commodity Monthly Matrix Explained

Score based on unweighted sum of four fundamental/technical measures detailed below with each measure awarded a possible score of -1, 0, or 1 depending on whether variable is viewed as fundamentally negative, neutral or positive. Score ranging from -4 to +4. For commodities where data is not available or not relevant, scores are calculated on remaining variables and adjusted to the -4 to +4 scale. The score matrix is designed to highlight significant changes in key variables but should not be viewed as predictor of performance.

The four fundamental/technical measures are as follow:

- + Price vs. 200 days moving average: 1 when price is above 200dma and return is positive, -1 when price is below 200dma and return is negative, 0 otherwise.
- + % change in net positioning over the past month: 1 when % change is positive, -1 when % change is negative, 0 when no change.
- + % change in inventory level over the past 3 months: 1 when % is negative, -1 when % is positive, 0 when no change.
- + Roll yield between the front and second month futures contracts: 1 when in backwardation, -1 when in contango, 0 when no change.

Calendar

WisdomTree - Recent Blogs					
17-Aug-23	Aneeka Gupta	What does El Niño's return mean for commodities?			
16-Aug-23	Mobeen Tahir	Renewable energy – bold ambitions, exciting innovations, and hope for a sustainable <u>future</u>			
14-Aug-23	WisdomTree	Diversifying your emerging market exposure using WisdomTree strategies			
11-Aug-23	Piergiacomo Braganti	What's Hot – Italian banking stocks (overly) hit by the new "windfall tax"			
10-Aug-23	Chris Gannatti	Behind the Markets Podcast: Using ChatGPT to forecast equity price movements, with Alejandro Lopez Lira			
09-Aug-23	Mobeen Tahir	<u>WisdomTree Renewable Energy UCITS ETF has SFDR Article 9 status. What does that mean and why is it important?</u>			
07-Aug-23	Benjamin Dean	Clarity improves around crypto asset securities in the US			
04-Aug-23	Mobeen Tahir	What's Hot: Oil prices rebound as markets anticipate tightness			
03-Aug-23	Jeremy Schwartz	Performance after peak valuation: navigating the tech sector's high multiples			
01-Aug-23	Benjamin Dean	A flurry of spot US Bitcoin ETF filings			
01-Aug-23	Aneeka Gupta	What's Hot: Bank of Japan sitting on the fence on easy policy exit			
31-Jul-23	Jeremy Schwartz	Behind the Markets with 314 Research: Outlook for economy, commodities, and real <u>assets</u>			
28-Jul-23	Chris Gannatti	Behind the Markets Podcast: what can history teach us about the future of AI?			

WisdomTree - Past Issues of Commodity Monthly Monitor				
Jun-Jul 2023	Research Team	Geopolitics back in the driving seat		
May-Jun 2023	Research Team	Geopolitics back in the driving seat		
Apr-May 2023	Research Team	Still waiting for China to rebound		
Mar-Apr 2023	Research Team	Firing on multiple cylinders		
Feb-Mar 2023	Research Team	Risk-off in commodities as the impact of long and variable policy lags arrives		
The research notes are for qualified investors only				

The research notes are for qualified investors only.

Key Reports					
Current	Next release				
11-Aug-23	12-Sep-23	USDA	World Agricultural Supply and Demand Estimates		
08-Aug-23	12-Sep-23	EIA	Short-Term Energy Outlook		
10-Aug-23	12-Sep-23	OPEC	OPEC Oil Market Report		
11-Aug-23	13-Sep-23	IEA	IEA Oil Market Report		

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