Global Energy Weekly

Rates, recession, and restocking are the keys to energy

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Commodities
Global

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Growing energy supplies have offset Middle East tensions

While heightened tensions in the Middle East initially triggered a big dislocation in oil futures and options prices in October, oil supplies have continued to expand into November. Russian seaborne export cargoes specifically have moved higher in recent weeks, Iran continues to grow production, and Venezuela just got a 6-month reprieve on US sanctions. Plus US shale supply has surprised to the upside too. With global inventories pushing up and the Israel-Gaza conflict still contained, oil prices have fallen. With the Battle royale between oil and money in the rear view mirror, macro factors could come into play next to drive global oil prices higher or lower over the coming months. In particular, where do US interest rates settle and when and why rate cuts start will remain a key area of focus for the asset class.

Macro factors such as rates and FX could drive energy next

If lower US rates eventually trigger a weaker USD in 2024 as our FX team expects, we believe that currency could become a tailwind for energy demand and prices next year. However, before a weaker USD starts to support oil prices, the open debate on what the new US neutral interest rate should be in a post-Covid world needs to settle, as a higher neutral rate may or may not necessarily be consistent with lower economic activity and thus lower oil demand growth. For now, global inflation has continued to ease with lower energy prices this year, and EM central banks are cutting rates, a positive for the commodities asset class at a time positioning is particularly low. If recent data points in the US confirm the end of the monetary tightening cycle, easier policy around the world should come to support commodity prices in 2024 so long as growth eases smoothly.

2024 restocking cycle may support commodities

More importantly, commodity inventories are relatively low and stocks of both intermediate and finished goods are also low, a set up for a restocking cycle if growth holds up or recovers. Of course, the bears will argue that the Fed has already over tightened the US economy and a recession will ensue in coming months. As such, while cross commodity correlations have come down in recent months, a reversal in this trend could come soon. Easier policy and an inflection in industrial activity and trade could trigger a joint run up in commodity prices, or perhaps the lagged effects of monetary tightening will trigger a joint meltdown across many commodities. We note that interest rate cutting cycles have historically fueled commodity prices by an average of 19% after the last cut, and the dynamics are highly contingent on the context of the cutting cycle. Given where commodity inventories stand today, we believe the monetary policy shift, already underway in emerging markets, could be a signal to increase allocations to energy and commodities as an asset class, so long as progress on disinflation rather than collapsing growth is the main driver.

Refer to important disclosures on page 14 to 15.
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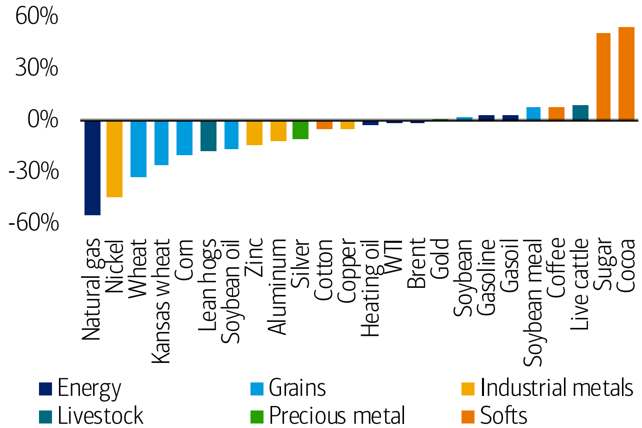
Rates, recession, and restocking are the keys to energy

Softs, energy, and precious outperformed grains, base metals in '23…

Looking across the commodity complex, we note that total returns for softs such as sugar and cocoa came out on top (Exhibit 1), delivering 22% for investors year-to-date. In stark contrast, grains were by far the worst performing raw material sector this year, with industrial metals not very far behind (Exhibit 2). Despite all the volatility experienced by oil prices during the course of the year, energy will likely end the year higher, helped by roll returns of 7.5% but weighed by spot returns of -7% year-to-date. Note that total commodity returns measured by the MLCX TR index have neared 0.9% so far this year compared to 18% for the S&P500TR index and -0.2% for the 10y US Treasury total return index.

Exhibit 1: MLCX year-to-date commodity returns

Looking across the commodity complex, we note that returns for softs such as sugar and cocoa came out on top...



Source: Bloomberg

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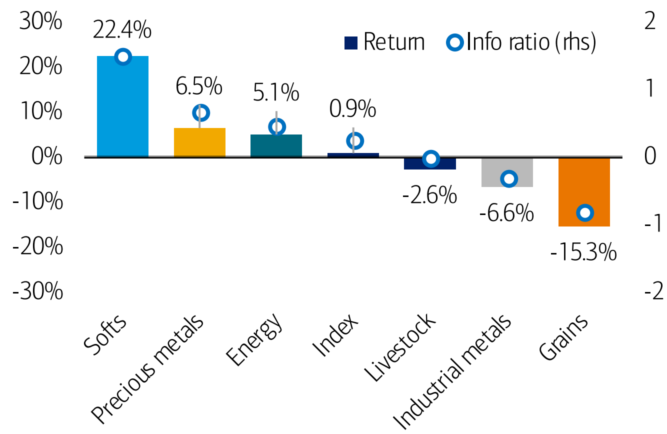
Exhibit 2: MLCX commodity sector index year-to-date returns and information ratios

... while grains were by far the worst performing raw material sector, with industrial metals not far behind



Source: Bloomberg

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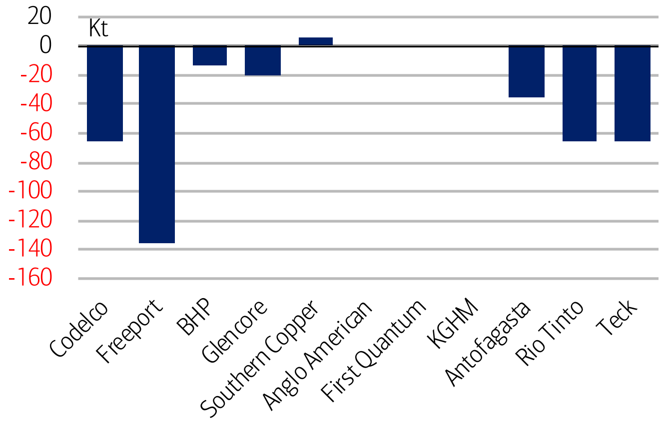
…as slowing economic growth often clashed with supply side issues

The returns delivered by commodities have been rather diverse and attained against a slowing macro economic backdrop in which the China post Covid reopening failed to live up to its hype. Supply in a number of key commodities such as copper failed to grow in line with expectations ultimately lending support to the red metal as the real estate crisis in China deepened (Exhibit 3), while energy-linked agricultural commodities such as corn and sugar diverged, leaving ethanol prices in a limbo (Exhibit 4) as biofuel supplies continued to grow.

Exhibit 3: Change in 2023 production guidance

Supply in a number of key commodities such as copper failed to grow in line with expectations...



Note: Freeport is sales guidance, BHP figures consolidate Escondida and is per fiscal year
Source: company reports, BofA Global Research

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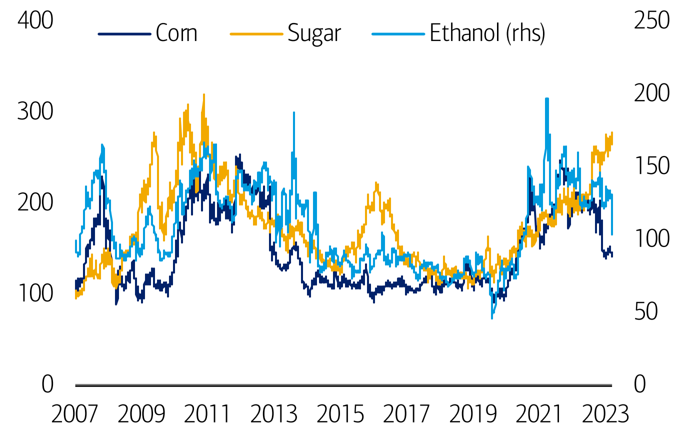
Exhibit 4: Corn, sugar, and ethanol front-month futures/swap prices indexed to Sep-2007

... while energy-linked agricultural commodities such as corn and sugar diverged, leaving ethanol in limbo



Source: Bloomberg

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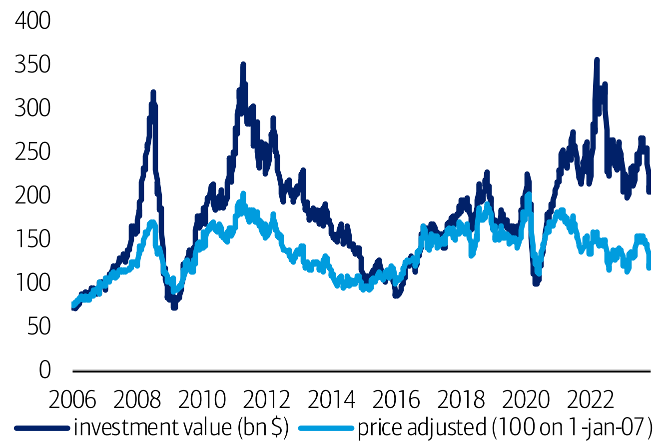
Commodity investors have continued to pare back their positions...

As a result of worsening macro headwinds such as higher interest rates and rising recession risks in the US and China, commodity investors have continued to reduce their positions in the asset class (Exhibit 5). We estimate investor assets are now at around $208bn compared to $221bn at the start of the year, with an average decrease in the value of positions of 6.5%. Similarly, our analysis of systematic flows also points to a sharp reversal in commodity longs in the past month (Exhibit 6) after a blip in early September driven by the extension of the Saudi cuts into 2024.

Exhibit 5: Commodity index assets under management

As a result of worsening macro headwinds, commodity investors have continued to reduce their positions...



Source: BofA Global Research, CFTC

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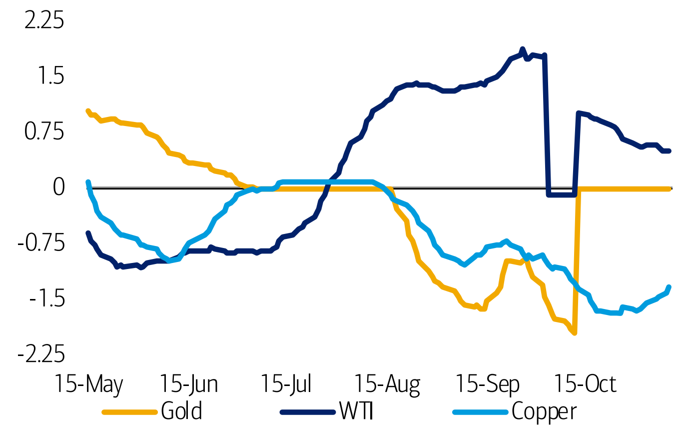
Exhibit 6: BofA Trend Following (CTA) Oil, Gold, and Copper (HG) Position

... while our analysis of systematic flows also points to a sharp reversal in commodity longs in the past month



Source: BofA Global Research. Data as of 10-Nov-2023

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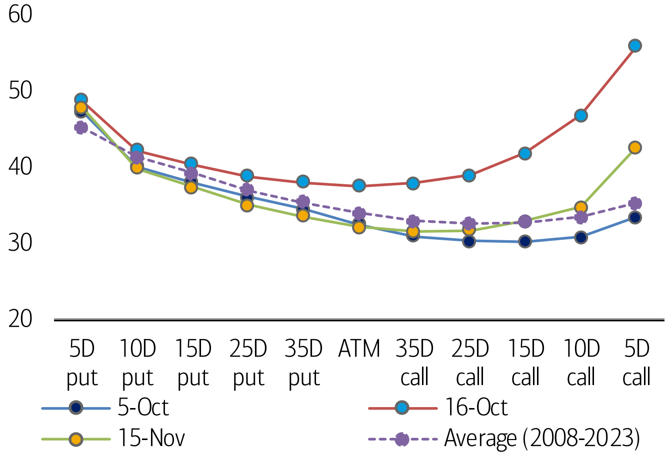
...as Middle East tensions have not led to supply dislocations so far

While heightened tensions in the Middle East initially triggered a big dislocation in oil options markets (Exhibit 7) that led to a pronounced call skew over a number of weeks, oil supplies have continued to expand in November. Russian cargoes specifically have moved higher (Exhibit 8) and seaborne exports averaged 3.5mn b/d in the past week, the highest levels since July. The Russian export surge is not surprising from a financial point of view, as Russia needs all the money it can get to keep funding its military efforts, but begs the question of how much policy coordination remains within the OPEC+ group.

Exhibit 7: Brent crude 3-month option skew
While heightened tensions in the Middle East initially triggered a big dislocation in oil options markets...



Source: Bloomberg
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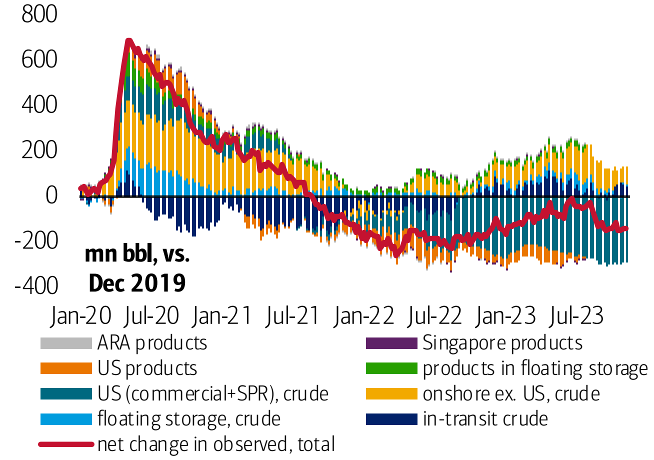
Exhibit 8: Observed change in petroleum inventories
... oil supplies have continued to expand in recent weeks, with Russian cargoes specifically moving higher



Source: Kayrros, Bloomberg, BofA Global Research
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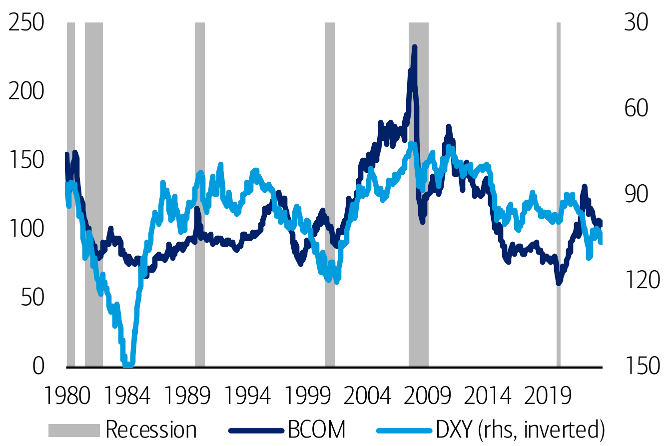
Raw materials have become less connected to currency moves...

While incremental supplies in Russia and also in the US are likely behind some of the latest declines in prices, other macro forces are at work. It is important to remember that the historical relationship between the DXY and commodity investor returns seems rather broken (Exhibit 9), even though commodity prices in local currency such as EUR, GBP, or JPY have hovered at very high levels (Exhibit 10). Perhaps the weaker growth projected by consensus forecasters, as well as by BofA, for developed economies into 2024, may once again change this relationship.

Exhibit 9: Bloomberg commodities index (BCOM) and dollar index (DXY)
Meanwhile, the historical relationship between the DXY and commodity investor returns seems rather broken...



Source: Bloomberg
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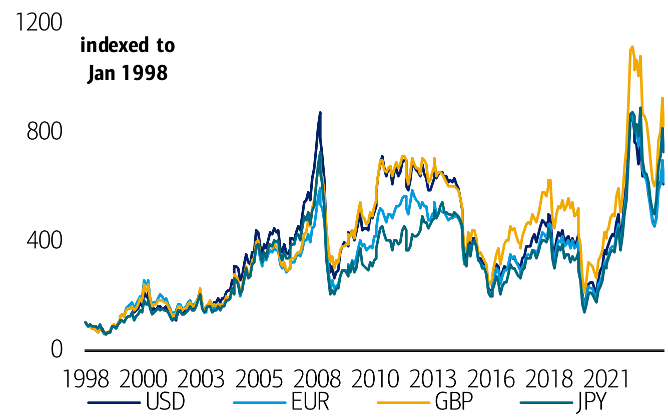
Exhibit 10: Front month gasoil futures price in local currency indexed to January 1998
... even though commodity prices in local currency such as EUR, GBP, or JPY have hovered at very high levels



Source: Bloomberg, BofA Global Research
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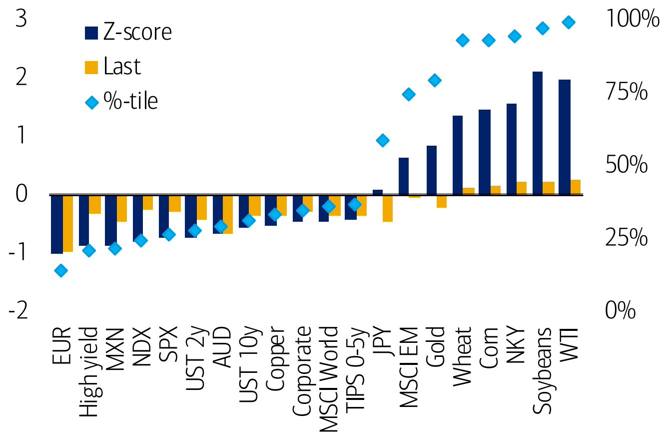
....and at times oil dollar correlations have actually turned positive...

Interestingly, commodity correlations to the dollar have surged in recent months to become some of the most positive in history (Exhibit 11) with commodities like oil and grains showing some of their most positive linkage to the US currency in recent memory. Note that this high positive commodity/dollar correlation is a clear break from the historically highly negative oil-dollar correlations witnessed in the 1990s and 2000s (Exhibit 12). Will the positive commodity/DXY link last into next year? If lower US rates eventually trigger a weaker USD in 2024 as our FX team expects, we believe that the correlation could again flip as commodity demand improves.

Exhibit 11: Rolling 63-day cross-asset correlations to DXY, percentile, and z-score

In fact, commodity correlations to the dollar have surged in recent months to some of the most positive in history…



Source: BofA Global Research estimates, Bloomberg

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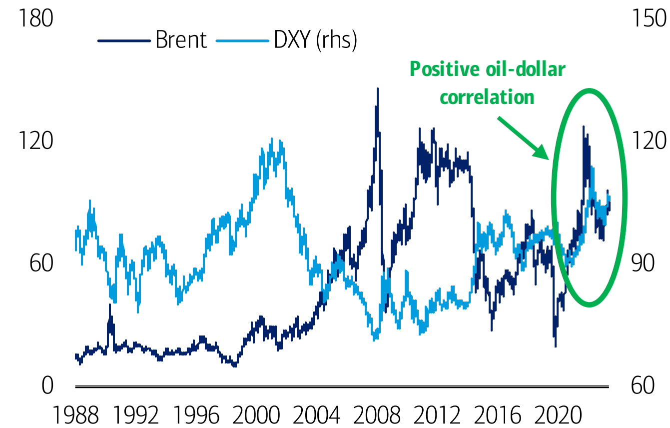
Exhibit 12: Brent crude oil front month futures price and broad dollar index (DXY)

… which suggest that the linkage between dollar pricing and commodity demand could not be as penalizing as before



Source: Bloomberg

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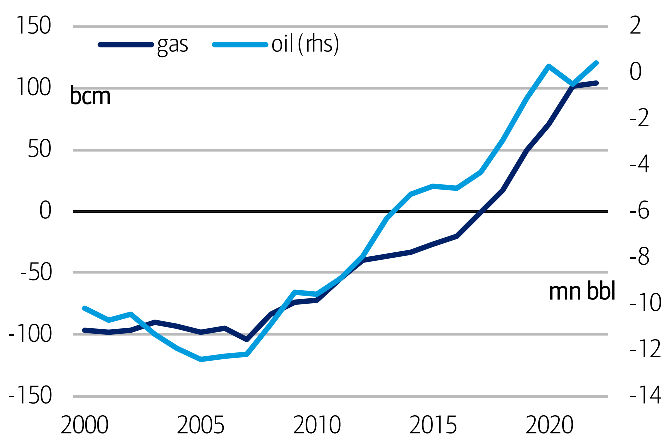
…supported by America's growing dominance of commodity flows

Truth be told, the breakdown in USD/commodity correlations has had a lot more to do with US export dynamics that demand itself, even if expansive global GDP periods tend to coincide with a weaker US currency. While the US was the world's largest energy importer in 2008, it is now a net exporter of gas, chemicals and petroleum products (Exhibit 13). So higher commodity prices tend to positively impact the US trade balance. Similarly, America's agricultural balances have continued to improve, allowing America to dominate this space too (Exhibit 14) and setting the stage for USD strength when commodity prices are high. Nonetheless, a weaker USD in 2024 should support nominal GDP growth in USD and thus commodity prices, in our view.

Exhibit 13: Net US exports

While the US was the world's largest energy importer in 2008, it is now a net exporter of gas, chemicals and petroleum products



Source: Energy Institute

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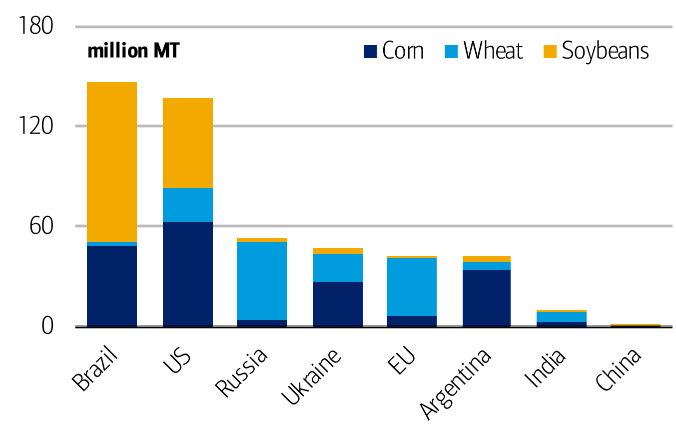
Exhibit 14: Global corn, wheat, and soybean exports as a percentage of global exports

Similarly, America's agricultural balances have continued to improve, allowing America to dominate this space too



Source: USDA

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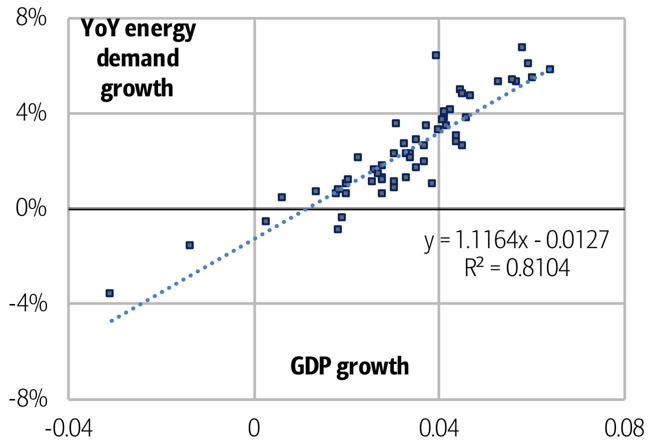
Commodity returns are increasingly linked to GDP growth and rates

Another key factor to consider when looking at commodities into 2024 is the pace of expansion of the global economy. World GDP expanded by 3.5% last year and by 3% this year. Most forecasters, including BofA, point to a decelerating growth environment into 2024 as a result of the very restrictive monetary policy backdrop. Energy demand growth is usually very closely linked to GDP, as productivity growth highly depends on it (Exhibit

15). Moreover, oil price changes are also highly connected to GDP changes, but price moves are often highly amplified (Exhibit 16).

Exhibit 15: World GDP and energy demand growth (1966-2022)
Energy demand growth is usually very closely linked to GDP, as productivity growth highly depends on it



Source: BP, Bloomberg

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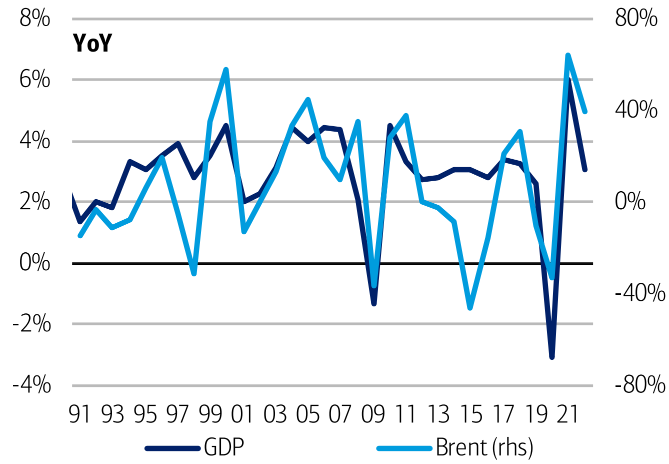
Exhibit 16: Global GDP growth and Brent crude oil returns
Moreover, oil price changes are also highly connected to GDP changes, but price moves are often amplified



Source: World Bank, Bloomberg

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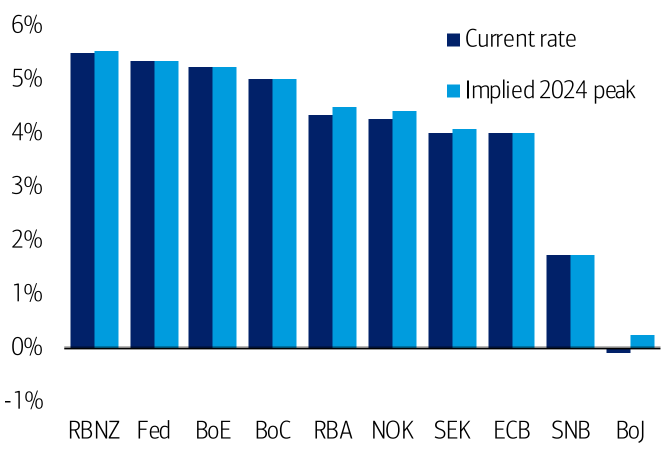
Thus, where do rates settle & rate cuts start is key for the asset class

If global GDP slows down materially beyond consensus expectations, demand for commodities will also slow down and prices should, other things being equal, fall to reflect the weaker backdrop. Lower commodity prices and lower growth would in turn allow for monetary policy easing at some point in the future. Thus, the question of where interest rates settle and whether the impact on growth is moderate or more dramatic is key for commodities, although markets assume US and European rates are at or close to peak (Exhibit 17). From here on, US interest rate markets price in declines of about 100bps over the course of 2024 (Exhibit 18).

Exhibit 17: G10 central bank policy rates and OIS implied peak through 2024
Where interest rates settle is a key question for commodities, although markets assume we are at or close to peak



Source: Bloomberg, BofA Global Research

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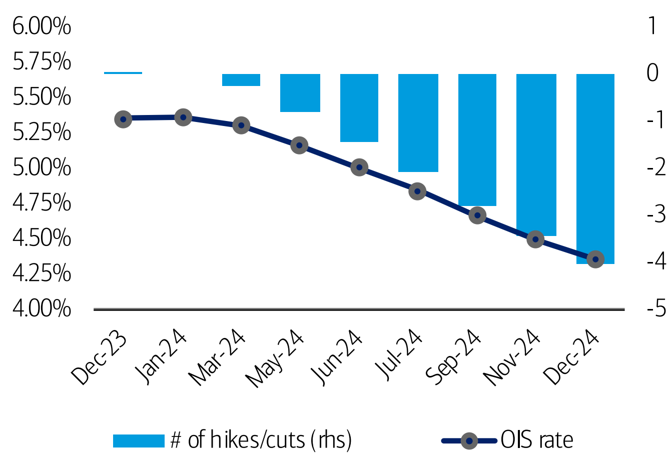
Exhibit 18: US OIS implied rates
From here on, US interest rate markets price in declines of about 100 bps over the course of 2024



Source: Bloomberg, BofA Global Research

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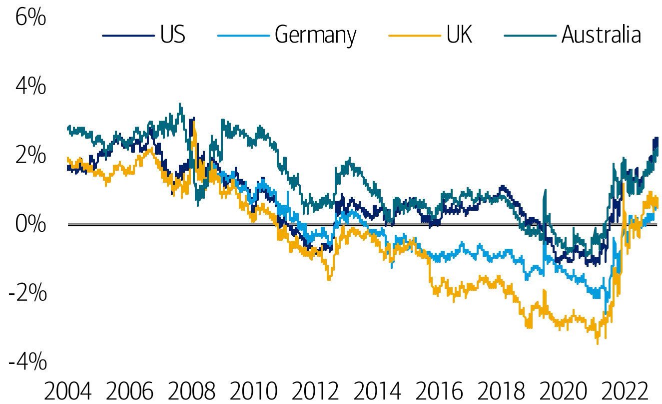
While a run up in rates could slow growth, hurting commodity returns…

A run up in interest rates, whether nominal or real, should eventually impact economic activity negatively. The crucial question of course is how negative the hit will be. Real interest rates have increased very markedly during the course of this year as demand for money outpaced supply (Exhibit 19). If rates have done their work, oil demand should ease and prices should fall. However, there is also an open debate as to what the new neutral interest rate will be in a post-Covid world (Exhibit 20). In turn, a higher neutral implies that the current level of policy rates may or may not necessarily be consistent with lower economic activity and thus lower oil demand growth.

Exhibit 19: 10 year real rates
Real rates have increased very markedly during the course of this year as demand for money outpaced supply...



Source: BofA Global Research, Bloomberg

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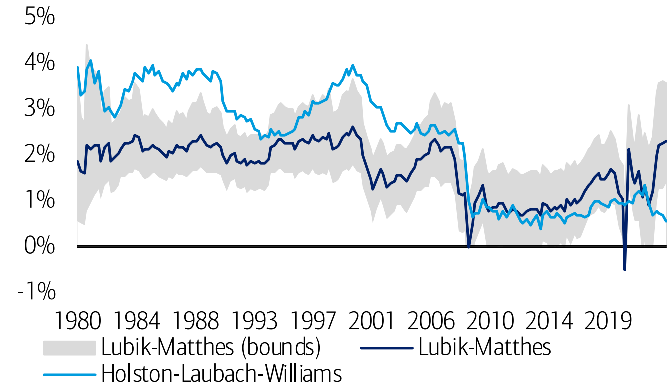
Exhibit 20: Holston-Laubach-Williams and Lubik-Matthes estimates of US neutral interest rate
... and there is an open debate as to what the new neutral interest rate will be in a post-Covid world



Source: Federal Reserve Bank of New York, Federal Reserve Bank of Richmond

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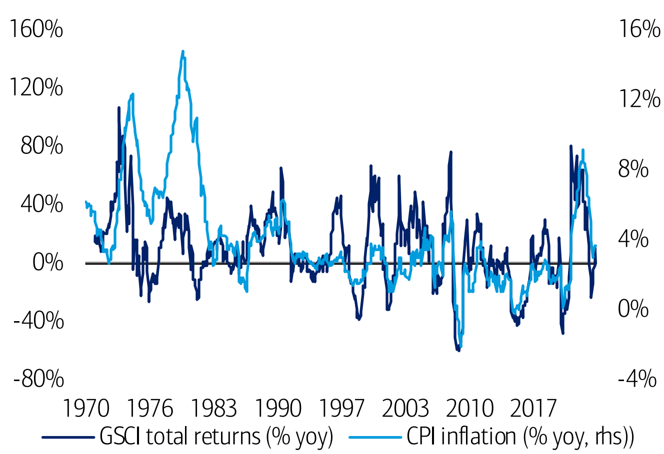
...and inflation still has to ease meaningfully in line with expectations...

In any case, the one relationship that still remains an anchor of commodities as an asset class is inflation. Commodity prices have maintained an exceptionally strong relationship with inflation over many decades as a result of two drivers. First, food and energy are an important part of the US and global inflation baskets, and an increase in commodity prices impacts headline inflation directly and through lagged effects as raw materials seep through other segments of the economy. Second, energy is the most volatile component of inflation because prices change every second of the day, having an outsized influence in expectation settings (Exhibit 21). As of now, inflation expectations embedded into fixed income markets point to a pronounced deceleration in price rises ahead (Exhibit 22).

Exhibit 21: Annual GSCI total returns and US CPI inflation
Commodity prices have maintained an exceptionally strong relationship with inflation over many decades



Source: Bloomberg

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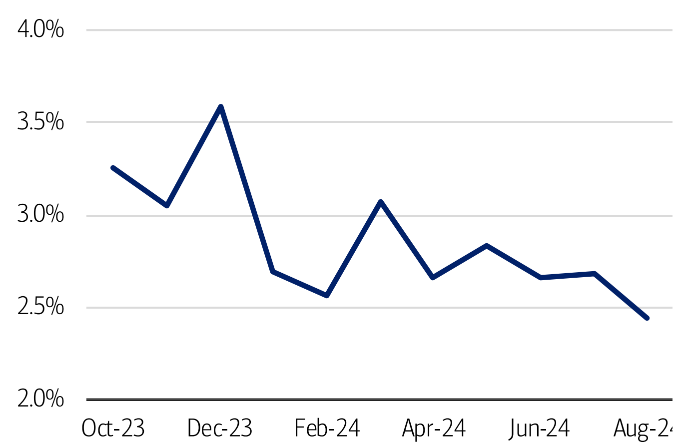
Exhibit 22: US CPI year-on-year swaps implied inflation
Now inflation expectations embedded into fixed income markets point to a pronounced deceleration in price rises ahead



Source: Bloomberg

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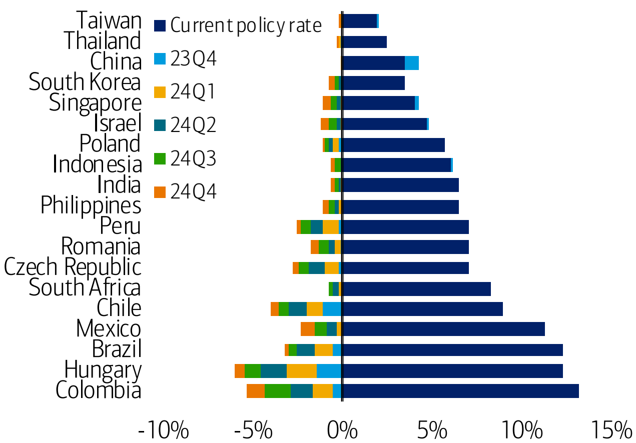
...EM central banks are cutting rates, a positive for the asset class

Because commodity curves are mostly in backwardation (i.e. forward prices are below spot), we believe inflation expectations tend to underestimate the risks of a resurgence in commodity prices on a forward basis. Looking at Bloomberg, we note that consensus projections point to a continued reduction in rates across EMs on the basis of falling inflation expectations and increased policy bandwidth to support economic activity (Exhibit 23). Meanwhile, we expect developed markets to follow suit over the course of 2024, potentially leading to a pivot in macro conditions (Exhibit 24) and an improvement in commodity demand if easing is not forced by significant growth contractions.

Exhibit 23: Bloomberg median expectation of emerging market monetary policy rates

Looking at Bloomberg consensus, we note that projections point to a continued reduction in rates across EMs



Source: BofA Global Research, Bloomberg

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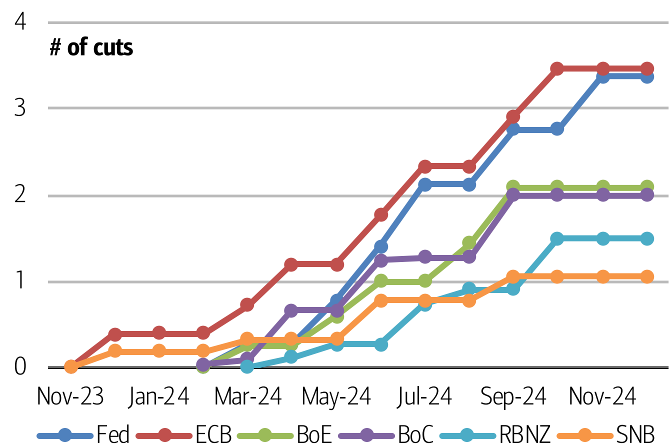
Exhibit 24: Number of swaps implied cuts from max implied rate

Meanwhile, we expect developed markets to follow suit over the course of 2024, potentially changing macro conditions



Source: BofA Global Research, Bloomberg

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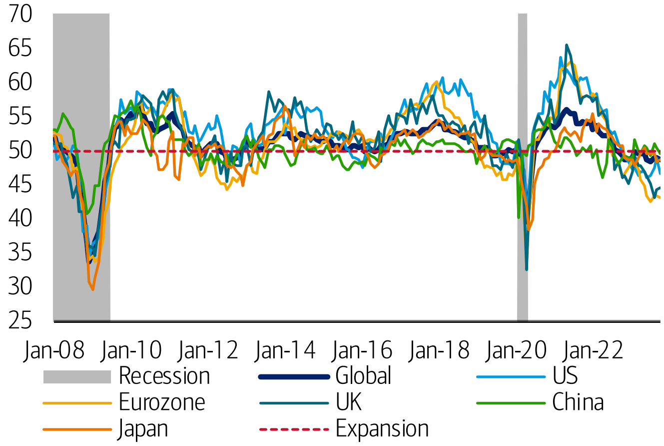
Also, commodity returns have become less linked to PMI moves

While recession risks have featured prominently in the narrative of financial markets this year, the departure point matters. Looking at PMIs, we note the marked downward trend in recent months, a major headwind to commodities this year, and point to the fact that eventually manufacturing expectations tend to improve as reduced industrial activity allows for a reduction in excess inventories of intermediate and finished good (Exhibit 25). Even then, the relationship between commodity returns and PMIs seems to have changed considerably (Exhibit 26) as outside of sustained grid spending supporting copper demand in China, our European economists highlight that sub-50 manufacturing PMIs may not actually reflect as dire industrial activity and can be consistent with low or zero, not contracting growth (see [Europe Economic Weekly: Message understood (we think)](#)).

Exhibit 25: Global manufacturing purchasing manager indices (PMI)
Looking at PMIs, we note that marked downward trend in recent months, a major headwind to commodities this year



Source: ISM, Markit, Haver

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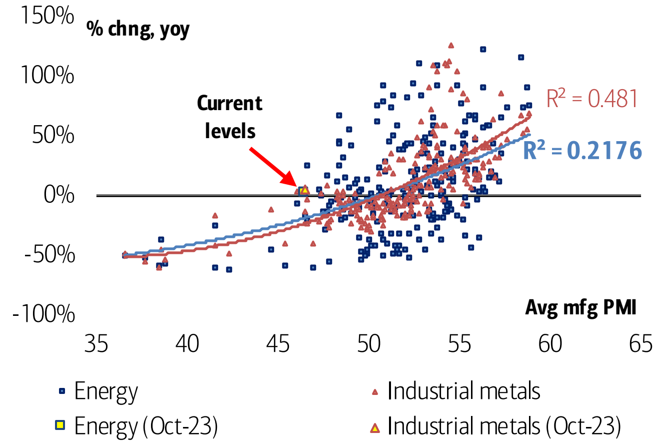
Exhibit 26: Average manufacturing PMIs (US, China, Eurozone) and annual commodity sector index returns
Even then, the relationship between commodity returns and PMIs seems to have changed considerably



Source: ISM, Markit, Bloomberg

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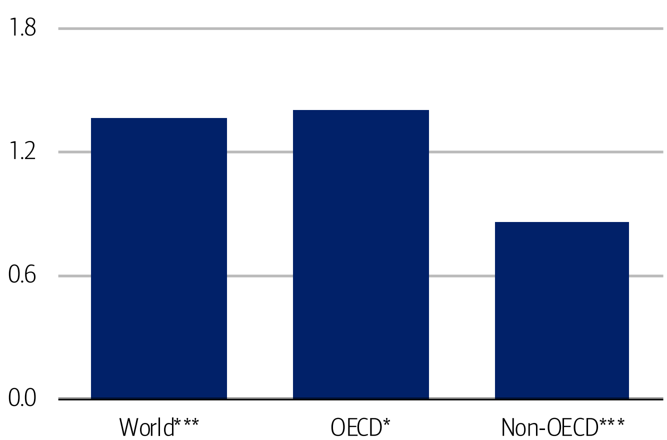
Still, the sensitivity of oil demand to GDP growth is higher for DMs…

So what does a tight money policy and declining PMI industrial backdrop mean for the energy complex? Oil demand is much more sensitive to changes in GDP in developed economies than in emerging economies (Exhibit 27), so the composition of growth matters. We have long argued that global oil demand will likely expand by 1.1mn b/d in 2024 following a 2mn b/d expansion this year, with OECD oil demand growth moving from a slight expansion of 120k b/d to a modest contraction of 240k b/d. Put differently, our commodity demand forecasts already assume that the projected deceleration in DM economic activity over the coming quarters could hurt oil demand growth (Exhibit 28). Yet we still have to pencil in any potential positives from lower rates.

Exhibit 27: Elasticity of oil demand to GDP growth (% year-on-year controlling for Brent crude returns)
Oil demand is much more sensitive to changes in GDP in developed economies than in emerging economies…



Source: BP, IMF, BofA Global Research estimates

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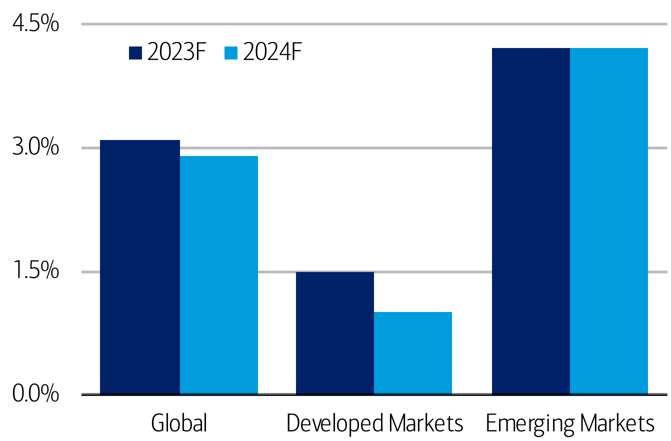
Exhibit 28: BofA global economics GDP forecasts
… suggesting the projected deceleration in DM economic activity over the coming quarters could hurt oil demand growth



Source: BofA Global Research

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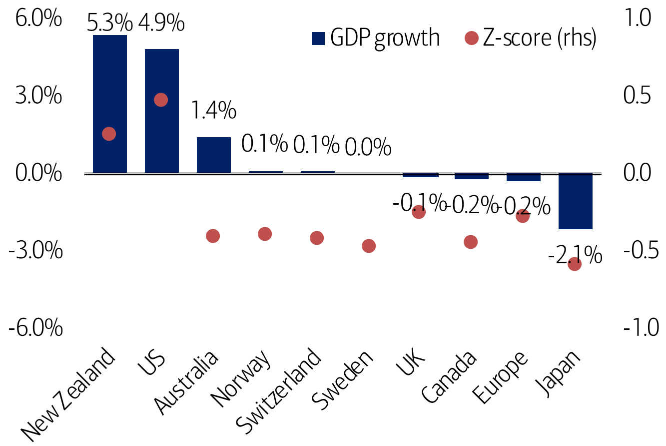
…and fiscal issues could come back to haunt fixed income markets…

Although economic growth has defied expectations and remained resilient in a number of large economies including the US but has recently started to turn (Exhibit 29), government budget deficits remain rather imbalanced and growing debt supply could lead to sustainability issues (Exhibit 30). The US government budget deficit has already doubled in size this year against much more moderate expectations, and the higher rates have not helped balance public books. The deficit has been further amplified by a big 7% boost in tax band rates in 2023 (and again another 5%+ coming in 2024) that has reduced income tax revenues even as the economy expanded.

Exhibit 29: Latest G10 annualized quarterly GDP growth
Although economic growth has remained resilient in a number of large economies including the US…



Source: Haver

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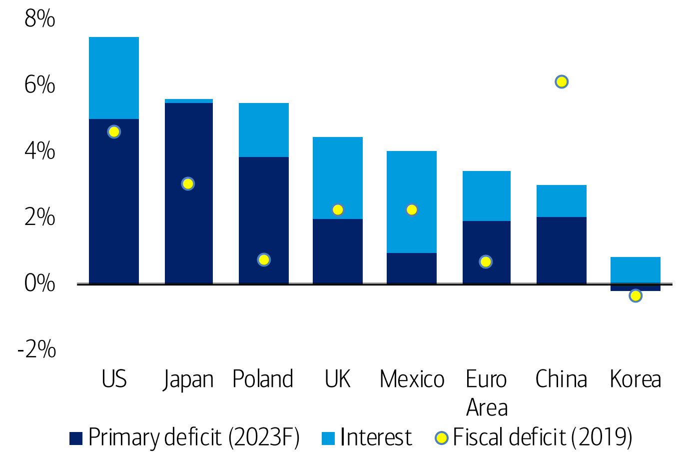
Exhibit 30: Global primary and fiscal deficits as percentage of GDP
… government budget deficits remain rather imbalanced and growing debt supply could lead to sustainability issues



Source: BofA Global Research, IMF, CBO

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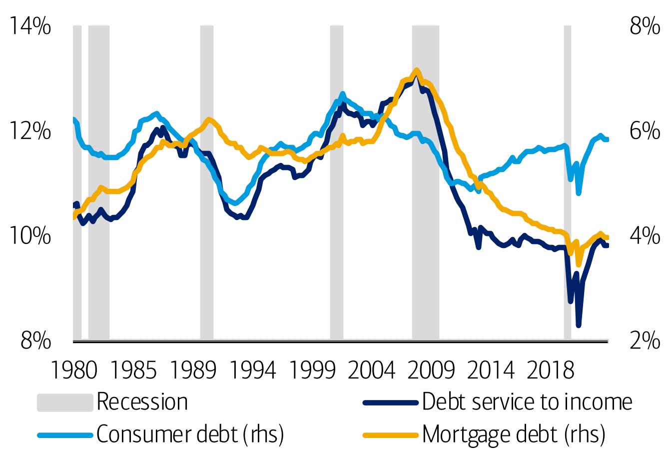
…although the US consumer remains resilient as debt levels are low

The lack of fiscal discipline in the US as well as some other major economies has continued to support growth, but at an important cost. While US Federal government debt levels are high and rising into $34tn, the level of US consumer debt as a share of disposable income remains quite low as does debt service (Exhibit 31). Of course, many consumers refinanced their debts during the pandemic and much of the interest rate risk sits in the hands of government. Meanwhile, commercial and industrial bank lending conditions have tightened during the past year, but consumer loans continue to grow (Exhibit 32) owing to a cleaner balance sheet.

Exhibit 31: US debt service to disposable income
While government debt levels are high, debt service for consumers as a share of disposable income remains quite low



Source: Federal Reserve

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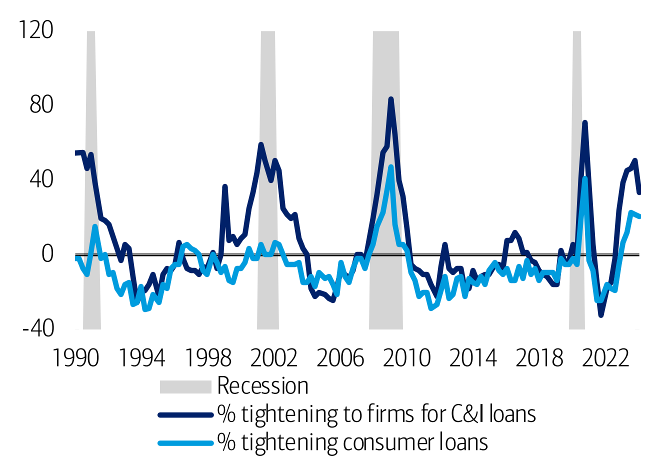
Exhibit 32: Senior Loan Officer Opinion Survey (SLOOS) percentage respondents reporting tighter conditions for industrial and consumer loans
Commercial and industrial bank lending conditions have tightened during the past year, but consumers loans continue to grow



Source: Federal Reserve

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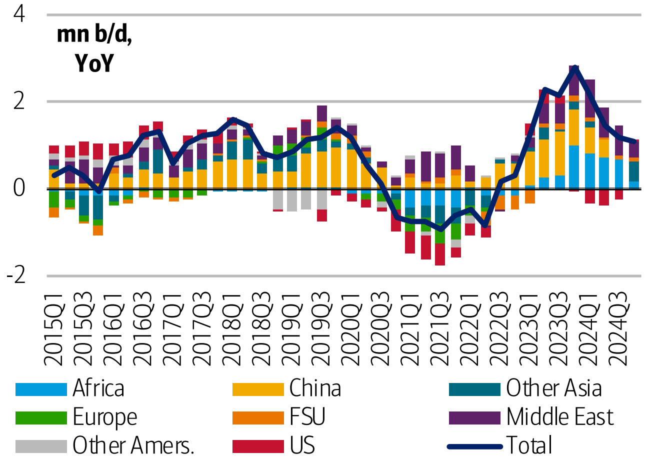
From aggs to energy to metals, micro supply issues have dominated...

To sum up, the macro situation remains in flux with easy fiscal policy and tight monetary allowing for relatively robust consumer activity and economic growth in the US and elsewhere. Meanwhile, from agriculture to energy to metals, the commodity complex has faced a number of micro supply issues that have triggered price rallies throughout this year and will likely continue to do so in 2024. For example, the contraction in refining capacity during the pandemic, coupled with the Ukraine war, triggered exceptional fuel margins (Exhibit 33), while a drought in Europe and Florida respectively lifted the prices of olive oil and orange juice around the world (Exhibit 34).

Exhibit 33: Global refining capacity growth

The contraction in refining capacity during the pandemic, coupled with the Ukraine war, triggered exceptional fuel margins



Source: Platts, BofA Global Research estimates

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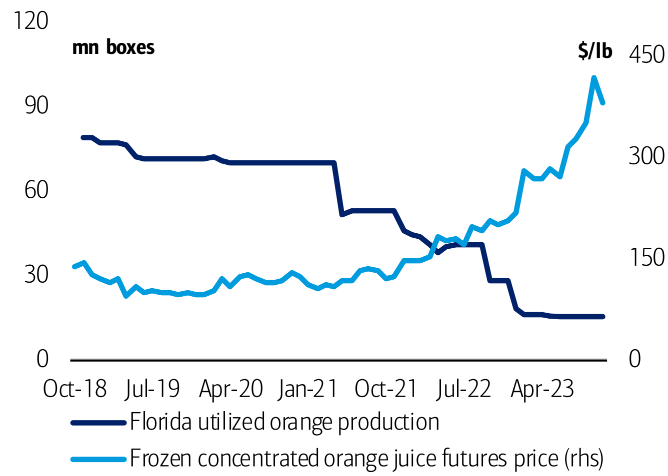
Exhibit 34: Florida utilized orange production and orange juice front month futures price

A drought in Europe and Florida respectively lifted the prices of olive oil and orange juice around the world



Source: Bloomberg, USDA

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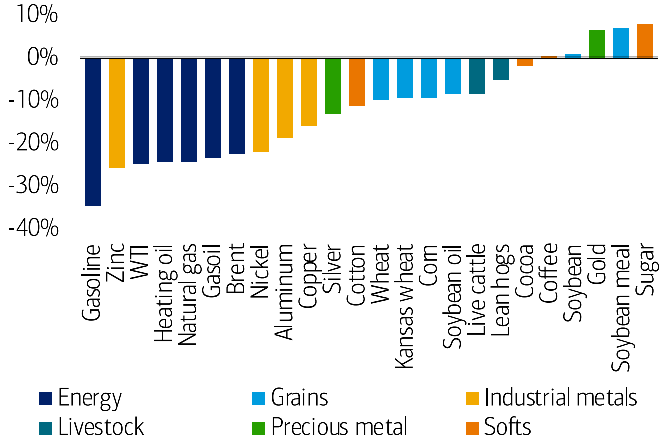
...but a global recession could push all commodity prices lower in '24

The upward moves in commodity markets triggered by micro supply shocks in an environment of relatively steady demand growth have been quite pronounced compared to history and have resulted in significant dispersion in commodity returns across the asset class, a development that partly resembles the narrow breadth in the US equity market. So will commodity markets become highly correlated again? For that to happen, global economic activity needs to move in tandem. Historically, global recessions have had a negative impact on commodity prices across the board (Exhibit 35) with cross commodity correlations spiking whenever macro economic activity collapsed around the world (Exhibit 36). But periods of exceptional economic strength have also allowed for higher cross commodity correlations.

Exhibit 35: Average front month commodity futures return across US recessions
Historically, global recessions have had a negative impact on commodity prices across the board...



Source: BofA Global Research, Bloomberg. Data from Jan-1980 and subject to data availability by commodity.

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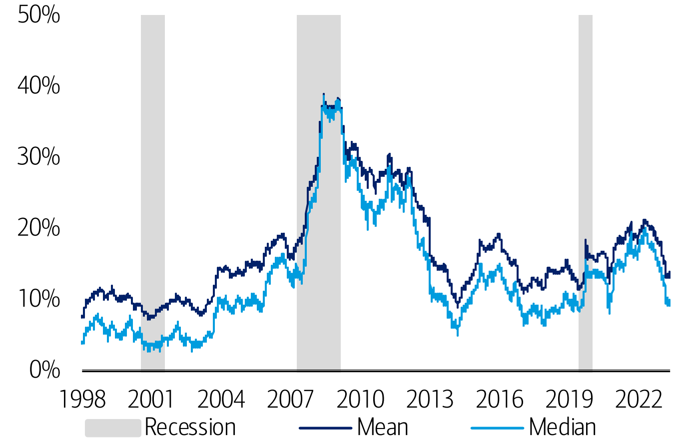
Exhibit 36: Average rolling 1-year cross-correlations across BCOM commodities
... with cross-commodity correlations spiking whenever macro economic activity collapsed around the world



Source: BofA Global Research estimates

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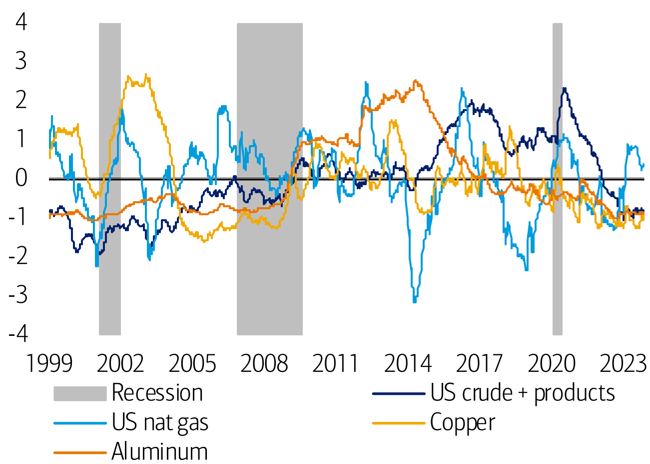
Even then, inventories for raw materials and finished goods are low...

Looking back, 2023 seems like a transition year where each commodity market behaved independently after an exceptionally volatile 2022 driven by a post-Covid demand recovery and a war in Ukraine. Still, it will not take much to trigger an increase in commodity correlations, either up or down. Looking at raw materials, we note that inventories are relatively low for many commodity markets (Exhibit 37) and we also point to relatively low stocks of both intermediate and finished goods, a set up for a restocking cycle if demand holds up or recovers (Exhibit 38). Thus, 2024 could well be a year where easier policy triggers a joint run up in commodity prices, or a year where the lagged effects of monetary tightening trigger a joint meltdown across all sectors.

Exhibit 37: Z-score of commodity inventories
Looking at raw materials, we note that inventories are relatively low for many commodity markets...



Source: DOE, LME, CME, SHFE

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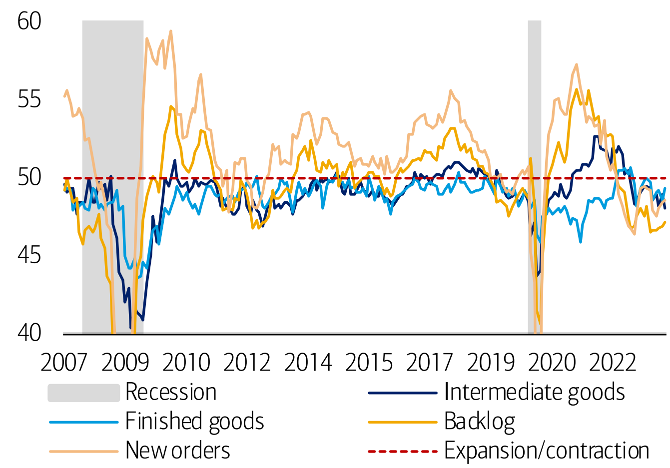
Exhibit 38: Markit global manufacturing purchasing manager indices (PMIs)
... and we also point to relatively low stocks of both intermediate and finished goods, a set up for a restocking cycle if demand picks back up



Source: Markit

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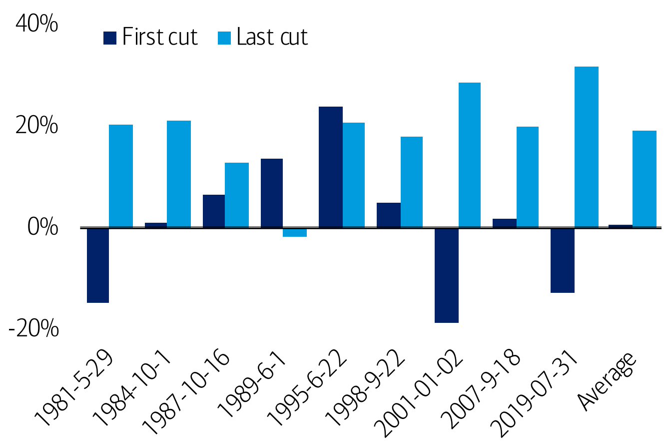
...suggesting a monetary policy shift may boost commodity returns

To provide some context to this observation, we note that interest rate cutting cycles have historically fueled commodity prices by an average of 19% after the last cut (Exhibit 39), with energy and industrial metals sectors tending to outperform the more micro and weather-driven grains markets. It is key to note that historically, the start and duration of the cutting cycle has commonly coincided with macro weakness and risk-off, thus while the start of the policy easing can be a positive development for oil this time around, it is highly contingent on the context. The most consistent reflations have occurred directly after the last cut once macro conditions have stabilized. Yet we note that commodity price increases have been most significant whenever stocks (and positioning) were low to begin with (Exhibit 40). Given where commodity inventories stand today, we believe a monetary policy shift, already underway in emerging markets, could be a signal to increase allocations to energy and commodities as an asset class, so long as progress on inflation rather than collapsing growth is the driver.

Exhibit 39: BCOM returns in year after first and last cut of Fed cutting cycles

Historically, interest rate cutting cycles have fueled commodity prices by an average of 19%, but only after the last cut...



Source: BofA Global Research

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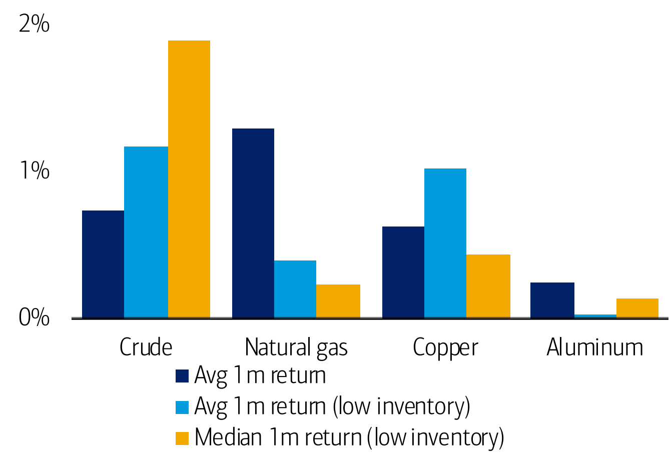
Exhibit 40: Average 1-month commodity price returns conditional on rolling 2-year z-score of inventories below -1

... but we note that commodity price increases have been most significant whenever stocks (and positioning) were low to begin with



Source: BofA Global Research, Bloomberg, DOE, LME, CME, SHFE

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