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Sébastien Mc Mahon, MA, PRM, CFA

Chief Strategist, Senior Economist and Vice-President,
Asset Allocation & Portfolio Manager

Adil Mahroug, MSc

Senior Strategist and Director, Asset Allocation

Tuyen Tran, MSc, CFA

Senior Analyst, Asset Allocation

Out of the Woods: A Swift Look at the Taylor Rule

The markets have been keeping a close watch on central banks across the globe, monitoring their policy decisions and reacting accordingly.

The recent reaction to Fed speak has been linear: equities moved higher and long-term rates moved lower, resulting in markedly looser financial conditions.

Meanwhile, Bank of Canada (BoC) Governor Tiff Macklem has shared some optimism about reaching the 2% inflation target, although he reiterated that it is still too early to start discussing rate cuts. Expecting 2024 to be a year of transition, he said the lagged effects of past interest rate hikes would weigh on the economy in early 2024, restraining spending and limiting growth and employment.

Looking forward to 2024, we think the tried-and-tested Taylor rule could offer hints on the dynamics that lie ahead in monetary policy land.

The Taylor rule

The Taylor rule serves as a useful tool for an understanding of the drivers of monetary policy.

It provides a systematic, transparent framework for adjusting interest rates to prevailing economic conditions. By linking interest-rate decisions to measurable factors, such as the inflation rate, the output gap and the neutral real interest rate, the rule helps central banks make more objective and consistent decisions.

This transparency allows market participants to anticipate central bank actions, leading to better-informed investment decisions while potentially mitigating market volatility. In essence, the Taylor rule helps bridge the gap between central bank actions and the markets' understanding and interpretation of those actions, promoting stability and informed decision making.

Highlights

- Global economy negatively impacted by monetary tightening, but inflationary pressures expected to dissipate.
- Taylor rule framework indicates it's time for central banks to act on monetary easing, but markets look like they overestimate speed and number of cuts.
- Equity investors increasingly comfortable with a 2024 soft-landing and multiple rate cuts, driving bullish stock market momentum.

Global Asset Allocation Positioning (January 2024)

	--	-	N	+	++	Δ
Asset Classes						
Money Market						
Fixed Income						↓
Equities						↑
Alternatives						
Relative Equity						
Canadian Equities						
U.S. Equities						↑
International Equities						
EM Equities						
Relative Fixed Income						
Government Bonds						↓
IG Corporate Bonds						
HY Bonds						
Other						
Oil						↓
Gold						↑
USD (trade weighted)						
CAD/USD						

The Taylor rule is a monetary-policy guideline that central banks can use to set short-term interest rates on the basis of current economic conditions. It was proposed by U.S. economist John B. Taylor in 1993 to help central banks make consistent, transparent and objective decisions when they set interest rates.

The rule has three primary components: the inflation rate, the output gap and the neutral real interest rate.

1. Inflation rate: This is the primary factor central banks consider when setting interest rates. The Taylor rule suggests that if the inflation rate is higher than the target inflation rate, central banks should raise interest rates to combat inflation. Conversely, if the inflation rate is lower than the target, central banks should lower interest rates to stimulate economic growth.
2. Output gap: The output gap measures the difference between an economy's actual output and its potential output, where potential output is the highest level of output an economy can sustain without causing inflation to rise. A positive output gap indicates that the economy is overheating, while a negative output gap suggests that the economy is underperforming. According to the Taylor rule, central banks should raise interest rates when the output gap is positive and lower interest rates when the output gap is negative.
3. Neutral real interest rate: This is the interest rate that neither stimulates nor dampens economic growth when the economy is operating at its potential and inflation is stable. The Taylor rule adds this neutral real interest rate to adjust for changes in the economy's potential growth rate or for other long-term factors affecting interest rates.
3. Policy focus on labour market: Central banks often have a dual mandate of maintaining price stability and achieving full employment. Consequently, incorporating the unemployment gap directly into the Taylor rule is more in line with the goals of many monetary policymakers.

Incorporating the unemployment gap into the Taylor rule, we get this formula:

$$\text{Interest rate} = \text{neutral real interest rate} + \text{target inflation rate} + 0.5 \times (\text{actual inflation rate} - \text{target inflation rate}) - 0.5 \times (\text{actual unemployment rate} - \text{target unemployment rate})$$

Adjusting the Taylor rule for persistence

One criticism of the Taylor rule model is that it can be quite reactive and have limited usefulness in truly guiding monetary policy decisions.

In reality, central banks tend to move interest rates gradually, rather than making abrupt changes in response to economic conditions. Policymakers tend to prefer gradual adjustments so that they can avoid exacerbating economic fluctuations and learn more about the effects of their policy changes as they unfold. Moreover, central banks are often cautious in adjusting interest rates, given the uncertainty surrounding economic data, structural changes in the economy and the lagged effects of monetary policy on the real economy.

To better reflect this behaviour, we need to adjust for persistence.

We modify the Taylor rule to account for persistence by incorporating the lagged policy interest rate into the formula. The adjusted Taylor rule becomes:

$$\text{Interest rate} = a \times (\text{neutral real interest rate} + \text{target inflation rate} + 0.5 \times (\text{actual inflation rate} - \text{target inflation rate}) - 0.5 \times \text{unemployment gap}) + (1 - a) \times \text{previous policy interest rate}$$

Here, a is a parameter between 0 and 1 that captures the extent of policy persistence. If a is close to 1, the central bank is less responsive to changes in economic conditions and places more weight on adjusting interest rates gradually. If a is close to 0, the central bank is more responsive to economic changes and less anchored in the past.

By adding the persistence term (calibrated at 0.8 in the current study) to the Taylor rule, we can better reflect the actual behaviour of central banks in their interest rate setting decisions, acknowledging their preference for gradual adjustments and enhancing the rule's applicability in both analyzing and guiding monetary policy.

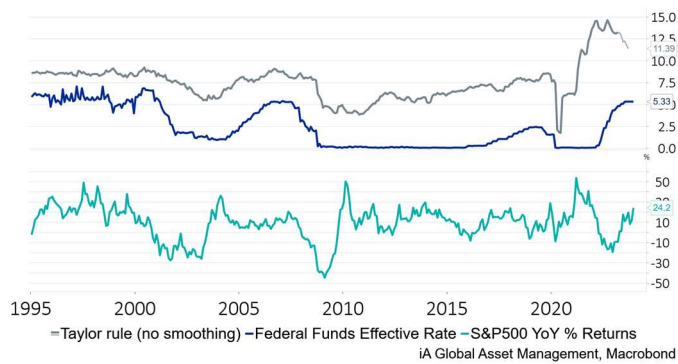
In its simplest form, the Taylor rule can be stated as:

$$\text{Interest rate} = \text{neutral real interest rate} + \text{target inflation rate} + 0.5 \times (\text{actual inflation rate} - \text{target inflation rate}) + 0.5 \times \text{output gap}$$

In the context of the Taylor rule, using the unemployment gap instead of the output gap is often considered more practical for several reasons:

1. Data availability: Unemployment data are generally more readily available and more frequently updated than output data are. Unemployment rates are usually released monthly, whereas gross domestic product (GDP) or potential output estimates are often published with a lag, on a quarterly or even an annual basis. Thus, the unemployment gap is a more timely and up-to-date measure of economic slack.
2. Easier interpretation: The unemployment gap is simply the difference between the actual unemployment rate and the natural (or equilibrium) unemployment rate. Thus, it is relatively straightforward to interpret, because higher unemployment gaps point to underutilized labour resources, whereas lower gaps indicate a tighter labour market.

The Taylor rule in action



The chart above shows the Fed funds rate, the Taylor rule without smoothing and the Taylor rule with smoothing for each month from November 1995 to November 2023.

Focusing on the most recent period starting from 2020 helps illustrate the usefulness of the model.

From March to June 2020, the Fed sharply cut its leading rate to provide financial liquidity. The unemployment rate had surged to a record 14.7% in April 2020 as a result of the pandemic's immediate and negative impact on the labour market. During this period, the Taylor rule (smoothed or not) displayed negative values, suggesting that conventional monetary policy would not be sufficient to address the crisis.

From July 2020 to early 2022, as the global economy was rebounding, the Fed kept rates near the zero lower bound to stimulate economic growth. The unemployment rate proceeded to decline gradually while inflation picked up sharply owing to various factors, such as supply-chain disruptions and pent-up consumer demand. As a result, the Taylor rule suggests that Fed rates should have started moving higher right away and stand at about 2%, according to the more conservative smoothed estimate, right as the Fed finally got moving.

Lastly, from early 2022 to November 2023, the actual path of monetary policy was largely in line with the prescriptions of the smoothed Taylor rule but grossly undershot the recommendations of the classic formulation.

The signal we're getting right now is that monetary policy is still not strict enough, but the time for rate hikes is effectively getting closer.

The Taylor rule and recent market action

Showing the sensitivity of market sentiment to anticipation of Fed actions, the most recent rally interestingly started just when the non-smoothed Taylor rule reached its zenith, in September 2023, namely when the combination of the inflation and unemployment rates reversed course.

The current situation differs from recent history in that the markets have reacted positively to prospects for rate cuts, which are expected to happen against a backdrop of soft but positive economic growth. The market's bold bet is that the Fed will succeed in landing the economy safely while minimizing the potential of fanning further inflationary pressures.

This context differs from the previous instances in 2001 and 2007, when the markets rightly interpreted that central banks were reacting to a potential economic recession.

One of the Fed's key challenges is its ability to strike the right balance between curbing inflation and supporting economic growth; its track record in this area is, in fact, rather unfavourable.¹ We also note that achieving this soft landing without rattling the markets should be an important communications challenge, a tall order given the recent communications misstep from Fed Chair Powell. While we remain open-minded, we see the odds of such success as rather low.

So, what to expect for 2024?

BoC Governor Macklem recently opined that rate cuts could be expected sometime in 2024, but only after a sustained downward movement in core inflation lasting several months.

Similarly, the Fed seems to be taking a prudent approach. Powell and his colleagues have stressed the importance of maintaining a data-dependent stance on monetary policy, meaning that rate cuts are contingent upon how the economy performs in terms of inflation and employment.

Are rate cuts coming in 2024? Of course! But the question is not necessarily when, but why? If, as we think, central bankers start moving aggressively with cuts, then it's highly unlikely that it's because inflation has normalized without any significant economic damage. And if we're proven wrong and we do see a prime example of a soft landing of the U.S. economy in 2024, then it's quite unlikely that the Fed will feel the need to move as aggressively with cuts.

Investors need to pick a side and remain careful of market environments priced for perfection.

Bottom line

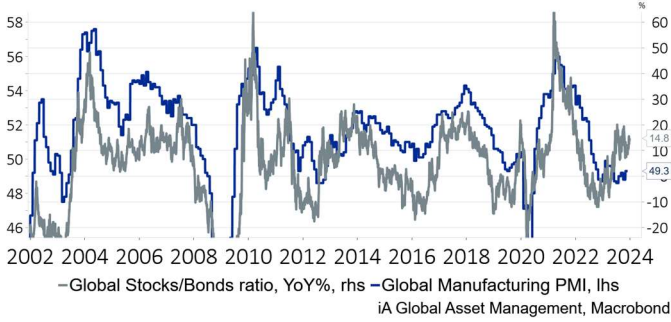
Equities

As discussed in the previous section, the Taylor rule framework suggests that it's about time for central banks to get moving on monetary easing, although it's most likely overoptimistic to expect them to move as swiftly as the market is currently expecting.

¹ See this paper from the Journal of Economic Perspectives for a more thorough discussion:
<https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.37.1.101>

Global PMI vs Global Stocks/Bonds Ratio

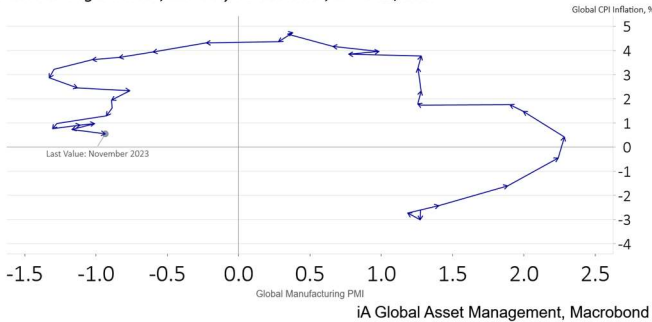
As at 12/27/2023



Another way to look at the current macro backdrop is to situate the global PMI and global inflation on the investment clock and look at the dynamics of the 10-year z-scores of each factor. As can be seen in the figure below, it seems that enough economic damage has already been done that inflationary pressures should disappear from now on.

World: The Economic & Inflation Cycle

10-Year rolling Z-Scores, monthly observation, as at 11/2023



Although we're expecting 2024 to be the year of rate cuts all over the world, we think the markets have gone too far in pricing in the speed and number of cuts.

Number of rate hikes (+) / cuts (-) priced in 2024

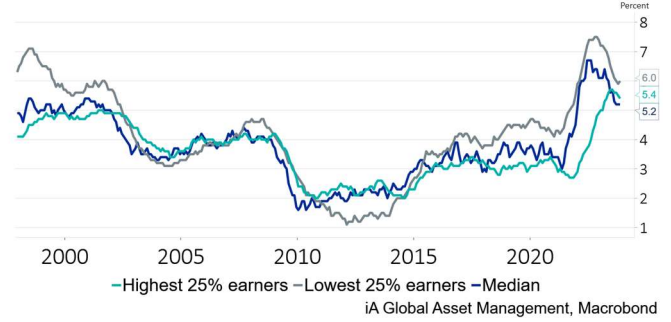
	Mid-2024	End-2024
Federal Reserve	-3	-6
Bank of Canada	-2	-6
European Central Bank	-3	-7
Bank of England	-2	-6
Bank of Japan	1	2
Reserve Bank of Australia	-1	-3

Bloomberg, as at Dec. 28, 2023

We think it isn't reasonable to argue for both a soft landing and four to six rate cuts by each of the major central banks next year. As long as the developed economies hold strong, inflationary wage pressures will remain a concern for central bankers, and an expedited normalizing of monetary policies is quite unlikely. But, if the long and variable lags of monetary policy bring the brunt of their combined weight in 2024, as we expect, then a soft-landing scenario becomes highly unlikely, and more rate cuts become a distinct possibility.

U.S.: Median Annual Hourly Wage Growth by Wage Level

Federal Reserve Bank of Atlanta, as at 11/2023



Canada: Average Hourly Wages, Permanent Workers

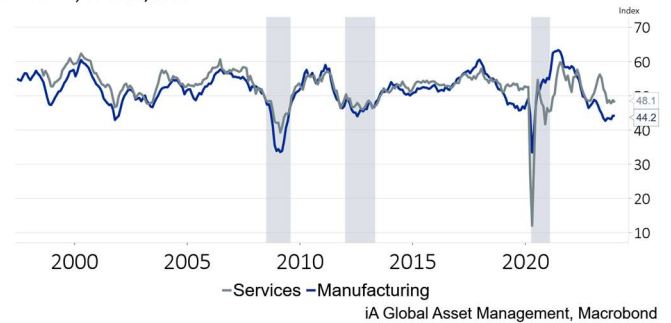
Statistics Canada, % Change YoY, 11/2023



Looking around the world, we continue to see signs of recession percolating through the data. In December, it was mostly in Europe that the slide became more apparent, as Germany and France again disappointed on manufacturing and services data alike.

Euro Area: PMIs

S&P Global, as at 12/2023



Euro Area: Composite PMI vs GDP

S&P Global, Eurostat, as at 12/2023



As stated in previous months, the macroeconomic backdrop remains one of the most challenging components of our asset allocation framework and suggests that a careful stance toward equities is warranted as an exceptional year ends.

In contrast, market **momentum**² suggests that it pays not to be too pessimistic too soon about equities.

Equity investors have been progressively getting more comfortable with the soft-landing, multiple-rate-cuts-in-2024 scenario; momentum trading took over market behaviour in October and has carried indexes back near their all-time highs. U.S. indexes, with the NASDAQ leading the charge, have had a stellar fourth quarter with momentum that looks as if it will extend into 2024.

Recognizing this rise in the tide, we have shifted from an underweight position in U.S. equities in early December to a neutral position. Because this position was established relative to an overweight position on commodities through a pair trade, the shift also results in a move from overweight to neutral on oil.

Outside the United States, we note that momentum signals have become much stronger on the short-term window all over the globe, with the Nikkei remaining more subdued. Even though the current momentum surge on most equity indexes is notable, we remain cautious about its sustainability; the long-term picture remains somewhat negative.

Momentum across equity indexes

Equities	Fast	Medium	Slow
S&P500	0.58	1.01	0.08
NASDAQ	0.63	0.75	0.87
Russel 2000	0.87	0.17	-0.89
S&P/TSX 60	0.79	-0.70	-0.85
MSCI EAFE	0.51	-0.51	-0.67
NIKKEI 225	0.75	0.50	1.36
MSCI EM	0.79	-0.67	-0.70

Turning to **valuation**, the strong market performance of recent months continues to push most indexes into pricier territory.

Even though U.S. large-cap equities still have the loftiest valuations, we note that the MSCI EAFE and the Russell 2000 indexes are no longer cheap, trading near their median valuations.

Current valuation vs. 10 years historical (percentile)

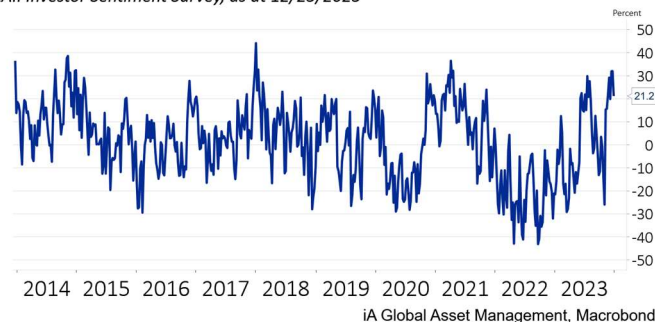
	EV/Sales	EV/EBITDA	Price/Book	FCF Yield	P/E	Dividend yield*	Median	Change in median vs last month
S&P/TSX	28%	N.A	43%	43%	21%	25%	28%	5%
NASDAQ	83%	84%	80%	12%	84%	82%	82%	4%
S&P 500	85%	84%	91%	2%	84%	92%	85%	4%
MSCI World	86%	83%	92%	4%	79%	88%	84%	5%
MSCI Japan	34%	31%	66%	47%	62%	33%	40%	1%
Russell 2000	56%	55%	33%	89%	23%	45%	50%	32%
MSCI EAFE	55%	27%	86%	71%	28%	63%	59%	20%
MSCI ACWI	86%	83%	91%	7%	80%	87%	84%	5%
MSCI EM	76%	83%	67%	81%	82%	28%	78%	8%

* Inverted

Interestingly, the S&P/TSX remains the cheapest index and a bright spot as we head into 2024. Even though valuations tend not to dictate short-term returns, they become important in periods of turmoil when the priciest assets face more important rounds of profit taking.

U.S.: AAIL Bull-Bear Spread

AAIL Investor Sentiment Survey, as at 12/25/2023



Investor **sentiment** toward equities has been lifted by the recent perception of a pivot by the Fed. Interestingly, most of the rise in recent investor perception of the attractiveness of

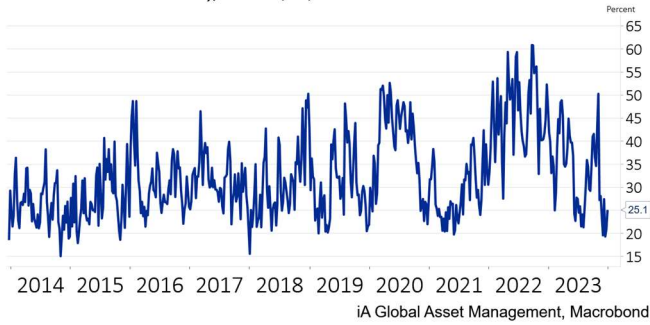
² The momentum tables across this publication show the output of our proprietary methodology, with the z-scores of momentum measures across three time windows, fast (fewer

than 100 days), medium (100 to 200 days) and slow (more than 200 days).

equities has come from a fall in the share of bearish respondents, which has recently hit the lowest level since 2018.

U.S.: AAI Bearish

AAII Investor Sentiment Survey, as at 12/25/2023



One of our other favourite gauges, the J.P. Morgan global equity sentiment indicator, is also near all-time highs. In fact, the last time the equity sentiment index reached the most recent levels was in late 2021, when global liquidity conditions led to what proved to be peak valuations on U.S. equities and then, a short few months later, the start of the 2022 bear market.

S&P 500: Fwd P/E

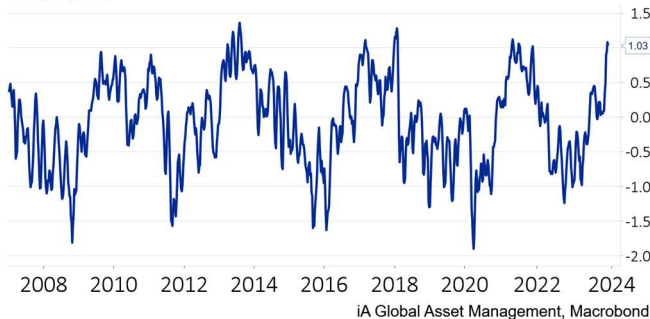
As at 12/28/2023



Finally, the most impressive gauge of investor optimism most likely lies with the VIX index, which is back to pre-pandemic lows and flirting with an 11-handle.

J.P. Morgan Global Equity Sentiment Indicator

As at 12/22/2023



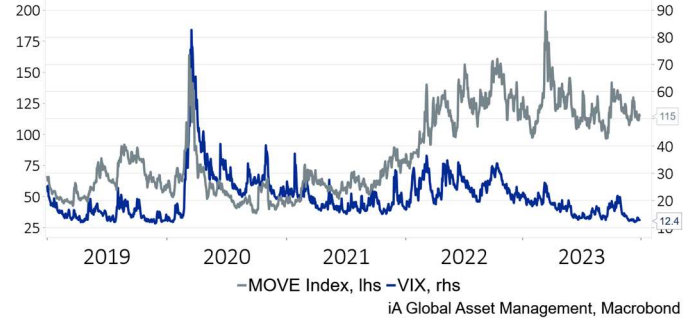
Although last month's reading on equity sentiment suggested a more balanced picture, we view the recent market behaviour as typical "pricing for perfection". It usually pays to ride the wave during such interesting displays of herd

psychology, but it also reinforces our stance of looking at 2024 with a keen eye on valuations.

Price is what you pay, value is what you get, and we expect valuations to become the dominant factor in the road ahead. In other words, being selective in early 2024 should be a winning strategy.

Implied Volatility in Stocks (VIX) vs Bonds (MOVE)

CBOE, as at 12/27/2023

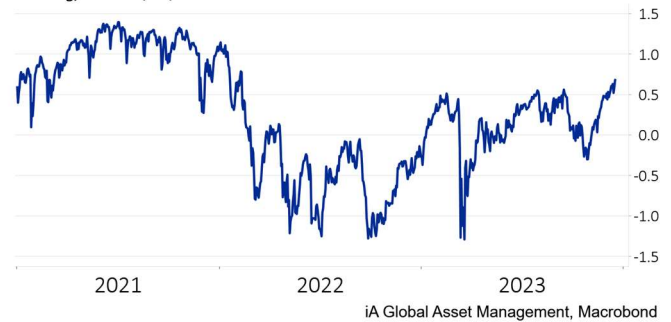


Fixed Income

Most of the points made in the previous section on equities also hold for sovereign bonds: the markets seem to be pricing in some sort of perfect scenario in 2024, the momentum of falling rates has been extraordinary and we're ending the year with the loosest U.S. financial conditions since early 2022 (don't forget that since then the Fed has embarked on one of the most aggressive tightening cycles in modern history).

U.S.: Financial Conditions Index

Bloomberg, as at 12/18/2023



North American long-bond yields accelerated their dive in December on friendlier inflation figures and, of course, the absence of pushback from Fed Chair Powell on the market's pricing-in of aggressive cuts in 2024. The result: in only 6 weeks U.S. 10-year yields went from 5% to below 4%, where they closed the year.

U.S.: 10-Year Rate Decomposition

Macrobond Financial AB, as at 12/27/2023



Interestingly, our breakdown of the U.S. 10-year yield supports our thesis that the coming **macro** environment has deteriorated (even though growth expectations for 2023 have been revised higher all year, 10-year rates have been sending opposite signals about the real growth that lies ahead). We also take note of the risk premium, which has fallen by about 80 bps since the October 2023 peak but still remains higher than the levels seen during the summer when market pricing for cuts in 2024 was similar to year-end levels.

The above suggests that an important part of the recent decline in yields comes from the pullback in inflation expectations, which have historically been joined at the hip with oil prices. Given the volatile geopolitical backdrop and efforts by OPEC+ to push global oil prices higher, in our view the potential for more interest rate volatility and uncertainty in 2024 remains alive and well.

Oil price and break-even inflation rate



Turning to **momentum**, recent price action has been sharply positive in recent months, to the benefit of our small overweight position in sovereign bonds. Remaining tactical and disciplined with our positioning is key. Given the exceptional returns since mid-October and our view that the road ahead could continue to be bumpy, we've opted to move back to a neutral stance on sovereign bonds.

Momentum indicators across select bond indexes

Fixed Income	Fast	Medium	Slow
US 10YR Note	1.12	-0.93	-1.18
CAN 10YR Bond	1.13	-0.51	-1.16

From a **valuation** perspective, sovereign bonds are looking less attractive after the recent rally, although the equity risk premium still gives the edge to U.S. short- and long-term bonds over U.S. equities.

S&P 500: Equity Risk Premium

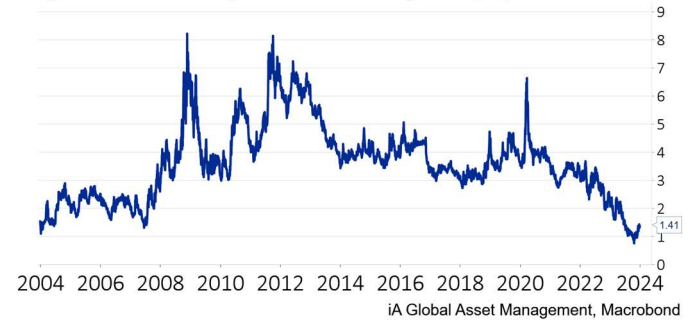
Using 12-Month Fwd Earnings and U.S. 3-Month Rate, as at 12/27/2023



Looking at corporate bonds, IG and HY spreads have continued their rapid tightening in December. Both are back to their early-2022 lows, reflecting the market's conviction that a no-recession scenario is the most likely outcome for 2024.

S&P 500: Equity Risk Premium

Using 12-Month Fwd Earnings and U.S. 10 Year Rate, as at 12/27/2023



Over all, we still think corporate spreads are relatively tight, given our expectations of further economic pain in 2024; thus, our net view on corporates, at year-end, is to remain slightly underweight HY bonds.

Corporate Spreads: Investment Grade and High Yield

Bloomberg, as at 12/28/2023



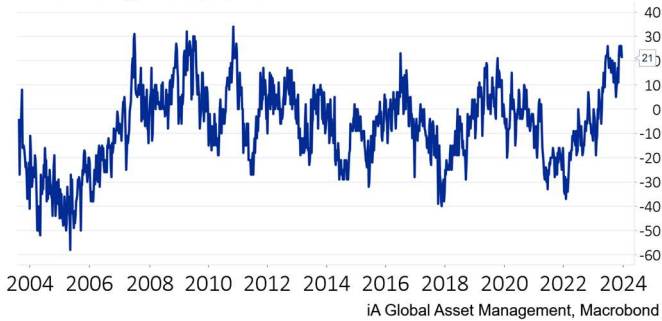
Finally, looking at investor **sentiment**, we note that the MOVE Index representing the bond market's implied volatility

continues to stick out and to suggest lingering nervousness in the market.

Even though the nervousness isn't surprising, given how violent the recent repricing of the bond market has been, investor surveys continue to show that U.S. Treasuries remain a favoured asset class.

JP Morgan U.S. Treasury Investor Sentiment

All Client Net Long, as at 12/11/2023



Over all, the recent aggressive repricing of long-duration sovereign bonds has most likely pushed prices to short-term overbought levels, leading to opportunistic profit taking.

Finally, given our view on the pricing of HY spreads against the current macro backdrop, we are maintaining an underweight position in lower-quality HY bonds.

Commodities and Currencies

Despite efforts by OPEC+ to prop up oil prices, U.S. shale production has filled in the gaps in recent months, pushing Brent down to a low of about US\$75 in December. Despite the geopolitical events of 2023, oil has surprisingly had a negative year.

Crude Oil: Brent

Intercontinental Exchange (ICE), as at 12/27/2023



As already stated, we held a long/short position on oil versus U.S. equities for part of the year, looking at divergent pricing of recession odds as a driver of relative outperformance for the commodity. Even though this thesis paid off temporarily, the markets have shifted their views squarely on the Fed's 2024 path, pushing equities sharply higher and forcing a close of the pair trade. As the year ends, we have returned to a neutral stance on oil.

Momentum indicators across select commodities

Commodities	Fast	Medium	Slow
WTI Crude	-1.12	-0.40	-0.55
Gold	0.90	0.25	0.47
Copper	0.51	-0.31	-0.84

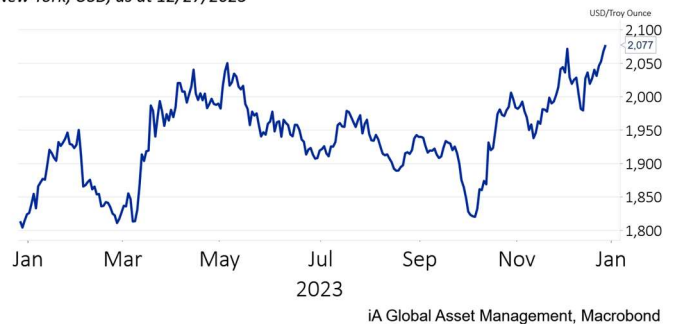
Our momentum analysis also argues for staying away from oil for the time being, given the sharp deterioration of the short-term component.

In contrast, gold and copper continue to get better.

After the past few months' comments on gold, we have finally seen a price breakout, prompting us to initiate a slightly overweight position on the yellow metal.

Gold Price

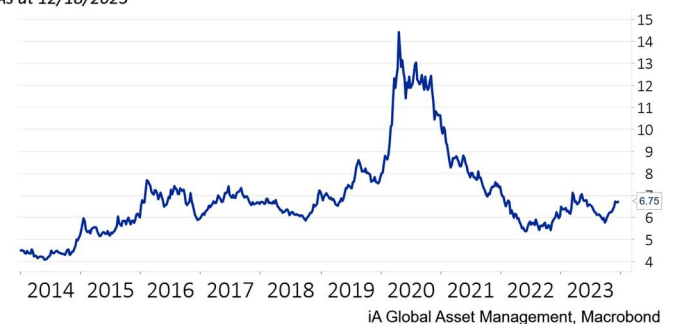
New York, USD, as at 12/27/2023



Gold is still in a somewhat volatile price pattern as the year ends, vulnerable to mood swings in response to Fed pricing. If U.S. real rates and the greenback remain on a downswing, we see gold's upside potential continuing. We note that gold's outperformance versus the broad CRB Commodity Index has persisted over the past month, indicating continued leadership.

Gold: Relative performance vs CRB Index

As at 12/18/2023



Looking at currencies, we see that the weakening of the mighty U.S. dollar continues to play a dominant role in the market.

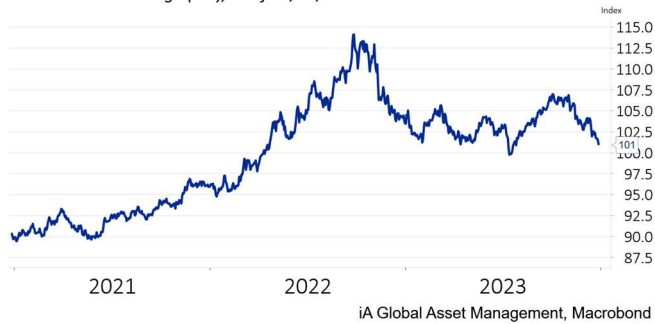
Momentum indicators across select exchange rates

FX	Fast	Medium	Slow
CAD/USD	-1.23	-0.39	-0.72
EUR/USD	-1.10	-0.32	-0.74

As for the Canadian dollar, short-term **momentum** remained negative in December, as it also did for the euro. We're still convinced that the loonie can have a good year in 2024, when the global economy finally finds its footing and a new business cycle takes hold. For now, given the macro backdrop featuring a recessionary Canadian economy and no clear direction on the loonie's price action, we're maintaining a neutral stance.

U.S. Dollar: DXY index

Intercontinental Exchange (ICE), as of 12/27/2023



Market Performance

(Total return, in local currency)

As of December 29th, 2023	MTD%	QTD%	YTD%	Δ1Y%
Equity				
S&P 500	4.5%	11.7%	26.3%	26.0%
S&P/TSX	3.9%	8.1%	11.8%	11.2%
NASDAQ	5.5%	14.3%	53.8%	53.6%
MSCI World	4.2%	9.8%	23.1%	22.6%
MSCI EAFE	2.9%	5.0%	16.2%	15.2%
MSCI EM	3.2%	5.6%	10.3%	10.2%
Commodities				
Gold	1.3%	11.6%	13.1%	13.7%
CRB	-3.7%	-7.0%	-8.0%	-7.9%
WTI	-5.7%	-21.1%	-10.7%	-8.6%
Fixed Income				
FTSE Canada Universe Bond	3.4%	8.3%	6.7%	6.3%
FTSE Canada Long Term Bon	6.1%	14.8%	9.5%	8.8%
FTSE Canada Corporate Bonc	3.3%	7.6%	8.4%	8.1%
Currency				
DXY	-2.1%	-4.6%	-2.1%	-2.4%
USDCAD	-2.3%	-2.5%	-2.3%	-2.3%
USDEUR	-1.4%	-4.2%	-3.0%	-3.4%
USDJPY	-4.8%	-5.6%	7.6%	6.0%
USDGBP	-0.8%	-4.2%	-5.1%	-5.3%

As of December 29th, 2023	MTD%	QTD%	YTD%	Δ1Y%
S&P/TSX Sectors				
Financials	7.8%	12.8%	13.9%	12.9%
Energy	-2.8%	-1.3%	6.3%	6.5%
Industrials	6.5%	7.4%	11.9%	11.0%
Materials	1.4%	1.9%	-1.3%	-2.2%
Information Technology	3.7%	24.0%	69.2%	67.9%
Utilities	5.4%	8.2%	0.2%	-0.7%
Communication Services	1.0%	7.6%	-2.4%	-2.2%
Consumer Staples	2.7%	8.1%	12.2%	11.2%
Consumer Discretionary	3.0%	7.3%	11.0%	10.2%
Real Estate	8.8%	10.7%	6.9%	6.8%
Health Care	12.8%	2.0%	18.3%	18.8%
S&P 500 Sectors				
Information Technology	3.8%	16.9%	56.4%	56.2%
Health Care	4.1%	5.9%	0.3%	0.0%
Consumer Discretionary	6.1%	12.2%	41.0%	40.6%
Financials	5.3%	13.4%	9.9%	9.6%
Communication Services	4.8%	10.7%	54.4%	54.3%
Industrials	6.8%	12.5%	16.0%	15.6%
Consumer Staples	2.4%	4.8%	-2.2%	-2.6%
Energy	-0.2%	-7.8%	-4.8%	-4.1%
Utilities	1.7%	7.6%	-10.2%	-11.1%
Real Estate	8.0%	17.7%	8.3%	7.2%
Materials	4.3%	9.1%	10.2%	9.4%

About iAGAM

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Rooted in history, innovating for the future.

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