PGIM QUANTITATIVE SOLUTIONS

December 2023

2024 OUTLOOK

PGIM Quantitative Solutions Multi-Asset Team

Executive Summary

Economic Outlook

- As 2023 comes to an end, a US recession isn't in sight. The economy has been able to absorb the Federal Reserve's (Fed) rate hikes and still post real GDP growth of more than 5% annualized in Q3. Our base case for 2024 is for a soft landing. If a recession does materialize, we think it would be a shallow one.
- Economic conditions are uneven across the globe. The Eurozone is teetering on the brink of a winter recession, while China's post-COVID rebound has disappointed.
- Elevated real interest rates and tighter credit conditions will likely weigh on rate-sensitive sectors in early 2024 before financial conditions ease later in the year amid the Fed's expected rate cuts.
- Japan's growth will likely be supported by pent-up consumption demand, wage growth, and economic stimulus.
- Eurozone economic activity is expected to struggle in early 2024. While the US has been able to shake off Fed rate hikes, European Central Bank (ECB) hikes have put the Eurozone in a precarious position.
- China's economy is expected to moderate, but still grow at a solid pace in 2024. The ongoing transition to a more consumption-led economy remains fraught with risks.
- Inflation has pulled back in 2023 due to the lagged effect of interest rate hikes as well as base effects. These trends are expected to persist as current higher rates continue to weigh on activity.
- Global central banks have begun to move from a tightening bias to a neutral or cutting bias.
- US markets have priced in ~150bps of rate cuts during 2024 amid encouraging trends in inflation and labor.
- The ECB is holding rates steady and a continued decline in inflation could prompt policy easing earlier in 2024 than the Fed. The Bank of Japan is expected to end its negative interest rate policy in H1 2024.

Market Outlook

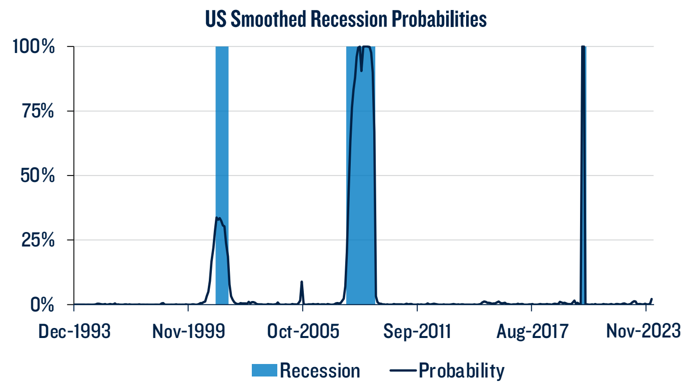
- Equities had a strong 2023, though performance was concentrated in a handful of growth stocks. Fixed income was volatile as yields spiked amid changing rate expectations. Commodities declined as tight monetary policy and a strong dollar were negatives.
- US earnings growth turned positive in H2 and is on track to post modest growth in 2023, while EAFE and emerging markets saw earnings declines.
- Consensus earnings expectations for 2024 are for low double-digit growth in the US, moderate growth in other developed markets, and a double-digit rebound in emerging markets.
- While US equity prices relative to earnings have risen in 2023, valuations are not seen as excessive. Among large caps, performance broadened in late 2023. If this trend continues, we could see the equally weighted S&P 500 Index fare better in 2024.
- The Bloomberg US Aggregate Bond Index has yet to fully erase its losses from 2022, setting it up for at least some potential gains in 2024. While the risk of growth disappointment is a support, any stubbornness in inflation coming down to target could keep the Fed on hold for longer, leaving yields elevated.
- Rather than looking at bets among broad asset classes to add value, an alternative in 2024 will be to look within equities for niches where we see better opportunities.
- Regionally, Japan is attractive due to still-easy monetary policy, fiscal stimulus, and strong earnings growth expectations.
- Commodity returns are likely to be moderate but volatile in 2024. Tight monetary policy and a strong dollar could reverse in 2024 but downside risks from slower growth and higher-for-longer rates remain.
- While higher rates have improved our long-term outlook for multi-asset portfolios from a return perspective, building a diversified portfolio has become more challenging with equity/bond correlations remaining significantly positive heading into 2024.
- However, stocks' correlations with diversifiers such as commodities and safe havens (like gold) have turned negative, making them potentially attractive from a portfolio context next year.

Global Growth Slowing but US Soft Landing Expected Despite Downside Risks

The past year has played out like a modern-day Chicken Little fable, not with a lone voice proclaiming the sky's demise, but rather with a chorus of economists squawking the impending arrival of a recession.

And yet as we close 2023, a US recession does not appear to be in sight. Hard data remains resilient and soft data appears to have bottomed with even the weakest parts of the economy, such as housing and manufacturing, seemingly turning a corner. More quantitatively, the St. Louis Federal Reserve Bank's smoothed recession probabilities (Figure 1) remain near zero.

Figure 1: US Recession Probabilities Remain Low



Source: FactSet as of 10/31/2023

Indeed, that recession predictions did not come to fruition has been head-scratching. With the benefit of hindsight, we can see that the strong labor market, large fiscal deficits, and the Federal Reserve's (Fed) intervention in the aftermath of March's bank crisis helped the economy stay resilient and avoid a recession. As we look ahead to 2024, economic and market resilience seem to have legs, and our team's assessment of the probability of a significant left-tail outcome has lessened.

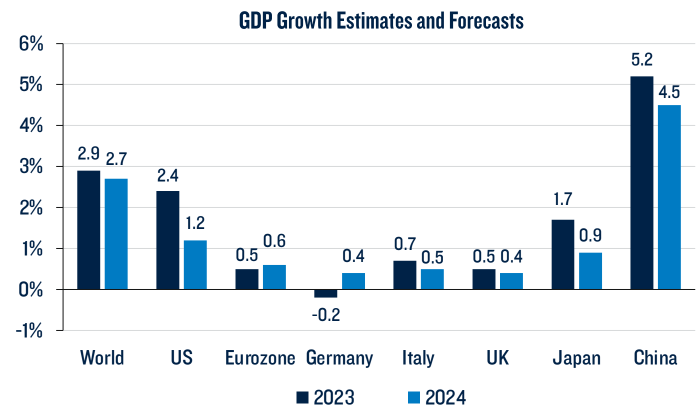
Indeed, we sympathized with Chicken Little this past year. Earlier in 2023, we took cover amid concerns that a recession was inevitable. However, recent data has drawn us out of our chicken coops. The US economy has been able to absorb the Fed's rate hikes and still post real GDP growth of over 5% annualized in Q3. Meanwhile, US unemployment remains well below 4%. Hardly recession fodder!

However, economic conditions are uneven across the globe. The Eurozone is teetering on the brink of a winter recession, driven by European Central Bank (ECB) rate hikes, elevated energy prices, and a manufacturing downturn, which have led to near-zero economic growth over the past few quarters. In contrast, Japan has benefitted from low interest rates, yen depreciation, and post-COVID re-opening. While the Chinese economy continues to expand at a faster pace than developed economies, the strength of the post-COVID rebound has disappointed, with the property sector remaining a drag, infrastructure spending restricted by financing constraints, and weaker demand from key export markets.

So, the global economy dodged the recession bullet in 2023, but what's likely for 2024?

Figure 2 shows that Bloomberg's consensus expectations for global GDP growth are moderating slightly for 2024 compared to 2023. Nevertheless, global growth is still expected to remain positive in 2024. And as in 2023, expectations are uneven across regions.

Figure 2: Slower but Still Solid Growth Expected in 2024



Source: Bloomberg as of 12/5/2023

Our base case for the US is for a soft landing and even if a recession materializes, we think it would be a shallow one. Elevated real interest rates and tighter credit conditions will likely weigh on interest-rate-sensitive sectors in early 2024 before financial conditions start to ease later in the year amid the Fed's expected rate cuts. The outlook could deteriorate if the impact of tighter monetary policy is stronger than expected or results in financial stress. On the other hand, a stronger decline in inflation combined with resilient employment could boost the growth outlook.

Outside the US, Japanese private consumption will likely be supported by pent-up demand, stronger wage growth, and the government's new economic stimulus package. Business investment is likely to benefit from the subsidies for green and digital investment and high corporate profits. Trade could be a wash with the benefits of a still-weak yen offset by slower global growth.

Meanwhile, Eurozone economic activity is expected to struggle in early 2024 with the manufacturing overhang. And although the US has been able to shake off Fed rate hikes, ECB rate hikes have put the Eurozone economy in a more precarious position. While private investment will likely remain under pressure until financing costs ease, private consumption continues to be supported by tight labor markets and receding inflation as real incomes improve.

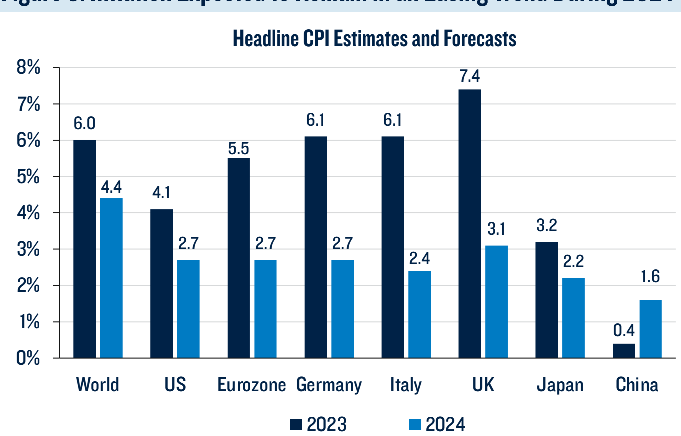
China's economy is expected to moderate, but still grow at a solid pace in 2024. The ongoing transition to a more consumption-led economic model remains fraught with risks. Ongoing adjustment in the real estate sector is driven by falling investment and continued financial stress. Given the diminishing returns from infrastructure spending, the government is moving away from this as the main strategy for boosting growth. Exports are likely a modest contributor given slower global growth and tense trade relations with the US, which are unlikely to improve with the upcoming US elections in November 2024.

Despite an uneven growth outlook, the inflation outlook (Figure 3) is relatively consistent across countries, particularly in developed market economies. Both headline and core G7 inflation (Figure 4) spiked higher in the post-COVID period, with aggressive fiscal and monetary stimulus and steeply rising energy and food costs following Russia's invasion of Ukraine. The end of 2023 already saw a pullback in inflation due to the lagged effect of interest rate hikes on the economy and partly due to base effects. These trends are expected to continue into 2024 as current higher rates continue to weigh on activity.

What Does This All Mean for Central Bank Policy?

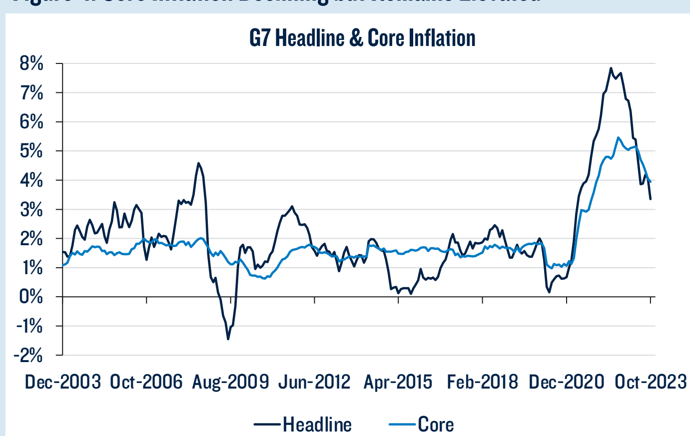
In the US, interest rate markets have already priced in around 150bps of Fed rate cuts by the end of 2024 (as of December 13) in response to encouraging trends in inflation and labor market data. If inflation continues to ease quickly or unemployment rises significantly, these expectations could materialize. However, if core inflation remains persistent or if the Fed endeavors to avoid a repeat of the 1970s mistake of letting inflation resurge, more modest or no rate cuts could materialize. The U.S. Interest Rate Sidebar analyzes the path of policy rates recommended by the Taylor Rule and compares it with current market expectations. Meanwhile, the ECB has already moved to keep rates on hold and a continued decline in inflation could prompt it to ease policy earlier in 2024 than the Fed. The Bank of Japan (BoJ) is expected to exit negative interest rate policy in H1 2024. However, the BoJ is likely to avoid rate hikes and reduce its balance sheet gradually in order to support the growth recovery.

Figure 3: Inflation Expected to Remain in an Easing Trend During 2024



Source: Bloomberg as of 12/5/2023

Figure 4: Core Inflation Declining but Remains Elevated



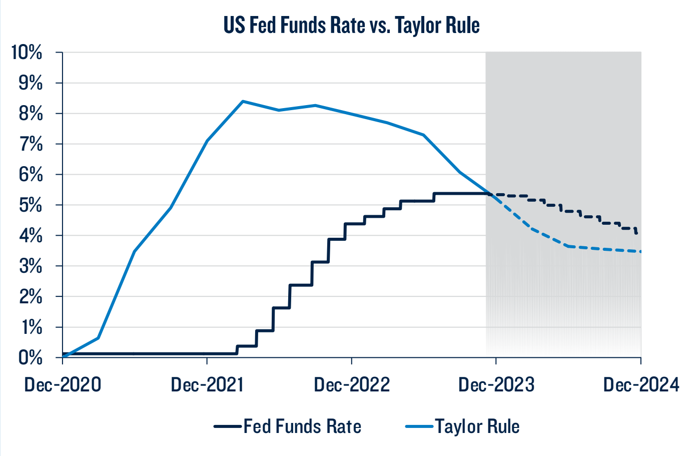
Source: Haver Analytics as of 10/31/2023

Taylor Rule Implications for 2024 Fed Policy

While several factors beyond the control of central banks fueled the post-pandemic inflation spiral, few would disagree that central banks were behind the curve in formulating appropriate policy.

A key insight of the Taylor Rule, a tool that recommends an appropriate monetary policy rate, is that central banks should raise policy rates by more than one-for-one with increases in inflation to keep inflation under control. Figure 5 contrasts the post-COVID path of the Fed Funds rate, and the path implied by futures prices into 2024 with a Taylor Rule recommendation using core Personal Consumption Expenditures (PCE) and unemployment projections from the Philadelphia Fed's Survey of Professional Forecasters (SPF).

Figure 5: Market's Rate Expectations Have Eased but Remain Above Taylor Rule Recommendations



Source: FactSet, Bloomberg, Philadelphia Fed, PGIM Quant Calculations as of 12/13/2023

The Taylor Rule would have recommended raising rates significantly in 2021 as inflation spun out of control, followed by stabilizing policy in 2022 and steadily easing policy in 2023. In contrast, the Fed's slow response helped contribute to the post-COVID inflation surge. Nevertheless, the current Fed target range of 5.25% - 5.5% is roughly in line with the recommendation of the Taylor Rule.

Given that we are now at the end of the Fed hiking cycle, what does the Taylor Rule recommend going forward?

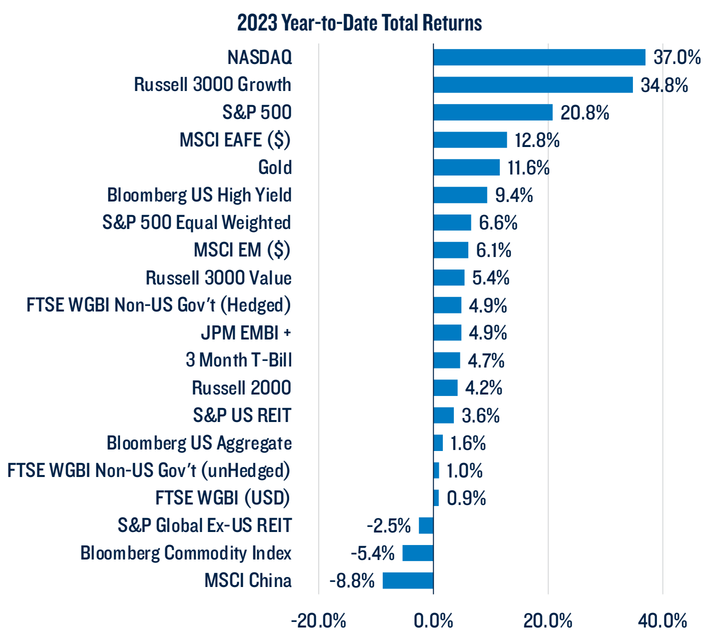
Looking to 2024, the Taylor Rule recommends approximately 200bps of cuts to bring policy rates to just below 3.5%, largely driven by the SPF forecast of core PCE easing to 2.5% by the end of 2024, nearing the Fed's 2% target. In contrast, market expectations implied by futures prices are for a more conservative path, ending 2024 with policy rates just below 4%, or about 150bps of cuts. The Fed's December Summary of Economic Projections (SEP) was even slower moving, with meeting participants expecting rates to end 2024 between 4.5% - 4.75%.

If unemployment and inflation trends in 2024 follow the SPF forecasts, then the Fed may find itself with monetary policy that is too tight if it follows the path suggested by the December SEP. If the Fed fails to ease when inflation comes down, then real interest rates will increase further, choking off new investment and sending unemployment higher. This scenario could lead to a recession later in 2024 or potentially in 2025. Thus, it may be prudent for the Fed to cut rates further than currently expected. However, if inflation remains more persistent through 2024, then it would be appropriate for the Fed to leave rates higher than the Taylor Rule currently recommends.

Moderate Major Asset Class Expectations: Riches in the Niches?

Equity markets posted strong results during the year. This was particularly true for growth stocks (Figure 6). The first quarter started on a positive note, but market sentiment quickly soured on persistent inflation pressures. Investors continued ratcheting up expectations for central bank tightening, culminating in fears of financial market vulnerability, rising volatility, and the collapse of Silicon Valley Bank and several other regional banks in March. While some of the banking system related troubles continued to keep markets volatile in early Q2, stocks — especially in the Information Technology sector — surged amid excitement around AI. Risk assets gained as concerns about broader financial contagion eased. However, government bonds struggled, pressured by sticky inflation and rate hikes.

Figure 6: Growth Stocks Have Been All the Rage in 2023



Source: FactSet as of 11/30/2023

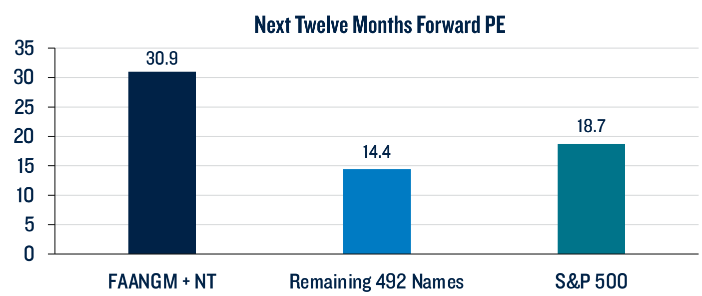
Equity/bond correlations shot higher in Q3 as a huge bond sell-off sent yields to multi-year highs, leading to steepening across the curve. The US 10-year Treasury yield spiked +74bps during the third quarter to 4.57%, before peaking at just above 5% in October. Energy commodities, which had declined over the past two quarters, surged on news that OPEC+ would extend production cuts to the end of the year and added to inflationary fears. While Q4 started on a weak note after Hamas' attack on Israel raised concerns about geopolitical risk and wider escalation, hopes for a soft landing and a dovish central bank pivot in November led to a major rally, with the Bloomberg US Aggregate Bond Index posting its best month since May 1985 and the S&P 500 Index breaking out to its best month of 2023.

Our 2024 expectations for asset outcomes hover in the flat-to-moderately-positive territory. There are overhangs from overly strong asset performance, including elevated equity valuations, moderating inflation trends, and still-subdued manufacturing activity. However, we don't consider these factors to be a danger to absolute positive performance, but instead, just a ceiling on what might happen.

So, after the strong rebound in 2023, what can we expect from equities in 2024? One standout feature of this year's stock rally has been the concentration of performance in a handful of stocks with significant weight in the S&P 500. The FAANGM+NT[1] accounts for about 26% of the S&P 500 (as of 11/30/2023). However, the weighted average return for these stocks has been a bit above 80%, while the rest of the stocks in the index have risen just around 8%.

The spectacular large-cap returns have led to higher valuations accompanied by strong earnings growth. The weighted average forward 12-month P/E for FAANGM+NT (Figure 7) is around 31X, compared to just 14X for the rest of the index. These high quality, very profitable firms have come to dominate their respective markets and command their higher valuations and outsized presence. However, if we believe markets are close to being fairly priced, earnings growth will need to reach lofty expectations in 2024 and beyond to support these valuations.

Figure 7: Market Valuations Excluding FAANGM+NT Remain Modest

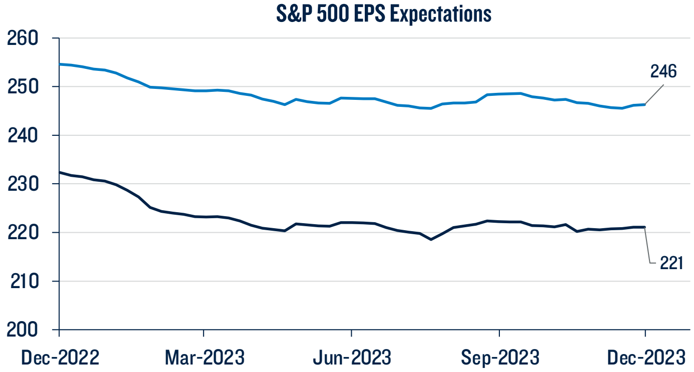


Source: FactSet as of 11/30/2023

Global earnings growth was modest in 2023, with significant declines in energy, commodity, and healthcare stocks offsetting growth in consumer discretionary and communication services holdings. In the US, earnings are on an improving trend, with Q3 growth turning positive for the first time in three quarters (Figure 8). Following modest growth in 2023, consensus expectations are for low double-digit growth in 2024 as the economy cools, with many industries having already experienced an earnings recession and a tightening of purse strings, setting the stage for margins to improve. Labor productivity has also accelerated in recent quarters. Even if current expectations get revised lower, earnings growth could still turn out moderate barring a hit to sales due to a significant slowdown in the economy. Outside the US, expectations are for moderate growth in other developed markets and for a double-digit rebound in emerging markets after declines over the past two years.

[1]FAANGM+NT is Facebook (Meta), Apple, Amazon, Netflix, Google (Alphabet), Microsoft, NVDIA, and Tesla.

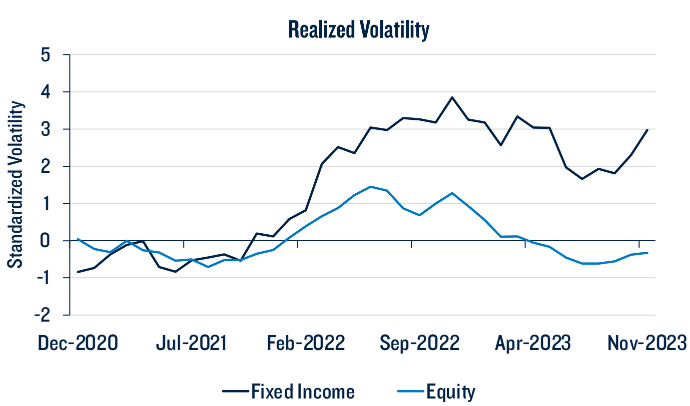
Figure 8: Earnings Expectations for 2024 Remain Solid



Source: FactSet as of 12/1/2023

Higher rates and slower growth are likely to keep major asset classes volatile, reducing the confidence to handicap their relative risk-adjusted performance in 2024. Speaking of volatility, stocks and bonds have been a study in contrast. Realized volatility (Figure 9) for equities is slightly below long-term averages, in contrast to bond volatility, which has moved materially higher over the last two years, consistent with the historical positive relationship between higher rates and bond volatility. Further, investors face a dramatically different landscape for building diversified multi-asset portfolios than in the period prior to the Fed's latest hiking cycle. Equity/Bond correlations remain significantly positive heading into 2024 following a generation of the relationship being negative. As such, the traditional hedge that bonds provided investors in periods of equity market turbulence is more tenuous. While higher rates have generally improved our long-term outlook for multi-asset portfolios from a return perspective, building a diversified portfolio has become more challenging in a regime of positive stock/bond correlation. While stock/bond correlations remain positive, stocks' correlation with diversifiers such as commodities and safe havens (like gold) have turned negative, making them potentially attractive from a portfolio context next year.

Figure 9: Elevated Bond Volatility Could Ease on Clearer Fed Rate Path



Source: FactSet, PGIM Quant Calculations as of 12/1/2023

Rather than looking at equities as a whole, an alternative will be to look for niches where we see better opportunities. The impact of a handful of stocks on overall equity returns could still be significant in 2024 but could moderate given their dominance in the past few years. Even among large-cap stocks, performance started broadening later in 2023. If this trend continues, we could see the equally weighted S&P 500 fare better in 2024. Regionally, Japan is relatively more attractive, with still-easy monetary policy, fiscal stimulus policies to boost both consumer and business spending, and one of the fastest earnings growth expectations globally. Emerging markets have an attractive earnings outlook and stand to benefit from easing Fed policy. With China remaining a drag on broad emerging markets indexes, an alternative might be to gain emerging markets exposure ex-China. Factor-wise, we favor quality as firms are likely to continue getting hammered by the steep cost of capital due to higher interest rates.

Among fixed income investments, the Bloomberg US Aggregate has yet to fully erase its losses from 2022, setting up for at least moderate gains in 2024. Inflation has moved steadily lower, with some hiccups, since peaking last year. While the Fed's urgency in hiking seems to have done its job, any stubbornness in inflation coming down to target could keep the Fed on hold for longer, wrong-footing market participants for the umpteenth time. It's hard to see a resurgence of higher rates, barring unforeseen events or shocks. Those aside, lower inflation and a dovish Fed point toward rates being flat to lower from this point forward, albeit with some higher-than-usual volatility as the Fed remains data dependent.

Commodities returns are likely to be moderate but volatile after a down year in 2023. Tight monetary policy and a strong dollar were negatives in 2023 but could reverse in 2024. OPEC+ is expected to continue to manage supply expectations by maintaining its guidance on supply. However, there are still downside risks from sharply slower global growth and higher-for-longer interest rates.

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PGIM QUANTITATIVE SOLUTIONS

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