For Institutional, Professional, Qualified Investors and Qualified Clients.
For general public distribution in the U.S. only.

VANTAGE POINT

Recession fatigue

Q4. 2023

BNY MELLON
INVESTMENT MANAGEMENT

INTRODUCTION

Welcome to another edition of Vantage Point, the quarterly economic and markets outlook from the Global Economics and Investment Analysis (GEIA) team.

This quarter we focus on two key questions. First, how much economic slack do economies need to create to bring inflation back to target sustainably? And second, are key economies diverging meaningfully for the first time in two years?

The first question will determine whether or not we get a recession in the major economies at some point soon. Regular readers will know that our call has been that recessions are more likely than not, largely because overly loose monetary policy in the immediate wake of the Covid pandemic has driven us to that situation. The US, euro area and UK have raised rates significantly in the past year, and we are probably close to rate peaks now. But core inflation remains worryingly high and labour markets look tight. Inflation expectations remain above target and it still looks like we may need a bit more monetary tightening to get us back to 2%. The euro area and UK are clearly weakening sharply, but real wage resistance is high in those two economies, so central bank rhetoric remains hawkish and will probably remain so until there is clear evidence inflationary psychology has been punctured. The situation is slightly different in the US – economic activity continues to surprise to the upside, with household spending proving robust – but inflation has surprised to the downside for much of this year and could plausibly get back to target without much more intervention from the Fed.

So, while we still think recessions are more likely than not, we have to acknowledge the possibility of a soft landing – inflation returning to target without a significant rise in unemployment – is rising, in the US at least. We think there are probably four reasons why such an outcome is possible. First, it could be that exit from the pandemic pushed economies close to capacity, so an increase in aggregate demand raised prices rather than output. If so, a relatively small fall in demand could allow price pressures to ease, without a large loss of output. Second, but related, labour markets could be behaving in a very different way to the norm: slack being created not through a rise in unemployment, but with a fall in job openings and vacancies. Third, inflation is more likely to be persistent when firms and workers try to resist adverse terms of trade shocks by bidding up prices and wages; but if the terms of trade shock dissipates and/or real wage resistance is low, then inflation can return to target with a smaller rise in interest rates and at a lower economic cost. Finally, it could be that decisive central bank intervention is influencing inflation expectations and these are moderating rapidly, reducing the need to create large amounts of economic slack. We have long felt this is a less-than-likely combination of circumstances, though have always acknowledged it as a possibility. What is becoming clear is that if any economy is likely to show this combination of characteristics, it is going to be the US.

And that is where the second question comes in. Whereas for much of the past 18 months, the story across major developed economies has been much the same – central banks hurrying to raise rates in order to combat inflation and rising inflation expectations. Now, nuances and differences are starting to appear and it is important to acknowledge these in our forecasts. The potential for the US to experience a softer landing that other economies

is one of those differences. But it is also evident the euro area has slowed much more rapidly than the US – in part because the energy price shock has been so much larger. Germany is likely to see three consecutive quarters of falling output. Given the euro area never really saw the post-pandemic surge in nominal demand the US experienced, the probability the ECB has already done enough and may possibly do 'too much' if it raises much further is accordingly higher. The UK stands out as having the worst of the US and European issues – both the large energy price increase and a large reduction in effective labour supply. As a result, the 'stagflationary' shock has been worse in the UK than anywhere else and, as references to the 'cost of living crisis' continue to dominate headlines, inflationary psychology has developed furthest there and leaves the Bank of England with the most difficult task in countering it.

Meanwhile, Japan has seen much the same inflation shock as the US and Europe, but unlike those two, has positively welcomed it. Indeed the Bank of Japan is trying to embed inflation expectations they haven't seen for at least two decades – using the opportunity to puncture the deflationary mindset once and for all. As a result, a few minor tweaks aside, Japanese monetary policy has been very different to that of the Fed or the ECB and is likely to remain so for as long as they remain more worried about a return to deflation than seeing inflation of 4-5%. At the same time, the Chinese economy is weakening sharply, as the immediate post-pandemic surge peters out and ongoing issues with the housing market and debt deflation resurface.

We reflect all these issues in our scenarios this time around. In our 'Unavoidable Recession' scenario (50%), the logic we have outlined many times in the past still holds. The major economies need to create large amounts of economic slack in order to get inflation back to target. Short term economic buoyancy is bad news in that it just makes that task harder. Rates have to go up further than markets currently expect and the upshot is recession during 2024, or earlier in the case of the euro area and UK. These trends are fortified by a sharp slowdown in China, which reinforces the global manufacturing recession and goods price deflation. Service sectors take longer to slow, but they crack eventually as unemployment starts to rise significantly.

By contrast, under 'Immaculate Disinflation' (20%), the economic cost of getting inflation down turns out not to be too high after all, for all the reasons outlined above. In this world, interest rates have peaked (almost) and start to come down more quickly than markets currently expect. Inflation asymptotes back towards target in most of the major economies. Savings built up during the pandemic turn out to have buffered household demand throughout the real income shock. Productivity growth continues to strengthen as post-pandemic ways of working normalize and 'zombie' firms go out of business. China's downturn turns out to be a blip and both growth and inflation pick up again in 2024, delivering a boost to global trade and commodities. In short, it turns out that 'team transitory' were right all along, merely underestimating the duration of what turns out to be a shock to the price level, not inflation.

In 'International Divergence' (30%), different countries undergo different elements of the two scenarios above. In particular, the US enters something like a soft landing, while China, the euro area and the UK see much more economic pain. This clearly has implications for relative asset class performance and currencies, and the US in particular continues to benefit from the Artificial Intelligence (AI) related stock outperformance.

After probability weighting our scenarios and generating our fan chart forecasts, our broad investment conclusions remain similar – favouring cash and fixed income for yield and safety reasons in the short-to-medium run, before moving back into equities once recessions have started and valuations reflect the new yield reality. Within equities however, we strongly favour on a strategic basis, since it stands the best chance of avoiding recession and has the largest exposure to the Artificial Intelligence (AI) theme. High-yield credit, real estate and other leveraged investments remain vulnerable, so best underweighted for now. The dollar is likely to be flat-to-slightly-rising on a trade-weighted basis, proving strongest against the yen and yuan, while relative monetary policy and economic performance make the outlook versus the euro and pound more ambiguous.

We hope you enjoy this edition of Vantage Point and, as ever, welcome feedback on any aspects of it.

SHAMIK DHAR
CHIEF ECONOMIST

VANTAGE POINT SUMMARY

We summarize the outlook in the graphics below. These show: 1) our 12-month forecasts of GDP growth, inflation, and monetary policy relative to their long-term trend; 2) how our fan chart forecasts differ from market expectations– in terms of expected returns and expected uncertainty; and 3) Our investment conclusions, based on the largest discrepancies between our own views and what the market is pricing in. Our conviction around our tactical investment views is higher when the level of uncertainty around our forecast is lower.

TABLE 1: SUMMARY OF OUR 12 MONTH OUTLOOK

How to read the heatmap. Green indicates above trend growth, below target inflation, policy accommodation and lower-than-average levels of uncertainty. Grey indicates economic growth in line with trend, inflation in line with target, a neutral policy stance, and average levels of uncertainty. Red indicates below trend growth, above target inflation, a tight policy stance, and higher-than-average levels of uncertainty.

		Growth	Inflation	Policy	Takeaway
Summary of VP outlook	**Average expectations**	Red	Red	Red	Despite better US outlook, global growth is below trend over the next 12 months on average; inflation is still above target and policy remains restrictive.
	Uncertainty	Red	Red	Red	Uncertainty is high on the timing of the recession and the policy reaction to slow/negative growth and high inflation.

TABLE 2: OWN FORECAST VS THE MARKET

How to read the heatmap. Green indicates that we expect growth to be higher compared to what implied by market prices, inflation to be lower than expected by the market and policy accommodation to be greater than expected. Green also indicates that uncertainty around our macro expectations is lower than what signaled by the market. Grey indicates that expectations (or uncertainty around expectations) for economic growth, inflation and policy are broadly in line with the market. Red indicates worse than expected growth, greater than expected inflation and a tighter than expected policy stance. Red also indicates that uncertainty around our macro expectations is higher than what signaled by the market.

		Growth	Inflation	Policy	Takeaway
Vantage Point vs market pricing	**Average expectations**	Red	Red	Red	We see growth disappointing, inflation surprising to the upside and tighter policy vs expectations.
	Uncertainty	Red	Red	Red	Our fan charts imply greater uncertainty in the outcomes for growth, inflation, and policy, compared to what is priced in option markets.

TABLE 3: SUMMARY OF 12 MONTH INVESTMENT CONCLUSIONS

How to read the heatmap. Green indicates overweight. Grey indicates neutral. Red indicates underweight. Polarized possible outcomes for the economy mean this is an environment to tighten risk budgets and not make bold directional bets.

Asset class	Q3 '23	Q4 '23	Conviction	Rationale
Cash	Green	Green	High	Cash attractive given income returns and optionality it provides.
Fixed Income	Green	Green	Medium	Benefits from high yields and provides a hedge for elevated recession risks.
Equities	Red	Red	Medium	Too much optimism is priced in by the market, and risks of slower growth, and tighter policy remain elevated.
Credit	Grey	Grey	Medium	Elevated yields are attractive, but spreads remain compressed providing less cushion for slower growth, particularly in lower quality credits.
Alternatives	Green	Green	Medium	Focus on assets less sensitive to growth and/or benefit from an increase in risk and upside inflation surprises.

Source: BNY Mellon Investment Management, as of September 12, 2023.

EXECUTIVE SUMMARY

Our new scenarios in brief

PROBABILITY

50%

Scenario 1
Unavoidable recession

- Wages and core/services inflation re-accelerate in late 2023 on what proves to be insufficient policy tightening.
- In response, Fed policy rates must be hiked further to around 6%, and US Treasury yields shift a leg higher to ~5%.
- Borrowing costs rise and excess savings are exhausted. Similar trends ensue in Europe as well. No meaningful offset from China.
- As a result, household spending and corporate profits are squeezed. Layoffs rise at the core of the global economy.
- An outright recession follows. The S&P index slumps to ~3500.
- Inflation tumbles to below 2% in late 2024 and the Fed ends up cutting rates by more than is currently priced in by the markets.
- These eventually set the stage for a meaningful recovery in risk assets —but only in 2025.

All business cycles come to end, although some last longer than others. We believe there is a 50% probability of this business cycle ending in the next 12 months due to inflation persistence and central bank responses. While inflation in China is on the downward trend and is weighing on goods prices globally, services inflation tends to be more localized and more intimately tied to conditions on the labor markets. A wave of baby boomer retirements on both sides of the Atlantic is constraining labor supply, and it is possible that immigration policies may limit the capacity of foreign-born labor to counteract the retirement trend. At the same time, expansionary fiscal policies, most notably in the US but also in Europe are supportive of aggregate demand at a time when unemployment rates are already historically low. If labor supply remains constrained and wages continue to grow at rates above those consistent with 2% inflation over time, both the Fed and the ECB may keep respective policy stances restrictive for longer than investors currently anticipate. At the same time, corporate refinancing needs are expected to rise, and the more corporates and consumers are forced to refinance into a higher rate environment, the greater the probability of cost-cutting measures- most notably layoffs in the US and lower capital expenditures in both the US and the euro zone- setting the stage for the next recession, a notable widening in corporate credit spreads and downdraft in equities as both corporate and consumer defaults accelerate.

PROBABILITY

20%

Scenario 2
Immaculate disinflation

- Supply-side shocks abate with more plentiful supply of workers, less labor hoarding and stable energy and commodity price levels.
- Wage growth and the headline inflation rate comes off into the Fed's comfort range.
- Stabilizing real wages (adjusted for headline inflation) sets up a timely buffer against dwindling excess savings and high real rates.
- US GDP hews to its long-term trend, allowing the Fed to gradually cut rates from 2H'24 in line with market expectations (by ~100bps).
- The USD softens, global financial conditions ease; these impart greater strength to the U.S.' main (demand deficient) trading partners.
- After a period of consolidation through 2023, risk assets stage a significant rally with the S&P reaching above 5000 by end 2024.
- In the same time frame, IG and HY spreads compress, respectively, to below 100bps and lower than 300bps.
- Treasury duration does less well in this scenario, as the curve bull-steepens mainly with a relative compression of front-end rates.

In a 'goldilocks' scenario, all chips fall into place perfectly. Supply side shocks to goods and services production reverse, with supply chain reallocations and energy price fluctuations not proving too disruptive. Improved labor supply — underpinned by a pick-up in immigration and easing quit-rate generates the right amount of slack in labor markets and softens wage growth as well. Headline inflation eases and stays low. Large-scale layoffs are not necessary. Stabilizing real wages offset the exhaustion of excess savings. In all, improving supply-side conditions are sufficient to lower inflation to global central banks' ~2% objective. Both the Fed and the ECB therefore feel comfortable to step away from restrictive policy stances, resulting in easing global financial conditions. In the meantime, Chinese growth stabilizes without major negative financial stability spillovers from the government's de-leveraging efforts. Investor confidence in global growth momentum allows the USD to weaken, further aiding its main trading partners.

PROBABILITY

30%

Scenario 3
International divergence

- US activity, labor markets, inflation dynamics and growth remain on a 'soft landing' course.
- However, struck by a bigger terms of trade shock, Europe's outlook darkens with slumping growth and only modestly easing inflation.
- Stickier wage-price dynamics worsens the ECB's growth inflation trade-off, and a deeper recession ensues.
- China fails to sufficiently stimulate its economy and counteract the deepening slump in its real estate sector.
- Meanwhile, faced with a worsening outlook in China and Europe, Japan's outlook worsens as well, and its core inflation re-weakens.
- US macro exceptionalism re-strengthens the USD index by ~5% in 2024. Financial conditions for emerging markets (EMs) remain tight.
- The Fed cuts rates by 2H-2024 in response to worsening global conditions and a quicker easing of domestic inflation.
- US equities and corporate credit stage a relative rally, versus their European and EM counterparts.

The US labor market continues to successfully rebalance, prompting a timely Fed pause and subsequent declines in policy rate. US fiscal measures are mostly absorbed through higher corporate investment and productivity-enhancing measures. Combined with ongoing deceleration in core inflation, this allows the US corporates and consumers to continue spending despite higher refinancing needs, as interest rates decline while growth remains on track, but core inflation does not prove sticky. However, the euro area and China are not as lucky, with stagflation risks in the euro area materializing and the de-levering process in China meaningfully stymieing growth. The resultant divergence in growth outlooks is exacerbated by the strength of the US dollar, which tightens global financial conditions, but also inducing the Fed to cut the policy rate in response to global instability concerns in the second half of 2024.

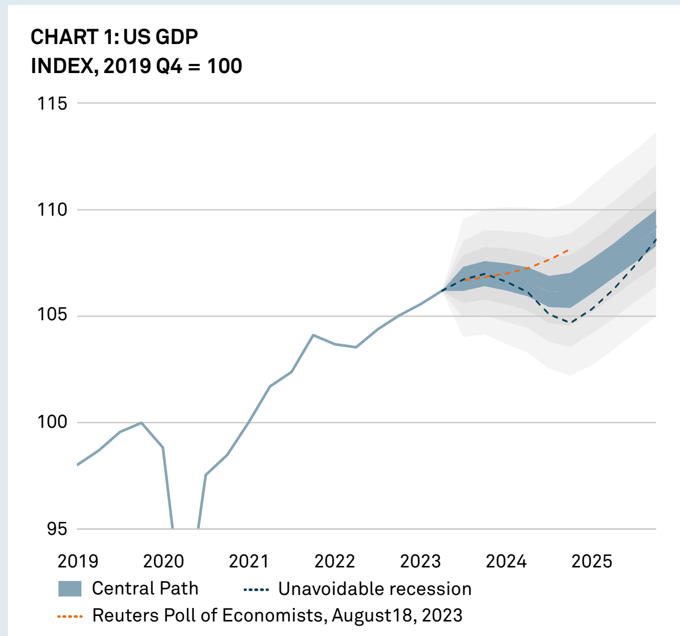
SECTION 1
WHAT WE THINK

Section 1

WHAT WE THINK: FORECAST SUMMARY

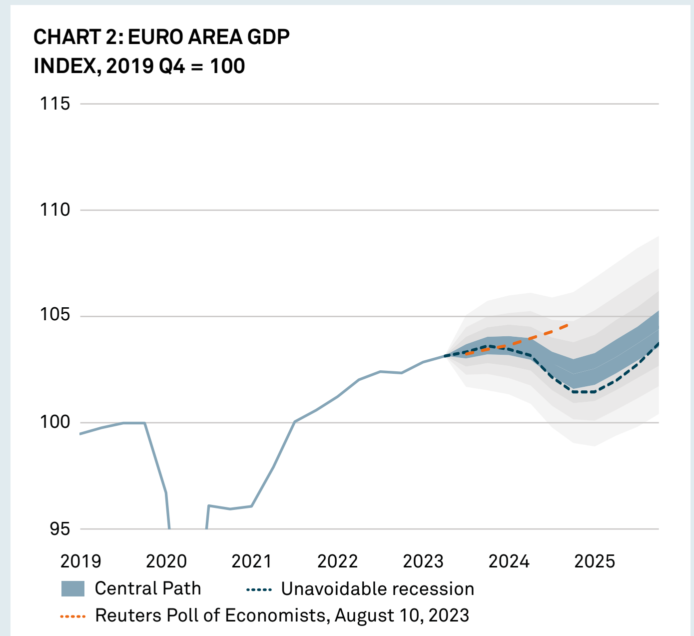
The global economy has continued to expand, but at a slowing pace, as the substantial monetary tightening already in place across many countries begins to take effect. Inflation peaked late last year, averaging just over 10% across the OECD economies. It has fallen steadily since then, dropping below 6% in the summer. These headline figures mask a range of experiences across countries. In Europe, growth has slowed sharply, with Germany suffering two consecutive quarters of contraction either side of the year end and stagnating in the second quarter. China is experiencing its own difficulties, as the boost to economic activity from the reopening of its economy post-COVID has proved to be short lived. By contrast, the US appears more resilient than many had expected, with growth in recent quarters at or above trend.

When it comes to combatting inflation, progress has been far from uniform. In Europe, and particularly in the UK, there are growing signs that the initial upward spike in prices is now having material second-round effects, affecting wages and prices more broadly. While core inflation is clearly past its peak in the US, and has fallen steadily through this year, the same pattern cannot be seen in Europe. When expectations of higher inflation become engrained in an economy, as they often do when the headline rate reaches double digits or thereabouts, the more likely it becomes that the central bank will need to continue to raise interest rates until something breaks. In the past, almost all tightening cycles on a scale similar to the one now in train across the Western economies have ended in recession. Signs of increasing divergence, in terms of both



Source: Refinitiv Datastream/Fathom Consulting.

Key Takeaway: US growth to soften more than consensus expectations, mainly on our 'unavoidable recession' scenario. But any downturn to be shallow, and a strong recovery expected in 2025.



Source: Refinitiv Datastream/Fathom Consulting.

Key takeaway: Euro area GDP poised to soften more notably through 2024 on tightening policy and financial conditions, and a deeper slowdown in Germany. Policy easing will take more time as underlying inflation is running higher than in the US.

Forecasts begin in Q4 2023 and were calculated as of September 2, 2023. Source: BNY Mellon Investment Management and Fathom Consulting. The "central path" (i.e., blue bands) represents the central 20% of outcomes based on a mean or probability-weighted average forecast across all three scenarios. The light gray bands show progressively less likely outcomes covering a combined 60% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central path are wider than those above, this shows the balance of risks lies to the downside.

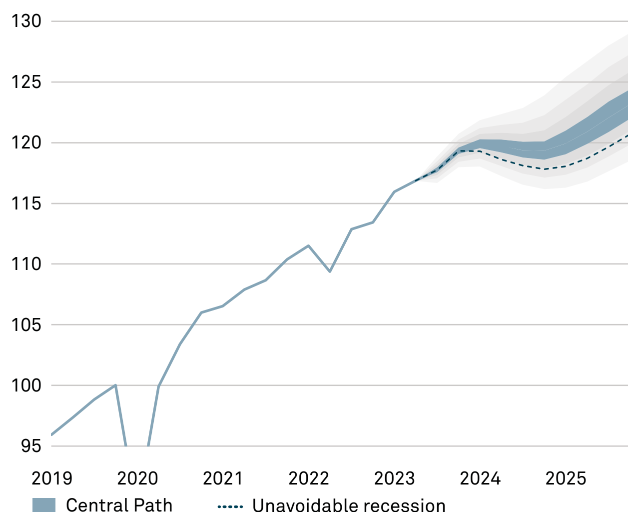
Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

growth and inflation across the major economies have caused us to increase the weight we attach to scenarios where this time turns out to be different, for the US at least.

Our views about the prospects for economic activity in the US, the euro area and China can be seen in our first three fan charts. A sustained period of economic contraction, beginning late this year or early next year, remains the single most likely outcome for all three countries and regions. With 'Unavoidable recession' the most pessimistic among the three possible scenarios, the risks around the modal path are skewed clearly to the upside, particularly in the US, which avoids recession in the 'International divergence' scenario, to which we attach a 30% weight. We are more pessimistic than the consensus among other economists, as surveyed by the Reuters Poll, who continue to anticipate uninterrupted economic expansion in most countries. Averaging across the possible outcomes for China, we expect to see GDP broadly flat through next year. If that were to materialise, and putting the pandemic period to one side, it would be China's weakest performance in at least 30 years.

Headline inflation has fallen rapidly in most major economies from a peak late last year. According to both the consensus among economists, and to market pricing, inflation is expected to make continued, uninterrupted progress towards the 2% target in both the US and Europe. We are less convinced. In 'Unavoidable recession', core inflation has become somewhat more persistent everywhere. Once the downward pressure from

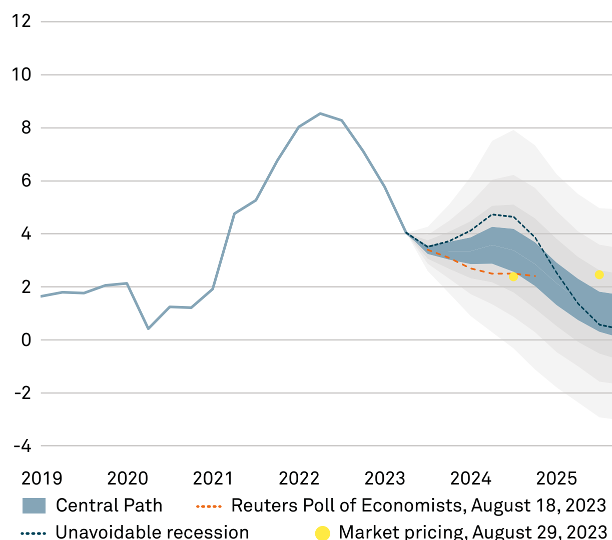
CHART 3: CHINA GDP
INDEX, 2019 Q4 = 100



Source: Fathom Consulting.

Key Takeaway: Chinese GDP also poised to remain softer than trend on its property sector woes and weak private confidence. An intensifying stimulus is in our base case and should prompt a slow pickup from late 2024 onward.

CHART 4: US CPI
FOUR-QUARTER PERCENTAGE CHANGES



Source: Refinitiv Datastream/Fathom Consulting.

Key Takeaway: US inflation likely to stay stickier, on the way down, versus market expectations, mainly on tight labor markets. A larger downshift seems likely in 'unavoidable recession' scenario in late 2024-25.

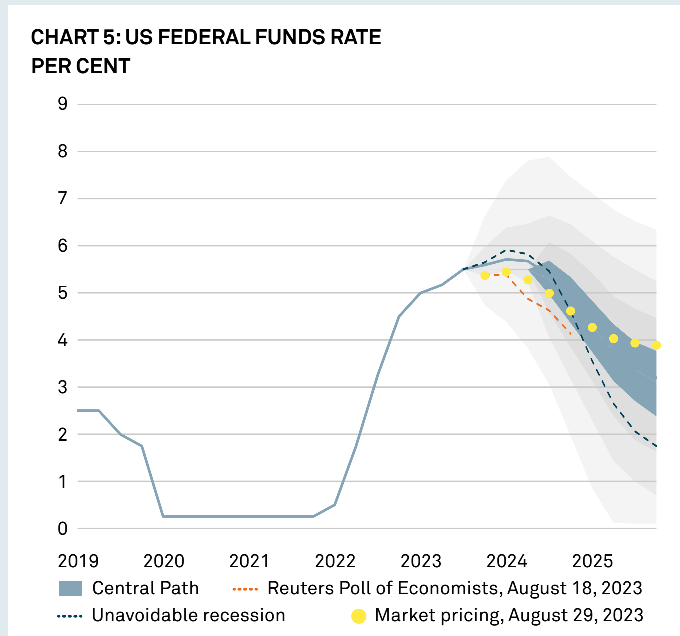
Forecasts begin in Q4 2023 and were calculated as of September 2, 2023. Source: BNY Mellon Investment Management and Fathom Consulting. The "central path" (i.e., blue bands) represents the central 20% of outcomes based on a mean or probability-weighted average forecast across all three scenarios. The light gray bands show progressively less likely outcomes covering a combined 60% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central path are wider than those above, this shows the balance of risks lies to the downside.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

energy prices, which are now falling on a twelve-month basis in the US and in parts of Europe, is behind us, the headline measure begins to rise again before falling sharply as recession takes hold. Looking across the distribution of all possible outcomes, we see upside risks to inflation in the US and Europe relative to both consensus and market pricing in the near term, but downside risks further out, reflecting our weaker projections for economic activity at that horizon.

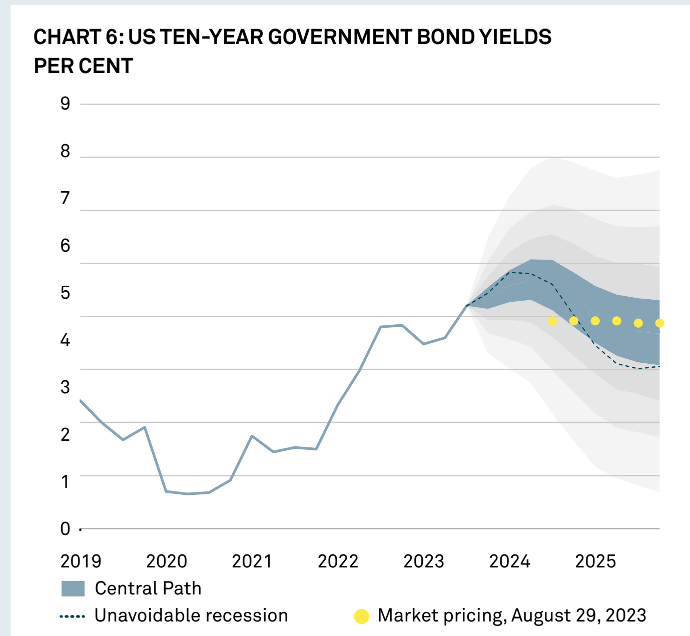
Understandably, our fan chart for the US federal funds rate has a similar shape to our fan chart for US CPI inflation, particular with regard to the balance of risks relative to what others expect. In our single most likely scenario, inflation proves stickier than many had hoped, and one or two further interest rate increases are required. In our two more optimistic scenarios, the Fed is likely to be on hold for the remainder of this year. That means, in aggregate, and in contrast to the consensus, the next move in the official rate of interest is more likely be a hike than a cut. By contrast, further into our forecast horizon we expect to see the Fed ease policy a little more rapidly than implied by current market pricing as inflation moves quickly towards, and even a little below the 2% target. This same pattern is reflected in our fan chart for US Treasury yields. We expect yields to lie somewhat above market pricing in the near term, before dropping below further out.

Our fan chart for US equities is a tale of two halves. Although the odds that we attach to scenarios where the US enters recession within the next few quarters have fallen since the previous Vantage Point, we remain more concerned by the



Source: Refinitiv Datastream/Fathom Consulting.

Key takeaway: Fed policy to stay a bit more restrictive for longer than what the market currently expects through 1H'24. But policy easing in late 2024 and into 2025 is likely to be bigger.



Source: Refinitiv Datastream/Fathom Consulting.

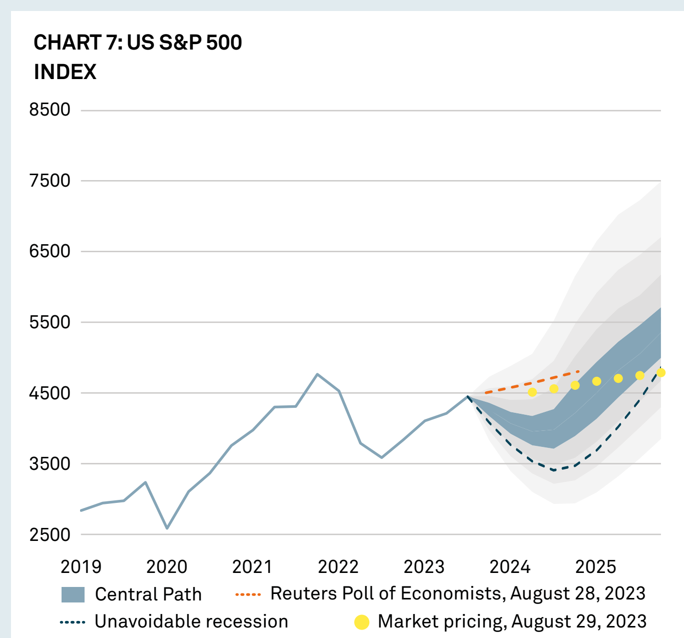
Key Takeaway: Bond yields are near peak and provide substantial income buffer amidst softening but sticky inflation. We expect a rally on a Fed policy peak or the materialization of a recession.

Forecasts begin in Q4 2023 and were calculated as of September 2, 2023. Source: BNY Mellon Investment Management and Fathom Consulting. The "central path" (i.e., blue bands) represents the central 20% of outcomes based on a mean or probability-weighted average forecast across all three scenarios. The light gray bands show progressively less likely outcomes covering a combined 60% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central path are wider than those above, this shows the balance of risks lies to the downside.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

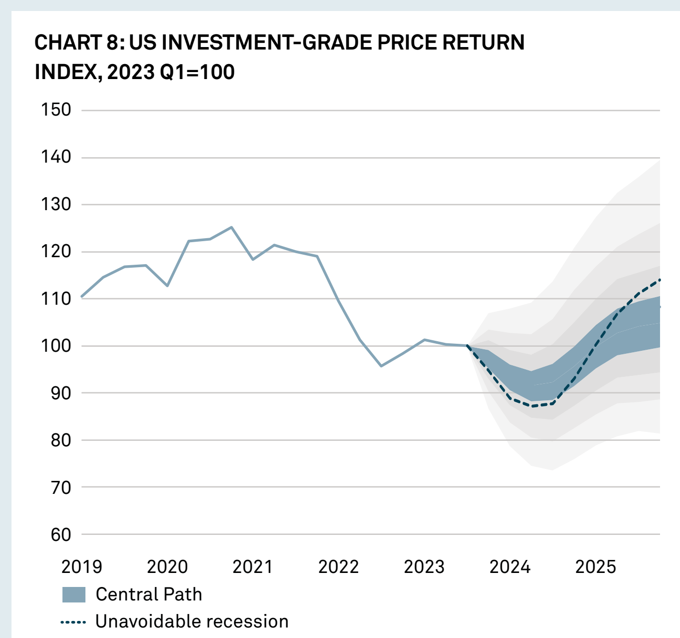
prospect of a significant US economic downturn than the consensus. That is why we find US equities are more likely to fall in the near term than to rise. Indeed, we would put the odds of the S&P 500 dropping below 4,000 by the year end around one in three. Looking further ahead, we see a broadly evens chance of a material improvement in P/E ratios, as investors become increasingly eager to increase their exposure to AI stocks. This combines with healthy growth in earnings to deliver strong returns to US equities. By early 2025, we expect that the S&P 500 will lie above current market pricing, and increasingly so as we move through that year. By the end of 2025, we see a greater than 60% chance that the S&P 500 has moved above 5,000 to reach new all-time highs.

In a similar vein, we expect credit pressure to build from here on a coming macro slowdown. Spreads have tightened more than historical standards, and the high-yield sector is especially vulnerable on coming maturities, higher for longer rates and given their weaker margins and pricing power. The assurance of better creditworthiness in the investment-grade sector and improved income buffers (of nearly 6% yields) provides some protection. But on a probability weighted basis, these could be eroded in the event of an 'unavoidable recession.' Price returns do improve from late 2024, though, on an improvement in macro conditions brought on by eventual easing in Fed policy.



Source: Refinitiv Datastream/Fathom Consulting.

Key takeaway: Equity outlook constrained over the near-term by rich valuations, elevated real rates and slowing economy. But prospects improve sharply, 2H'24 onward, on policy peak and the medium-term "AI" effect.



Source: Fathom Consulting.

Key takeaway: Credit pressure to build up on a macro slowdown and restrictive policies. High yield most vulnerable on thinner margins and rising maturities. But even investment grade could see income buffers eroded sizably in an 'unavoidable recession'.

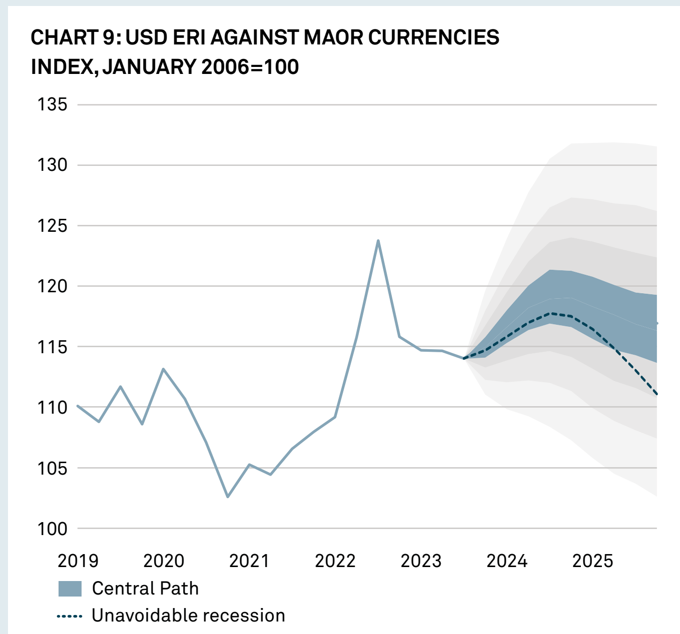
Forecasts begin in Q4 2023 and were calculated as of September 2, 2023. Source: BNY Mellon Investment Management and Fathom Consulting. The "central path" (i.e., blue bands) represents the central 20% of outcomes based on a mean or probability-weighted average forecast across all three scenarios. The light gray bands show progressively less likely outcomes covering a combined 60% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central path are wider than those above, this shows the balance of risks lies to the downside.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

The USD index is proving to be stronger than was expected at the start of the year. The main reason for this pertains to the US economy's better relative performance compared to other major economies such as the euro area and China. Japan has not done too badly so far this year. But the policy and market rate divergence has been massive. More tightening by the Fed, than was expected at the start of the year, and only a grudging and small adjustment in the Bank of Japan's accommodative policies have fuelled this divergence. As most major economies continue to encounter more serious challenges, relative to the US, we think the trade-weighted USD index stays strong for a while. Key catalysts for a broader weakening in the USD include clear signals of a Fed policy easing, and a bigger stimulus from China which provide greater reassurance about global growth.

The price of gold, after adjusting for inflation, rose steadily during the early 2000s as the opportunity cost of holding gold – and other assets that offer no income return – fell in line with policy rates of interest. More recently, and since the onset of the COVID-19 pandemic in particular, gold prices have been volatile, but have largely kept pace with the prices of goods and services more broadly, as reflected in the CPI. It is likely that the impact of high and uncertain inflation, which makes gold more attractive, was largely offset by the impact of higher policy rates of interest, which makes gold less attractive. Looking further ahead, we expect gold to underperform the prices of other goods and services, as inflation stabilises and moves back towards target, while policy rates of interest remain elevated in comparison to levels seen since the turn of the century.

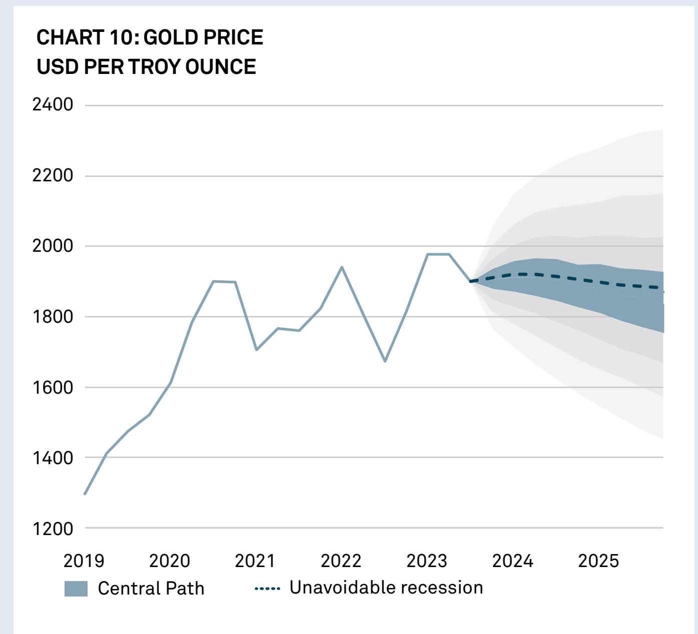
CHART 9: USD ERI AGAINST MAOR CURRENCIES INDEX, JANUARY 2006=100



Source: Fathom Consulting.

Key takeaway: USD to remain firm on relatively stronger US macro and higher Fed rates --in comparison to most other major economies. Macro improvements elsewhere and a Fed cutting cycle will set the stage for weakening but in mid-late 2024.

CHART 10: GOLD PRICE USD PER TROY OUNCE

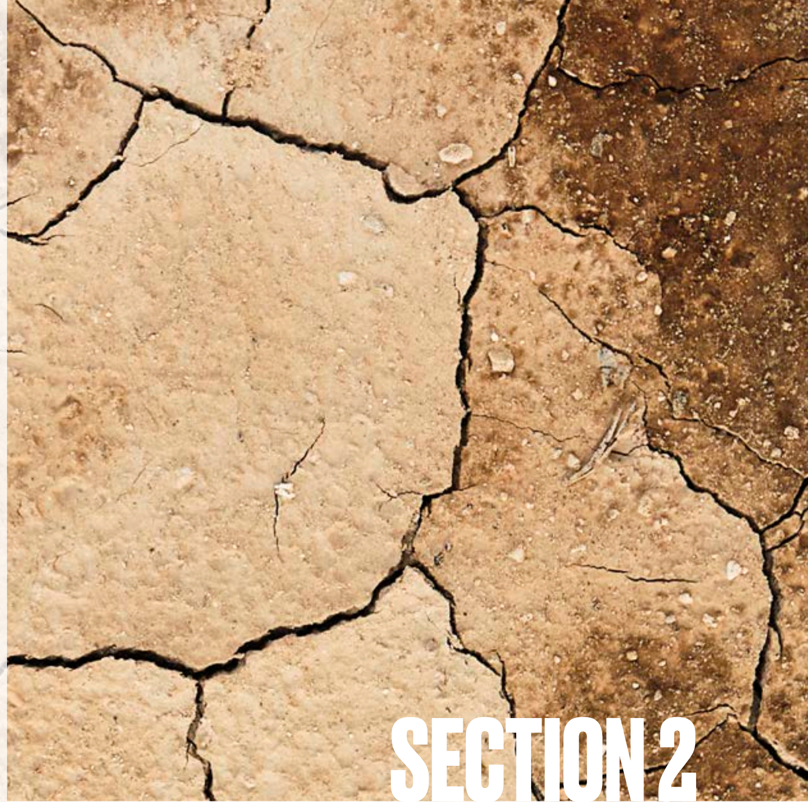


Source: Fathom Consulting.

Key takeaway: The price of gold will likely stabilize but is skewed lower on easing inflation and falling inflation volatility alongside lagging cuts in central bank policy rates. We expect most other asset classes to outperform gold in the forecast horizon.

Forecasts begin in Q4 2023 and were calculated as of September 2, 2023. Source: BNY Mellon Investment Management and Fathom Consulting. The "central path" (i.e., blue bands) represents the central 20% of outcomes based on a mean or probability-weighted average forecast across all three scenarios. The light gray bands show progressively less likely outcomes covering a combined 60% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central path are wider than those above, this shows the balance of risks lies to the downside.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.



SECTION 2
WHAT THE MARKET THINKS

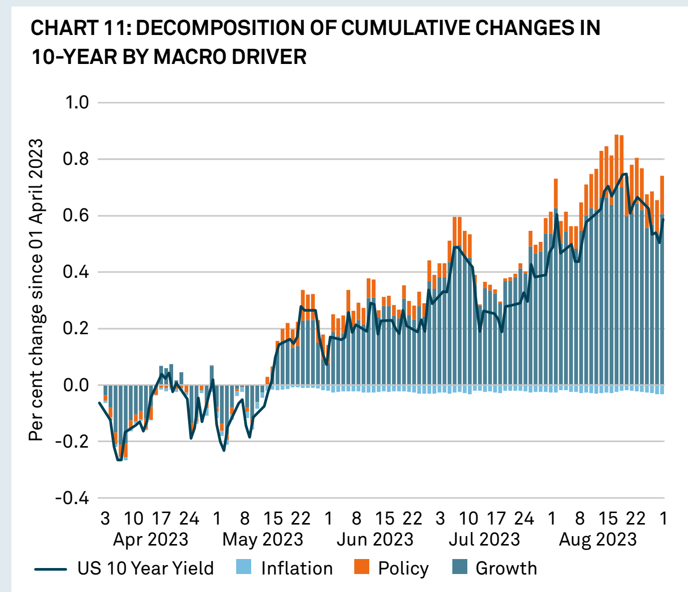
Section 2A

WHAT'S PRICED IN

Summary: Over the summer, rising growth expectations were met with higher real interest rates, as pricing for looser monetary policy in 2024 was partly taken out by the market. Historically, this balance between growth optimism and concerns about higher interest rates leads to a performance of risky assets that is positive, on average, but somewhat volatile. This aligns with what was seen since the publication of our previous edition of Vantage Point. The current market landscape remains most consistent with a tale of 'immaculate disinflation,' where inflation is expected to stabilize at 2% while growth remains positive yet moderate, and interest rates return smoothly to neutral levels (i.e. neither restrictive nor stimulatory). This narrative suggests that the global economy is resilient to both past monetary tightening and the currently elevated level of real interest rates. It also suggests that central banks will be able to fine-tune the economy going forward, making timely and sufficient interest rate cuts to prevent excessive tightening. Option markets indicate limited risks for sharp (upward or downward) moves in both equities and bonds, signaling a market consensus that largely aligns with the 'immaculate disinflation' story. Despite our more constructive outlook on growth and inflation relative to June, we believe there is a higher probability of more extreme scenarios. Consistent with what seen in the first weeks of August, we think there is an elevated risk that good news on growth trigger a more hawkish repricing of real rates, e.g. if inflation proves to be stickier than expected or central banks judge that more slack is needed to bring inflation back to target sustainably (i.e. not in a transitory way), leading to a markdown in growth expectations further into the future. Conversely, advancements in AI could again surprise investors, lifting equity valuations further in the near term.

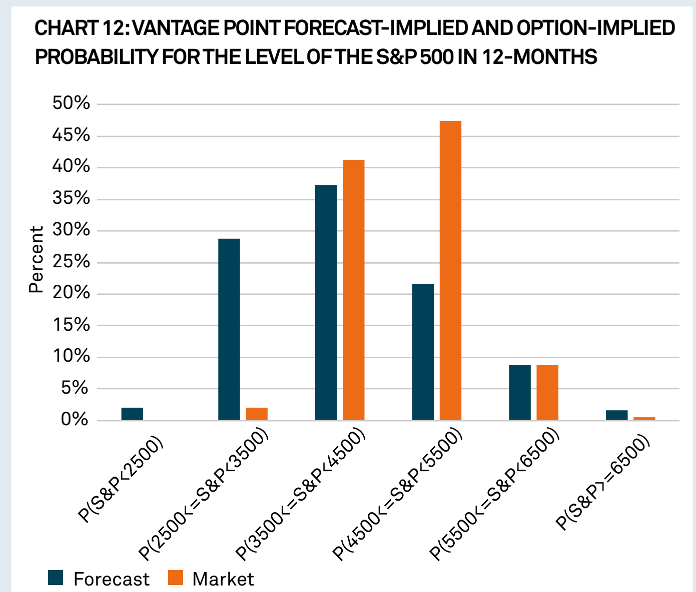
Growth: Despite a decline in the global composite PMI, and ongoing weakness in manufacturing activity surveys – variables usually closely correlated with cyclical parts of the market – market-based growth expectations have remained resilient. The market continues to expect elevated levels of growth, with cyclical investments still outperforming more defensive ones, and sees more optimistic prospects for the US and Japan relative to the euro area, the UK, and China. Recession risks, as judged by the slope of the yield curve, remain elevated but have receded somewhat, in line with the

10-year yields were pushed higher by expectations for stronger growth and tighter monetary policy



Source: BNY Mellon Investment Management, Macrobond. Data as of September 7, 2023.

We remain more defensive in the near term given the excessively optimistic outlook priced in by the market



Source: Bloomberg and BNY Mellon Investment Management. Data as of September 12, 2023.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

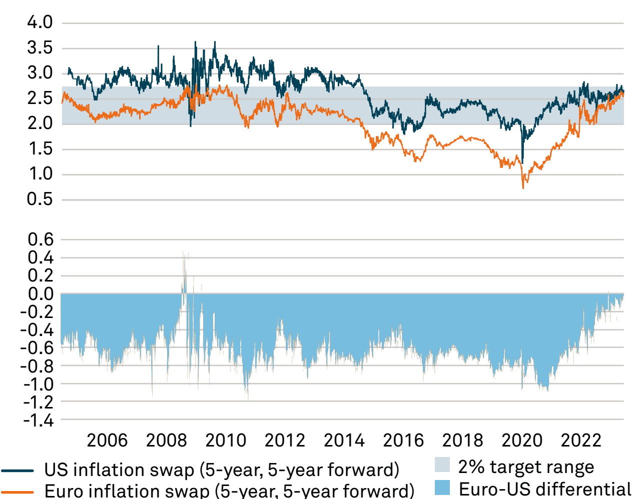
bear-steepening of curves (i.e. long-term yields rising more than short-term yields) seen over the summer. Overall, option markets suggest that downside risks to growth are perceived to be lower than what we think, but also see such risks higher in Europe than in the US, consistent with our outlook.

Inflation: Market inflation expectations broadly align with a return of inflation to the 2% target in advanced economies. US inflation is seen as returning to target first and within the next year, while the euro area is seen as regaining price stability some months later. The UK remains somewhat of an outlier, with inflation expectations that remain at the upper range of what is consistent with target. Our probability-weighted inflation expectations for the next few years remain higher than what is expected by the market for both the US and the euro area. This is driven by the probability we assign to sticky inflation, in both our 'unavoidable recession' and 'international divergence' scenario.

Monetary policy: Markets are signaling the likely end of the rate-hiking cycle in the U.S. and the euro area, with no additional hikes fully priced in. The UK is expected to see further monetary policy tightening, with between one and two more rate rises priced in by year-end. In Japan, a small, but nonetheless symbolic, 10 bps rate increase is expected by mid-2024. Market-implied peak rate pricing appears to have stabilized, with realised volatility falling considerably over the summer. As central banks continue to support the "higher for longer" narrative, along with a strong data-dependent approach and a persistent tightening bias, additional hawkishness is being reflected as cuts being taken out in 2024 as opposed to a higher terminal rate. Roughly a total of 100 bps of rate cuts are seen as starting in mid-2024 for the US, and some months later for the euro area. Real (i.e. inflation expectations adjusted) rates have risen further, particularly at long-term maturities, bringing about a bear steepening in the (real) interest rates curve. It appears that the market is buying into the arguments that suggest that long term interest rates will be higher in the future. We believe there remains some scope for tighter monetary policy by major central banks and see market pricing as too benign in the near term, but also expect more rate cuts than what is expected further into the future, particularly in Europe.

The long standing gap between euro area and US inflation expectations has broadly closed since the end of the pandemic

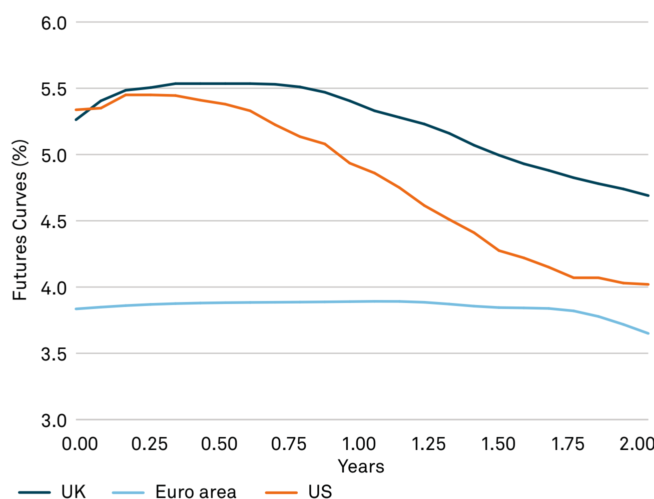
CHART 13: US AND EURO MARKET AREA INFLATION EXPECTATIONS



Source: Macrobond, BNY Mellon Investment Management. Data as of September 7, 2023.

Compared to the market, we think monetary policy might tighten more in the short term and loosen more one year from now

CHART 14: MONETARY POLICY EXPECTATIONS FOR THE US, THE EURO AREA AND THE UK



Source: Macrobond, BNY Mellon Investment Management, CME Group, Eurex Exchange, Intercontinental Exchange (ICE). Data as of September 7, 2023.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

Section 2B

MARKET SENTIMENT

During the quarter, recession expectations faded from the consensus, particularly for the US, while a variety of indicators suggest that sentiment hit stretched levels during the summer rally. In the US, the outperformance of high beta stocks in June/July highlights the robust risk-on market that took hold over the summer. Investor surveys in July registered high percentile readings (bullish) and tactical equity flows accelerated, which taken together with other metrics suggest stretched levels. Like a rubber band, stretched levels may point to a near-term reversals.

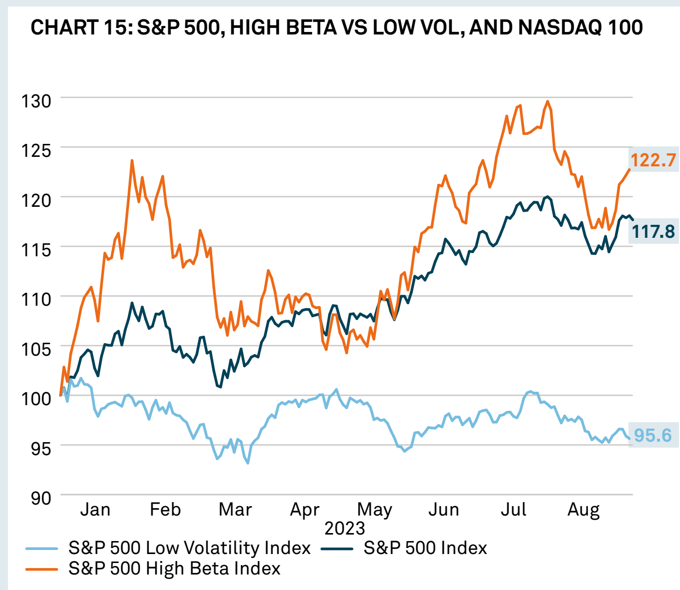
Moving into August, metrics such as the rising Put/Call ratio pointed toward the possibility of a near-term downshift in sentiment (demand for downside risk protection was increasing faster than demand for upside optionality). Markets subsequently stumbled as sovereign yields marched higher and sapped risk appetite for elevated equity valuations. Negative headlines and weaker economic data out of China, and to a lesser extent Europe, also moderated global growth expectations. Sentiment metrics came off the boil and moderated.

Heading into the final quarter of 2023, sentiment appears broadly more neutral, although in the US particularly, sentiment remains tilted towards optimism. US equity valuations remain elevated (especially relative to bond prices), and some surveys suggest investors are the least bearish since early 2022 as "soft landing" is by-and-large the base case for many individuals.

Based on these observations, risks appear skewed to the downside since data that does not reinforce "soft landing" expectations would force a larger downward repricing. US economic surprises have rolled over from elevated levels and economic news sentiment may soon begin to point downward. Note that from the signing of the US debt deal at the end of May, economic news sentiment improved through the summer, providing a positive backdrop for the market's performance. As the summer heat fades into fall, sentiment may not be so supportive given the starting point is elevated.

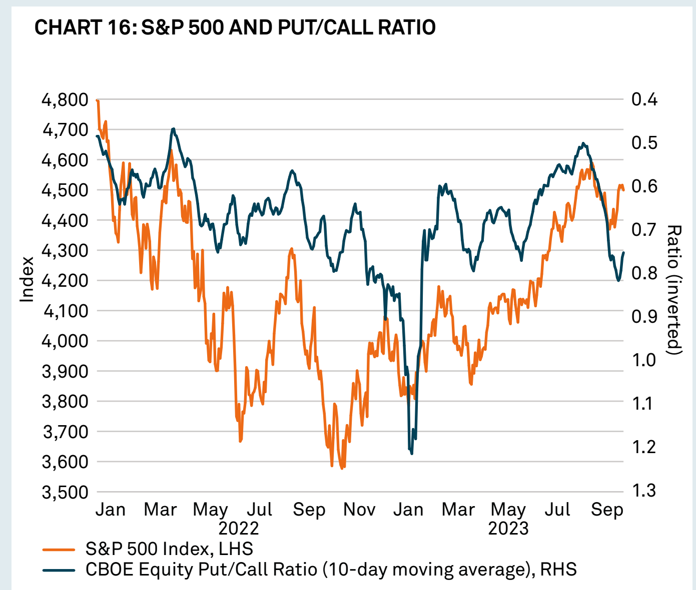
Our fan charts above show that our risk asset forecasts continue to be exhibit larger near-term drawdown risk than

High beta stocks outperformed over the summer until August's pullback



Source: Macrobond, BNY Mellon Investment Management. Data as of September 5, 2023.

The turning put/call ratio signalled a downshift in sentiment



Source: Macrobond, BNY Mellon Investment Management. Data as of September 5, 2023.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

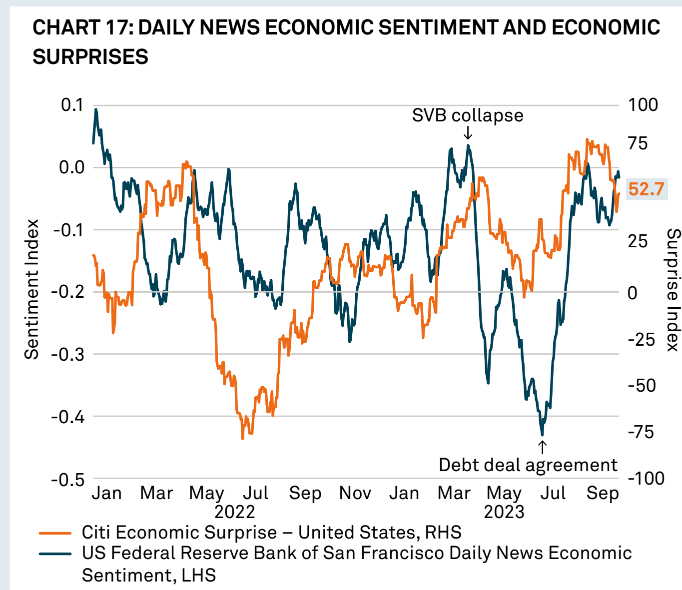
projected by consensus forecasts, stemming from our assessment of higher recession probabilities. Compared to last quarter, while we upgraded our outlook, we continue to see high uncertainty which is captured by fat tails in our forecast distributions. This warrants caution (due to recession risk) but is not wholly negative as we also assess a larger upside return potential beyond the near-term outlook, compared to consensus and market pricing.

The tactical outlook remains challenged by varying degrees of recession risk across regions, but strategically we are more confident of higher expected returns on the back of AI's ability to enhance productivity and drive share prices higher in the coming years (i.e., in the next bull market). While the nascent bull market, which began in October 2022 for the S&P 500, may yet have legs to run, the terrain is unlikely to be easily navigated.

In the final section, we pull it all together and layout our tactical and strategic views by major asset class

News sentiment bottomed in May and rose through the summer, but sets up a more challenging fall

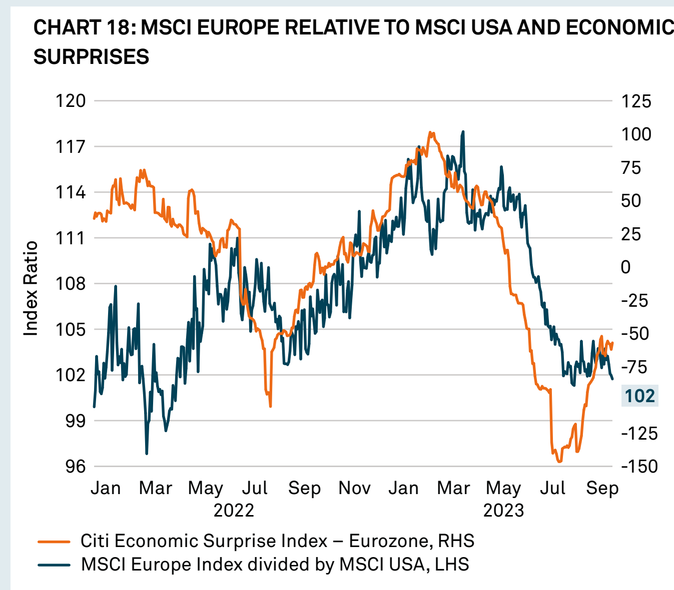
CHART 17: DAILY NEWS ECONOMIC SENTIMENT AND ECONOMIC SURPRISES



Source: Macrobond, BNY Mellon Investment Management. Data as of September 5, 2023.

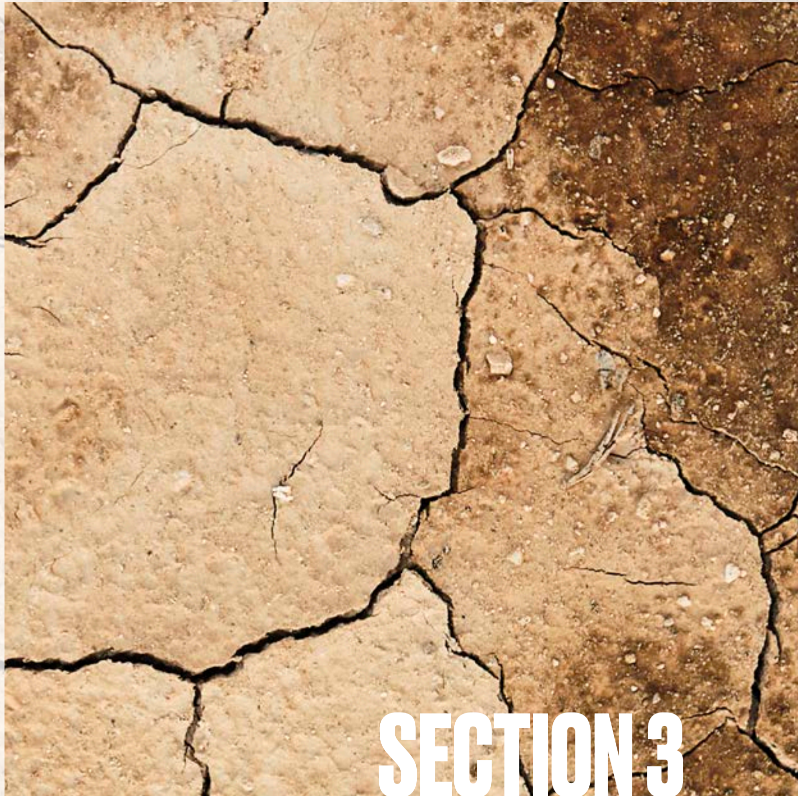
Europe equity lagged US as data missed expectations, but we see further downside risk

CHART 18: MSCI EUROPE RELATIVE TO MSCI USA AND ECONOMIC SURPRISES



Source: Macrobond, BNY Mellon Investment Management. Data as of September 5, 2023.

Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.



SECTION 3
INVESTMENT CONCLUSIONS

Section 3

INVESTMENT CONCLUSIONS

Summary

Dodging the widely expected 2023 recession (so far), markets have unsurprisingly performed much better than expected. But context matters. The Nasdaq and S&P 500's year-to-date returns of +30% and +16%, respectively, don't look quite so flattering when considering that returns since the start of 2022 are -12% and -7%, and are worse still on an inflation adjusted basis. In other words, while progress has been made, we're still digging out of the hole.

As our scenarios make clear, we estimate that recession risk remains material and is higher than what is being priced into markets. It's understandable that there is "recession fatigue" from a downturn that never seems to arrive. The Conference Board's Leading Economic Index has pointed to imminent recession for 16 consecutive months. But recession fatigue isn't an excuse to abandon the data and adopt an investment strategy of hopes and prayers. The data continue to provide robust evidence that near-term recession risks are much higher than average, and our tactical recommendations reflect this through our estimates of expected risk-adjusted total returns.

What may not be readily apparent, however, is a note of optimism injected into our multi-year outlook, principally stemming from our evolving views around the potential for AI's economic impact.

On a tactical basis (i.e., into 2024), the outlook for risk assets remains highly uncertain due to varying recession probabilities across markets, monetary policy reaction functions, and what's already priced in. As highlighted in previous sections, the market is most closely priced for a future that looks like our "immaculate disinflation" scenario. We assign lower probability to this outcome. That's the bad news. The good news is that should it occur, we expect the market could rally well above consensus expectations.

To put it simply, we see a smaller chance, but a bigger potential upside. Paired with our higher probability scenarios, the result is that we perceive a higher chance of either a sizable sell-off from a recession or a strong rally (i.e., a fat tail distribution). The market appears to be underappreciating the risks of these more extreme outcomes and pricing a benign outcome. On the upside, avoiding a recession in combination with real and perceived benefits of AI's wider adoption could spark a significant rally beginning in 2024 as risk appetite fuels higher multiples across sectors. However, on the downside, incoming data that does not reinforce the "immaculate disinflation" narrative may dent risk sentiment and may hasten a sell-off, particularly if/when the labor market shows signs of deteriorating or inflation re-accelerates and necessitates higher terminal rates expectations. Fat tails would suggest more neutral positioning on a tactical basis, until the balance of risks become more favorable.

On a strategic multi-year basis, we're becoming more optimistic as our research into the potential impact of AI on productivity is encouraging. Although the impact is highly uncertain in coming years, we estimate a high probability that AI will significantly boost labor productivity with benefits accruing broadly across the economy and to shareholders. These developments may support margins and earnings growth sooner-than-expected, and importantly, we do not think these benefits are priced into the market.

The nearby table shows the potential paths for the S&P 500 using estimates of P/E and EPS (price/earnings and earnings per share, respectively). The bullish AI case is captured primarily in the 'immaculate disinflation' scenario, while 'international divergence' is a more moderate view. This upside scenario may appear extreme (possibly outlandish) but consider that the S&P 500 has recorded returns of more than 40% on a rolling 2-year basis nearly 20% of the time since 1930. Moreover, while equities are expensive on an equity risk premium metric (i.e., equity earnings yield relative to bond yield), valuations are far from the stretched levels seen during past periods of strong enthusiasm for new general-purpose technologies.

S&P 500

Unavoidable recession	Year End Values		
	2023	2024	2025
EPS Estimate	216	205	246
Earnings Growth	-2%	-5%	20%
Price/Earnings	19	17	20
Approximate Level	4,096	3,482	4,916
Annual Return Estimate	7%	-15%	41%

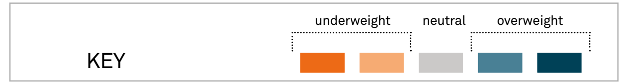
International divergence	Year End Values		
	2023	2024	2025
EPS Estimate	220	231	254
Earnings Growth	0%	5%	10%
Price/Earnings	20	22	22
Approximate Level	4,400	5,082	5,590
Annual Return Estimate	15%	16%	10%

Immaculate disinflation	Year End Values		
	2023	2024	2025
EPS Estimate	227	249	274
Earnings Growth	3%	10%	10%
Price/Earnings	20	23	23
Approximate Level	4,532	5,733	6,306
Annual Return Estimate	18%	27%	10%

Forecasts were calculated as of September 2, 2023. BNY Mellon Investment Management GEIA.

The tables on the following pages include our tactical and strategic views across major asset classes. Within equities, we remain cautious on developed market (DM) tactical exposure and are neutral on EM. We raised the US equity strategic outlook to most overweight as we expect post-recession, or earlier if a recession is avoided, to see higher multiples and strong earnings growth on the back of widespread adoption of AI technologies. On tactical fixed income, the macro-outlook continues to favor exposure to DM sovereign debt (US Treasuries over international exposure), and up-in-quality Investment Grade credit.

ASSET CLASS VIEWS



Major asset class	Tactical view	Strategic view	Comments
Equities			We remain cautious on increasing cyclical exposure via equities, but a rising possibility of “soft landing” in the world’s largest economy suggests moderating tactical underweights to risk assets. Immaculate disinflation prospects support US equity outlook especially, but the likelihood remains too low currently to be aggressively re-risking (i.e., beta>1). On a strategic multi-year outlook, we have a strong preference for US equity.
Fixed Income			Higher yields present buying opportunity as we continue to see extending duration as a favorable risk/reward trade-off into 2024. Given the difficulty in timing a recession and the associated market moves, we think the risk of being too late in extending duration outweigh those of being too early. Further, with spreads remaining tight, we continue to lean in favor of sovereign debt and high-quality fixed income over lower quality credits that face greater spread risk.
Alts/Real Assets			Alternatives are historically less sensitive to growth swings so may provide additional portfolio stability in a slowdown. We’re tactically favorable on alternatives and real assets.
Cash			Cash remains attractive at the moment, but we expect it will begin to lose its luster next year, either in a recessionary environment, or through normalization of monetary policy. Thus, reinvestment risk is elevated for cash given our outlook.

Equity	Tactical view	Strategic view	Comments
Developed Markets Equity			A shifting global macro backdrop will likely lead to diverging developed market equity performance. We capture this most acutely in our ‘international divergence’ scenario, but the theme will likely play out across scenarios as monetary policy takes differing paths. DM equity continues to face headwinds near-term from restrictive monetary policy and weakening demand, especially in Europe. We’re considerably more positive on a multi-year horizon, particularly on US equities benefiting from AI adoption, which will likely have positive spillover to international markets.
US Equity			Lowered near-term recession probability is still above average; however, strategic outlook is notably stronger on potential AI impact on earnings and multiples. Tactical outlook is distinguished by fatter tails than market expects with a skew to the downside. This keeps us tactically underweight until the balance of risk is more favorable. A near-term rally is challenged by what’s already priced in (robust growth, ongoing disinflation, strong earnings. Strategically, we raised the US equity outlook to most overweight as we expect post-recession, or earlier if one is avoided, to see higher multiples and strong earnings growth on the back of sooner-than-expected widespread adoption of GenAI capabilities.
UK Equity			Cheap valuations on both a relative and historical average basis remain attractive and imply that minimal less bad news could spur on markets to re-rate. But a poor macro backdrop both domestically and externally (which is critical for larger UK-listed firms) keep us tactically underweight. More positive on a strategic basis.
Europe ex UK			Tactically underweight European equities on a risk-return basis as the economy remains challenged. A recession in Europe remains highly likely, and troubles in China mean that global economic performance ex US continues to struggle. As the asset class is more cyclical, we see a greater downside risk potential, as well as less near-term upside if AI developments surprise positively.
Japan Equity			Reflation process remains intact. Headwinds cropping up from slowing China and Europe. But domestic consumption is steady. BOJ will take more time to ease up on YCC. Meanwhile, stable to weak-ish trend in Yen will underpin FX translations of Japanese corporations’ offshore earnings. Attractive valuations and structural reform keep us positive on a strategic basis.

Equity	Tactical view	Strategic view	Comments
EM Equity			Attractive valuations but weakening Chinese and European demand plus elevated US rates weighs on EM equities and cause us to stay tactically neutral. Over a longer horizon, China likely will remain a drag, but improvements in cyclical and financial conditions alongside shifting supply chains and catch-up potential keep us strategically neutral across the EM equity space with a preference for non-China EM exposure such as India.
EM ex China			Attractive valuations and the resilience of domestic demand-driven economies or those poised to benefit more directly from a bottoming out of the tech (semiconductor) plus AI cycle keep us selectively constructive and tactically neutral. Sound macro management, economic flexibility and long-term potential keep us strategically bullish on EM ex-China.
China Equity			China remains too cheap to underweight and (fundamentally) too weak to go overweight. Thus, we stay neutral for now in anticipation of late year support to meet the "around 5%" growth target and which should also prop up demand and sentiment into 2024. Looking a bit further ahead, China faces a narrowing path to addressing long-term structural challenges. We remain negative on a strategic basis.

Fixed Income	Tactical view	Strategic view	Comments
US Treasuries			Despite a relatively brighter outlook for the US economy, and challenges stemming from near term upward pressure on US yields, we remain overweight on US sovereign fixed income. Given high levels of nominal yields, income returns are attractive, and provide an "income cushion" to short-term price return volatility. Recession risks remain elevated and higher than priced in by the market. Given the difficulty in timing a recession and the associated market moves, we think the risk of being too late in extending duration outweigh those of being too early. We expect to see total returns in positive territory, both on a tactical and strategic horizon.
Intl. Sovereign Debt			We maintain an overweight tactical allocation to developed market sovereign fixed income. The outlook for this asset class remains positive over the full forecast horizon, particularly as economic challenges in Europe mount. However, the stickiness of inflation in Europe, and the associated potential for hawkish monetary policy surprises, constitute a downside risk to price returns. Income returns are also less attractive versus the US given the lower (average) level of yields.
Global IG			Higher quality, better income buffer. But relatively rich spreads imply modest defensive value amidst G2 slowdown. We stay tactically neutral. Over a longer time-horizon, G2 policy easing and better underlying credit quality likely to support healthy returns but unlikely to be exceptional – we stay neutral strategically as well.
High Yield Debt			Sub-investment grade credits resilient so far this year. But spreads have become too rich given the outlook. That leaves it vulnerable to a macro downturn alongside refinancing stresses in 2024 and leads us to stay tactically underweight. A bounce back post-recession and easier financial conditions to help ease credit spreads pointing to higher expected returns – we are strategically overweight.
EM Local Currency Debt			An earlier and lower inflation peak than DMs keeps us optimistic, but higher US rates, stronger USD and a deeper (than expected) slowdown in China cause us to shift back to neutral (from modest overweight previously). On a longer horizon, a track record of economic flexibility and improving policy credibility, despite the drag from China, keep us bullish EM LC debt.
EM USD Debt			Reasonable yields but combination of a euro area and China slowdown, tight spreads and frontier market distress keep us cautious and tactically neutral. Over time, easier global financial conditions to help, but sovereign USD debt issuers' heavier reliance on China and a relatively lower yield, versus local currency, keep us strategically neutral as well.

Source: BNY Mellon Investment Management, as of September 12, 2023.

Past performance is no guarantee of future results.

All investments involve risk, including the possible loss of principal. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

RISK CONSIDERATIONS

This report has been provided for informational purposes only and is subject to significant limitations. The views contained herein are not to be taken as advice or a recommendation to buy or sell any investment. The information contains projections or other forward-looking statements regarding future events, targets or expectations, and is only current as of the date indicated. Targets contained herein are based upon an analysis of historical and current information and assumptions about circumstances and events that may not yet have taken place and may never occur. If any of the assumptions used do not prove to be true, results may vary substantially. Certain information has been obtained from sources believed to be reliable, but not guaranteed. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. If the reader chooses to rely on the information, it is at its own risk. The information is based on current market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons. We do not undertake to advise you of any change in the information contained in this report. The report does not reflect actual trading and other factors that could impact future returns. Given the inherent limitations of the assumptions, this report does not contain sufficient information to support an investment decision and it should not be relied upon by you in evaluating the merits of investing in any securities or products. The information has been provided without taking into account the investment objective, financial situation or needs of any particular person. Please consult a legal, tax or financial professional in order to determine whether an investment product or service is appropriate for a particular situation.

Equities are subject to market, market sector, market liquidity, issuer, and investment style risks, to varying degrees.
Bonds are subject to interest-rate, credit, liquidity, call and market risks, to varying degrees. Generally, all other factors being equal, bond prices are inversely related to interest-rate changes and rate increases can cause price declines. **Commodities** contain heightened risk, including market, political, regulatory, and natural conditions, and may not be appropriate for all investors. **High yield bonds** involve increased credit and liquidity risk than higher-rated bonds and are considered speculative in terms of the issuer's ability to pay interest and repay principal on a timely basis. Investing in **foreign denominated and/or domiciled securities** involves special risks, including changes in currency exchange rates, political, economic, and social instability, limited company information, differing auditing and legal standards, and less market liquidity. These risks generally are greater with emerging market countries. **Small and midsized company stocks** tend to be more volatile and less liquid than larger company stocks as these companies are less established and have more volatile earnings histories. **Currencies** are can decline in value relative to a local currency, or, in the case of hedged positions, the local currency will decline relative to the currency being hedged. These risks may increase volatility. **Alternative strategies** may involve a high degree of risk and prospective investors are advised that these strategies are appropriate only for persons of adequate financial means who have no need for liquidity with respect to their investment and who can bear the economic risk, including the possible complete loss, of their investment. The strategies may not be subject to the same regulatory requirements as registered investment vehicles. The strategies may be leveraged and may engage in speculative investment practices that may increase the risk of investment loss. Investors should consult their financial professional prior to making an investment decision.

INDEX DEFINITIONS

Beveridge Curve: The relationship between the unemployment rate and the job openings rate. It is a measure of the general state of the labor market, highlighting if the market is tight (lots of jobs available, low unemployment), or loose (few jobs available, high unemployment). **Japan (Nikkei 225):** The NIKKEI 225 is an index that tracks the performance of the largest 225 companies traded in the Japanese market. **10Y UK Gilt** – Average yield of a range of UK government bonds all adjusted to the equivalent of a ten-year maturity. **Phillips Curve:** An economic theory that inflation and unemployment have a stable and inverse relationship. US **Consumer Prices (CPI) Index** measure of prices paid by consumers for a market basket of consumer goods and services.
The yearly (or monthly) growth rate represents the inflation rate. The **10Y US Treasuries Average Yield** of a range of Treasury securities all adjusted to the equivalent of a ten-year maturity. The **CBOE VIX Index (VIX)** is an indicator of the implied volatility
of S&P 500 Index as calculated by the Chicago Board Options Exchange (CBOE). The **Majors Dollar Index (USD)** measures the value of the US dollar relative to a basket of currencies of the most significant trading partners of the US including the euro, Japanese yen, Canadian dollar, British pound, Swedish krona, and Swiss franc. The **MSCI EM Index (Emerging Markets Equities)** tracks the total return performance of emerging market equities. The **S&P 500 Composite Index (S&P 500)** is designed to track the performance of the largest 500 US companies. **Europe STOXX 600** Index represents the performance of 600 large, mid and small capitalization companies across 18 countries in the European Union. **Bloomberg US Corporate High Yield:** covers the universe of fixed-rate, non-investment grade corporate debt in the US. **Bloomberg US Corporate Investment Grade:** designed to measure the performance of the investment grade corporate sector in the US **1-mth. 1-year forward swap:** the avg. interest rate for 1-mth. in 1-year forward. **GDP:** gross domestic product is the total monetary or market value of all the finished goods and services produced within a country's borders over a given time period. **Fed funds Rate:** the target interest rate for overnight lending and borrowing between banks. **Purchasing Managers Index (PMI):** An economic indicator derived from monthly surveys of private sector companies. A level above 50 indicates expansion compared to the prior month and below 50 contraction. Investors cannot invest directly in any index.

STATISTICAL TERMS

Skewness in statistics represents an imbalance and an asymmetry from the mean of a data distribution. In a normal data distribution with a symmetrical bell curve, the mean and median are the same. **Kurtosis** is a measure of whether the data are heavy-tailed or light-tailed relative to a normal distribution. That is, data sets with high/low kurtosis tend to have heavy/low tails, or outliers. **Probability-weighted mean** is similar to an ordinary arithmetic mean, except that instead of each of the data points contributing equally to the final average, data points are weighted by the statistical probability for a particular scenario outcome. **Duration** is a measure of a bond's interest-rate sensitivity, expressed in years. The higher the number, the greater the potential for volatility as interest rates change.

Other

QE: quantitative easing. **Fed:** US Federal Reserve. **ECB:** European Central Bank. **BOJ:** Bank of Japan. **BOE:** Bank of England.

BNY MELLON GLOBAL ECONOMICS AND INVESTMENT ANALYSIS TEAM

SHAMIK DHAR
Chief Economist

JAKE JOLLY, CFA
Head of Investment Analysis

SEBASTIAN VISMARA
Senior Financial Economist

ANINDA MITRA
Head of Asia Macro & Investment Strategy

SONIA MESKIN
Head of U.S. Macro

The BNY Mellon Global Economics and Investment Analysis Team, headed by the Chief Economist, with several senior investment strategists, provides research on global economic trends and views on investment strategy to external clients and audiences across The Bank of New York Mellon Corporation.

im.bnymellon.com

FOR INSTITUTIONAL, PROFESSIONAL, QUALIFIED INVESTORS AND QUALIFIED CLIENTS. FOR GENERAL PUBLIC DISTRIBUTION IN THE U.S. ONLY.

This material should not be considered as investment advice or a recommendation of any investment manager or account arrangement, and should not serve as a primary basis for investment decisions. Any statements and opinions expressed are those of the author as at the date of publication, are subject to change as economic and market conditions dictate, and do not necessarily represent the views of BNY Mellon or any of its affiliates. The information has been provided as a general market commentary only and does not constitute legal, tax, accounting, other professional counsel or investment advice, is not predictive of future performance, and should not be construed as an offer to sell or a solicitation to buy any security or make an offer where otherwise unlawful. The information has been provided without taking into account the investment objective, financial situation or needs of any particular person. BNY Mellon and its affiliates are not responsible for any subsequent investment advice given based on the information supplied. This is not investment research or a research recommendation for regulatory purposes as it does not constitute substantive research or analysis. This information may contain projections or other forward-looking statements regarding future events, targets or expectations, and is only current as of the date indicated. There is no assurance that such events or expectations will be achieved, and actual results may be significantly different from that shown here. The information is based on current market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons. References to specific securities, asset classes and financial markets are for illustrative purposes only and are not intended to be and should not be interpreted as recommendations. Past performance is no guarantee of future results. Information and opinions presented have been obtained or derived from sources which BNY Mellon believed to be reliable, but BNY Mellon makes no representation to its accuracy and completeness. BNY Mellon accepts no liability for loss arising from use of this material.

All investments involve risk including loss of principal.

Not for distribution to, or use by, any person or entity in any jurisdiction or country in which such distribution or use would be contrary to local law or regulation. This information may not be distributed or used for the purpose of offers or solicitations in any jurisdiction or in any circumstances in which such offers or solicitations are unlawful or not authorized, or where there would be, by virtue of such distribution, new or additional registration requirements. Persons into whose possession this information comes are required to inform themselves about and to observe any restrictions that apply to the distribution of this information in their jurisdiction.

Issuing entities

This material is only for distribution in those countries and to those recipients listed, subject to the noted conditions and limitations: For Institutional, Professional, Qualified Investors and Qualified Clients. For General Public Distribution in the U.S. Only. • United States: by BNY Mellon Securities Corporation (BNYMSC), 240 Greenwich Street, New York, NY 10286. BNYMSC, a registered broker-dealer and FINRA member, and subsidiary of BNY Mellon, has entered into agreements to offer securities in the U.S. on behalf of certain BNY Mellon Investment Management firms. • **Europe (excluding Switzerland):** BNY Mellon Fund Management (Luxembourg) S.A., 2-4 Rue Eugène Ruppert L-2453 Luxembourg. • **UK, Africa and Latin America (ex-Brazil):** BNY Mellon Investment Management EMEA Limited, BNY Mellon Centre, 160 Queen Victoria Street, London EC4V 4LA. Registered in England No. 1118580. Authorised and regulated by the Financial Conduct Authority. • **South Africa:** BNY Mellon Investment Management EMEA Limited is an authorised financial services provider. • **Switzerland:** BNY Mellon Investments Switzerland GmbH, Bärengasse 29, CH-8001 Zürich, Switzerland. • **Middle East:** DIFC branch of The Bank of New York Mellon. Regulated by the Dubai Financial Services Authority. • **Singapore:** BNY Mellon Investment Management Singapore Pte. Limited Co. Reg. 201230427E. Regulated by the Monetary Authority of Singapore. • **Hong Kong:** BNY Mellon Investment Management Hong Kong Limited. Regulated by the Hong Kong Securities and Futures Commission. • **Japan:** BNY Mellon Investment Management Japan Limited. BNY Mellon Investment Management Japan Limited is a Financial Instruments Business Operator with license no 406 (Kinsho) at the Commissioner of Kanto Local Finance Bureau and is a Member of the Investment Trusts Association, Japan and Japan Investment Advisers Association and Type II Financial Instruments Firms Association. • **Brazil:** ARX Investimentos Ltda., Av. Borges de Medeiros, 633, 4th floor, Rio de Janeiro, RJ, Brazil, CEP 22430-041. Authorized and regulated by the Brazilian Securities and Exchange Commission (CVM). • **Canada:** BNY Mellon Asset Management Canada Ltd. is registered in all provinces and territories of Canada as a Portfolio Manager and Exempt Market Dealer, and as a Commodity Trading Manager in Ontario.

BNY MELLON COMPANY INFORMATION

BNY Mellon Investment Management is one of the world's leading investment management organizations, encompassing BNY Mellon's affiliated investment management firms and global distribution companies. BNY Mellon is the corporate brand of The Bank of New York Mellon Corporation and may also be used as a generic term to reference the corporation as a whole or its various subsidiaries generally. • **Mellon Investments Corporation** (MIC) is a registered investment advisor and subsidiary of The Bank of New York Mellon Corporation. MIC is composed of two divisions: **Mellon**, which specializes in index management, and **Dreyfus**, which specializes in cash management and short duration strategies. **Dreyfus** is also a division of BNY Mellon Investment Adviser, Inc. (BNYMIA), a registered investment adviser. • **Insight Investment** – Investment advisory services in North America are provided through two different investment advisers registered with the Securities and Exchange Commission (SEC) using the brand Insight Investment: Insight North America LLC (INA) and Insight Investment International Limited (IIIL). The North American investment advisers are associated with other global investment managers that also (individually and collectively) use the corporate brand Insight. Insight is a subsidiary of BNY Mellon. • **Newton Investment Management** – "Newton" and/or the "Newton Investment Management" brand refers to the following group of affiliated companies: Newton Investment Management Limited (NIM) and Newton Investment Management North America LLC (NIMNA). NIM is incorporated in the United Kingdom (Registered in England no. 1371973) and is authorized and regulated by the Financial Conduct Authority in the conduct of investment business. Both Newton firms are registered with the Securities and Exchange Commission (SEC) in the United States of America as an investment adviser under the Investment Advisers Act of 1940. Newton is a subsidiary of The Bank of New York Mellon Corporation. • **ARX** is the brand used to describe the Brazilian investment capabilities of BNY Mellon ARX Investimentos Ltda. ARX is a subsidiary of BNY Mellon. • **Walter Scott & Partners Limited** (Walter Scott) is an investment management firm authorized and regulated by the Financial Conduct Authority, and a subsidiary of BNY Mellon. • **Siguler Guff** – BNY Mellon owns a 20% interest in Siguler Guff & Company, LP and certain related entities (including Siguler Guff Advisers LLC). • **BNY Mellon Investor Solutions, LLC** is an investment adviser registered as such with the U.S. Securities and Exchange Commission ("SEC") pursuant to the Investment Advisers Act of 1940, as amended. BNY Mellon Investor Solutions, LLC is a subsidiary of The Bank of New York Mellon Corporation.

No part of this material may be reproduced in any form, or referred to in any other publication, without express written permission. All information contained herein is proprietary and is protected under copyright law.

NOT FDIC INSURED | NO BANK GUARANTEE | MAY LOSE VALUE |

©2023 THE BANK OF NEW YORK MELLON CORPORATION

IS-427778-2023-09-21
GU-483 21 September 2024.
T11823 08/23.