Vantage Point

Q3. 2022

Confronting the bear

Introduction

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

The past three months have seen a dramatic selloff of risky assets, driven largely by a recalibration of expectations of where global interest rates might be headed. With rate expectations rising, fixed income assets have also fallen in value, generating a nasty positive correlation between bonds and equities on the way down. Overall, the situation is not unlike the 'overheating' scenarios we described in a number of Vantage Points last year. For instance, in our 2021Q2 edition, titled 'The Inflation Question", we wrote: *"There is, however, an element of 'policy error' in this scenario too, as central banks incorrectly interpret inflation running above 2% to be temporary and therefore maintain an accommodative policy stance. Ultimately, central banks and the Fed in particular do have to respond to the rise in inflation, once it starts to threaten inflation expectations, but that reaction comes late and is larger than it otherwise would have been."*

So, a lot depends on the evolution of inflation and therefore interest rates from here. We see three factors as being crucially important. **First**, there is the situation in Ukraine and how the conflict develops over the next few months. An attritional, unresolved outcome looks increasingly likely, meaning high energy prices, high food prices and economic sanctions are here to stay. **Second**, there is the disruption to global supply chains, itself related to the Ukraine war, but also manifesting itself in semiconductor shortages from Taiwan and disruption to the supply of durable goods. China's zero-COVID policy may have exacerbated this disruption, but probably not as much as the standard narrative might suggest.

These two factors have effectively reduced global aggregate supply (of goods), while global demand for goods remained high, even as the pandemic began to wane. The upshot has been a large rise in the relative price of goods, adding to the upside shocks to energy and food prices, driving recorded inflation rates up. The key question for central banks has been whether to accommodate supply-driven shocks and wait for inflation to come down again as these shocks gradually fall out of the twelve-month comparison, or to tighten policy in order to weigh down on the parts of the price index that haven't risen as sharply in order to bring the inflation rate of the overall index back to target relatively quickly.

Central banks have almost universally adopted the former approach – until very recently. A **third** factor now appears to be increasingly important. It is becoming clear that inflationary pressures are broadening out to core (ex-food, energy) elements of the index and that longer-term inflation expectations may be rising. Some of that may result from monetary policy remaining overly loose for too long. The Federal Reserve (Fed) appears to have decided it needs to normalize interest rates and then move them into outright restrictive territory much earlier than it had previously thought. Hence the 75bp rise in June, with the promise of more to come. Other central banks have started the process of tightening too. Once again, the situation is reminiscent of our old 'Overheating' scenario (see above).

The supply and demand-driven inflation shock is common to a number of countries, developed and emerging, but the size of their contribution differs. Broadly, the strength of aggregate demand appears to be a bigger issue in the US than the euro area. By contrast, supply shocks, most notably the energy price increase, appear to dominate in the euro area. The implication is potentially quite different paths for monetary policy going forward and, while both regions are increasingly vulnerable to recession, if recession comes it will be for different reasons and probably at different times.

The US is more vulnerable to a 'monetary recession', like the ones we saw at the beginning of the 1980s and 1990s. These generally occur because inflation has got out of control and the central bank has to step hard on economic activity in order to bring it back down. By contrast, some recessions occur because of 'real' shocks, such as a rise in real energy prices or a pandemic, that reduce real incomes and spending. We believe the euro area is more vulnerable to a recession like this, because of its energy dependency and the relatively large rise in the price of the energy it buys. Of course, real and monetary shocks aren't mutually exclusive, and the worst recessions take place when both hit simultaneously (such as in the 1970s). But the implications for growth, inflation and asset prices can be quite different in each.

Our scenarios trace out these implications in some detail. Of course, recession isn't inevitable and our **'best case'** scenario outlines how one might most likely be avoided. In short, we believe that it will require some combination of: (i) inflation to fall back quite sharply of its own accord, as nasty supply shocks drop out of the 12-month rate; (ii) interest rate expectations to stabilize and then start to fall back; (iii) aggregate nominal spending to slow but hold up well, possibly because households decide to run down some of the 'excess savings' they built up during the pandemic, in response to a sharp squeeze in real incomes; and (iv) an improvement in confidence, possibly because the negative tone of news narrative improves.

Our other two scenarios describe the 'real' and 'monetary' recessions. The **real recession** sees (i) energy prices staying high or taking another step up, perhaps because the situation in Ukraine deteriorates further and diversification proves difficult; (ii) inflation remaining well above target, so significant monetary easing is ruled out; (iii) a large deterioration in the international terms of trade and a large squeeze on real incomes that cautious households are unwilling or unable to offset by dipping into excess savings.

The monetary recession requires: (i) higher inflation becoming embedded in expectations, causing unit labour cost inflation to rise to levels inconsistent with inflation targets; (ii) central banks to respond with much more aggressive rate hikes, taking policy into significantly restrictive territory; (iii) A relatively unfavourable trade-off between growth and inflation, meaning activity has to fall in order to bring inflation and inflation expectations back to target.

China has its own domestic problems, driven by the bursting of the property bubble, made worse by periodic lockdowns in major cities thanks to the zero covid policy. The authorities have eased and, assuming no further lockdowns, the Chinese economy should recover for the rest of the year, but it will likely struggle to meet its growth target of 5.5% in any of these scenarios. Japan has been craving some inflation for some time but, unlike the US and euro area, hasn't managed to translate that into decisively higher inflation expectations. The yield curve targeting framework remains intact and the Bank of Japan (BoJ)'s stock of Japanese Government Bonds (JGBs) continues to grow. The UK shares similarities with both the US and euro area – experiencing the same kind of negative terms of trade/real income shock as the euro area, while overly loose monetary policy may well prove to be a problem there too. Emerging markets have fared OK economically, despite being hit by higher food/energy prices, rising US interest rates and a stronger dollar. There may well be political and/or economic ramifications to come, but our sense is these are likely to be most acute in frontier markets.

So, what about investments? The two questions I'm most often asked are: (i) has the equity market bottomed? And (ii) when will it be time to go long bonds (or long duration)? As you will see, the logic of our fan chart forecasts suggests the answer to both questions is 'not yet'. The main risk remains US rates – they may well have to go up further than markets have currently priced in. If that's the case, then both bonds and equities remain vulnerable and more volatility over the summer is likely. However, given the substantial selloff already in both asset classes, we may well get to the point where dialling up risk on multi-asset portfolios makes sense relatively soon, probably sometime in the second half. If US inflation surprises to the downside, then that moment could come sooner.

This edition aims to flesh out these arguments in more detail. We hope you enjoy reading it.

SHAMIK DHAR
CHIEF ECONOMIST

Vantage Point summary

We summarize our Vantage Point analysis in a new simple, yet powerful, way.

We start by showing a summary of our outlook over the 12 months in terms of the level for GDP growth, inflation and monetary policy support.

We then highlight how our fan charts and market expectations differ – in terms of average expectations for the variables considered, and uncertainty around such expectations. Broadly, the idea is that a significant share of moves in financial market can be explained by the 3 macro factors considered – growth, inflation and monetary policy – that macro-driven tactical investment opportunities arise when there is a substantial discrepancy between our own views and what is priced in by the market, and that conviction around our tactical investment views is highest the lower the uncertainty around our forecast.

TABLE 1: SUMMARY OF OUR OUTLOOK

How to read the heatmap. **Green** indicates above trend growth, below target inflation, greater 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 our outlook	**Average expectations**				Growth is weak over the next 12 months, inflation is still above target and policy moves rapidly to "neutral" levels.
	Uncertainty				Uncertainty about the geopolitical landscape, the policy reaction to it, and unknown consequences compounds.

TABLE 2: OUR FORECAST VS THE MARKET

How to read the heatmap. **Green** indicates better than expected (relative to the market) growth, lower than expected inflation and greater than expected policy accommodation. 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 the market	**Average expectations**				We see growth disappointing, inflation surprising to the upside and policy to tighten in line with expectations.
	Uncertainty				Us, like the market, recognise the sheer amount of uncertainty over the outlook.

TABLE 3: SUMMARY OF 12 MONTH INVESTMENT CONCLUSIONS

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

Asset class	Q1 '22	Q2 '22	Conviction	Rationale
Cash			High	Benefits from higher policy and slower growth. Suffers inflation.
Fixed Income			Low	Suffers from policy and inflation, benefits from slower growth.
Equities			High	Suffers from slower growth and tighter policy, ambiguous for inflation.
Credit			High	Suffers from slower growth, higher inflation and tighter policy.
Alternatives			Medium	Assets that benefit from higher inflation, but are less sensitive to growth and policy.

Executive Summary

OUR NEW SCENARIOS IN BRIEF

40%

PROBABILITY

Scenario 1 – Best Case

SCENARIO

- Ukraine conflict becomes localized, or winds down
- Energy and food price spikes abate
- China manages zero-covid more efficiently and its 2H'22 recovery + east Asia re-opening normalizes supply chains quickly
- U.S. wages weaken modestly, but labor markets and consumption hold up
- Nominal spending remains robust as households dip into 'excess saving' pots to offset impact of higher living costs
- Monetary policy tightens gradually
- Market liquidity returns, risk assets shift higher into 2023

Supply pressures ease and the cost-of-living crisis fades and, as a result, gradualism in policy hikes predominate and risk assets rally by year-end. In this scenario global production and shipping and logistics continue improving; the U.S. labor market holds up even as wage growth slackens; and, as the ongoing conflict in Ukraine becomes localized, oil and food prices do not escalate further. Even though the U.K. and E.U. undergo a mild contraction, the U.S. economy slows but narrowly avoids recession. Meanwhile, China's production-led recovery exceeds expectations. In this scenario, monetary policy tightening slows after the initial front-loading of rate hikes --with Fed rates cresting around 3% by end 2022. Consequently, yield curve inversion is forestalled, global policy-divergence is contained, USD strengthening abates, the S&P bottoms out soon and then goes on to rally into 2023. This scenario rests heavily on China managing to execute its zero-covid strategies more efficiently and re-stimulating production and investment sufficiently to offset the drag from its property sector. It also presumes that the U.S. labor market and consumer spending can absorb the front-loading of Fed rate hikes, with a slowdown in wage growth and a steady reduction in the job-vacancy-to-applicant ratio. Overall global nominal demand reverts to its supply-side capabilities with a re-opening across the rest of the world.

30%

PROBABILITY

Scenario 2 – Real Recession in 2022

SCENARIO

- Conflicts broadens or intensifies
- Geo-political fragmentation implies prolonged energy and food price shocks
- China's zero-covid efforts splutter & rest of Asia is slow to normalize upstream production
- Retail price spikes persist, cost-of-living crisis pushes major economies into recession
- Core inflation comes off in early 2023
- Major central banks pivot to easing early next year
- Market liquidity and sentiment stay sluggish, risk assets take longer to rebound

The Russo-Ukrainian crisis escalates and supply-chains fragment, which worsens the cost-of-living crisis and pushes several major economies into a real recession. There is no recovery in risk assets, to pre-Ukraine invasion levels, until the end of 2023. In this scenario, escalating conflict in Ukraine and fragmenting geopolitical relationships imply the dearth of any timely or coordinated energy-supply or food-production response. Moreover, China's zero-covid policies are haphazardly implemented and manufacturing and logistical disruptions recur across east Asia. All of these bring about a further, near-term, spike in energy and food prices as well as recurring shortages in upstream production inputs and manufacturing disruptions. Consequently, retail prices continue rising and which sharply erodes consumers' purchasing power --with Europe particularly hard hit given its proximity to the Ukraine conflict and dependence on Russian energy; and the U.S. also failing to avert an economic contraction. In this scenario, monetary policy tightens through Q3'22 but pivots to easing by early 2023 as recessionary conditions and widening output gaps pulls down core inflation toward or below 2% by early next year. However, the S&P stays below 4,000 till late 2023 till growth dynamics stabilize, and the earnings outlook improves.

30%

PROBABILITY

Scenario 3 – Monetary Recession by 2023

SCENARIO

- Ukraine conflict & tight supply chains lurk in the background, but…
- U.S. demand remains in rude health
- Wage-price spiral worsens, inflation broadens and becomes persistent
- Fed forced into raising rates much higher, to more than 4%
- USD strengthens, equity markets sell off, and financial conditions tighten sharply
- Global growth takes a large hit, and which ultimately slows inflation
- But asset prices stay suppressed for longer, with a recovery only in 2024

U.S. demand holds up through this year as its labor markets stay tight, but a worsening wage-price spiral causes inflation to become much more persistent. This results in the Fed applying a much harder policy brake to rein in demand and causing a much steeper fall in risk assets. In this scenario, the fed funds rate moves towards 5% next year, the yield curve inverts, and the USD strengthens considerably, with the S&P index price-equity multiple tumbling to GFC lows and the index level likely staying below 3,000 till 2024. In this scenario, the E.U. applies less monetary tightening and, hence, is relatively less worse off (than in scenario 2). But extreme policy divergence weighs on the Japanese Yen and Chinese Yuan, worsening market turbulence and resulting in a rapid tightening of global financial conditions which expose weaker corporates as well as a range of frontier- and emerging-market sovereigns to heightened interest rate and foreign-exchange risk and causing high-yield and EM spreads to widen materially.

Equities

- We further dial down risk exposures as markets are likely to remain volatile, risk premia remain high, and our fan chart forecasts suggest risks are skewed to the downside. Short-duration parts of the market are likely to outperform long-duration assets. On a relative basis, we see income equities (equities of companies that return cash to shareholders either through dividends or share buybacks) outperforming non-income paying stocks as income provides a hedge for upside inflation surprises and implies a lower sensitivity to higher rates. US and non-European Developed Markets (DM) stocks are likely to fare better than European, where the economic impact is largest and uncertainty greatest. Within emerging markets, we prefer to be invested in commodity exporting Brazil, Mexico, and Indonesia. We have reduced our underweight and prefer staying neutral on China with a tilt towards infrastructure, technology and consumer staples.

Fixed Income and Credit

- There is still a small chance of further increases in market rates if core inflation surprises on the upside. But at current yield levels, and with the (near) inversion in 10s30s and 5s10s across (most) DM curves, we would reduce our longstanding underweights on fixed-income duration.

FX

- From a major dollar index perspective, we still believe that the USD has further upside given the euro comprises 60% of the index. We continue to believe that the euro will come under pressure on markets pricing in fragmentation risks, proximity to Ukraine crisis and energy supply risks.

What We Think

SECTION 1

What we think: Forecast summary

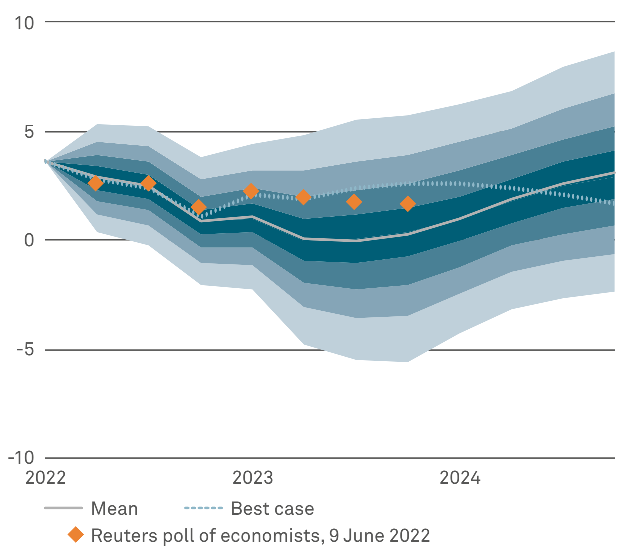
THE GLOBAL ECONOMIC OUTLOOK

These are challenging times: for households, for policymakers and for investors. Inflation has hit multi-decade highs across the major economies. And although wages have responded, to varying degrees across countries, they are yet to do so in full. As a result, many households have seen significant reductions in the purchasing power of their incomes. Measures of consumer confidence, in the US and in Europe, have fallen to levels that typically herald a downturn. Does that mean that a period of economic contraction is now inevitable? Not necessarily. Households have built up sizeable pots of additional savings during the pandemic. These are worth some 10% of GDP in the US, and perhaps just over half of that in Europe. Most of these savings remain unspent and have the potential to provide a significant cushion against a fall in real incomes that is perceived to be temporary.

Unfortunately, low levels of consumer confidence are not the only inauspicious signal out there. In the US, inflation has now reached 8.6%. The last time US policymakers succeeded in bringing inflation back down from such heights, while simultaneously avoiding recession, was under Bretton Woods in 1951. The reason is that, at moments like this, expectations of high inflation can become embedded, and self-fulfilling. They then affect the way wages and prices are set. In the past, and during periods of free-floating exchange rates, it has almost always needed a period of declining economic activity to force inflation expectations, and inflation lower.

Our latest forecasts for economic activity in the US and the euro area are shown in the first two fan charts below. In our single most likely scenario, 'Best case', to which we assign a weight of 40%, a major economic downturn is avoided, although Europe in particular may experience one or two quarters of contraction. Some of the pandemic savings are spent, and there is the potential for additional fiscal stimulus too, offsetting some of the adverse consequences of falling real wages. Inflation expectations remain relatively well anchored, removing the need for an aggressive tightening of

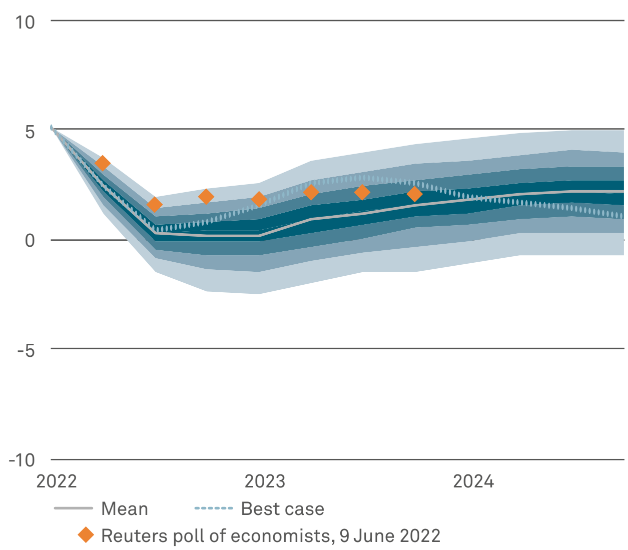
CHART 1: US GDP – FOUR-QUARTER PERCENTAGE CHANGES.



Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

Key takeaway: US growth likely to downshift, with majority of downside skew in 2023. Consensus is more optimistic, forecasting US to avoid recession.

CHART 2: EURO AREA GDP – FOUR-QUARTER PERCENTAGE CHANGES.



Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

Key takeaway: Europe growth outlook weaker than US near-term, with odds on chance of near-term recession. Consensus expects growth to stay firm.

Forecasts begin in Q2 2022 and were calculated as of June 20, 2022 Source: BNY Mellon Investment Management and Fathom Consulting. The dotted line shows the best case scenario mode and the solid line is the mean or probability-weighted average forecast across all three scenarios. Markings show survey and market implied pricing expectations. The darker bands towards the center of the fan chart show the more likely outcomes, while the lighter bands show progressively less likely outcomes covering 80% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central forecast are wider than those above, this shows the balance of risks lies to the downside.

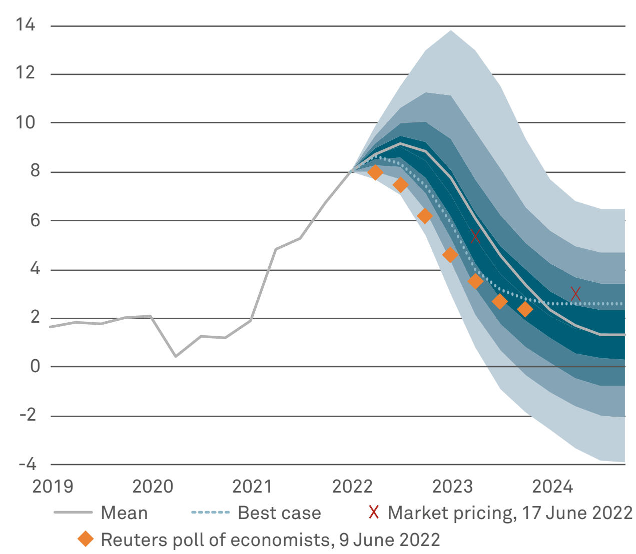
monetary policy. Our two alternative scenarios, which have a combined weight of 60%, each includes a period of recession, either in the near-term as households retrench rather than dip into their pandemic savings, or further out as inflation expectations slip their anchor leading to a more aggressive policy response from central banks and from the US Federal Reserve in particular. That is why our GDP fan charts have a pronounced downward skew. In the US, the greatest risk of recession is towards the middle of next year, where we see a 40% chance that US economic activity is lower than it was in 2022 Q1. In the euro area, the risk of recession is greater and more immediate. We see a 60% chance that euro area GDP is lower in 2022 Q2 than in 2022 Q1, and a 60% chance that it is lower in 2022 Q3 than in 2022 Q1.

The possibility that a loss of faith in the inflation target causes inflation to become more persistent, which occurs in our 'Monetary recession' scenario to which we attach a weight of 30%, accounts for the upside skew in our US CPI fan chart. Further out, the increasing likelihood of recession, and consequently a more rapid disinflation than in the central case, causes the skew to change sign and become negative. We see around a one-in-four chance that the US is in deflation by the end of 2023.

Our US federal funds rate fan chart is wider than it was at the time of the previous Vantage Point, reflecting what we judge to be a less certain macroeconomic outlook. Our forecasts now embody the prospect of a recession this year, in which case we may already be close to the peak in interest rates, as well as the prospect of prolonged double-digit inflation and much higher interest rates leading to a recession next year. Each of these very different scenarios is equally likely in our view. Mirroring the US CPI fan chart, the US federal funds rate fan chart has positive skew in the near term and negative skew further out. The fan chart for ten-year US Treasury yields is similar in shape to the fan chart for the US federal funds rate. However, the mean path drops off a little less quickly reflecting the consequences of quantitative tightening, which is likely to pick-up speed later this year and into next year in the 'Monetary recession' scenario.

There is a material downward skew to our fan chart for the US S&P 500. In 'Best case', US equities have more or less bottomed out, and are likely to recover from here, albeit gradually. In our two recession scenarios they have further to fall, particularly in the case where the pick-up in inflation becomes embedded, triggering a material further tightening of US interest rates. We see around a 40% chance that the S&P500 drops below 3000 and around a 20% chance that it drops below 2500.

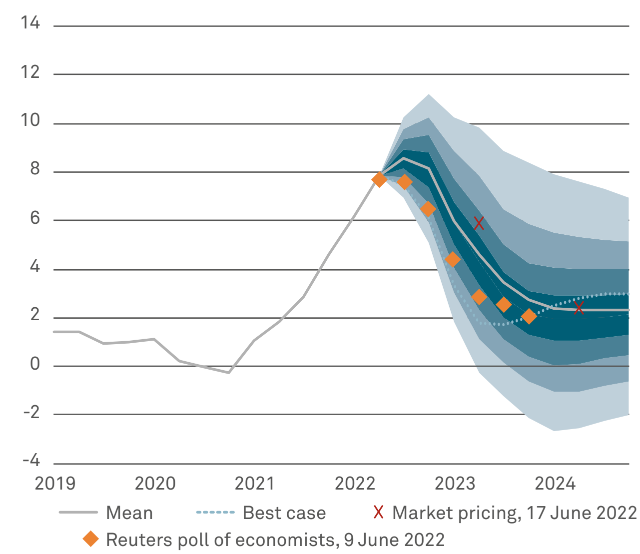
CHART 3: US CPI – FOUR-QUARTER PERCENTAGE CHANGES.



Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

Key takeaway: US inflation skewed to the upside near-term, driven by "monetary recession" scenario. Surveys and market pricing expect inflation will decline more rapidly from peak.

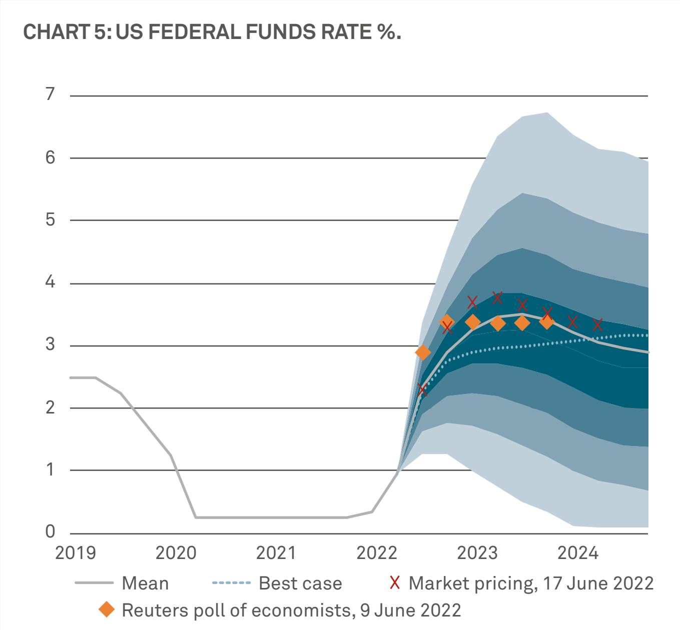
CHART 4: EURO AREA CPI – FOUR-QUARTER PERCENTAGE CHANGES.



Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

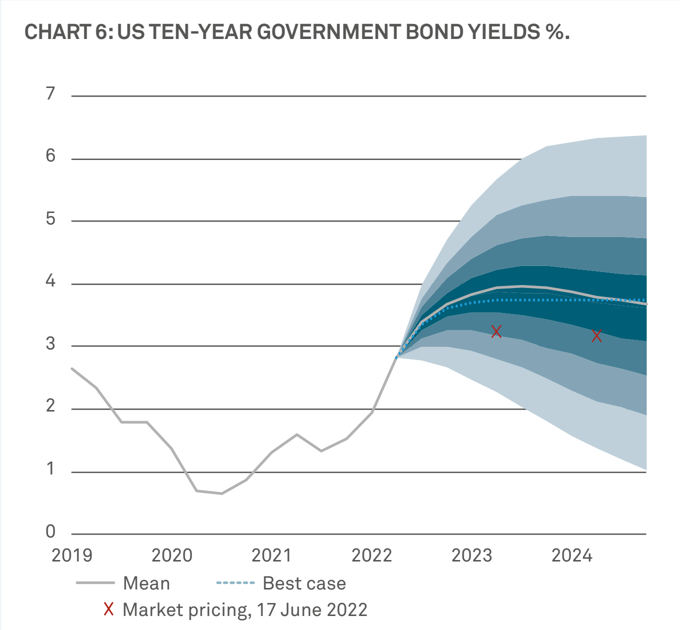
Key takeaway: Near-term upside skew less extreme than US. Risk becomes more balanced in 2023 as inflation trends lower.

Forecasts begin in Q2 2022 and were calculated as of June 20, 2022 Source: BNY Mellon Investment Management and Fathom Consulting. The dotted line shows the best case scenario mode and the solid line is the mean or probability-weighted average forecast across all three scenarios. Markings show survey and market implied pricing expectations. The darker bands towards the center of the fan chart show the more likely outcomes, while the lighter bands show progressively less likely outcomes covering 80% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central forecast are wider than those above, this shows the balance of risks lies to the downside.



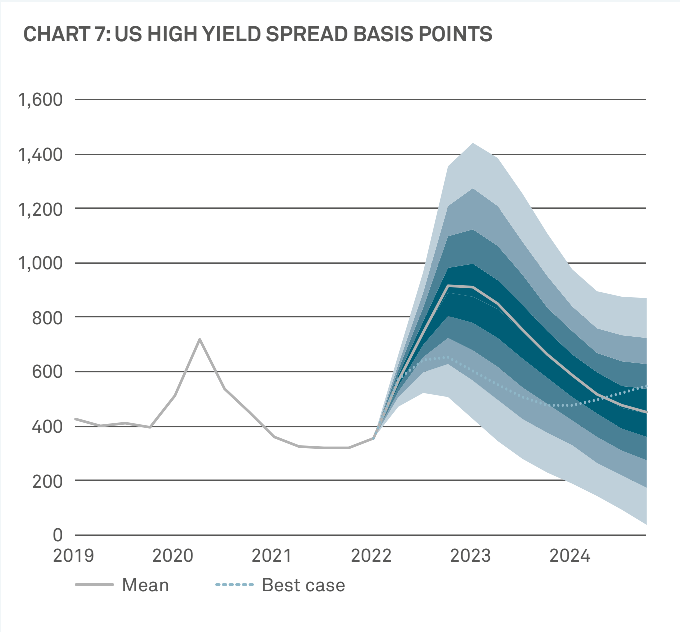
Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

Key takeaway: Policy rate needs to go higher, primarily in "monetary recession" scenario, but wide forecast spread in 2023 dependent scenario path. Central path in line with survey and market pricing, though risks decisively to the upside.



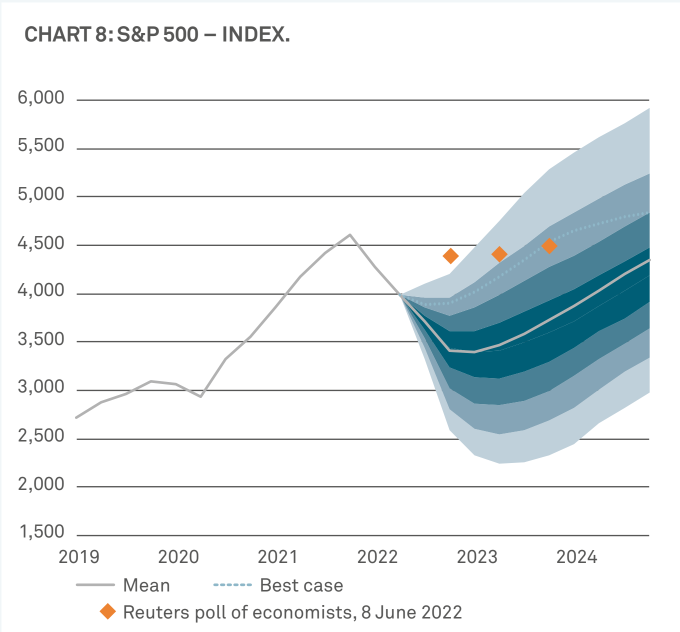
Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

Key takeaway: US 10-year yields likely to rise further as rate hiking cycle progresses. Market pricing expects rates may have already peaked between 3-3.5%. Risks are evenly balanced.



Source: Fathom Consulting. Data as of 20 June 2022.

Key takeaway: High yield spreads likely continue widening as financial conditions tighten further. Upside skew driven by "monetary recession" scenario.



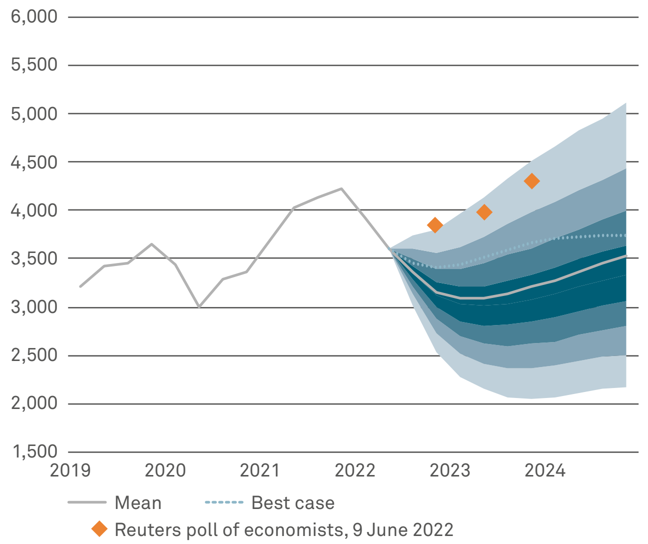
Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

Key takeaway: Near-term outlook skewed to downside given recession risk probabilities. Consensus expects strong rebound. Only "best case" scenario envisions a recovery beginning by year-end.

Forecasts begin in Q2 2022 and were calculated as of June 20, 2022 Source: BNY Mellon Investment Management and Fathom Consulting. The dotted line shows the best case scenario mode and the solid line is the mean or probability-weighted average forecast across all three scenarios. Markings show survey and market implied pricing expectations. The darker bands towards the center of the fan chart show the more likely outcomes, while the lighter bands show progressively less likely outcomes covering 80% of the forecast distribution. The width of the fan chart shows the level of uncertainty and when the bands below the central forecast 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.

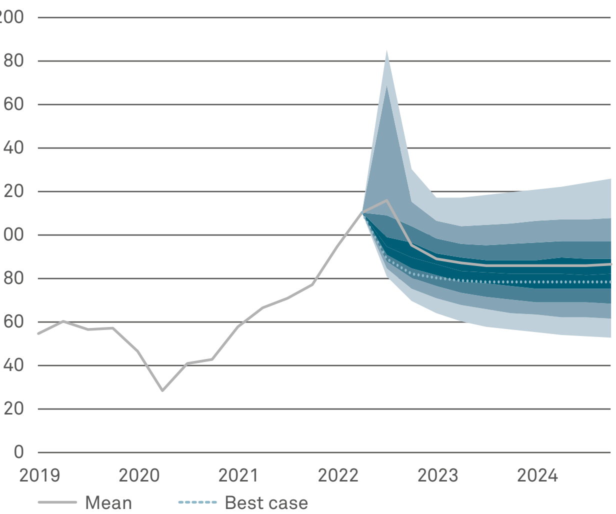
CHART 9: EURO STOXX 50 – INDEX.



Source: Refinitiv Datastream/Fathom Consulting. Data as of 20 June 2022.

Key takeaway: Near-term outlook skewed to the downside with sluggish rebound in 2023. Consensus expects near-term rebound and gains through 2023.

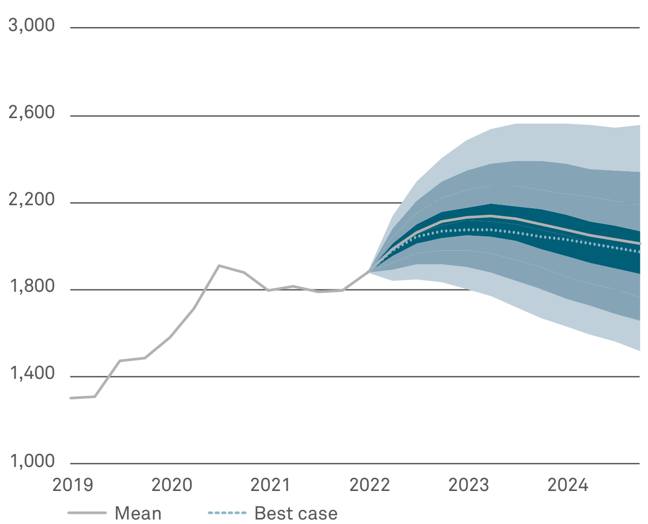
CHART 10: OIL PRICES – USD PER BARREL.



Source: Fathom Consulting. Data as of 20 June 2022.

Key takeaway: Risk remains of further oil price spike high due to ongoing conflict uncertainty. Likely to fall back in due course, but not steeply as spare capacity will remain tight.

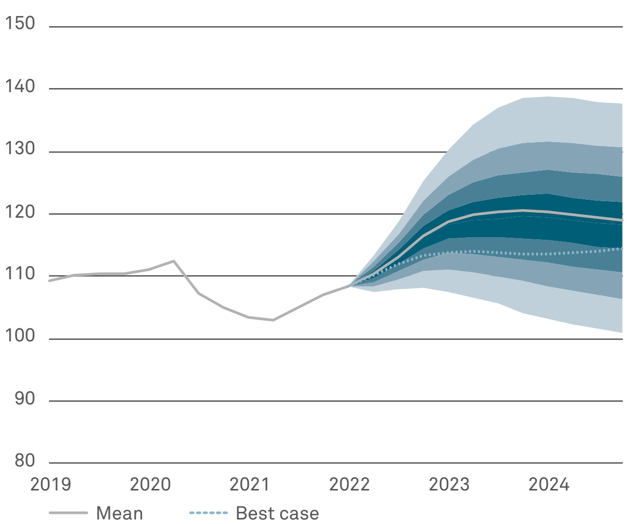
CHART 11: GOLD PRICE – USD PER TROY OUNCE.



Source: Fathom Consulting. Data as of 20 June 2022.

Key takeaway: Gold to remain well supported thanks to its hedging against both inflation and financial crisis.

CHART 12: US ERI AGAINST MAJOR CURRENCIES – INDEX, JANUARY 2006 = 100.



Source: Fathom Consulting. Data as of 20 June 2022.

Key takeaway: US Dollar is likely to keep rising against major crosses due to aggressive hikes and haven demand as global growth softens. Risks evenly balanced but upside potential large.

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What the Market Thinks

SECTION 2

SECTION 2A

What's priced in

Overview: In the latest quarter, markets continued to price in a macro narrative that can be broadly summarised as: stickier than expected inflation, surprisingly slower growth, and more hawkish monetary policy. Having been surprised by the persistent inflationary pressures affecting the global economy, central banks are now in a race to tighten monetary policy and re-establish price stability. To do so, contrary to the policy prescription of the past decades, they are raising rates in a slowing economy, leading to a spike higher in the discount factor (real yields saw the biggest 1-year rise in 20 years), and lower cash flow/earnings expectations. In this environment, diversified bonds/equities portfolios have posted some of the weakest performance of the past decades. Overall, markets still appear to be expecting positive, but below potential, growth (and recession probability is broadly seen as coin toss), elevated but falling inflation and tight monetary policy. The uncertainty around this view remains high. This story is consistent across asset classes, with few signs in the market that this narrative may be reversing. If anything, some assets sensitive to the macro cycle still appear expensive based on their historical relationship with leading global growth indicators.

Market-based growth expectations: Market-based expectations for growth have continued to deteriorate globally, as highlighted by a range of market indicators sensitive to global growth (certain components of credit spreads, relative performance of asset classes and equity sectors). Growth expectations fell the most in the US, followed by the euro area and the UK. The market-implied probability of a recession spiked higher in the US, from 15-20% – broadly in line with the unconditional probability of a recession, to 40-50%. In the euro area and the UK, the market is implying an even greater probability of recession. Option prices also still indicate significant further downside risks to growth, with the US and the Euro area seen as most at risk, followed by Emerging Markets.

Market-based Inflation expectations: Over the quarter, one-year market inflation expectations moved higher, while expectations in the near years afterwards (2 to 5 years) weakened, consistent with the idea that the strength in current inflation will eventually lead to a slowdown in the economy – via rate hikes and a hit to real incomes – and price growth in turn. Inflation expectations remain somewhat elevated over

Summary of market pricing

TABLE 4: THE MARKET IS EXPECTING POSITIVE GROWTH, AT TARGET INFLATION AND LIMITED POLICY TIGHTENING, BUT UNCERTAINTY AROUND THIS VIEW IS ELEVATED.

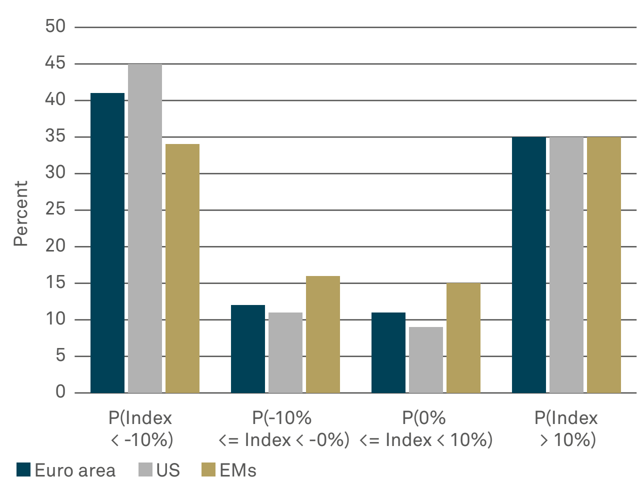
Market pricing	Growth	Inflation	Policy
Current expectations	Red	Grey	Red
At end Q1 expectations	Grey	Grey	Green

Green indicates above trend growth, below target inflation and policy accommodation. **Grey** indicates economic growth in line with trend, inflation in line with target and a neutral policy stance. **Red** indicates below trend growth, above target inflation and a tight policy stance.

Source: BNY Mellon Investment Management. Data as of 14 June 2022.

Option implied outcomes in 1 year for Euro area, US and EM MSCI cyclically focused equities

CHART 13: THE MARKET IS PRICING IN MEANINGFUL DOWNSIDE RISK FOR THE US AND EURO AREA ECONOMIES.



Source: BNY Mellon Investment Management, Thompson Reuters Datastream. Data as of 14 June 2022.

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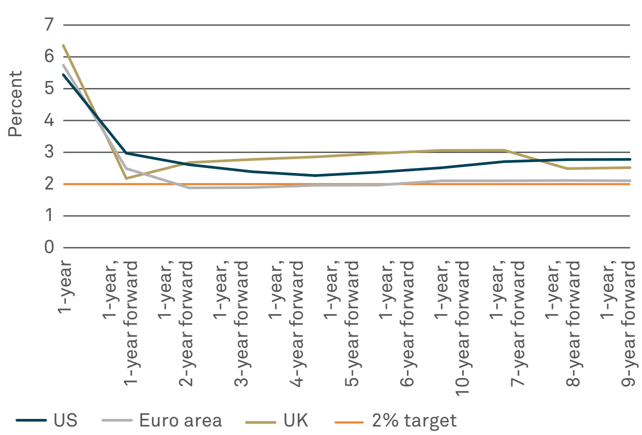
the next years. Although inflation is seen as falling closer to target two-three years from now, it is expected to settle at the top of the post global financial crisis range. The market is telling a similar story for the UK, with inflation anticipated to remain somewhat above target for years to come. In the euro area, elevated near-term inflation is seen as falling in line with target over the next few years. This is a significant development for the euro area, where long term inflation had been priced to severely undershoot 2% since the aftermath of the 2011-2012 euro area crisis.

Market-based monetary policy expectations: Markets continued to price in a rapid tightening in global monetary policy over the quarter. In the US, policy rates moved from near zero prior to March to 1.50-1.75% in June, one of the most dramatic moves in US monetary policy history. As of mid-June, the market expects policy rates to reach 4.5% in one year, a staggering 6 rate rises of 50 bps each. Despite the further rise in short term market inflation expectations, expected real rates have at last reached positive levels, aside from the very short end of the curve – crossing above the FOMC's 0.5% implied estimate for the neutral real interest rate. This means markets anticipate a need for restrictive monetary policy in order to slow down the US economy and achieve a fall in inflation. In other DMs, the story is not too dissimilar, with real rates in the euro area spiking higher (by more than 100 bps over the quarter) and reaching levels in line with estimates of neutral in 1 year from now.

Market inflation expectations

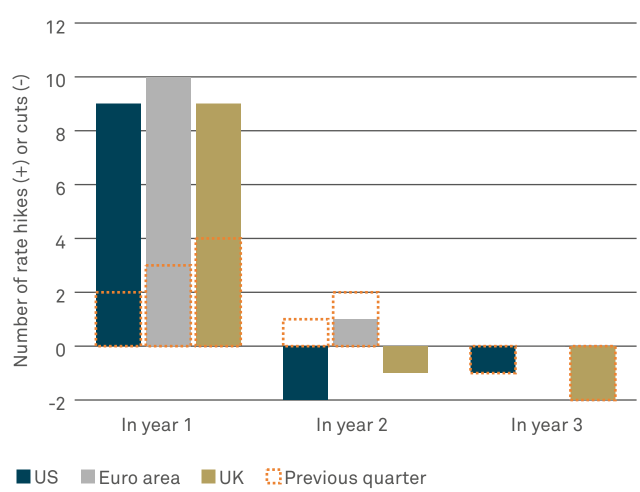
CHART 14: THE MARKET MAY BE STARTING TO PRICE INFLATION TO REMAIN SOMEWHAT ABOVE TARGET FOR YEARS TO COME, GRADUALLY MOVING CLOSER TO OUR MEAN INFLATION EXPECTATIONS OVER THE NEXT FEW YEARS.



Source: BNY Mellon Investment Management, Bloomberg. Data as of 14 June 2022.

Number of rate cuts (-)/Hikes (+) priced in by the market

CHART 15: THE MARKET EXPECTS AN EXTREMELY FAST AND FRONT-LOADED HIKING CYCLE. TERMINAL RATE EXPECTATIONS SURGED DURING THIS QUARTER.



Source: BNY Mellon Investment Management, Bloomberg. Data as of 14 June 2022.

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SECTION 2B

Market Sentiment

As highlighted in the preceding section, markets took a dimmer view of key macro drivers during the second quarter. Unsurprisingly, market sentiment walked hand-in-hand downward with lower growth expectations and fears that a recession is looming. The prescription for elevated inflation was clear months ago (i.e., higher policy rates). However, in recent weeks a combination of higher-than-expected inflation (no peak yet) and weaker growth signals forced the market to acknowledge elevated recession risks.

Short-term sovereign yields surged on expectations of larger policy rate hikes, while equity markets pulled back on concerns that the growth outlook was less likely to withstand restrictive monetary policy. The S&P 500 entered a bear market on June 13th, closing more than 20% below the last peak achieved on January 3rd of this year. Non-market data also corroborates that growth slowdown fears are mounting. For instance, Google searches show the word "recession" spiking since May.

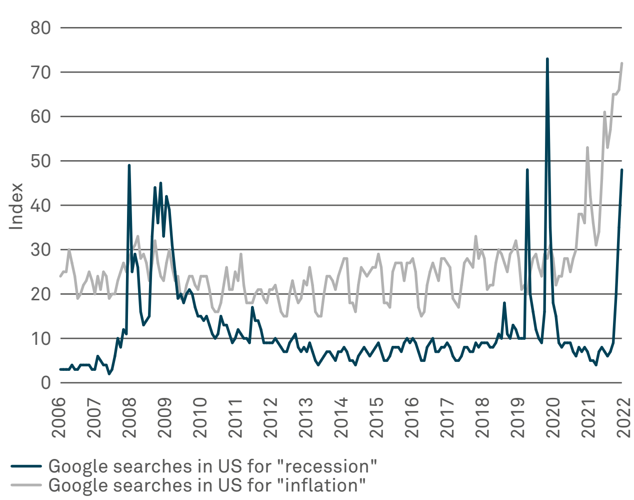
In March, we cautioned that "The likelihood of further negative surprises remains elevated with further market de-risking a material possibility." Case in point, the hot May US CPI inflation report and on the same day a consumer survey showing inflation expectations jumping. As we expected, risk assets remained under pressure with only brief bouts of relief.

Caution continues to be warranted given downside scenario risks that we believe carry a meaningful probability. Comparing our fan charts against consensus surveys and market pricing, the consensus appears relatively more sanguine, particularly for the path of equities. This optimism is consistent with consensus expectations of inflation declining relatively quickly, whereas we see greater risk of inflation becoming entrenched. Thus, we assign a higher probability that central banks must "jam on the brakes" to ultimately regain control of inflation. This would prove particularly challenging for risk assets.

Deeply pessimistic sentiment indicators are often associated with market cycle lows and can thus serve as a guide to inflection points. However, assessing such indicators must be paired with the macro-outlook. Right now, though some indicators suggest we may be nearing conditions for a market low, the macro-outlook overshadows these indicators. Our scenarios above suggest risk assets are likely to face stiff

Google searches for "recession" and "inflation"

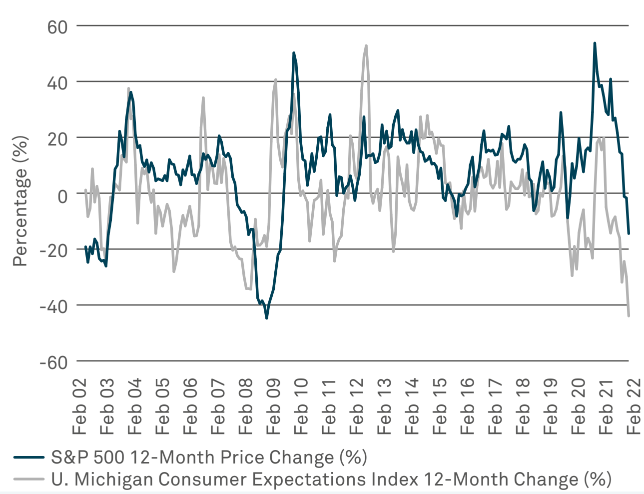
CHART 16: PEOPLE WORRIED ABOUT INFLATION FOR MONTHS, BUT RECESSION ONLY RECENTLY.



Source: Google Trends; Data as of 31 May 2022.

Consumer Expectations Index and S&P 500 Price Change

CHART 17: WHEN THE CONSUMER IS DOWN, THE MARKET IS DOWN.



Source: BNY Mellon Investment Management, Bloomberg; Data as of 14 June 2022.

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headwinds near-term and can be expected to decline further should recession fears become reality. In other words, despite the poor performance this year, the market does not appear to be priced for a recession yet. One plausible explanation for this is that there remains a possibility that recession can be narrowly avoided, and markets could then begin to recover later this year.

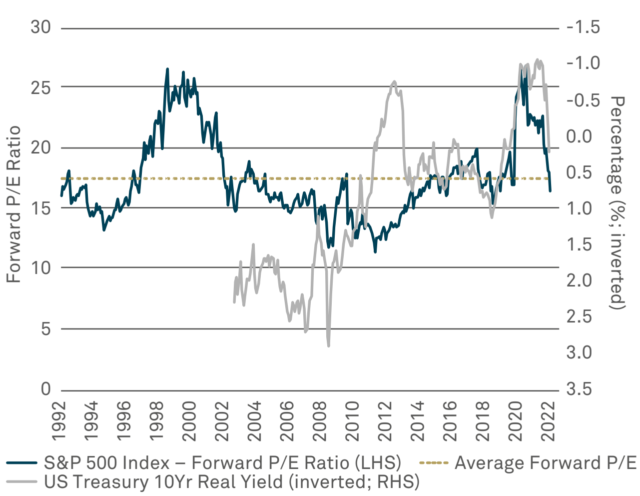
History suggests that bear market rallies are frequent but fleeting in the face of economic challenges. Indeed, most bear markets throughout history are associated with recessions. Yet, some optimism can be taken from the past. Analyzing the S&P 500 performance in every bear market since 1929, in most instances the S&P records a positive return in the next year after entering a bear market.[2]

The market's resiliency over its long history should be comforting and kept in mind during challenging periods. Given our assessment of the most likely scenarios, the market's expectations, and where our views differ, the following section lays out where we see the relative outperformers in this challenging landscape.

[2] 1-year forward price return from the date the S&P 500 first closed more than 20% below the prior peak. Source: BNY Mellon Investment Management, Bloomberg; Data as of 29 June 2022.

S&P 500 Forward Price/Earnings Ratio and US Treasury 10-Year Real Yield

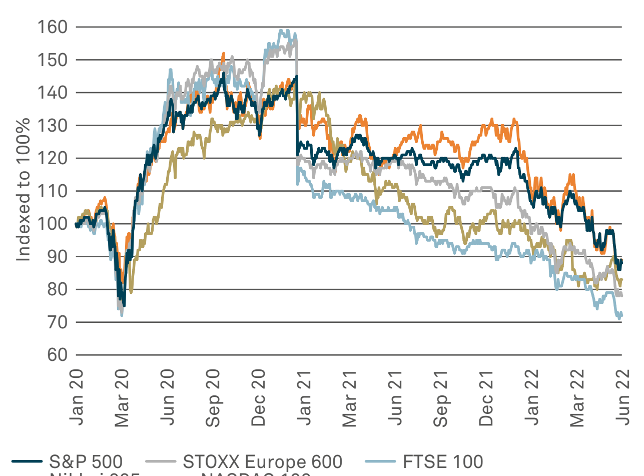
CHART 18: SUPPORTIVE (LOW) REAL YIELDS QUICKLY VANISHED THIS YEAR.



Source: BNY Mellon Investment Management, Bloomberg; Data as of 15 June 2022.

Select Equity Market Forward Price/Earnings Ratios (Indexed to 100%)

CHART 19: FORWARD P/E RATIOS MOVED BELOW PRE-COVID LEVELS IN Q2.



Source: BNY Mellon Investment Management, Bloomberg; Data as of 22 June 2022.

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Investment Conclusions

SECTION 3

EQUITIES

US Equities: Real yields climbed significantly and the market is now broadly in line with our mean projections but our lower growth forecasts mean valuations will likely come under further pressure. Earnings expectations – still significantly above trend – are likely to come down too. We expect market volatility and risk premia to remain high in the short-to-medium term and our fan chart forecasts suggest risks are skewed to the downside. This leads us to further dial down risk and equity exposures. On a relative basis, we see income equities (equities of companies that return cash to shareholders either through dividends or share buybacks) outperforming non-income paying stocks as income provides a hedge for upside inflation surprises and implies a lower sensitivity to higher rates. Similarly, value stocks are preferred to growth due to their lower duration in a rising rate environment and when multiples may compress further. Overall, given our outlook, it is prudent to trim back cyclical exposures and begin shifting allocation to defensive sectors such as consumer staples and healthcare.

International Developed Equities: Continued deterioration of the macro environment and corporate fundamentals will likely keep the near-term trajectory for international stocks (ex-Japan) under pressure. From a macro perspective, in the euro area, the risk of recession is greater and more immediate. We see a 60% chance that euro area GDP is lower in 2022 Q2 than in 2022 Q1 and we are more bearish compared to what's priced into markets. We continue to think that European stocks may underperform the rest of the developed world and recommend further cutting risk. Japanese equities are a relative safe haven. There is further upside to broader Japanese equities given yen weakness as the BOJ keeps monetary policy intact and diverges from the hawkish stance of the Fed and ECB, while also reopening of the economy and implementing market friendly policies.

Emerging Markets (EM) Equities: Overall, macro environment for EMs remains tricky, given the impact of the stronger dollar and slowdown in the US and Europe. We have reduced our underweight and prefer staying neutral on China with a tilt towards infrastructure, technology and consumer staples. We think the easing of lockdowns and local government driven infrastructure stimulus will lift China out of its second-quarter slump in the remainder of the year. Chinese equities have cheapened significantly and the near-term macro-outlook contrasts notably with the slowing activity momentum and worsening risk sentiment in other major economies. However, we refrain from going overweight as China's sequential pick-up will remain shallow on continuing zero-covid policies, the drag from property and weak business confidence and labor markets. In EM-ex China, from a macro perspective, we continue to think that oil and commodity exporters such as Brazil and Indonesia will benefit from high commodity prices, continued post-Covid consumer bounce back, and demand for real assets. In these countries, we expect value-tilted sectors to outperform growth, and materials, and financials. APAC economies (except Malaysia and Indonesia) are net energy importers and will be hit hard.

FX

US Dollar and Foreign Exchange (FX): From a major dollar index perspective, we still believe that the USD has further upside given the euro comprises 60% of the index. We continue to believe that the euro will come under pressure on market's pricing in a growth slowdown (if not recession), fragmentation risks, proximity to Ukraine crisis and energy supply risks. We continue to favor EM FX commodity exporters such as Indonesian rupiah, Mexican peso, and Brazil real while commodity importers will likely come under pressure.

FIXED INCOME

Developed Market Sovereign Debt: Government bond yields have risen to their highest in a decade and curves have flattened across most DMs, except Japan. Markets have priced in a significant number of policy rate hikes to near, and in some cases, above 'neutral' levels. There is still a possibility of further increases in market rates if core inflation surprises to the upside. But at current yields, and with the (near) inversion in 10s30s and 5s10s across (most) DM curves, our conviction for strong underperformance of fixed-income duration has fallen, leading us to trim back some of the underweight. Ongoing quantitative tightening in the U.S. and the cessation of the asset purchase program in Europe should reinforce the tightening stance of the Fed and ECB. Moreover, the reduction of fiscal stimulus (and negative fiscal impulse) alongside ongoing erosion of real spending power should anchor medium-term inflation expectations and strengthen the flattening/inversion bias across major bond yield curves. Risk-reward favors going long on long-dated bonds once survey inflation expectations begin softening, realized inflation begins surprising to the downside or growth starts to show serious signs of a recession. Meanwhile, European peripheral bond spreads have come under pressure from the twin pressures of rising energy prices and tightening policy. In response, the ECB's emerging framework to flexibly adjust pandemic-related asset purchase programs (PEPP) may stanch sovereign-credit pressures. But, fundamentally, a topping out of inflation would provide greater reassurance. Elsewhere, Japanese government bond yields will be anchored by the Bank of Japan's yield curve control framework (which caps 10-year JGBs at 0.25%), but the widening divergence in yields and balance sheets, with other major central banks, will fuel Yen weakness through the remainder of this year.

Emerging Market Sovereign Debt: In comparison to DMs, we remain underweight EM local bonds where real (inflation-adjusted) yields are either negative, or near zero, and central banks are poised to hike further, especially in Central and Eastern Europe (CEE) and in large parts of Asia –amid ongoing increases in fuel and food price pressure, rising US rates, weakening currencies, and a sluggish macro-outlook for China. Latin American (LatAm) central banks moved earlier and faster to normalize policy. But most of them have struggled to lower inflation back to target levels. In this context, we favor a few select EMs like Indonesia and South Africa which have kept a lid on inflation, and whose bonds provide a healthy real yield buffer as well as a decent yield-spread over US Treasuries and whose external positions are anchored by a favorable terms of trade position. We also alter our recommendation on Chinese government bonds to neutral (from overweight) on negative yield differentials, rising FX hedging cost, and our expectation of heavier issuance. On the hard currency (USD sovereign) bonds, we continue to favor the energy and commodity complex, and mostly investment-grade names, over net commodity importers and high-yield issuers. We remain especially cautious about frontier sovereigns (single-B or lower rated) with elevated government debt, proportionally larger foreign-currency denominated debt and susceptible to negative terms of trade shocks – with either no established IMF program support or face growing odds of widespread social instability.

Global Investment Grade Credit (IG): For both US and Europe IG corporates, we see material risk of further widening in spreads given the expected removal of the policy support backstop, rising debt servicing cost, uncertain geopolitical environment, and persistently high energy prices impacting profitability, even as pricing power holds (for now).

Global High Yield Credit (HY): Recent spread widening reflects rising borrowing costs amidst intensifying hawkishness at the Fed. If, as we expect, activity slows, tightening financial conditions alongside slowing revenue and worsening operating margins will weigh on interest-coverage ratios, market liquidity and refinancing ability. This will especially hurt highly-levered firms that lack pricing power. We have long been concerned that extraordinary fiscal and monetary intervention during the pandemic may have hidden or delayed bankruptcies or defaults among the more marginal companies. The latest shocks threaten to unearth more of these. In this environment, we emphasize the importance of active issuer selection and favor less-inflation-pressured sectors such as healthcare and IT. European HY is relatively less attractive given income returns provide a thinner cushion against negative price returns we expect over the whole forecast period. For both, we favor short duration exposures and floating rate to fixed.

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

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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

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.

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.

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