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Vantage Point

Q2. 2022

BNY MELLON
INVESTMENT MANAGEMENT

Introduction

The war in Ukraine is primarily a human and humanitarian tragedy. But coming hard on the heels of a global pandemic, it will challenge an already fragile world economy in ways that are hard to predict. Surging energy and commodity prices will likely hit importing countries hard, while complicating the outlook for central banks, who are faced both with much higher inflation and, potentially, much lower growth. The scale of financial sanctions is unprecedented and will prove calamitous for the Russian economy. But given how interconnected to the rest of world Russia has become in energy, commodity and financial markets, there could be unintended consequences for counterparties that have yet to emerge. No wonder markets are jittery.

How to pick our way through all of this? Once again, given the huge uncertainty, the scenario approach proves its worth, allowing investors to calibrate risks as well as likely returns. We have altered our approach a little this time, however. We are not geopolitical experts, nor would it be appropriate for us to comment on the likely political outcome of all this. Instead, we start with two broadly defined scenarios for the conflict itself, described by its duration and spread. In the first, the conflict is resolved one way or another relatively soon (within months) and remains localized to Ukraine. In the second, it is long and drawn out, with an ever-present risk of escalation geographically and in intensity. Given we aren't experts, we give these war scenarios an evens chance (50-50).

These two scenarios imply different outcomes for energy and commodity prices over the short and medium term, with differing implications for growth, inflation and interest rates in the major economies and therefore for asset prices too. We assume sanctions remain in place throughout our forecast period, irrespective of which conflict scenario comes to pass.

Within the two geopolitical scenarios we then focus on the two largest economic and market risks – some kind of policy error by central banks, and a liquidity crunch mediated through financial markets as a by-product of sanctions. Policy error could come about in two ways: either central banks could tighten too much in an attempt to bring inflation down, but find they push economies into recession and below-target inflation; or they could delay rate rises and find that some economies, less directly affected by the conflict, are running 'too hot', keeping inflation too high, destabilizing inflation expectations and requiring a much sharper tightening further down the road. We think the second type of error is more likely than the first and give it a 25% chance of happening in a short conflict, whereas the first has a 10% probability under a prolonged one. Essentially, we are saying that, outside Europe at least, the likelihood that central banks overestimate the growth consequences for their economy is greater than they underestimate it.

The liquidity crunch could come about in all kinds of ways. We are already seeing signs of financial stress in parts of the market – Treasury market depth has been falling and is poor relative to recent history, funding spreads and risk premia in credit markets have been rising. Some commodity markets have come under severe pressure, nickel for instance, which saw a severe short squeeze in early March and suspension of trading on major exchanges. Commodity financing, and commodity trading houses in particular, seem to be facing a liquidity crisis. None of this is on the scale of 2008, nor do we expect it to get there, but we could see a re-run of elevated market turbulence on the scale of the dot com crisis or euro area crises. A liquidity crunch could happen in either of our war scenarios: counterparties and supply chains remain vulnerable to disruption in commodity flows, prices and funding in both. But on balance we think it's most likely if the conflict drags on and policy tightens too quickly.

In principle then, we could end up with 8 scenarios – 2 war scenarios times 2 policy scenarios times 2 liquidity scenarios. But we bunch a few of them with similar outcomes together, leaving us with the usual 4.

The decision tree below explains how we did this and how we derived our scenario probabilities.

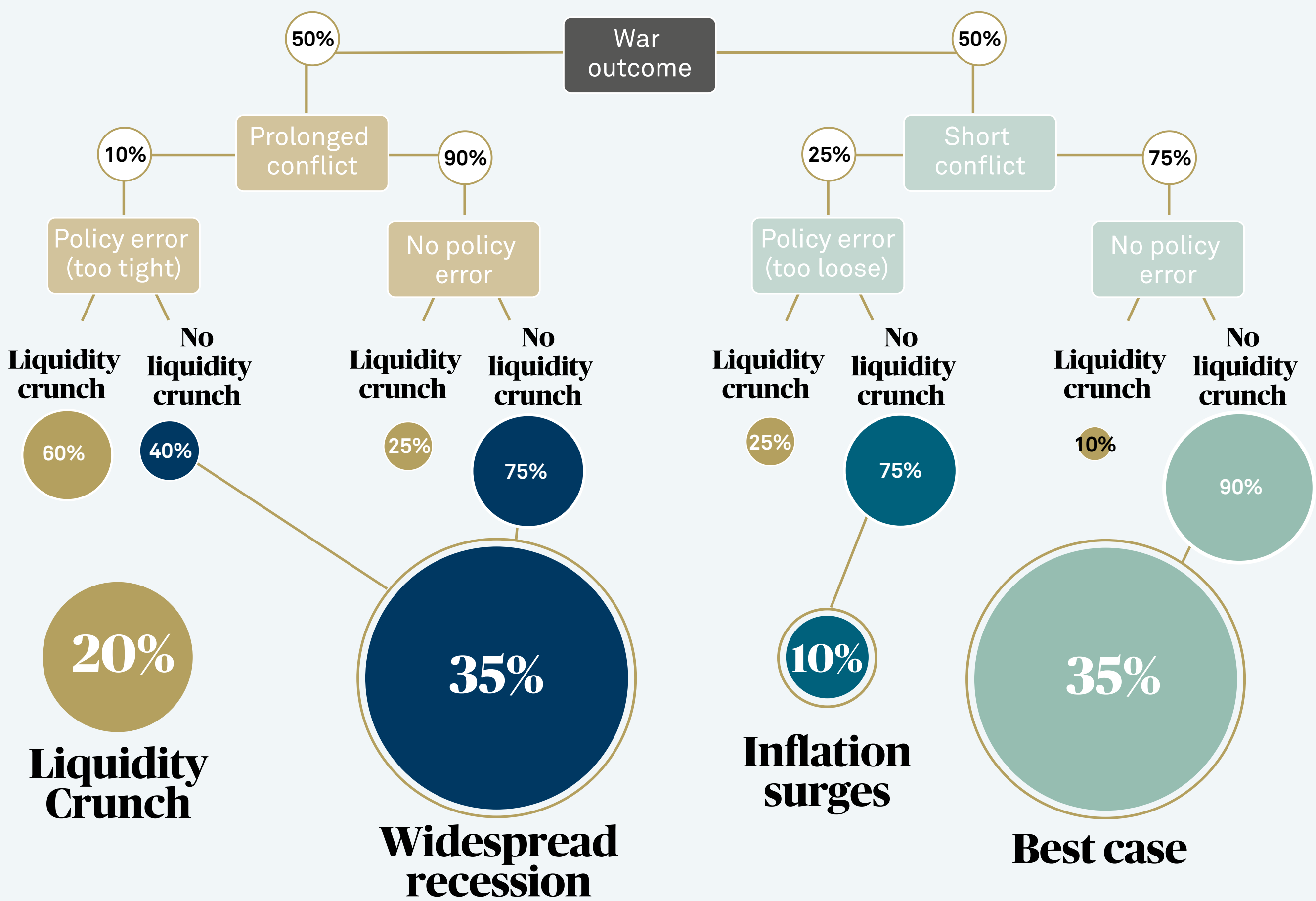
The scenarios are: 1) A short conflict, with no policy error and no liquidity crunch called 'Best Case' (35%); 2) A short conflict, where rates are left too low for too long and core inflation continues to rise outside Europe, called 'Inflation Surges' (10%); 3) A prolonged conflict, where energy prices stay high, Europe moves into recession and growth/core inflation fall sharply elsewhere, called 'Widespread Recession' (35%); and finally, either type of conflict that leads to a market liquidity squeeze and turbulence in global financial markets, called 'Liquidity Crunch' (20%).

Some things remain the same across all our scenarios. All of them see the Russian economy collapse, European growth slow sharply, possibly into recession, energy prices remain high for some time and periods of market turbulence. It's just that the severity and duration of the impact of these on global growth, inflation, interest rates and hence market outcomes differ somewhat.

These are hugely uncertain and worrying times. To pretend that we have captured all the possible outcomes would be foolish and misleading – to a large extent we don't know and our fan chart forecasts are wider than usual. However, these are what we feel are the most likely and plausible scenarios going forward and they feel like coherent narratives to us. Let's hope, for the sake of the Ukrainian people, that things resolve themselves in the best and safest possible way.

SHAMIK DHAR
CHIEF ECONOMIST

OUR NEW SCENARIOS – THE PROBABILITY TREE



For illustrative purposes only.

Executive Summary

OUR NEW SCENARIOS IN BRIEF

PROBABILITY

SCENARIO

35%

Scenario 1 – Best Case

- Short conflict
- Energy prices fall back in H2 2022
- Monetary policy tightens gradually
- Inflation falls, growth stabilizes
- Market liquidity returns, risk assets make progress

10%

Scenario 2 – Inflation Surges

- Short conflict
- But energy prices stay high
- Monetary policy left too loose for too long
- Core inflation stays high
- Inflation expectations and wage growth shift up
- Mostly happens outside Europe
- Tricky outlook for fixed income and risk assets

The Russo-Ukraine conflict is short-lived and remains localized. The outlook for energy flows – especially for Europe – improves and oil and gas prices start to fall back. Several other energy, metals, and agricultural producers, around the world, step up to alleviate any lingering (war-damaged) supply shortfalls. As a result, price hikes across most commodities abate. Moreover, an increasing number of countries, including Asian producers, re-emerge from the pandemic – bringing forth durable improvements in production and supply chains. In this scenario, developed economies' voracious demand for durable goods begins to ease, from 2020-21 levels, and domestic demand rotates toward services. At the same time, China's pulls through its own Omicron wave without too much trouble – given its high vaccination rate (albeit, not MRNA). The policy response in this scenario, from the G4 central banks (Fed, ECB, BOJ and BOE), is one of steady, and, not aggressive, tightening. All in all, financial conditions improve gradually, and the global economy manages to scrape through one of the most serious geo-political crisis in multiple decades – allowing risk assets to recover sharply in due course.

The conflict in Ukraine is short-lived or becomes localized. But, perturbed by the prospective worsening of the growth outlook, global central banks take fright and err on the side of deferring policy normalization. Central Banks like the ECB or even the Fed and BOE desist from tightening, at least to the extent needed to keep a lid on inflation. As a result, deeper negative, front-end, real rates amount to a re-loosening of policy and financial conditions. However, worsening price-stability and elevated inflation expectations leave little scope for a 'policy error' of this kind – being accommodative yet again. Consequently, inflation stays high as price increases become broad-based, and inflation expectations become un-anchored. This also results in a near-term pick-up in growth and upturn in risk assets. But a market-led, and belatedly policy-driven, adjustment ultimately raises developed markets (DM) bond yields and hurts global risk assets.

PROBABILITY

SCENARIO

35%

Scenario 3 – Widespread Recession

- Prolonged conflict
- Energy prices continue to rise
- Real incomes fall sharply in energy importing countries
- Potentially worsened by monetary tightening
- World moves into recession, core inflation falls
- Risk assets hit hard initially, but pick up sharply once policy is reversed

The war in Ukraine grinds on as mediation falls short and de-escalatory off-ramps fail to defuse the fighting or keep it from escalating. The West moves to reduce its dependence on Russian energy, but other energy producers are unable to make-up for the shortfall of Russian oil and gas anytime soon. Disruptions to energy supplies become longer lasting. Disruptions may also spread to other commodity markets that are essential to the global production of goods, e.g. metals. The price of oil and gas rises much further and stays higher for longer – imparting a large inflation shock. This hits real incomes hard in energy-importing countries, and the world economy slows down sharply. Global central banks stay the course on tightening, against a backdrop of weakening medium term price stability, and financial conditions tighten. Eventually, demand destruction and financial tightening causes core inflation to ease and central banks loosen policy settings –helping asset prices rebound after a year or so. Improved structural responses to re-orient energy production and supply sources, and shore up storage will help over the medium-term – but 2022 sees an outright global recession.

20%

Scenario 4 – Liquidity Crunch

- Financial sanctions have unintended consequences via western counterparties
- Market liquidity dries up – sharp widening of bid-ask spreads, risk premia etc.
- Central banks are unable to offset fully thanks to inflation constraint
- Markets sell off sharply, tightening financial conditions and hitting growth hard globally

This scenario is not entirely dependent on a worsening conflict. It incorporates supply-chain dislocations and a sharp, unexpected financial tightening from sanctions which elicit credit defaults and disrupts trade payments. Regardless of the intensity or duration of the Ukraine conflict, global central banks stay the course on tightening, but in doing so, they are less able to offset liquidity disruptions or a run on risk assets. In the absence of a prolonged conflict, we think these challenges can ultimately be surmounted without large scale damage to risk assets. But a liquidity crunch in certain parts of the world is possible, and heightened risk premia would persist for some time.

INVESTMENT CONCLUSIONS

Equities

- The immediate outlook for equities is poor – markets are likely to remain volatile, risk premia remain high, and our fan chart forecasts suggest risks are skewed to the downside. Inflation persistence means central banks are less able to offset negative market shocks than they have been. Short-duration parts of the market are likely to outperform long-duration assets. High-quality shorter-duration stocks with dividends that protect against inflation are likely to do best – equity 'income' stocks and funds. US and non-European DM stocks are likely to fare better than European, where the economic impact of the Russia/Ukraine conflict is largest and uncertainty greatest. Within emerging markets, commodity exporters such as Mexico, Indonesia, South Africa and Brazil are likely to outperform. For China, we will wait to see further clarity on further monetary policy easing coupled with moderation in China's strategic partnership with Russia in Ukraine war.

Fixed Income and Credit

- For much of the year, yields are likely to see upward pressure until inflation stabilizes and markets have sufficiently re-priced a tighter monetary policy stance. 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, uncertain geopolitical environment, and persistently high energy prices impacting profitability, even though corporates' pricing power remains strong for now.

FX

- Both relative monetary policy and 'flight-to-safety' considerations mean the USD should be well supported throughout 2022. This is particularly true against major FX crosses (notably EUR and GBP) but less so against commodity FX (such as the Canadian dollar and Norwegian krone). Emerging markets (EM) FX commodity exporters such as Indonesian rupiah, Mexican peso, and Brazil real are likely to do well, while commodity importers will likely come under pressure.

THE CHINA ANGLE

The "China challenge" drag on the global outlook, as described in our previous Vantage Point publication, has not entirely gone away. A below potential and below consensus growth outcome remain our base case. This is because of the triple headwinds from the pursuit of a zero-covid strategy, a prolonged slump in the property market and weakened confidence from the crackdown on the tech sector. In this adverse structural backdrop, and considering the slowing momentum in the economy, which decelerated to an annualized rate of just 4% at the end of 2021, the lofty growth target of 5.5%, for this year, seems ambitious. Moreover, the threat of outright ejections of Chinese technology companies' American depository receipt (or ADR) listings from U.S. markets resulted in a downward spiral in Chinese equities. In response, the "whatever it takes" promise from Vice-Premier Liu He to ease monetary and credit policies, shore up China's capital markets, ease up on tech sector restrictions and indefinitely postpone the property tax did come as a sentiment boost. It provides much needed ballast to the China macro outlook. But reviving growth, and turning the ship around, so to speak, will take time and may prove difficult. Moreover, the Chinese government's growing tensions with the U.S. and the People's Bank of China's policy divergence with the Fed keep alive the risk, though, not our base-case, of domestic risks spilling over to the rest of the world through exchange rate channels.

Despite Liu He's pledge to ease policies and throttle back regulatory restrictions, the foremost challenge remains the country's zero-covid strategy which, even after some moderation of quarantining and hospitalization requirements, could still upend retail activity and domestic demand. Another challenge comes from the property sector where, asides from the cancellation of the property tax, the promise of greater official support was vague. With its up- and down-stream linkages amounting to one-quarter of China's GDP, the property sector is important and it is still undergoing consolidation. Needless, to say it will take some time before prices and starts stabilize and resume growing again. Finally, market sentiment has improved since the pledge to work with the U.S. Securities and Exchange Commission (SEC) to find a compromise formula for Chinese ADR listings. However, the domestic inter-play between various government ministries, regulators, judicial authorities will have to be coordinated carefully to bring about a well-executed pull-back from the anti-monopoly and anti-capital crackdowns which have embodied President Xi's objective of "common prosperity."

What We Think

SECTION 1

SECTION 1

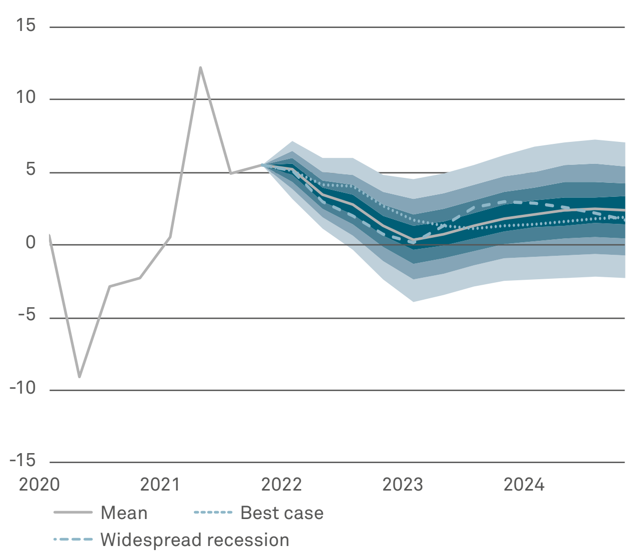
What we think: Forecast summary

THE GLOBAL ECONOMIC OUTLOOK

The outlook, both for the macroeconomy and for financial markets, has become much less certain since the turn of the year. Asset price volatility often rises close to turning points in major-economy policy rates. But as US policymakers prepared to raise the federal funds rate for the first time in more than three years, that normal cyclical behavior was compounded by Russia's invasion of Ukraine. A month after the fighting began, we do not know how or when it will end. If there is a resolution within a short space of time then, barring a financial market accident, we are likely to see economic activity stabilise and liquidity return, allowing a gradual tightening of monetary policy. In that world, it is likely that we are at or close to the peak in inflation. Alternatively, if the conflict becomes prolonged – a scenario that in our judgment is equally likely – we will see falling business and consumer confidence, and further material upward pressure on inflation, in the near-term through its impact on energy supply, particularly in Europe, but potentially further ahead if it causes countries to turn inward, and global trade to fall. And in this world a financial market accident is more likely.

Our new forecasts for growth in economic activity in the US and Europe are shown in the first two fan charts. We have two equally likely but substantially different scenarios. Under 'Widespread Recession', the conflict in Ukraine is prolonged and interruptions to the supply of oil and gas from Russia cause energy prices to climb further from here. Real incomes fall sharply in energy-importing economies. While the US undergoes a relatively mild technical recession in this scenario, Europe is hit harder. By contrast, a relatively quick resolution to the conflict under 'Best Case' allows the world economy and markets to recover strongly in H2. Looking across the whole distribution of possible outcomes, we see around a 30% chance that the US economy contracts during the second and third quarters of this year. The corresponding figure for Europe is around 50%.

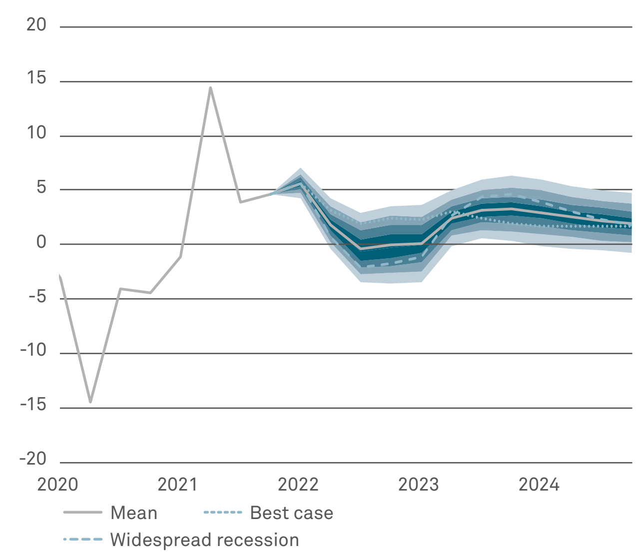
CHART 1: US GDP – FOUR-QUARTER PERCENTAGE CHANGES.



Source: Fathom Consulting.

Key takeaway: US growth likely to slow this year, but not as much as Europe. Outlook very uncertain though risks evenly balanced.

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



Source: Fathom Consulting.

Key takeaway: European growth outlook weaker than the US. Odds on chance of recession. However, risks are evenly balanced.

Forecasts begin in Q1 2022 and were calculated as of March 17, 2022 Source: BNY Mellon GEIA and Fathom Consulting. The dotted line shows the best case scenario mode, the dashed shows the widespread recession scenario mode and the solid line is the mean or probability-weighted average forecast across all four scenarios. 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 90% 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 shows the balance of risks lies to the downside.

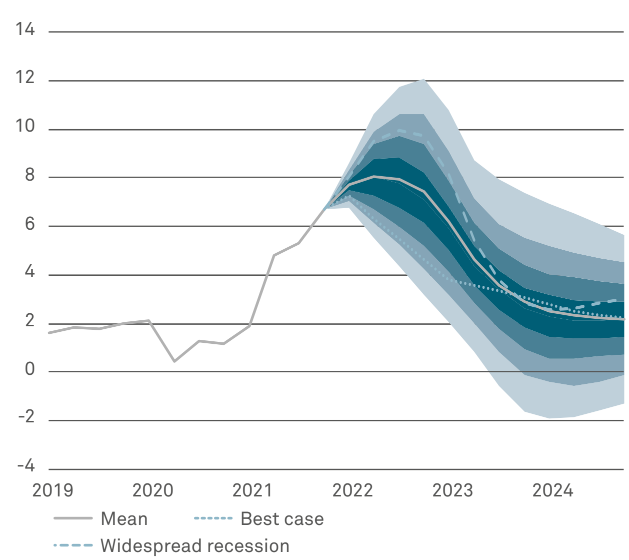
A substantial degree of uncertainty surrounds the near-term outlook for inflation in the major economies, and this is evident in the width of our fan charts. Relative to the forecasts we put together at the end of last year, we judge that the peak in inflation is likely not only to be materially higher, but also to last for longer. Two main factors underpin this revised assessment. First, energy shortages stemming from the conflict in Ukraine are likely to put further upward pressure on non-core components of inflation in the coming months, particularly in Europe. Second, after such a sustained period of materially above-target inflation, we see a greater risk that wage and price setting behavior more broadly become affected, briefly raising core measures of inflation. We find that the odds of double-digit inflation in either the US or the euro area later this year are now around one in four.

The forecasts show a meaningful chance of recession driven primarily by a negative shock to aggregate supply rather than a negative shock to aggregate demand. Such recessions create challenges for monetary policymakers as they are often accompanied, initially at least, by high and rising inflation. In our two most likely scenarios, a steady, uninterrupted policy tightening takes place in the US over the course of our forecast horizon, with the federal funds rate reaching what is thought to be its neutral rate of some 2.5% over the next two to three years. The two alternative scenarios lead either to much lower rates, with the Fed changing course when a combination of tighter policy and unanticipated financial market consequences arising from the sanctions against Russia trigger a 'Liquidity Crunch', or much higher rates in the case of 'Inflation Surges'. It is these two outlying scenarios that contribute towards significant uncertainty about the stance of monetary policy in two to three years' time.

Our fan chart for US Treasury yields has the same broad shape as our fan chart for the federal funds rate, though the upward slope is less pronounced, suggesting some probability of yield-curve inversion. In 'Best Case', both short and long rates climb steadily higher. In 'Widespread Recession', long rates rise more rapidly through this year as the Fed moves cautiously, fearing recession, as investors demand greater compensation for higher and less certain inflation.

US equity-market risks are large, and broadly balanced, with prices about as likely to fall through the remainder of this year as they are to rise. With European firms more exposed to interruptions in the supply of energy in 'Widespread Recession', one of our two most likely scenarios, the outlook for European equities is more bearish. We see around an 80% chance that the Euro Stoxx 50 falls across 2022 a whole. A corresponding figure for the S&P 500 would be 65%.

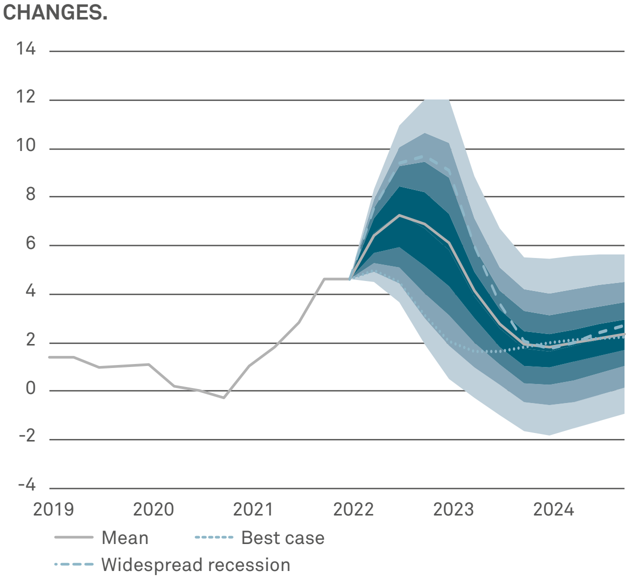
CHART 3: US CPI – FOUR-QUARTER PERCENTAGE CHANGES.



Source: Fathom Consulting.

Key takeaway: US inflation will probably be high and sticky. Likely to start falling this year, but not quickly. Risks to the upside.

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

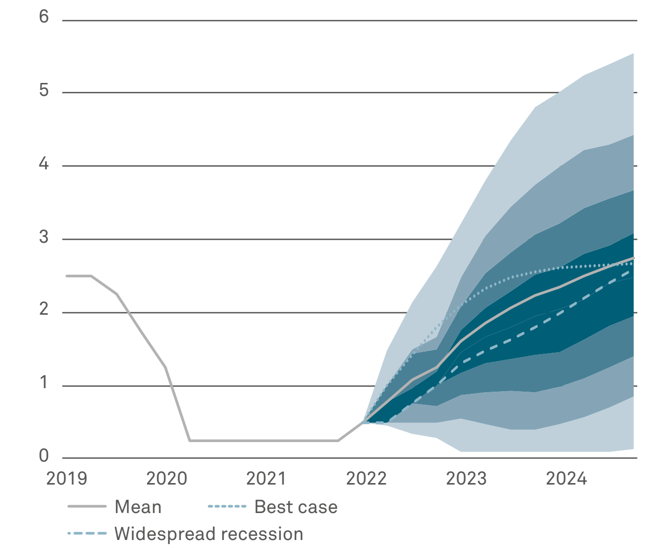


Source: Fathom Consulting.

Key takeaway: big rise in headline inflation thanks to food and energy. Underlying core weaker and may fall back sharply as recession kicks in. Upside risks.

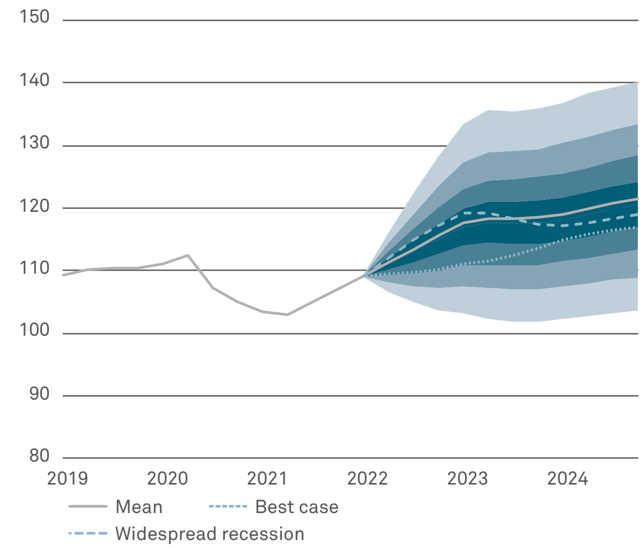
Forecasts begin in Q1 2022 and were calculated as of March 17, 2022 Source: BNY Mellon GEIA and Fathom Consulting. The dotted line shows the best case scenario mode, the dashed shows the widespread recession scenario mode and the solid line is the mean or probability-weighted average forecast across all four scenarios. 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 90% 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 shows the balance of risks lies to the downside.

CHART 5: US FEDERAL FUNDS RATE %.



Source: Fathom Consulting.

CHART 6: USD ERI AGAINST MAJOR CURRENCIES INDEX, JANUARY 2006 = 100.

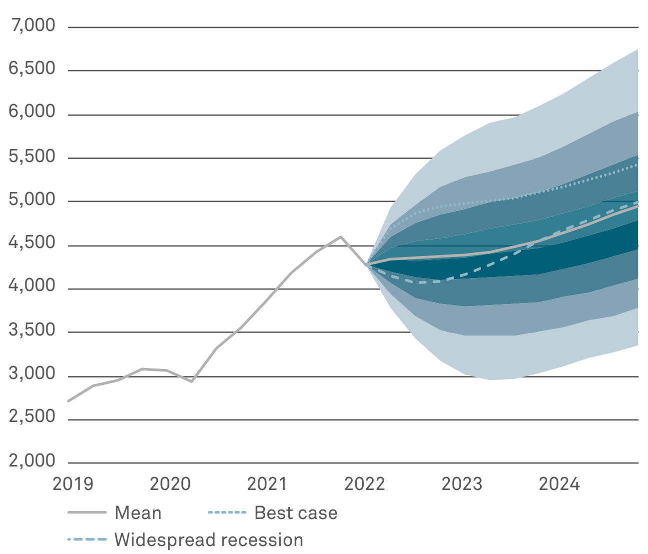


Source: Fathom Consulting.

Key takeaway: rates need to go up to contain inflation. In most of the scenarios, monetary policy tightening stays the course. Risks to the upside.

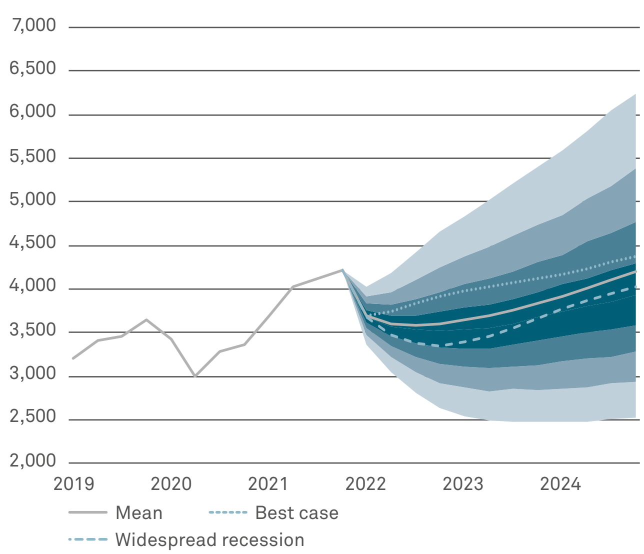
Key takeaway: Dollar likely to rise, benefiting from safe haven flows and monetary policy news. Risks evenly balanced but upside potential large.

CHART 7: US S&P 500 – INDEX.



Source: Fathom Consulting.

CHART 8: EURO STOXX 50 – INDEX.



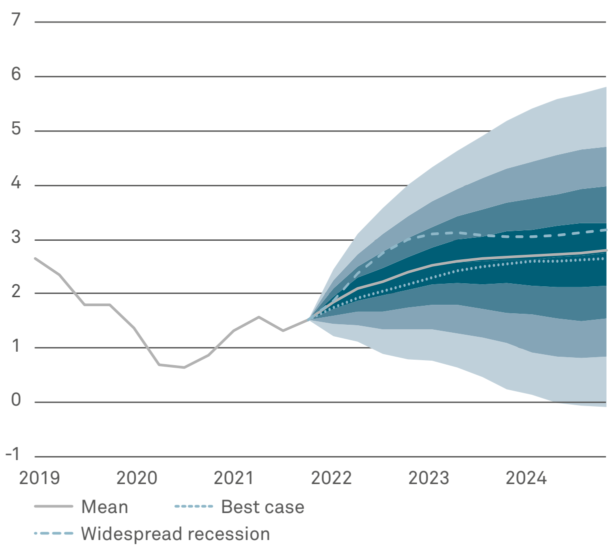
Source: Fathom Consulting.

Key takeaway: short-term outlook weak for US equities and fan chart wide, so volatility likely to be high. However, risks to the upside in 2023.

Key takeaway: Europe a grimmer version of the US, thanks to high energy cost exposure and ECB that can't/won't do a lot more support. 2022 likely to be weak. Like US, risks to the upside though.

Forecasts begin in Q1 2022 and were calculated as of March 17, 2022 Source: BNY Mellon GEIA and Fathom Consulting. The dotted line shows the best case scenario mode, the dashed shows the widespread recession scenario mode and the solid line is the mean or probability-weighted average forecast across all four scenarios. 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 90% 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 shows the balance of risks lies to the downside.

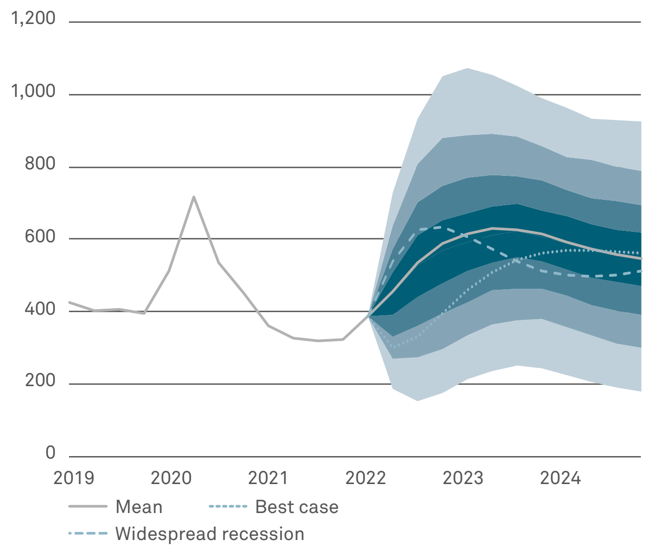
CHART 9: US TEN-YEAR GOVERNMENT BOND YIELDS %.



Source: Fathom Consulting.

Key takeaway: US 10-year yields likely to rise sharply – either because Fed signals more rate rises, or because they don't, and inflation compensation needs to rise. Risks are evenly balanced.

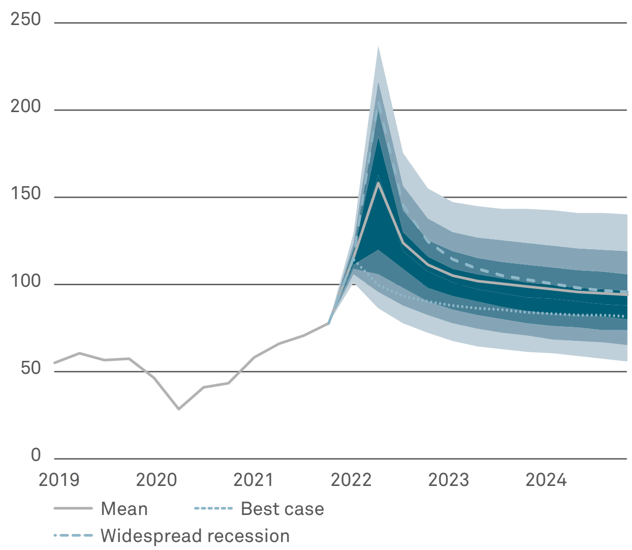
CHART 10: US HIGH YIELD SPREAD BASIS POINTS



Source: Fathom Consulting.

Key takeaway: global credit at risk. US HY spread likely to rise short term (despite US energy concentration). Large chance of widening beyond pandemic highs, thanks to vulnerability of zombie companies to high rates, recession and withdrawal of support.

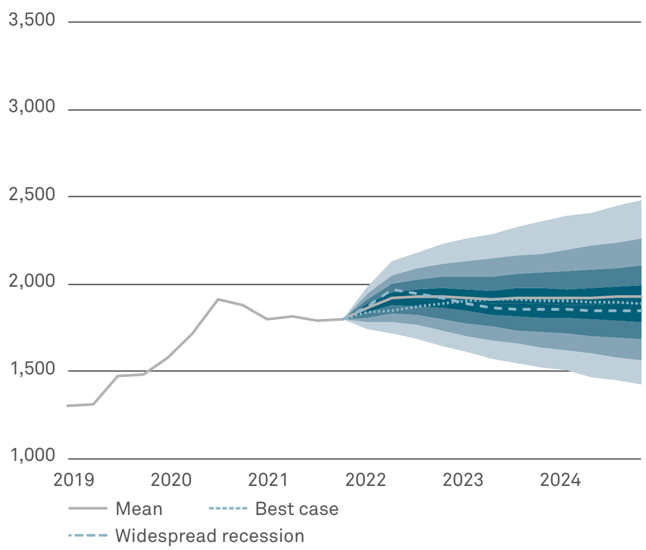
CHART 11: OIL PRICES – USD PER BARREL.



Source: Fathom Consulting.

Key takeaway: Risk of further oil price spike high – thanks to conflict duration uncertainty. Likely to fall back in due course, but less than forward curve suggests.

CHART 12: GOLD PRICE – USD PER TROY OUNCE.



Source: Fathom Consulting.

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

Forecasts begin in Q1 2022 and were calculated as of March 17, 2022 Source: BNY Mellon GEIA and Fathom Consulting. The dotted line shows the best case scenario mode, the dashed shows the widespread recession scenario mode and the solid line is the mean or probability-weighted average forecast across all four scenarios. 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 90% 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 shows the balance of risks lies to the downside.

What the Market Thinks

SECTION 2

SECTION 2A

What's priced in

Overview: In December, global growth was expected to remain strong in 2022. Central banks were largely expected to look through above target inflation over a number of years, and real rates were priced to remain at extremely negative levels, supporting risky asset valuations. As the year turned, and inflation pressure intensified and even broadened (not transitory, after all!), financial markets were shaken first by expectations for faster monetary policy tightening globally, then by the potential inflation and growth impact of the Russian invasion of Ukraine. Risky asset prices fell, traded inflation rose and interest rates moved up. In aggregate, the market still appears to be expecting positive growth, slowing inflation and limited policy tightening, but the uncertainty around this view has risen significantly. Indeed, investors appear to be increasingly worried about stagflation (i.e., low growth, rising unemployment, high inflation), and the possibility that central banks may be unable to accommodate the latest negative growth shock, at least to the extent they did in the past.

Market-based growth expectations: Over the quarter, markets priced in a slowdown in global growth: e.g., yield curves flattened, corporate bond spreads rose (particularly the component of spreads associated with slowdowns and recessions), and cyclical stocks (relative to defensives) sold off. Market-based growth expectations fell the most in Europe, followed by the US and Emerging Markets. Recession risks as implied by the market have risen. In the US, they remain low, at 15-20% – broadly in line with the unconditional probability of a recession but up from 10% in December 2021. Investors appear to be more concerned about a possible recession in Europe. In the UK, market-based probabilities of recession in the next 12-months stand as high as ~40+%. Option prices also suggest meaningful downside risks to growth, particularly for Europe, followed by the US, the UK and Emerging Markets.

Market-based Inflation expectations: Traded inflation expectations rose in Q1. The euro area saw the largest increase, driven by concerns about the impact of higher energy prices, followed by the UK and the US. Market pricing suggests that

Summary of market pricing

TABLE 1: THE MARKET IS EXPECTING POSITIVE GROWTH, SLIGHTLY ABOVE TARGET INFLATION AND SOMEWHAT LIMITED POLICY TIGHTENING, BUT UNCERTAINTY AROUND THIS VIEW IS ELEVATED.

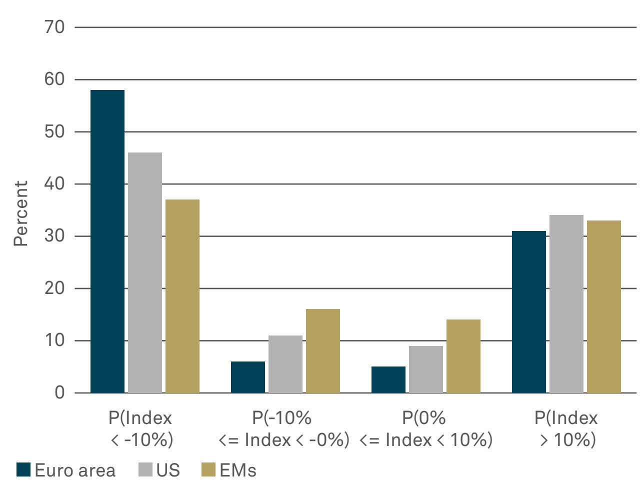
Market pricing – 1/2-years ahead	Growth	Inflation	Policy
Expectations – at end Q4	Gold	Gold	Gold
Expectations – current	Grey	Gold	Gold

Gold indicates above trend growth, above target inflation and policy accommodation. Grey indicates economic growth in line with trend, inflation in line with target and a neutral policy stance.

Source: BNY Mellon Investment Management. Data as of 20 March 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 EURO AREA ECONOMY.



Source: BNY Mellon Investment Management, Thomson Reuters Datastream; Data as of 14 March 2022; p stands for probability value.

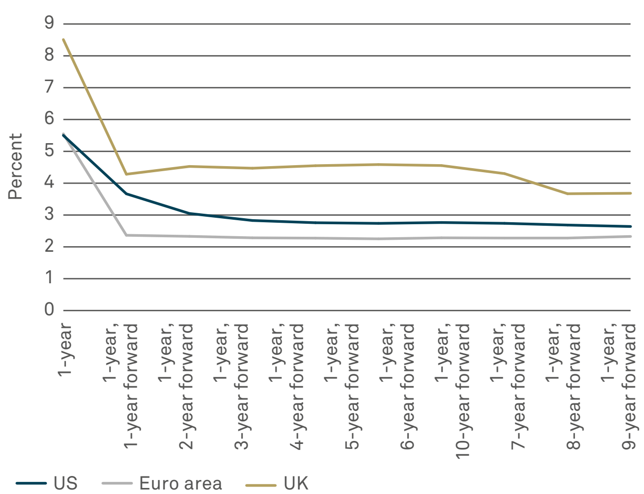
Charts are provided for illustrative purposes and are not indicative of the past or future performance of any BNY Mellon product.

inflation is expected to remain elevated in the near term but to fall back significantly over the next years. The speed at which inflation is expected to fall and the level at which is seen to settle differ across countries. In the US, the market expects a gradual fall in inflation to levels in line with target over the next 2/3 years. In the UK, inflation is anticipated to remain significantly more elevated than target for a number of years. In the euro area, inflation dynamics are expected to remain more subdued once near-term price pressures fade. Risks to inflation as implied by the market lie firmly to the upside.

Market-based monetary policy expectations: In Q1 2022, markets priced in a tightening in monetary policy globally. The US saw a major shift in policy expectations. Following the first rate hike in March, the market is currently pricing around 8-9 25 bps hikes over the next year, with less than 1 additional hike priced in afterwards. With inflation expected to fall back around target only gradually over the next 2/3 years, and real rates that remain negative throughout the curve, effectively, the market expects the Fed to tighten rapidly until inflation falls to levels closer to target, and then look through some of the remaining strength in price growth. To some extent, the market is providing a similar signal in a number of DMs (e.g. in the UK) as hike expectations are heavily front-loaded but capped at a relatively low rate despite elevated future inflation expectations.

Market inflation expectations

CHART 14: THE MARKET EXPECTS INFLATION TO FALL RAPIDLY CLOSE TO TARGET. OUR VIEW IS LESS OPTIMISTIC.

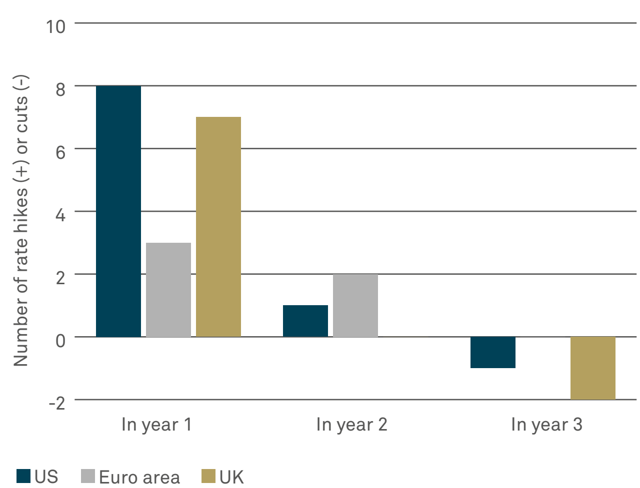


Source: BNY Mellon Investment Management, Macrobond; Data as of 14 March 2022.

UK traded inflation is indexed to the Retail Price Index (RPI) rather than the Consumer Price Index (CPI) as in the case of the US and euro area. The Wedge between UK RPI and CPI, currently at ~2%, is usually around 1%.

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

CHART 15: THE MARKET EXPECTS A HEAVILY FRONT-LOADED HIKING CYCLE, CAPPED AT LOW RATES.



Source: BNY Mellon Investment Management, Macrobond; Data as of 14 March 2022.

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SECTION 2B

Market Sentiment

During the quarter, measures of market sentiment and positioning turned strongly 'bearish', indicating relatively high levels of fear among investors. Take news sentiment as gauged by the San Francisco Fed's Daily News Economic Sentiment index. The index was trending downward but moved sharply lower in mid-February on heightened Russia-Ukraine tensions. The index tends to move inversely with market volatility, and this time is no different. Volatility measures increased early in the year and jumped as the Russia-Ukraine conflict erupted. Surveys of sentiment also turned lower as the balance between bulls and bears shifted strongly toward the bears. In fact, the spread between bulls and bears was nearly as wide as it was during the pandemic induced drawdown of March 2020.

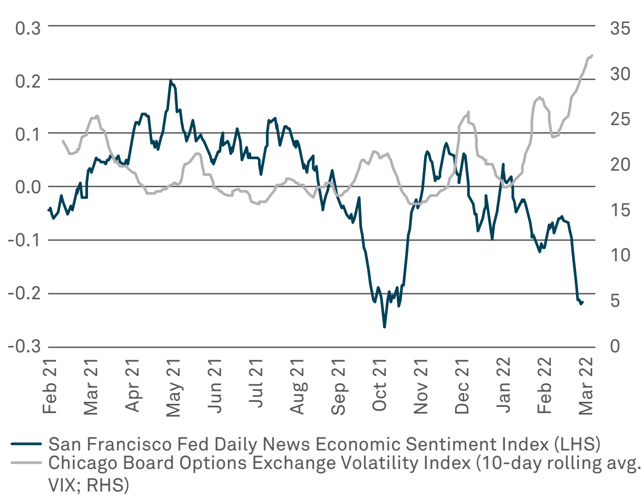
Sharp downward shift in sentiment combined with selloffs may provide a useful contrarian signal if the market is "oversold" on the latest dire headlines or poor economic data. In other words, when sentiment reaches extremely negative levels, it may be a buying opportunity as subsequent performance tends to be positive in the near-term. Basic valuation theory posits that a lower price paid is related to higher expected returns (all else equal). Of course, it may also be that market is accurately reflecting a multitude of risks and the market is fairly priced. Recently, sentiment had worsened to such an extent that several measures were showing some of their strongest buy signals of the past decade. Since the relief rally across risky assets in mid-March, investor sentiment has improved. Moreover, some indicators suggest that markets may have bottomed. So, is this an attractive contrarian "entry point"?

It's always challenging to time markets, and that may be particularly true when geopolitical events are driving markets (crude oil's recent path emphasizes this point). It's worth acknowledging a sizeable gap between sentiment and market positioning indicators, with the latter not yet as bearish as the former.

To reiterate, extreme measures of sentiment may anticipate turning points in the market. But confidence is higher when positioning indicators also turn extremely bearish. For now, gaps between sentiment and positioning remain which may suggest, if sentiment and positioning are to converge, that one possible outcome is for markets to further de-risk (i.e., move lower) from

Economic News Sentiment and Volatility

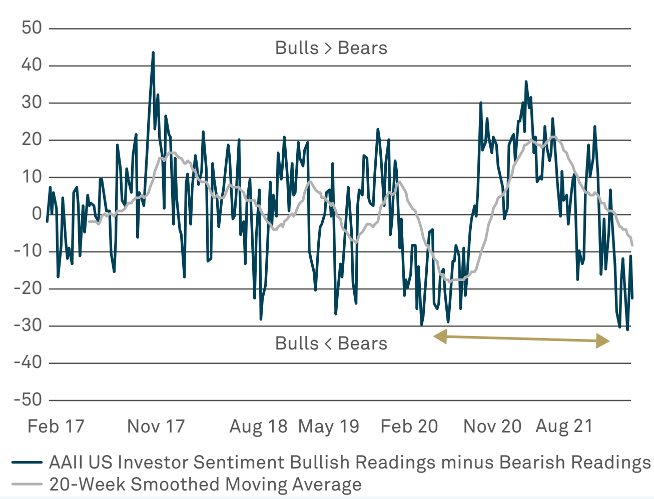
CHART 16: ARTICLES ON THE ECONOMY TURN SOUTH AS VOLATILITY HEADS THE OTHER DIRECTION.



BNY Mellon Investment Management, Bloomberg; Data as of 14 March 2022.

US Investor Sentiment Readings (Bulls minus Bears balance)

CHART 17: PESSIMISM PERVADES WITH BEAR READINGS NEAR 50% (30% FOR BULLS), SIMILAR TO COVID LOW.



BNY Mellon Investment Management, Bloomberg; Data as of 11 March 2022.

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current levels. Indeed, sentiment indicators over long stretches align with equity market performances.

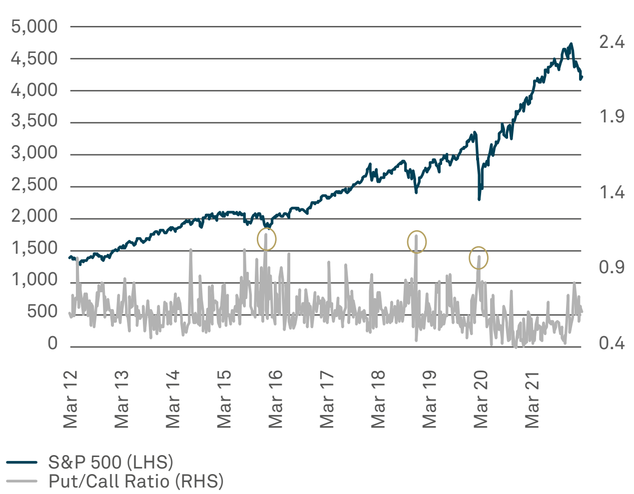
Overall, this is a challenging market with news flow driving aggressive moves (even intraday) in either direction. Despite the sharp rally in risk assets in mid-March, reviewing a checklist of common conditions often found in the early days of a durable market advance, it appears that very few conditions have been met so far.

Summing up, while our scenarios lay out many perilous paths, it's worth keeping in mind just how much uncertainty is being priced by the market. That markets are almost universally down this year may in hindsight prove an over-extrapolation of bearish sentiment as not all uncertainties are tinged with "doom and gloom". Indeed, market sentiment and positioning indicate that broad markets could rebound if and when positive macro news – such as downside inflation surprises, sharp drops in commodity prices, or a more accommodative Fed – hit headlines.

However, barring such developments, we think the likelihood of further negative surprises remains elevated with further market de-risking a material possibility. Considering this, the following section highlights our views on the relative winners among this challenging landscape.

Chicago Board Options Exchange (CBOE) Put/Call Ratio and S&P 500

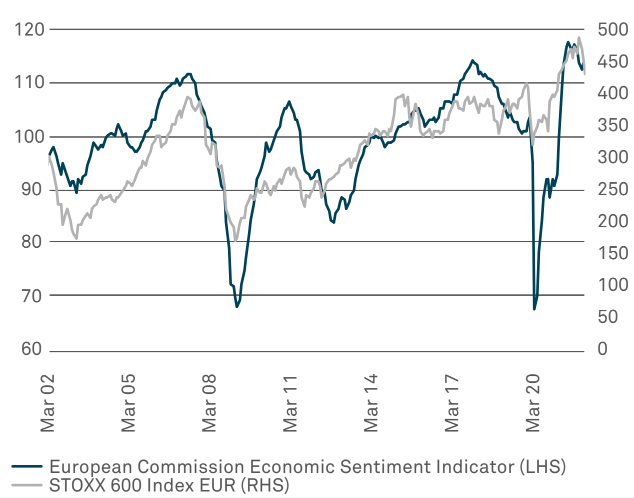
CHART 18: DEMAND FOR PUTS REMAINS RELATIVELY LOW, SUGGESTING POSSIBLE FURTHER DE-RISKING.



BNY Mellon Investment Management, Bloomberg; Data as of 15 March 2022.

European Economic Sentiment and STOXX 600 Performance

CHART 19: SENTIMENT AND EUROPEAN MARKET TURN LOWER AS CONFLICT ERUPTS .



BNY Mellon Investment Management, Bloomberg; Data as of 11 March 2022.

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Investment Conclusions

SECTION 3

EQUITIES

US Equities: The greater number of uncertainties triggered especially by the Ukraine crisis (summarized in our macro scenarios) come at a major turning point in central bank policy making- namely, the end of the QE era. From a tactical standpoint we are dialing down risk exposures. 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. From a strategic point of view, equities' TINA ("There is No Alternative') quality is still intact (based on the S&P's equity risk premium with forward earnings yield of 5.2% vs 10-year yield of around 2.3%-2.4%). As the recovery matures, it gets harder to see further multiple expansion, nevertheless it remains a good environment for bottom-up stock selection and active asset allocation. We continue to think that 2022 performance will be driven by the likely direction of rates. As we expect long-term interest rates to move higher, and persistence of inflation forces the Fed's hand, we expect short-duration parts of the market to outperform long-duration assets. In this environment, equity income stocks and funds that offer some real income stability could do well. Value-tilted sectors such as energy and financials should do well, whereas technology and materials sectors which derive almost 50% of their revenues from outside the United States could struggle.

International Developed Equities: The Ukraine crisis materially increases the stagflation risk for Europe owing to its proximity and trade linkages to Russia. While the ECB is unlikely to meaningfully tighten policy, it is unlikely to be able to loosen much in the form of QE either. For both those reasons we suspect European stocks may underperform the rest of the developed world, though we recognize the potential for a strong bounce in the event of a relatively quick resolution to the conflict. There are nuances within Europe however. French industry is slightly more insulated from the oil and gas price hikes thanks to its nuclear generation share. Norway could be a strong beneficiary, not just of high energy prices, but the attempt to diversify away from Russian production. And the UK is a relative safe haven with the FTSE 100 21% exposed to energy and mining (sectors we are bullish on) as well as more defensive sectors such as consumer staples (18%) and healthcare (12%).

Emerging Markets (EM) Equities: Overall, we expect mixed performance from EM equities, with significant dispersion in regional and country outcomes. For Chinese equities, the growth target that the PBoC recently announced (around 5.5%, even though growth has been decelerating) requires further cyclical easing (mainly monetary) and a moderation in China's strategic partnership with Russia. We remain agnostic on China until we see greater clarity on either of these issues, and indeed the course of the pandemic under its strict 'zero-Covid' policy. For EM-ex China, the hefty valuation advantage of EM stocks vs DM peers offers attractive opportunities to investors who want to diversify their portfolios to hedge against unintended consequences and complexities brought forward by the Russia-Ukraine war. From a regional perspective, we expect LATAM (which trades at 25% discount vs Asian peers) oil and commodity exporters such as Brazil and Mexico to benefit from high commodity prices and strong demand for real assets. The Middle East and Africa should benefit from continued high energy prices and also offer higher-quality financial sector opportunities. APAC economies (except Malaysia and Indonesia) are net energy importers and will be hit, as they have just begun recovering past their pre-Covid levels of output. We continue to favor Indonesia and the Philippines where ongoing consumption recoveries should boost equity outperformance.

FX

US Dollar and Foreign Exchange (FX): We expect the USD to stay firm in Q2 2022 against major FX crosses (notably EUR and GBP but less so against commodity FX such as CAD, NOK). First, the US is ahead of its tightening cycle vis-a-vis Europe and Japan. Second, safe haven flows to the USD will likely not dissipate in the near term as the US is less directly affected by the rise in geopolitical risk tensions vs. Europe (and to some extent the UK) with more contained energy and trade linkages to Russia. We 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 Sovereign Debt: For much of the year, yields are likely to see upward pressure until inflation stabilizes and markets feel they've re-priced policy sufficiently. In the US, with continued strong inflationary impulses, Fed hikes that have only started and quantitative tightening about to begin we think there is still room for yields to move higher, and as such expect negative price returns on US government bonds.

We do not expect Euro area and Japanese government bond yields to rise as strongly, as we see the ECB or Bank of Japan lagging the Fed in normalizing policy. We see government bonds retaining their hedging benefits overall but investors should be mindful of the risk that yields may fall less than expected on negative, inflationary, growth shock.

Global Investment Grade Credit (IG): US Investment-Grade corporate spreads rose to around their long-term average of ~140 bp as uncertainty about both the path of monetary policy and the situation in Ukraine weighed on investor sentiment. 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, uncertain geopolitical environment, and persistently high energy prices impacting profitability, even as pricing power remains strong for now.

Global High Yield Credit (HY): US high-yield credit spreads have widened significantly since the start of the year, reaching at one point in the quarter end-2020 levels, but remain around 100 bp tighter than their long-term average (since 2010). Recent spread widening reflects the change in the in balance of risks. Continued hawkishness of the Fed, persistence of inflation, supply-side bottlenecks, with added pressure of the rise in geopolitical tensions, pose downside risks to the high yield space as refinancing options and liquidity access dry up and operating margins come under pressure, especially for highly levered firms with little 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 for active issuer selection in less-inflation-pressured sectors such as healthcare and IT. European HY is relatively less attractive given income returns are expected to provide less of a cushion to the negative price returns we expect over the whole forecast period. For both, we favor short duration exposures and floating rate to fixed.

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FORECASTS

Projections or forecasts regarding future events, targets or expectations, are 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.

RISKS

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 Barclays US Corporate High Yield:** covers the universe of fixed-rate, non-investment grade corporate debt in the US. **Bloomberg Barclays 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. **MRNA:** Messenger RNA vaccines.

BNY Mellon Global Economics and Investment Analysis team

Shamik Dhar
Chief Economist

Lale Akoner
Senior Market Strategist

Jake Jolly, CFA
Senior Investment Strategist

Aninda Mitra
Head of Asia Macro & Investment Strategy

Sebastian Vismara
Senior Financial Economist

im.bnymellon.com

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