2023 Investment Outlook

APAC Version

Executive summary

Introduction

In September, the World Bank warned that "central banks around the world have been raising interest rates this year with a degree of synchronicity not seen over the past five decades", which has increased the risks facing the global economy. Not surprisingly, the outlook for 2023 is largely dependent on the path of monetary policy, which in turn is very reliant on the path of inflation. To address the breadth of possibilities that lie ahead in this environment, we have provided a base case scenario which we believe is highly probable as well as an alternate scenario.

Our base case

Near-term view

We believe we are currently in the contraction phase of the economic cycle with global growth below trend and decelerating, which we expect will continue in the near term. We think the contraction globally will be a modest soft patch, although some economies will be hit harder than others.

The path ahead

We expect inflation to moderate and markets to start to anticipate in the first quarter a pause in central bank tightening taking place before the end of the first half of 2023. This should enable a recovery regime to unfold where global growth will be below trend but rising. This should help trigger the beginnings of the next economic and market cycle, leading to an outperformance of risk assets.

Our base case anticipates inflation moderating, resulting in a pause in central bank tightening early in 2023. This enables an economic recovery to unfold later in the year.

Alternate scenario

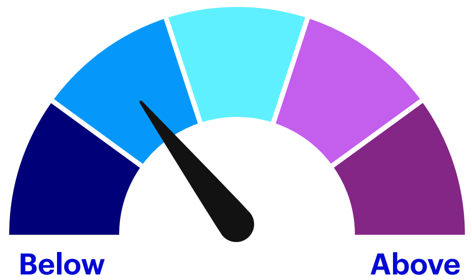
A different path: Persistent inflation

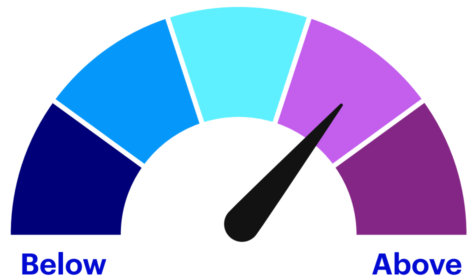
If inflation remains stubbornly high, we assume central banks will continue tightening monetary policy for longer. In our view, this would maintain the contraction regime for longer than we expect in our base case. We would expect this to increase the probability of a global recession, resulting in worse growth and further pain in risk assets.

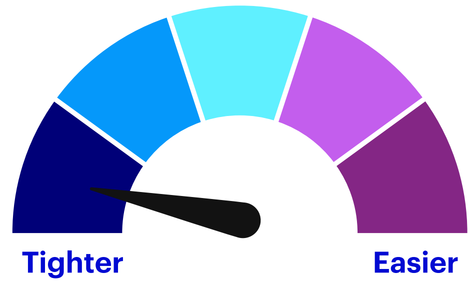
Our alternate scenario anticipates the economy remaining in contraction, as inflation remains persistent and central banks are unable to pause tightening.

Summary of macro factors: Current conditions

Macro factors versus market expectations







Global growth: Below expectations

- **Recession risk rising.** The chances of a near-term recession in the US and Europe are rising.
- **Headwinds are building.** Headwinds due to tightening global financial conditions, high energy prices and inflation that is running ahead of wages are constraining growth.
- **Chinese growth likely to remain low.** We foresee continued slow growth in China despite recent and expected policy support.

Global inflation: Above expectations

- **Inflation running too hot.** Inflation is well above central bank targets in the US and Europe, spurring aggressive hawkish action.
- **Inflation likely to cool in 2023.** We expect headline inflation rates to come down in the near term, and 2023 should see a period of declining inflation rates, especially in the US.
- **Factors are mixed but point to softening.** A tight labor market is likely to keep upward pressure on inflation, but easing supply chain pressures, stable energy prices and cooling demand should work to bring inflation down.

Global policy and financial conditions: Tightening

- **Central banks likely to pause in early 2023.** US and European central banks are tightening despite slowing growth, signs that inflation is peaking and the fact that financial conditions have already tightened substantially. We expect these factors to eventually turn the tide, leading to a pause in rate hikes materializing in early 2023.
- **The risk of recession has increased.** Western central banks are likely to overshoot in their tightening, increasing the risk of recession and keeping market volatility high.

Source: Invesco.

Mapping asset classes to macro regimes

Invesco Investment Solutions tactical asset allocation framework (TAA)

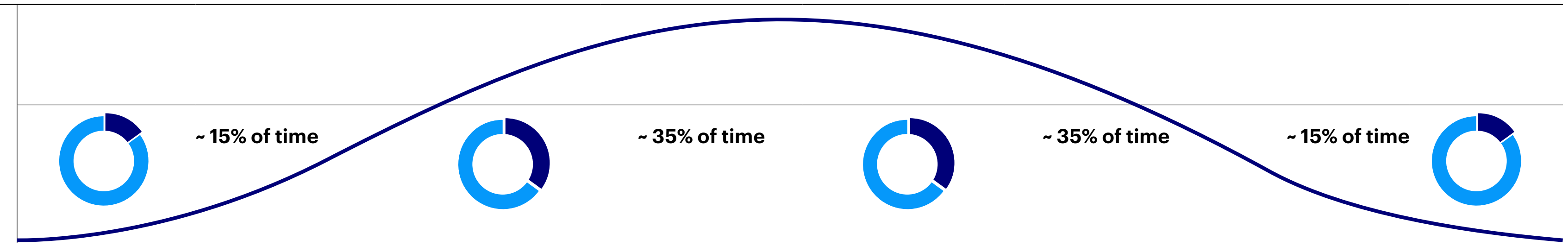
We believe:

- Asset prices are cyclical, exhibiting differentiated risk and return characteristics in different stages of the business cycle.
- A forward-looking approach to macro regime identification can guide investors in their allocation decisions. When are investors compensated for taking risks? What types of risk?

A disciplined approach to TAA can support investors seeking to capitalize on opportunities resulting from changing macro and market conditions, dynamically adjusting exposures across asset classes, regions, styles, factors and sectors.

Example: in an environment with below-trend and decelerating growth, investors are typically compensated to reduce portfolio risk.

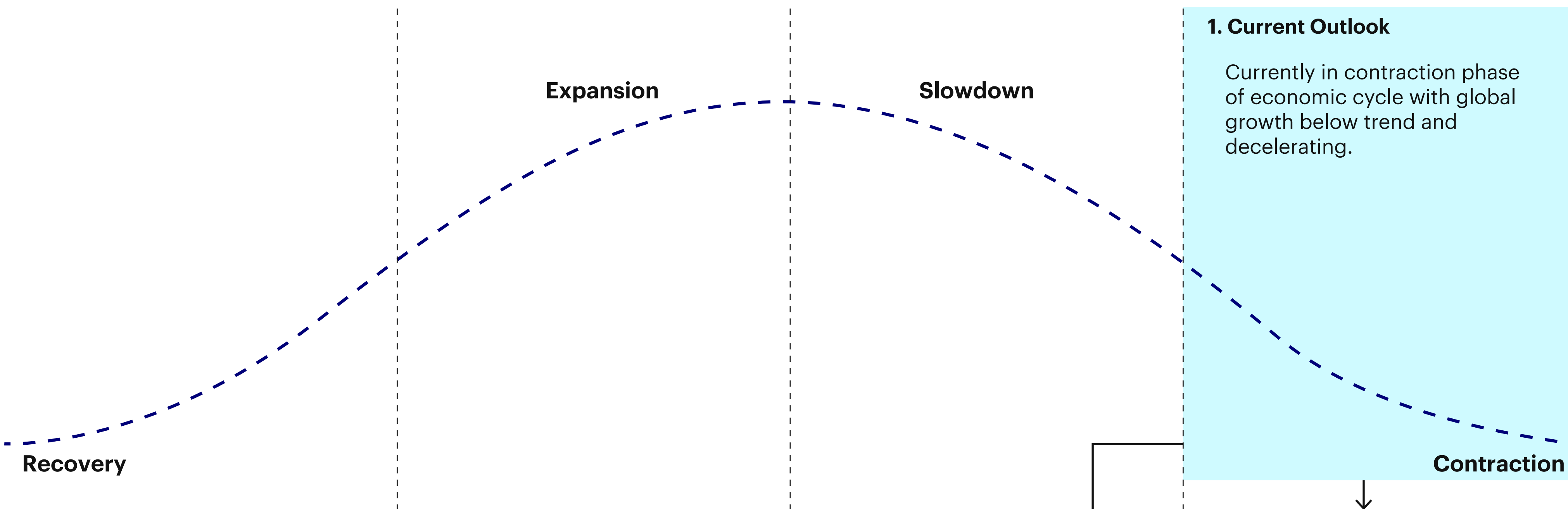
Economic growth



	Recovery	**Expansion**	**Slowdown**	**Contraction**
	Growth ▼ **below** trend & ▲ **accelerating**	Growth ▲ **above** trend & ▲ **accelerating**	Growth ▲ **above** trend & ▼ **decelerating**	Growth ▼ **below** trend & ▼ **decelerating**
Portfolio risk	**Overweight risk**	**Overweight risk**	**Neutral risk**	**Underweight risk**
Asset classes • Regions • Styles / factors • Sectors Most favored	**Risky credit** • High yield • EM hard currency • Bank loans	**Equity** • Emerging markets • Momentum, value, size • Cyclicals	**Equity** • Developed markets • Quality, low vol • Defensives	**Government bonds** • Long duration • Nominal bonds
	Equity • Emerging markets • Value, size • Cyclicals	**Risky credit** • Bank loans • High yield • EM hard currency	**Government bonds** • Long duration • Nominal bonds	**High-quality credit** • IG securitized • IG corporate
	High-quality credit • IG corporate • IG securitized	**High-quality credit** • IG securitized • IG corporate	**High-quality credit** • IG corporate • IG securitized	**Risky credit** • EM hard currency • High yield • Bank loans
Least favored	**Government bonds** • Intermediate duration • Inflation-linked bonds	**Government bonds** • Short duration • Inflation-linked bonds	**Risky credit** • EM hard currency • High yield • Bank loans	**Equity** • Developed markets • Low vol, quality, momentum • Defensives

Source: Invesco Investment Solutions. For illustrative purposes only and intended to represent average historical outcomes. Outcomes may vary, depending on the relative balance of risk premia composition between asset classes across business cycles, depending on asset class duration, spread duration, inflation, etc. **There is no guarantee that these trends will continue in the future.**

Presently our framework indicates a contractionary regime, potentially progressing into a recovery



1. Current Outlook

Currently in contraction phase of economic cycle with global growth below trend and decelerating.

2. What gets us to Recovery

Inflation should moderate, allowing central banks to pause in the first half of 2023, resulting in a recovery regime with growth below trend but improving.

3. What keeps us here longer

The contraction regime may last for longer if inflation persists higher than expected, requiring central banks to be hawkish for longer and very likely triggering recession.

Please see page 21 for a summary of our scenarios and related asset allocation guidance.

Other risks

Recession risk

Unprecedented, synchronized monetary policy tightening has substantially increased the risks of a global recession. While some economies are less vulnerable to recession than others, we believe risks, in general, are on the rise for countries experiencing monetary policy tightening. A global recession remains a significant possibility, with the potential for higher unemployment, defaults, and a deterioration of earnings. However, we believe that risk is still below 50%, based on our expectation that central banks pause tightening soon.

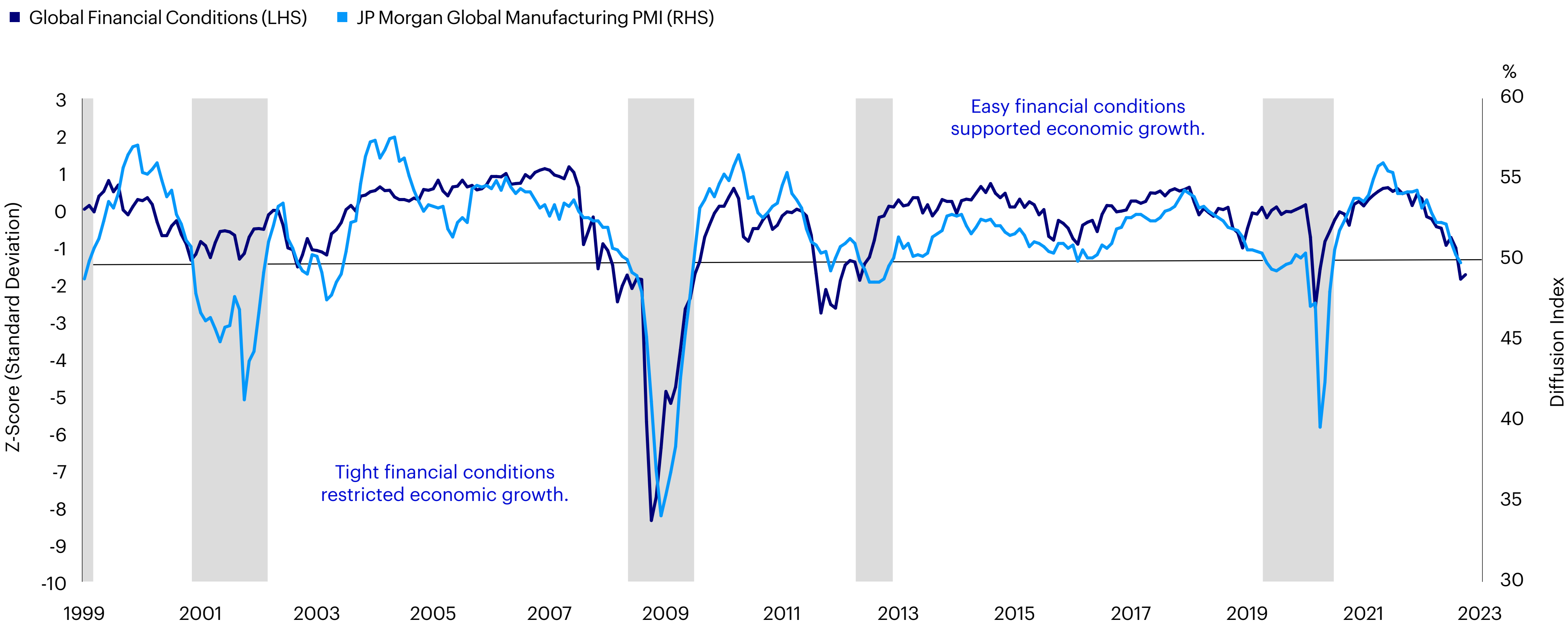
Financial instability

Rapid rate hikes may cause a major financial event, requiring central banks to step in to resolve dislocations between fundamentals and market pricing.

Source: Invesco. For illustrative purposes only.

Leading economic indicators and financial conditions currently point to contraction regime

Global financial conditions and manufacturing activity since 1999

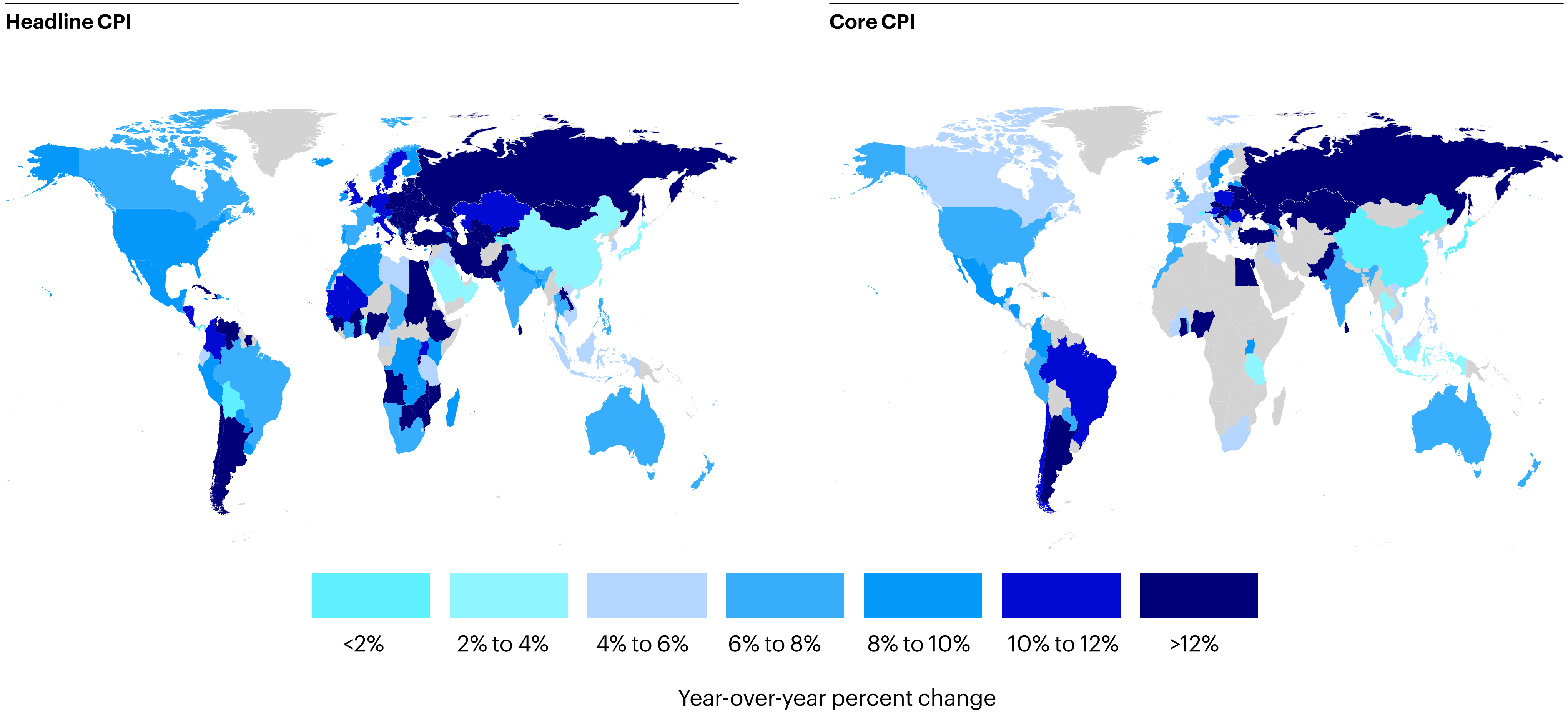


- There has been a strong inverse relationship between tightening financial conditions, which are influenced by a country's central bank, and manufacturing activity over time. Specifically, easy financial conditions are tailwinds for economic growth, and tight financial conditions are headwinds for economic growth.
- Business surveys, manufacturing activity, and the construction sector continue to decline towards their long-term trend while monetary conditions continue to tighten. Risk sentiment has deteriorated, with equity markets underperforming fixed income and credit spreads widening.
- However we expect the current contraction regime to transition into a recovery in the near future once monetary policy tightening is paused.

Sources: Bloomberg L.P., Haver, Invesco, October 31, 2022. Notes: The Bloomberg Global Financial Conditions Index tracks the overall level of financial stress in the US, Europe, UK, and Asia ex-Japan money, bond, and equity markets to help assess the availability and cost of credit. A positive value indicates accommodative financial conditions, while a negative value indicates tighter financial conditions relative to pre-crisis norms. Shaded areas denote global manufacturing contractions. An investment cannot be made in an index.

Core inflation has remained persistently above target in many advanced economies even as global growth has slowed in 2022

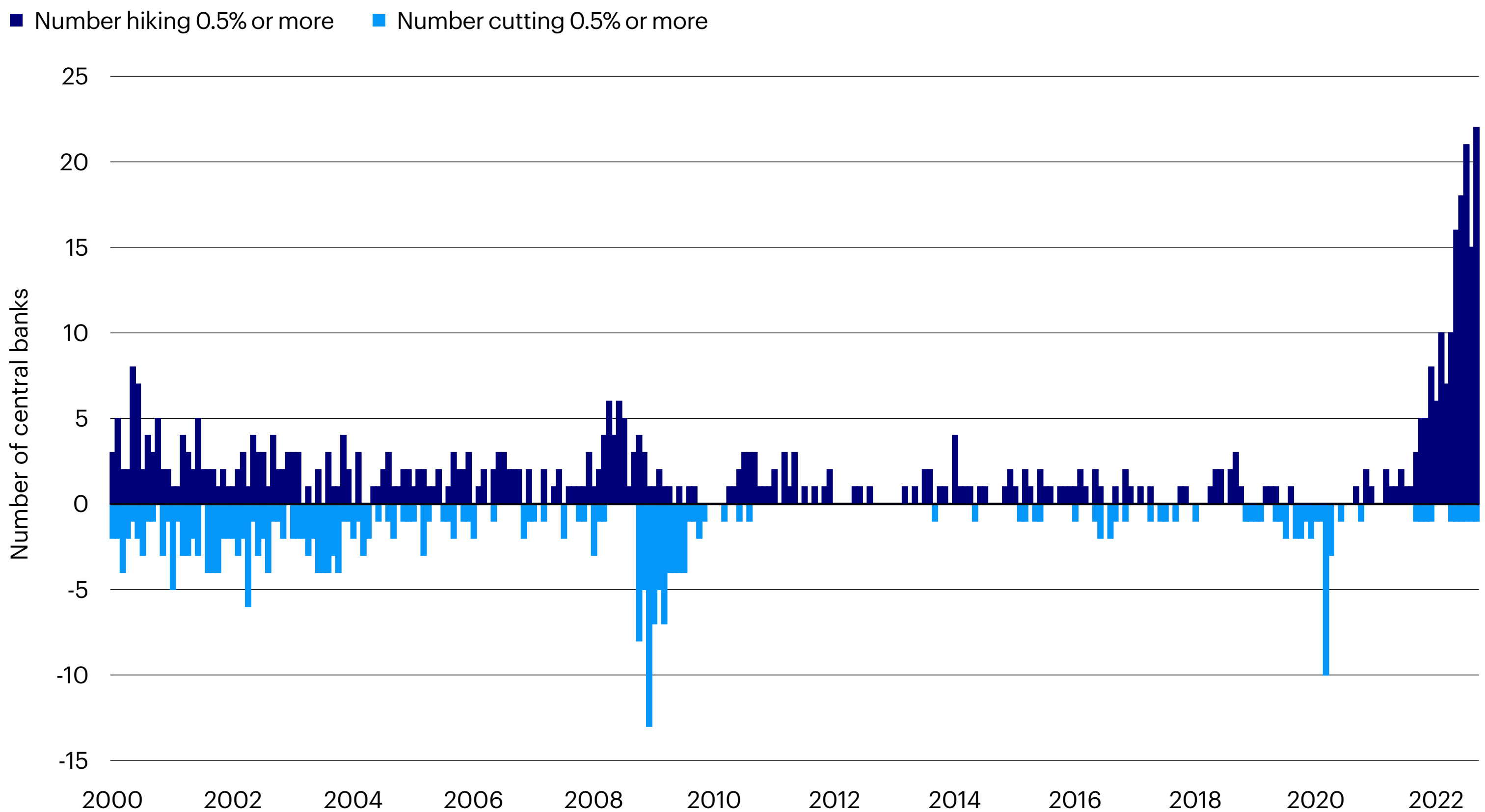
- The combination of several factors (monetary and fiscal expansion, supply chain disruptions, energy market disruptions related to the war in Ukraine) has pushed core inflation to multi-year highs in many advanced economies.
- Relatively few economies have been spared from high inflation, most importantly China, Japan, and other parts of East Asia.
- This has led to a global monetary policy tightening cycle across the West and Emerging Markets. Monetary policy in East Asia is on a different course, where China is easing and Japan is on hold.
- The divergence in monetary policy and the Fed's relatively hawkish stance has contributed to a strong dollar, which has tightened global financial conditions.



Sources: Macrobond and Invesco, as of October 2022. Inflation figures are from various national sources. Latest data available for each country.

In stark contrast to 2020, when almost all central banks were loosening policy, almost all central banks are now tightening policy via increases in policy rates

Global central banks are tightening aggressively



- Following the extraordinary loosening of monetary and fiscal policies across the world in 2020 and 2021, the chickens have come home to roost. Inflation is now broad-based and significantly above target in most economies.
- The major outliers to synchronized tightening are China (where policy is loosening) and Japan.
- Going forward, this monetary policy tightening will likely continue in the near term, albeit in a relatively constrained manner in Europe and the UK.

Note: Number of central banks among 38 leading central banks. The number of central banks hiking or cutting rates is measured on a one-month rolling basis.

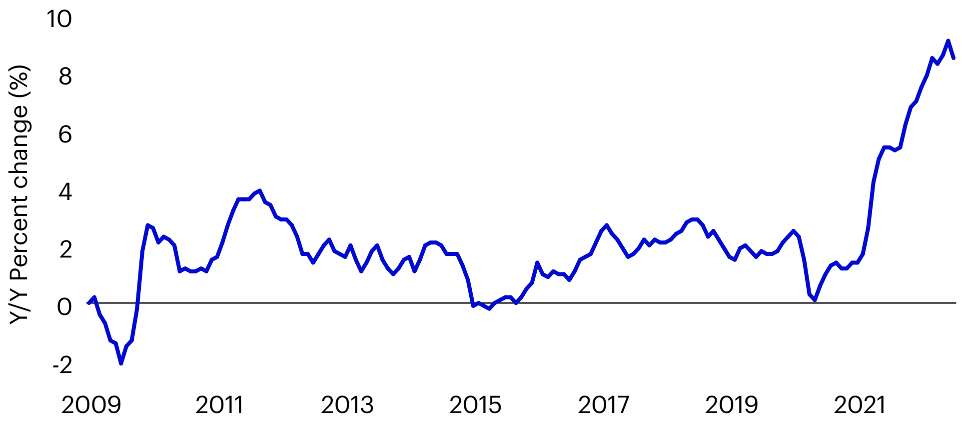
Sources: Macrobond and Bank for International Settlements, September 30, 2022.

In the US, higher inflation has triggered a tightening of financial conditions

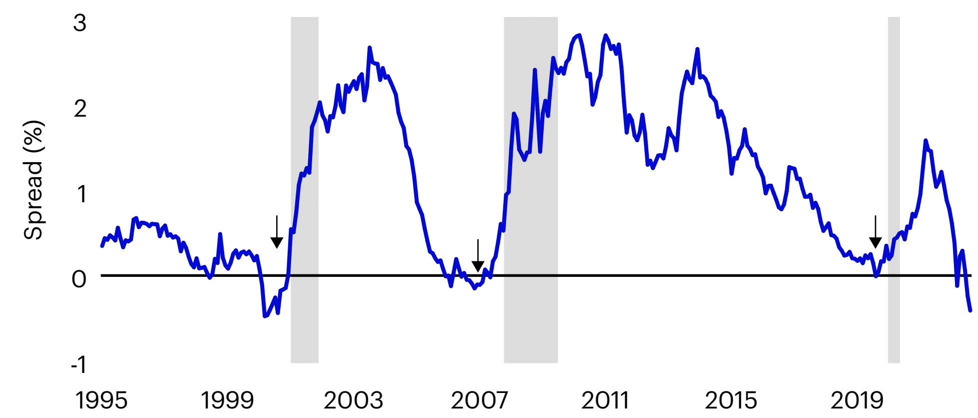
The traditional cycle indicators are flashing warning signs

- In the US, both headline and core inflation have persisted above the 2% target throughout 2022, leading the Federal Reserve to embark on a tightening cycle in March 2022.
- The tightening of financial conditions is likely to eventually lower inflation in the US towards the target rate of 2%, but inflation is still likely to be above target for some time.

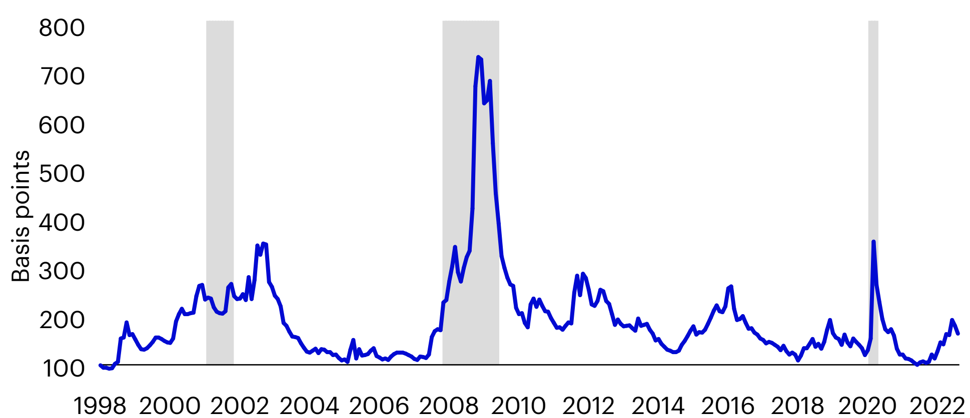
US Consumer Price Index



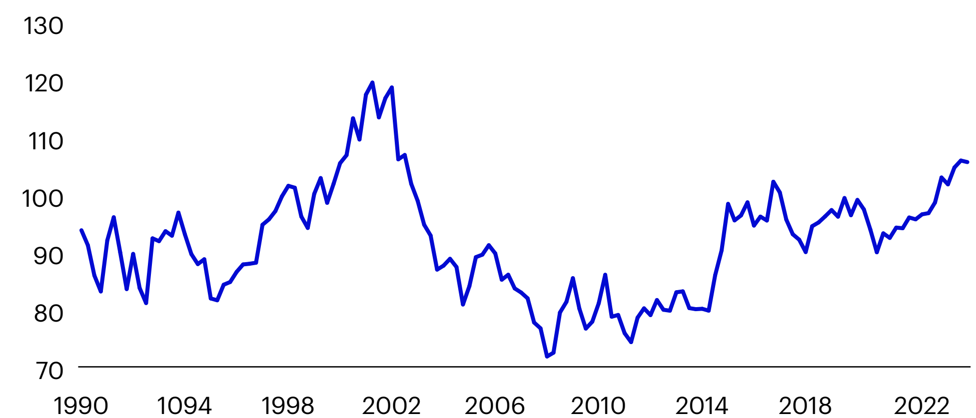
US Treasury Yield Curve
(10-year US Treasury rate minus 2-year US Treasury rate)



US Corporate BBB Bond Spreads



US Dollar Index (DXY)



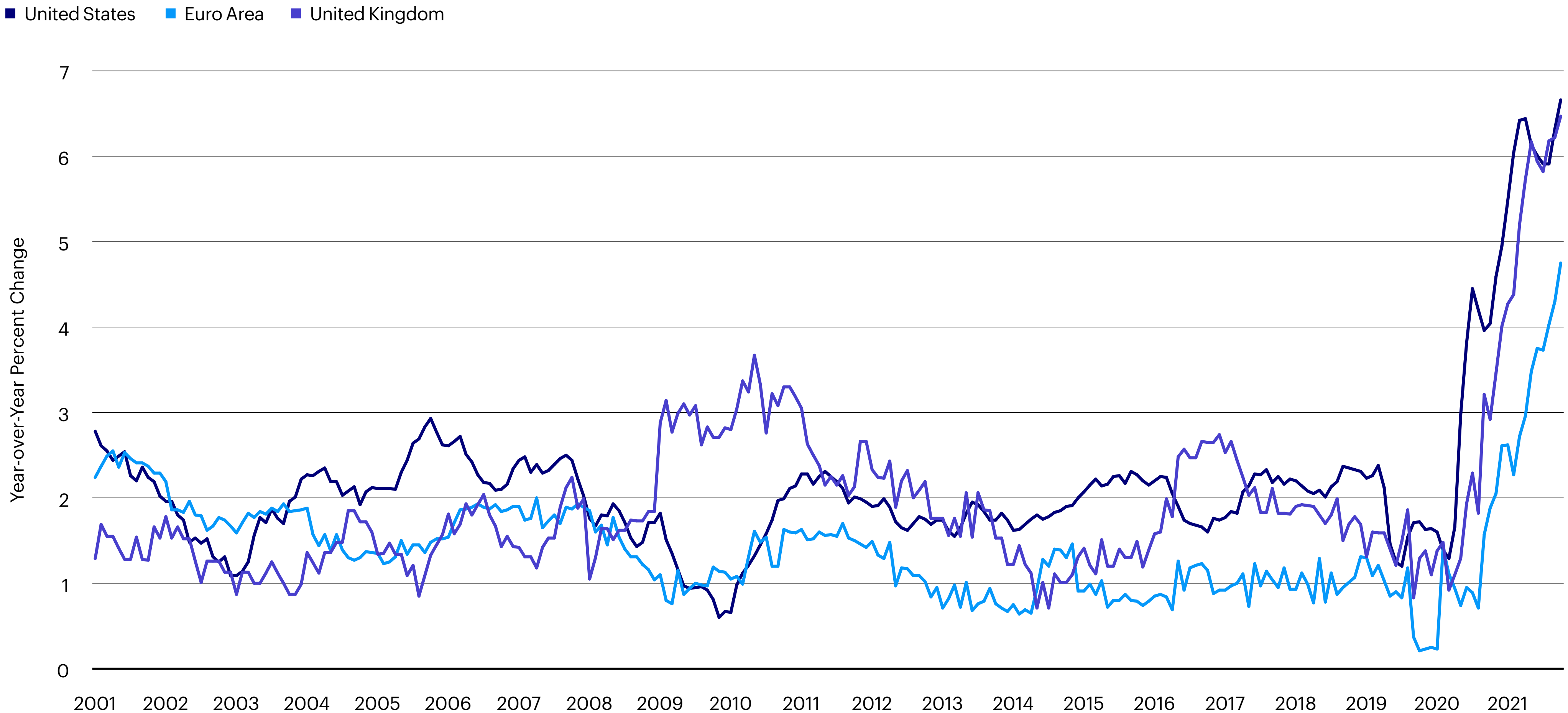
Shaded areas represent recessions.

Sources: US Bureau of Labor Statistics, July 31, 2022, and Bloomberg L.P., August 12, 2022. BBB spreads are represented by the option-adjusted spread of the Bloomberg US Corporate Bond Index. The option-adjusted spread (OAS) is the measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is then adjusted to account for an embedded option, such as calling back or redeeming the issue early. See appendix for index definitions. The yield curve plots interest rates, at a set point in time, of bonds having equal credit quality but differing maturity dates to project future interest rate changes and economic activity. **Past performance is not a guarantee of future results.**

The energy supply shock stemming from the Ukraine war will likely constrain monetary policy tightening in the euro area and the UK relative to the US

- Energy inflation in 2022 has been much higher in the eurozone and the UK as a result of the Russia-Ukraine war than in the US, which is much more insulated as a net energy exporter.
- Still, high headline inflation led by energy prices is boosting Core CPI in both the UK and the eurozone. Strong demand, sizeable fiscal and monetary support during the pandemic and tight labor markets since have also helped boost Core CPI. And now governments are capping energy prices and subsidizing consumers and firms, which will likely sustain demand and longer-term inflation pressures. So the ECB and BOE will likely keep tightening policy.
- That said, the ECB and BOE see the energy price rise as a supply shock that is out of their control, which will likely hit real incomes and spending and hence should limit both growth and inflation. As a result, the ECB and the BOE are likely to tighten monetary policy less aggressively than the Federal Reserve has done.

Core CPI by region

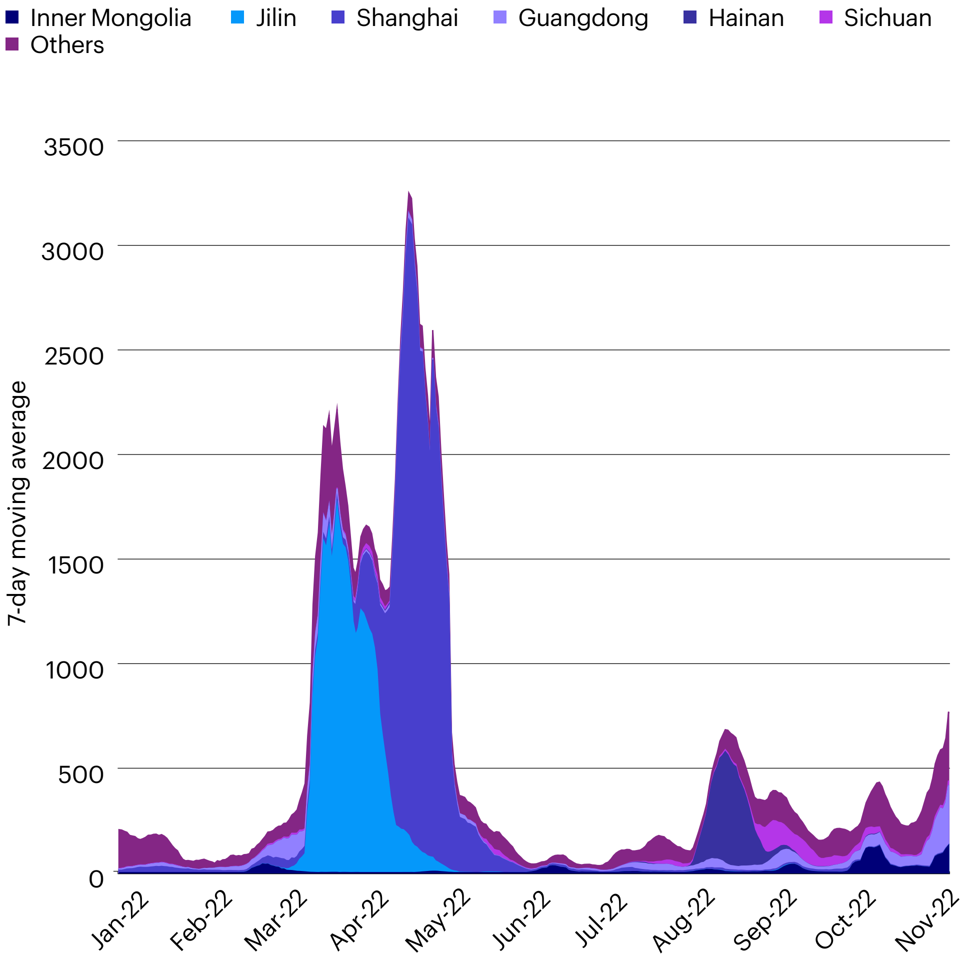


Sources: Invesco and Macrobond, as of September 30, 2022. **Past performance is not a guarantee of future results.**

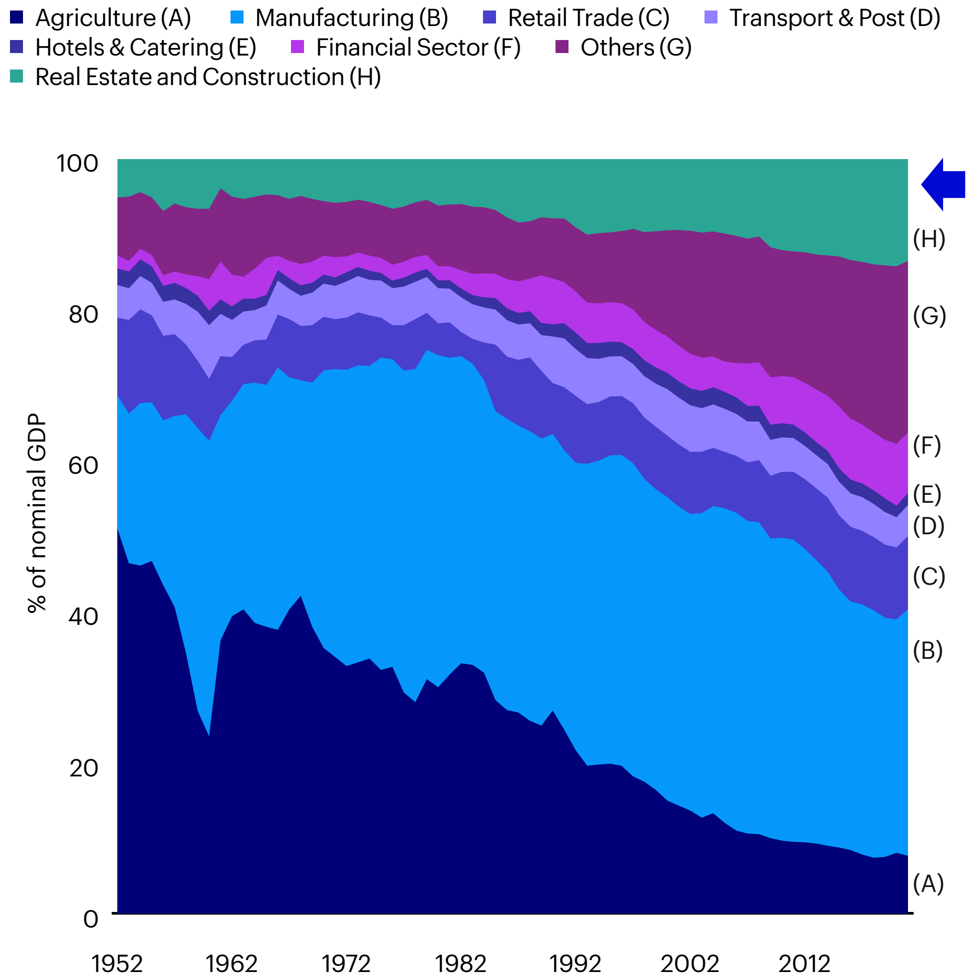
China's property and COVID-19 woes are likely to set the tone for 2023

Despite recent easing, China's growth outlook remains murky

Confirmed COVID-19 cases in China



China GDP breakdown by industry



- Our 2023 outlook for China is contingent on the property market stabilizing and the economy reopening from the stringent zero-COVID policies.
- We assume stabilization of the property market and a gradual reopening starting in Q2 2023, which should lead to mid single digit GDP growth and onshore earnings growth in the mid-teens.
- Risks are to the downside in the first half of the year due to the weaker export environment and tepid domestic household spending with much stronger prospects in the second half owing to the reopening.

Left chart sources: DXY (Lilac Garden Family Clinics) and China National Health Commission. Data as of November 9, 2022.

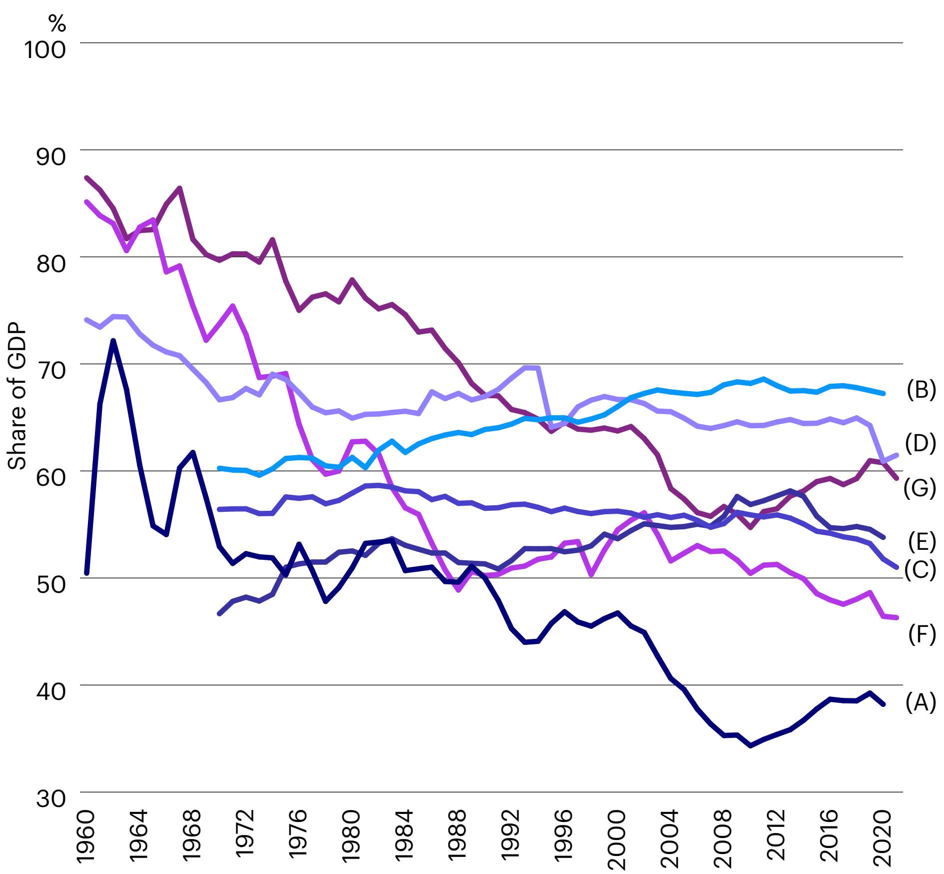
Right chart source: China National Bureau of Statistics (NBS). Data as of 2021.

China's shifting political economy targets self-sufficiency

National security and technology self-sufficiency have become top priorities

Household consumption share lower than most economies

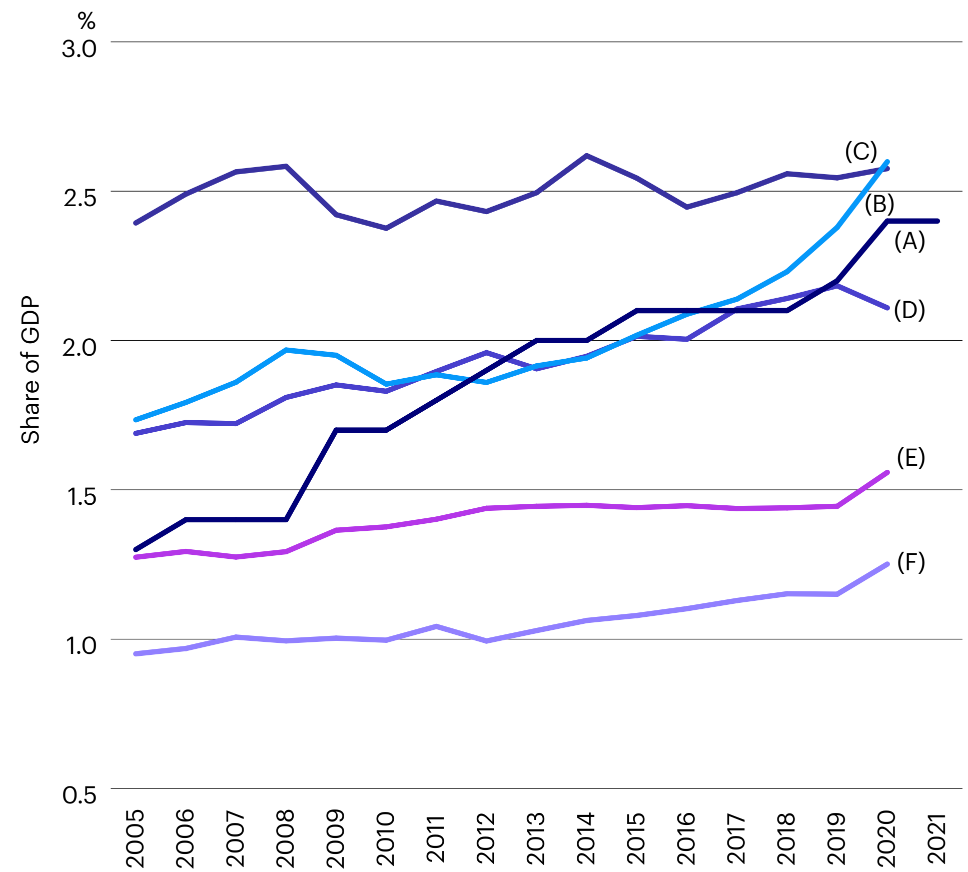
China (A) United States (B) Euro Area (C) United Kingdom (D)
Japan (E) South Korea (F) India (G)



Research and development spending

China compared with major DM economies

China (A) United States (B) Japan (C) Germany (D) France (E)
United Kingdom (F)



- China's political economy is evolving – gone are the days when policymakers prioritized growth through investment spending.
- Beijing is pursuing a state-led development model with a focus on national security and technology self-sufficiency. Indeed, about 20% of China's R&D spending comes from the government.
- Priority has shifted towards developing domestic consumption and strengthening supply chains to drive longer-term growth, and we favor sectors that receive policy support, such as electric vehicles, alternative energy, hard tech, and local consumer brands.

Left chart source: World Bank World Development Indicators, Macrobond, and Invesco. Data as of 2021 as at October 2022.

Right chart source: CEIC and Invesco. Data as of 2021 as of August 2022.

A strong US dollar and tightening monetary policy across EM will likely maintain pressure on EM risk assets, but to different degrees across countries

US Dollar Index (DXY) vs. S&P500/MSCI-EM Equity Index performance

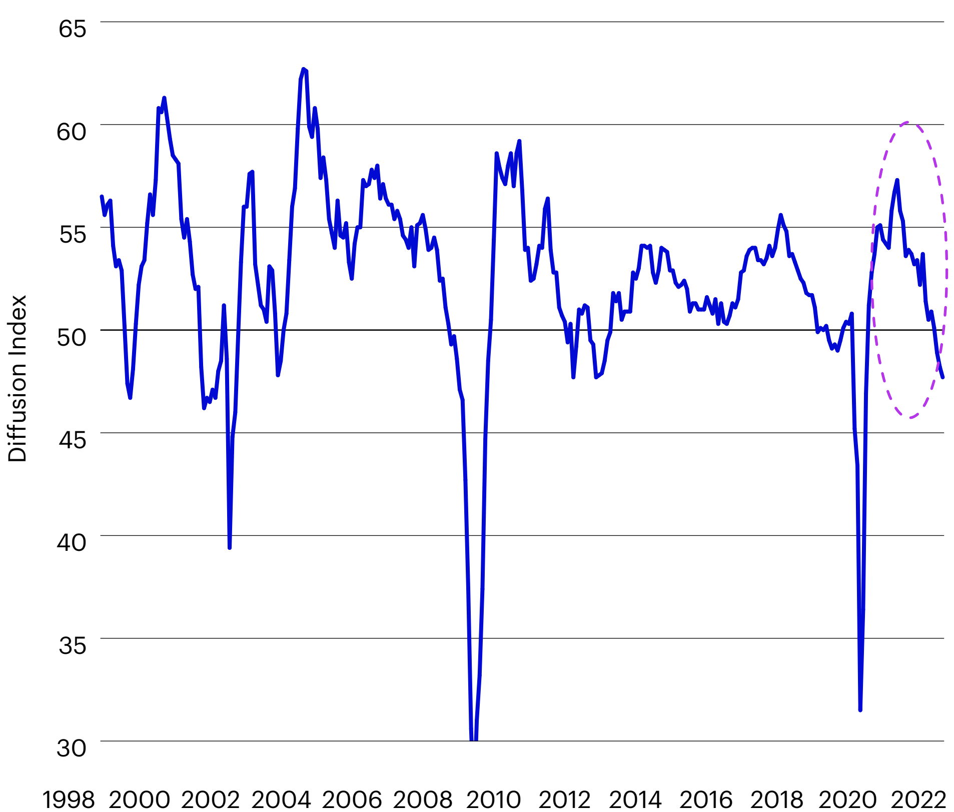
- Emerging market economies are fighting a war on two fronts.
- First, inflation has been a major problem despite earlier and stronger rate hikes in EMs than in the US. Many EM countries' inflation rates are above target – especially those geographically closest to the war in Ukraine.
- Second, the strong US dollar has exported inflation and cut financial flows to EMs where cross-border credit is mostly dollar-denominated.
- Valuations in the US dollar are looking stretched, and we would expect to see the dollar decline when the US Fed is believed to stop raising rates. When the dollar begins to weaken, we would expect EM assets to benefit.

Sources: Macrobond and Invesco. Data as of October 31, 2022. **Past performance is not a guarantee of future results.**

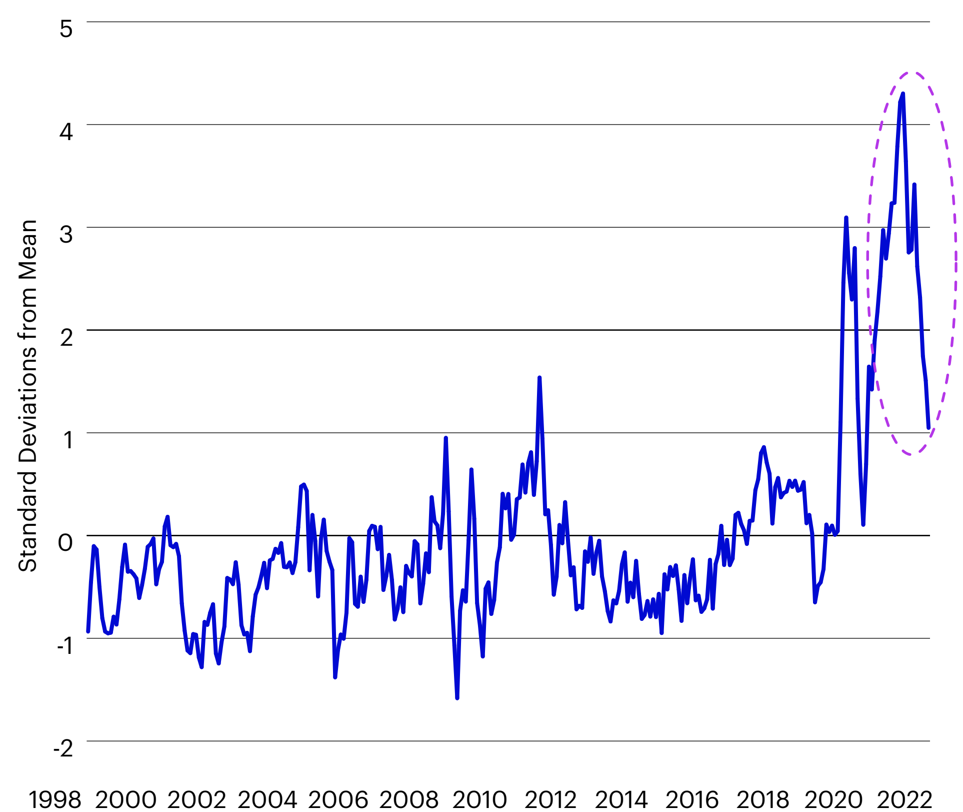
Central bank aggressiveness could ease soon

Both demand and supply side indicators suggest declining inflationary pressures

Demand: Global manufacturing new orders



Supply: Global supply chain pressure index

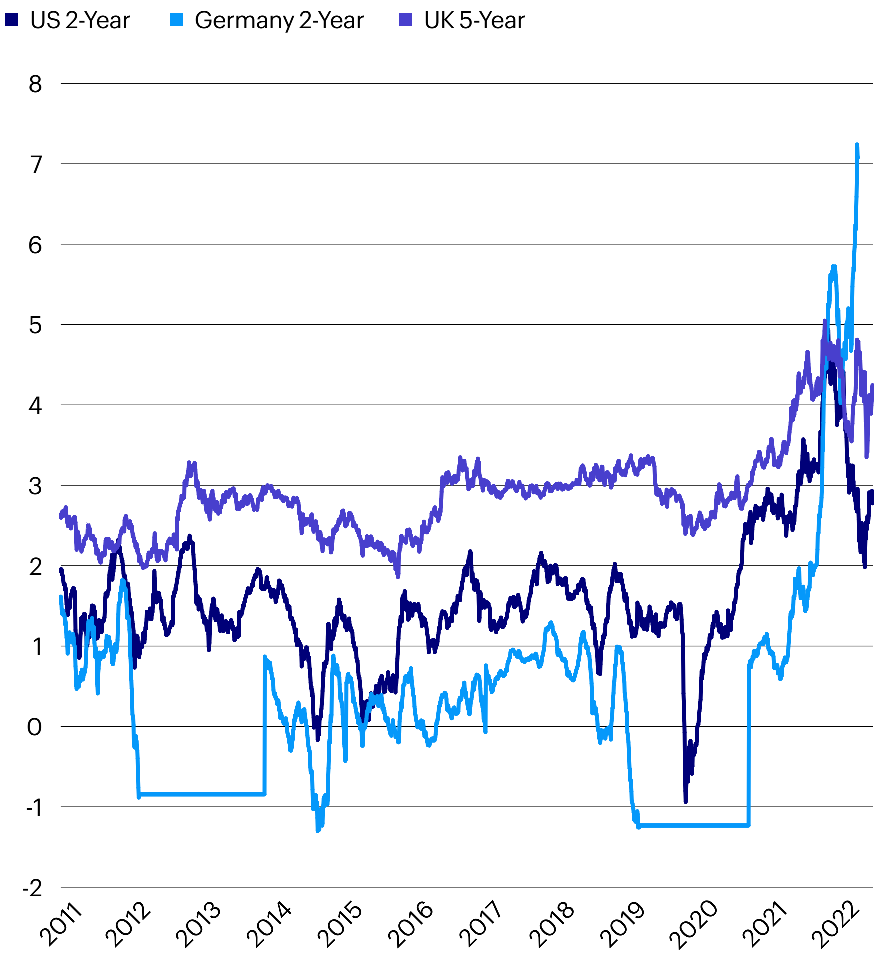


- We expect inflation to moderate in 2023, allowing markets to anticipate early in 2023 a pause in rate hikes, resulting in a recovery regime where growth will be below trend and rising.
- Disinflation could materialize soon. Demand is already slowing in many major economies, and supply-side challenges are rapidly improving. These disinflationary forces may help a recovery regime to occur soon. This should help trigger the beginnings of the next economic and market cycle sooner, resulting in the outperformance of risk assets.

Sources: Bloomberg L.P., S&P Global, and the Federal Reserve Bank of New York, as of September 30, 2022.

However, if inflation remains higher for longer, central banks could become more hawkish

With inflation expectations priced above target, easing may be delayed (%)



Factors driving inflation

- Job openings remain high, suggesting wages may have room to push higher
- Inflation has broadened out into services, a typically more persistent inflation to quash
- Consumer spending has remained persistently strong despite recent tightening
- US balance sheets are healthy, which may suggest a build-up of debt may help prolong demand
- In Europe, high energy prices are also pushing up domestic prices, wages, core inflation, and inflation expectations

- One possibility we have to consider is that high inflation persists for longer. Bond market inflation expectations are presently below current inflation readings, yet are significantly above historical averages and central banks' inflation targets.
- Persistently high inflation could imply that major central banks keep rates higher for longer than if inflation starts to fall back as we expect in our base case.
- Higher inflation and tighter policy would, in turn, imply that the contraction regime lasts longer than we anticipate in our base case.
- The tighter financial conditions and increased risk of recession that would result from tighter central bank policy could cause more pain in risk assets.

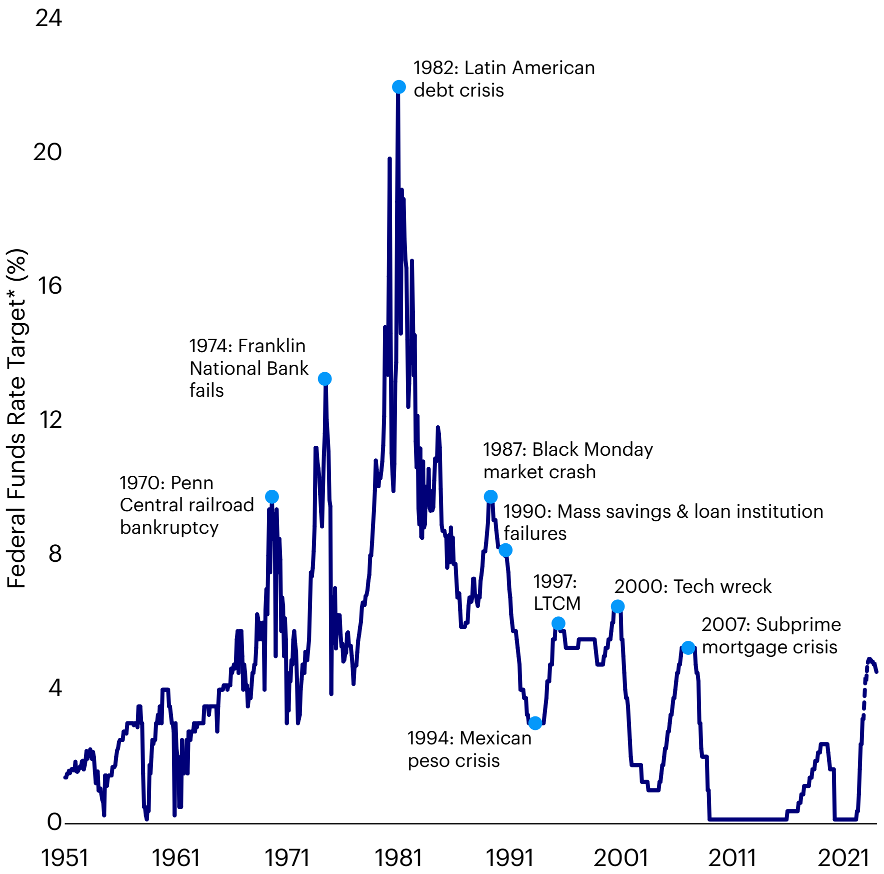
Note: Chart shows market inflation expectations derived from the difference between nominal and inflation-protected government bond yields – for relatively liquid short- to medium-term bonds.

Sources: Bloomberg L.P. and Invesco, as of November 4, 2022.

Additional risks to the outlook: Financial events and geopolitics

Financial accidents

Financial crises tend to occur in periods of tightening financial conditions



As central banks undergo an aggressive tightening cycle, the risk of financial crisis is elevated. The potential for policy errors was exemplified by the recent events in the UK, where expansionary fiscal policy was rejected by markets, forcing an about-face by the Bank of England to once again provide quantitative easing support.

Such financial crisis risks raise the probability that central banks will likely have to pivot to an easing regime more quickly, perhaps leading to an eventual transition to a recovery regime.

Geopolitics

Geopolitics is front and center given the war in Ukraine, but even so, major tail risks hang over global markets

Nuclear weapons

Fear of a dirty bomb or tactical nuclear weapon has risen – their use would likely cause a major flight to safety. We see it as a risk to be monitored, not an investment driver, as Russia may face direct Western retaliation yet gain little on the battlefield.

Taiwan tensions

Concerns are also spreading that attempts to reunify Taiwan with China will be accelerated – which we see as a risk, not a central theme. Tensions will likely continue but not escalate without moves toward independence, in our view.

*Values prior to July 1954 are the effective federal funds rate. **Past performance is not a guarantee of future results.**

Sources: Global Financial Data and Invesco, as of November 2, 2022. Inspired by a concept from Palisade Research and Bank of America. Dashed line indicates the expected path of the Federal Funds rate based on market-implied expectations as derived from Federal Funds futures.

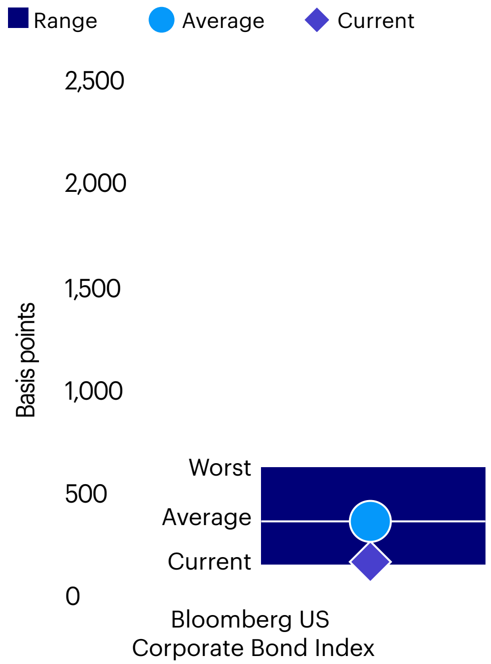
We favor credit risk over equity risk and higher quality within both

We remain underweight equity due to the possibility of further weakness in growth in favor of fixed income, which now offers attractive 5-6% yields in investment grade or 8-9% yields in risky credits.

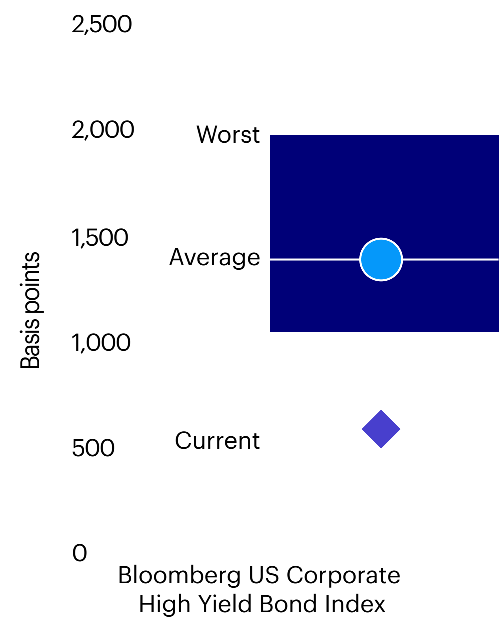
Within fixed income, we are underweight risky credit as a contractionary regime has historically led to underperformance in high yield relative to higher-quality debt with similar duration. While high yield spreads have widened again to about 5.5%, average recessionary regimes have seen spreads widen to 7-8% (except for the Global Financial Crisis, when spreads rose up to 20%); hence we remain underweight and wait for further widening before increasing exposure.

Bloomberg US Corporate Bond Index and Bloomberg US Corporate High Yield Bond Index spread widening during recessions (best/worst/average outcome vs. current)

Investment grade credit spreads
(1988 – 9/2022)

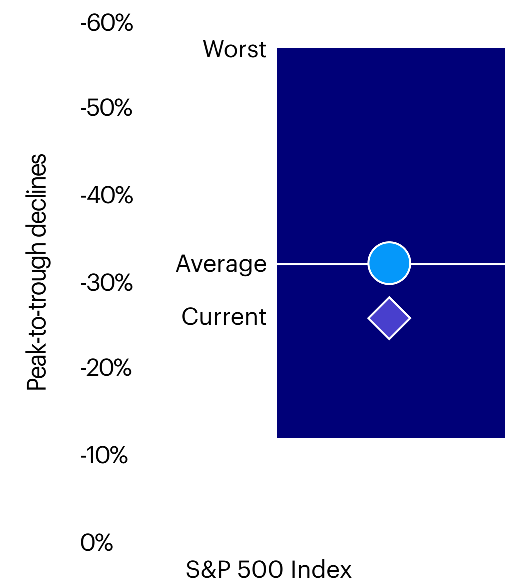


High yield credit spreads
(1993 – 9/2022)



S&P 500 Index performance during recessions (best/worst/ average outcome vs. current)

Equities
(1957 – 9/2022)



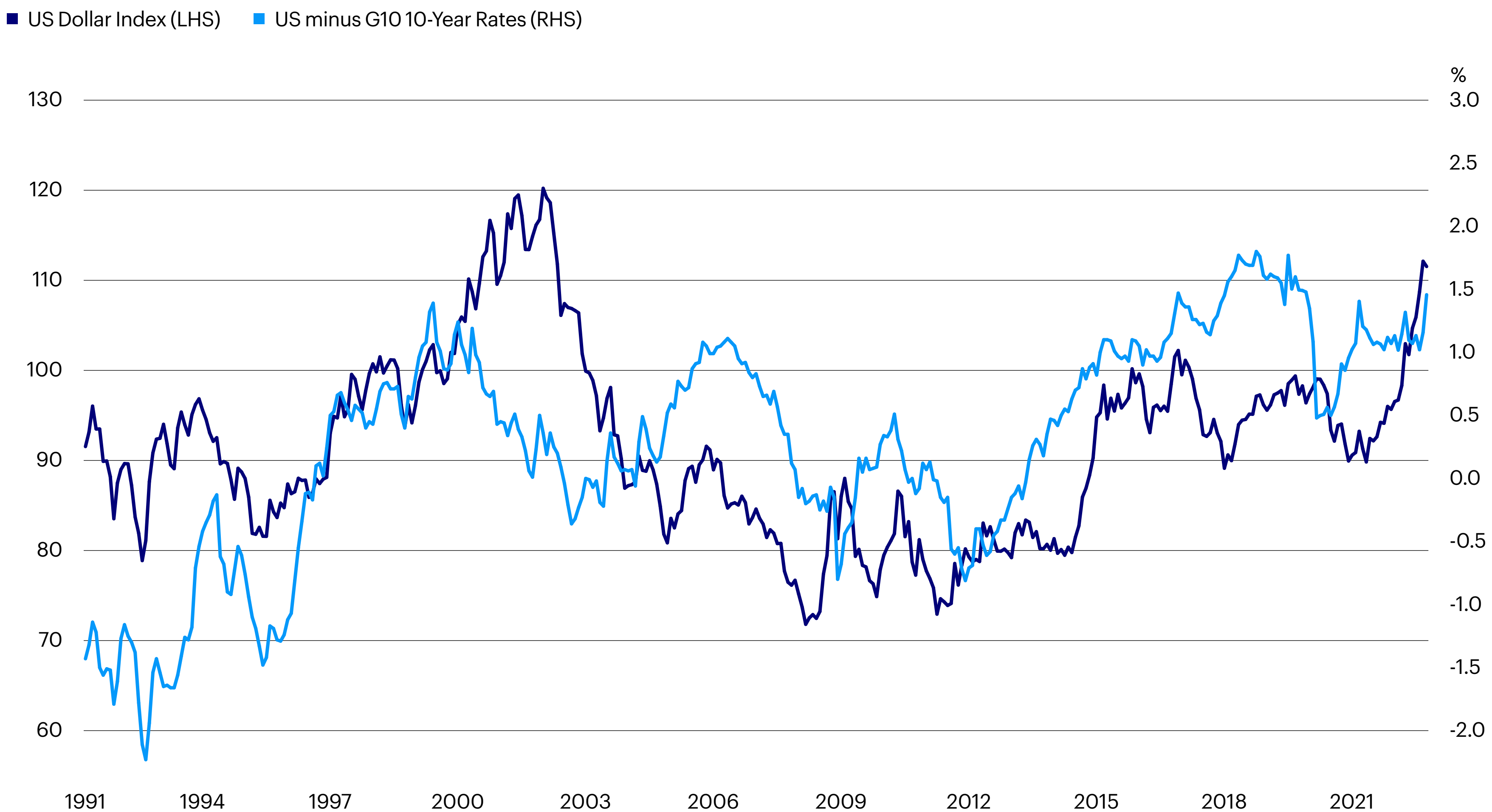
Source: Bloomberg L.P., September 30, 2022. Based on recession dates defined by the National Bureau of Economic Research: Aug. 1957 – Apr. 1958, Apr. 1960 – Feb. 1961, Dec. 1969 – Nov. 1970, Nov. 1973 – Mar. 1975, Jan. 1980 – Jul. 1980, Jul. 1981 – Nov. 1982, Jul. 1990 – Mar. 1991, Mar. 2001 – Nov. 2001, Dec. 2007 – Jun. 2009 and Feb. 2020 – Apr. 2020. The S&P 500 Index is a market-capitalization-weighted index of the 500 largest domestic US stocks. The Bloomberg US Corporate Bond Index measures the investment grade, fixed-rate, taxable corporate bond market. The Bloomberg US Corporate High Yield Bond Index measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P are Ba1/BB+/BB+ or below. Indices cannot be purchased directly by an investor. Past performance does not guarantee future results. Credit spread is the difference in yield between bonds of a similar maturity but with different credit quality. A basis point is one-hundredth of a percentage point.

US dollar strength, driven in part by higher rate differentials between the US and the rest of the world

The US dollar has been very strong. One of the drivers has been a climbing interest rate differential between the US and the rest of the world.

The strong-dollar cycle will likely cease as the US Federal Reserve signals a pause in its tightening cycle. Given how expensive the dollar has become, we would expect it to weaken once the Fed pivots.

Interest rate differentials and the US dollar

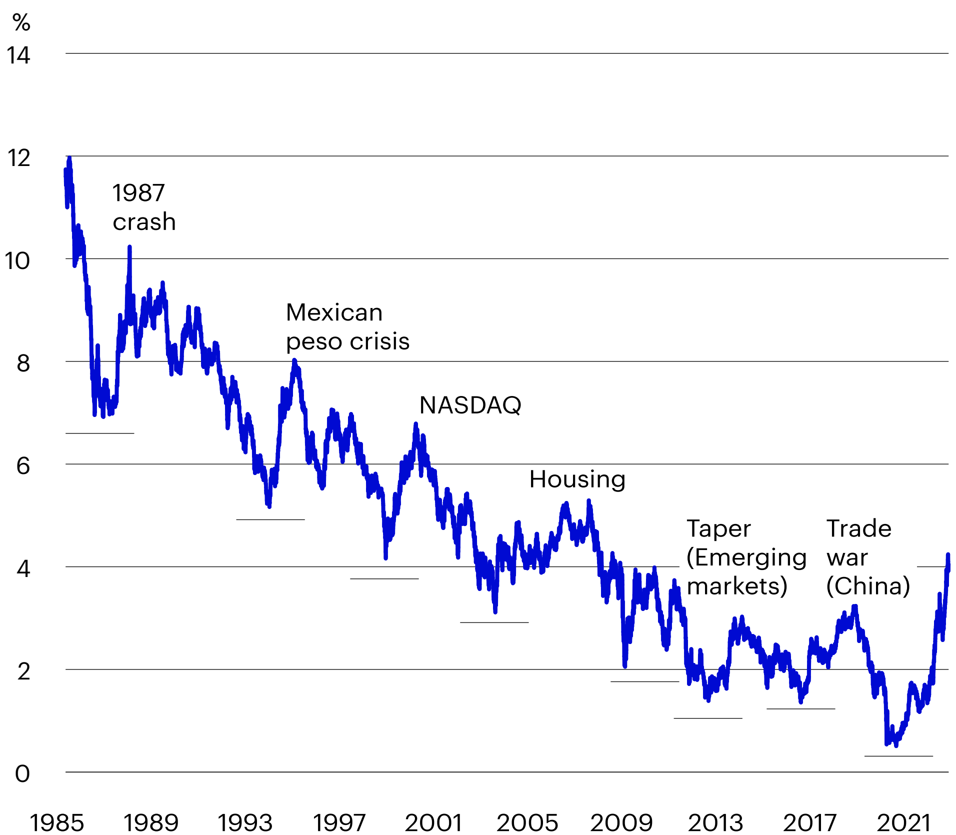


Sources: Bloomberg L.P. and Invesco, data as of October 31, 2022. **Past performance is not a guarantee of future results.**

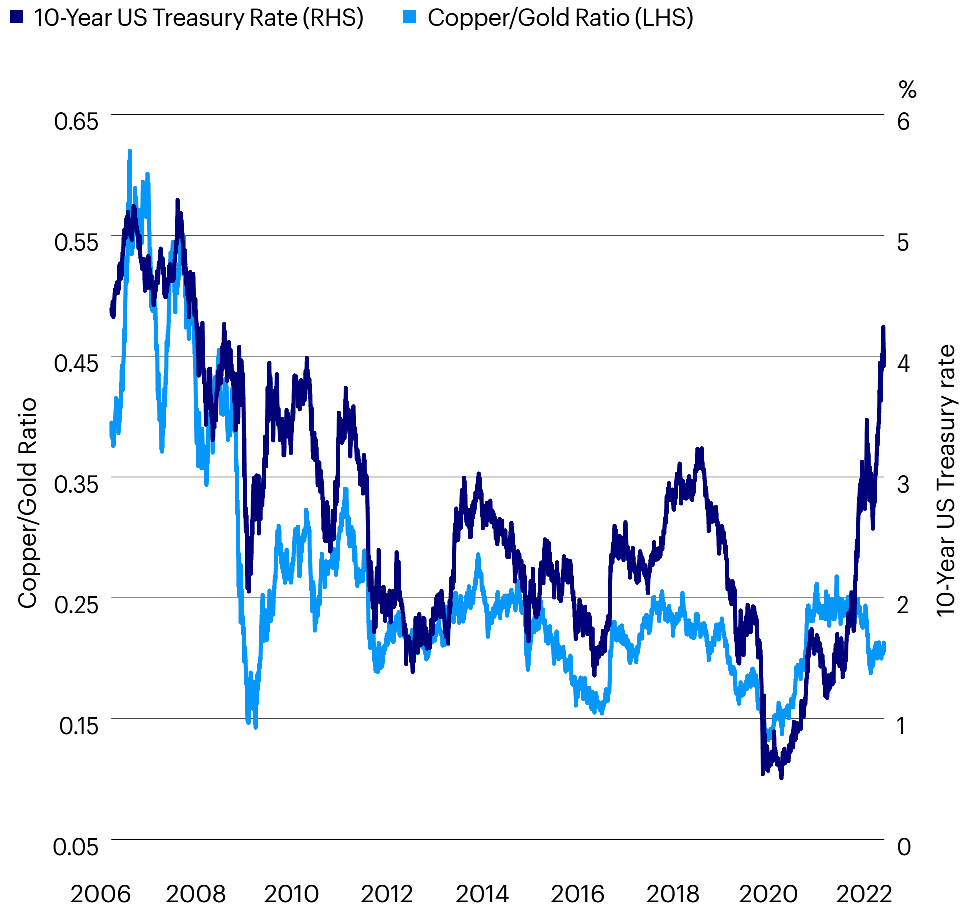
Over the past 30+ years, spikes in rates have been followed by further declines

Leading indicators of the economy suggest rates will roll over

10-Year US Treasury rate



10-Year US Treasury rate and the copper/gold ratio



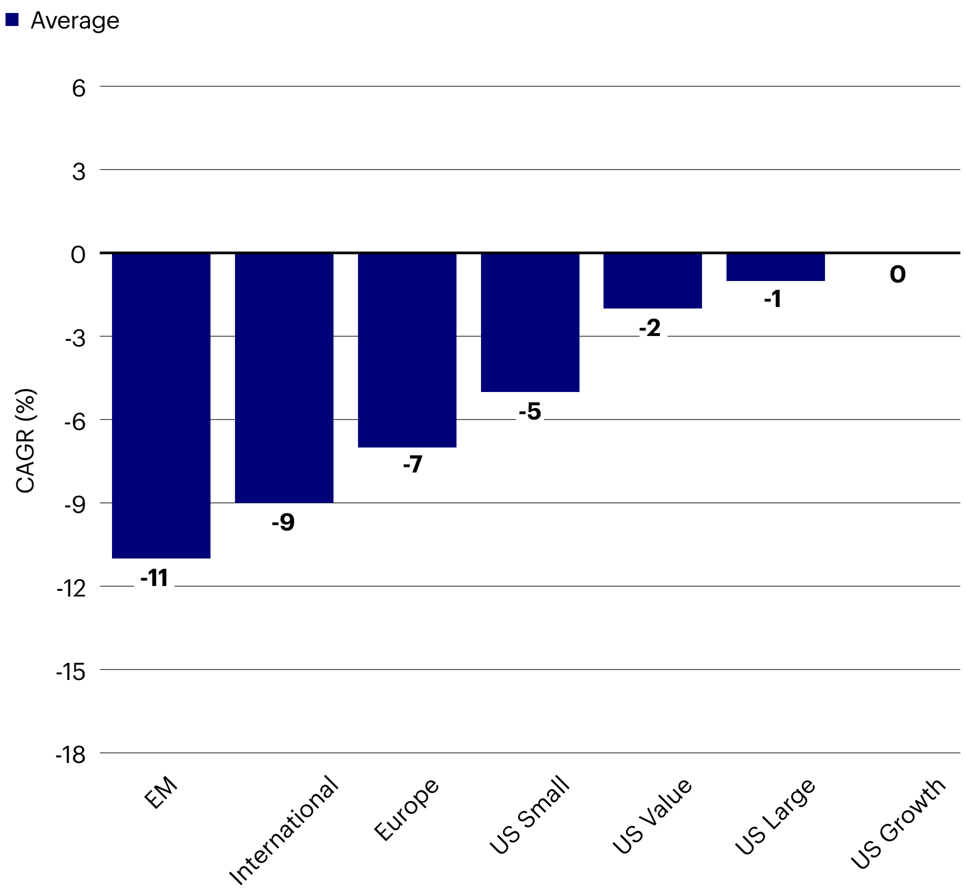
Longer duration bonds tend to perform well on a relative basis in the contraction phase of the economic cycle.

- Over the past 40 years, a sharp rise in interest rates has resulted in significant stress somewhere in the global economy. This time will likely be no different. Each time, interest rates fell in the aftermath.
- The copper/gold ratio is rolling over as economic activity wanes. Nonetheless, interest rates remain elevated. Historically, that disconnect has not lasted long.

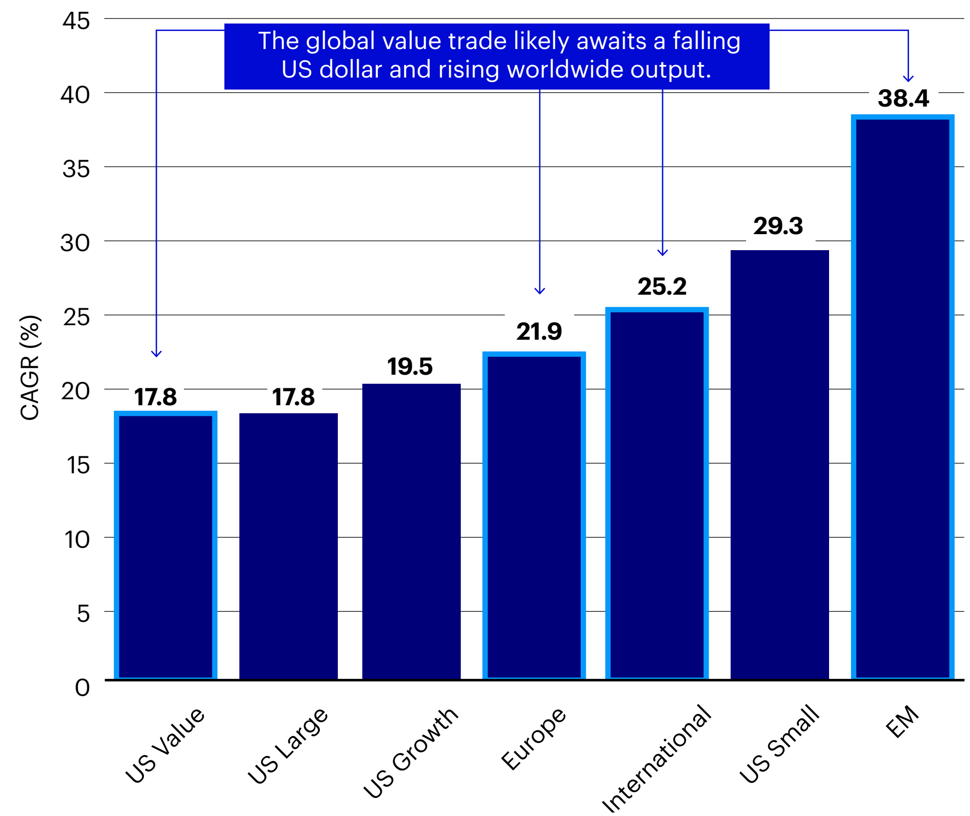
Sources: Bloomberg L.P. and Invesco, data as of October 31, 2022. **Past performance is not a guarantee of future results.**

Emerging markets and European stocks typically struggle in periods of easing global manufacturing activity, and outperform during recovery

Global equity performance in periods of falling global manufacturing activity since 1998



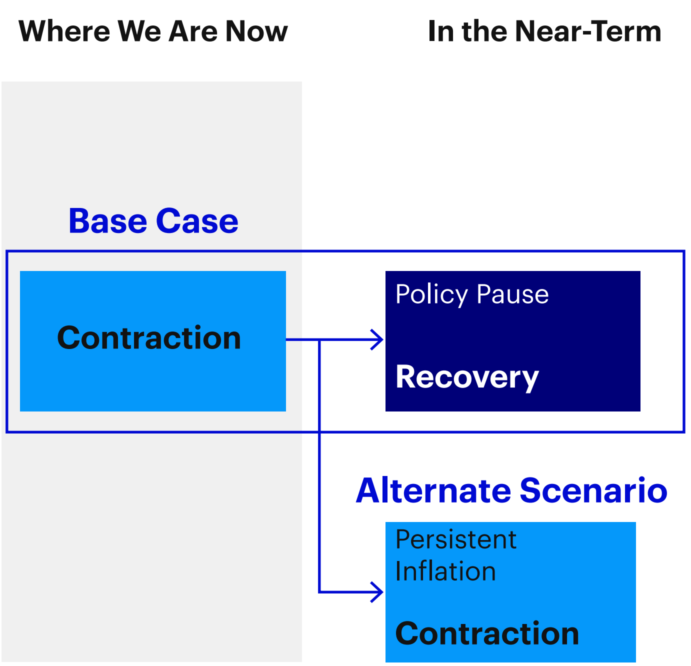
Global equity performance in periods of rising global manufacturing activity since 1998



Sources: Bloomberg L.P., Invesco, February 28, 2022. Notes: EM = MSCI Emerging Markets Index. International = MSCI ACWI ex USA. US growth = Russell 1000 Growth. Europe = MSCI Europe Index. US large = S&P 500. US small = Russell 2000. US value = Russell 1000 Value. Price returns in US dollars. An investment cannot be made into an index. **Past performance does not guarantee future results.**

Summary of our scenarios and related asset allocation guidance

Summary of the Path Ahead



Please see page 5 for further detail on the path ahead.

	Where We Are Now	Path Ahead
Model Regime	**Contraction**	**Recovery**
Portfolio Stance	Underweight risk stance relative to benchmark. Expect a difficult investment environment with the potential for weakness in most asset classes. Underweight equities relative to fixed income, tilted to defensives, quality and low volatility. Underweight risky credit and overweight government bonds and duration. Neutral the US dollar.	Overweight risk relative to benchmark. Expect a reacceleration in growth, with higher bond yields, looser monetary policy, and rising global risk appetite. Overweight risky credit, sovereign bonds versus credit, value-oriented regions, and cyclical sectors. Neutral duration.
Equity Regions	**DM** over EM **Neutral** US vs. DM exUS	**DM ex-US** over US **EM** over DM
Equity Sectors/Factors	Large caps Quality Low volatility Cons. Staples Health care	Small/ Mid caps Financials Value Industrials
Fixed Income	Investment grade credit over high yield Overweight duration Nominal government bonds over inflation-linked	Neutral duration Risky credit over quality Credit over government
Commodities / Alternatives	Core real estate and infrastructure Direct lending Energy	2nd lien private credit Large buyout
Currencies	USD EUR GBP	CAD AUD BRL

Source: Invesco. The asset choices are designed to show our favored assets within a diversified selection of asset categories. Diversification does not guarantee a profit or eliminate the risk of loss.

Opportunities in fixed income in coming months

Global duration: Overweight

- Central bank interest rate increases now appear priced into the market. Real yields have risen substantially and offer value, in our view.
- Duration may also help provide protection to portfolios during a recession if interest rates decline.

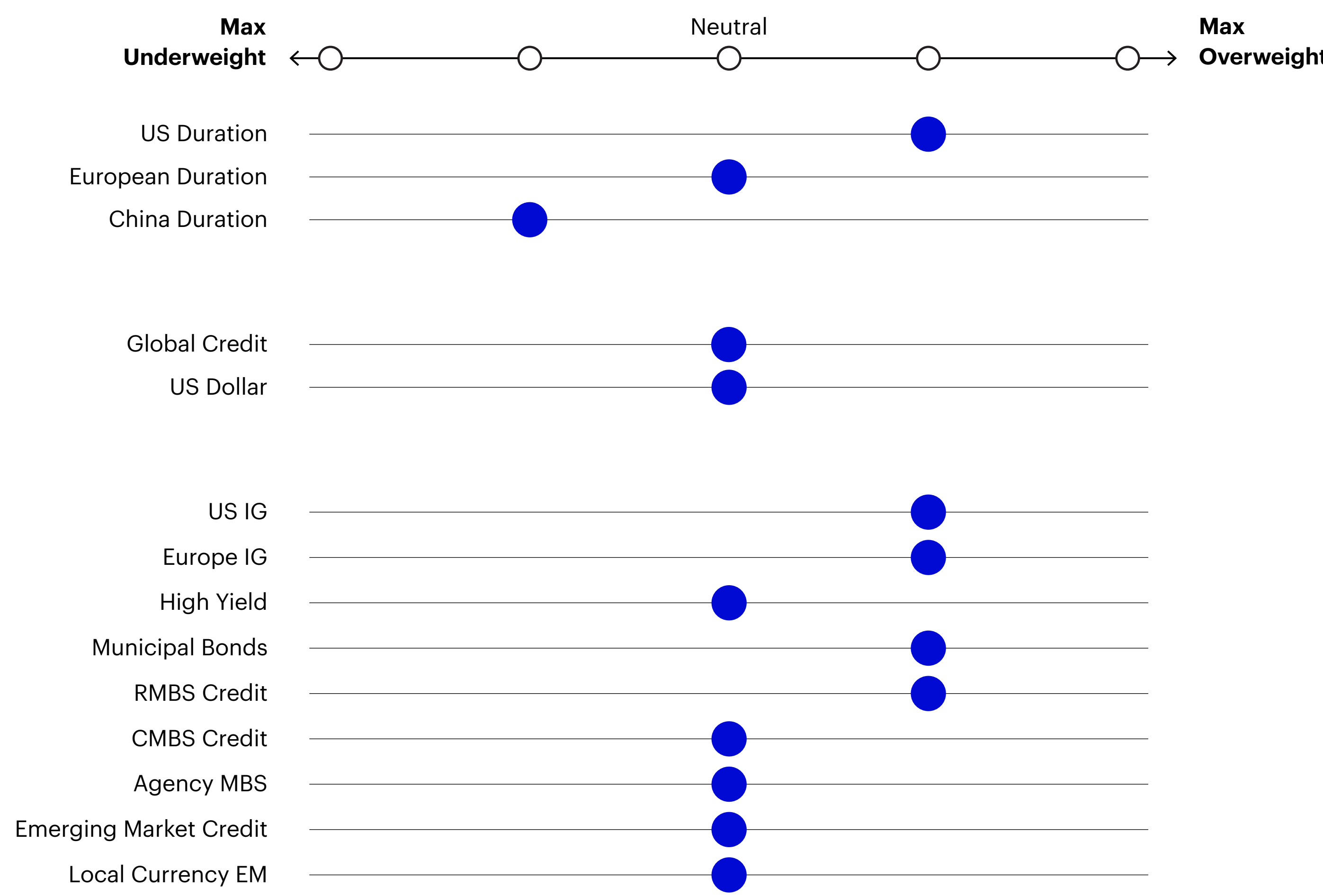
US dollar: Neutral

- Tighter US monetary policy is supportive of the US dollar, in our view, especially against the European and Japanese currencies.
- Strong commodity prices should be supportive of other developed market and some emerging market currencies.
- On the other hand, valuations in the US dollar are looking stretched, and we would expect to see the dollar decline when the US Fed stops raising rates.

Global credit: Neutral

- Valuations within global credit have improved over the recent quarter, but slower rates of economic growth going forward could weigh somewhat on fundamentals.
- Tighter policy and financial conditions may be conducive to volatility going forward.
- We believe the current risk-reward balance favors a more cautious stance on credit. We are seeking to add value through idiosyncratic opportunities, security selection and buying into pullbacks.
- We like higher quality credit over lower quality, as all-in yields in high-quality credit look attractive, in our view, and the risk of default loss is low, even in a recession.

Invesco Fixed Income portfolio views



Source: Invesco Fixed Income. **There is no guarantee these views will come to pass.**

Opportunities in alternatives in coming months

Private markets

- Private markets may be a way for investors to diversify their portfolios to meet their objectives, whether enhancing growth with private equity, finding income in direct lending, or diversifying through real assets.
- With high and persistent inflation, rising interest rates, widening credit spreads, and significant equity market volatility, investors have been facing many macroeconomic hurdles simultaneously. These conditions are most clear in our regime signal, which is presently at unattractive levels due to high and rising volatility.
- Combining the difficult backdrop with the latest data available for private markets, our framework leads us to the conclusion that all assets are presently neutral due to strong but weakening fundamentals and valuations that are roughly in line with history.
- Within private credit, spreads have held up relative to public assets, leading to an attractive valuation rating. We are neutral on fundamentals as it has become evident that borrowing conditions have tightened, thus negatively impacting interest coverage ratios, which is not yet reflected in the data.
- Should we move into a recovery regime with high but falling credit spreads, we anticipate out-performance of riskier and cyclically-oriented private assets.

Real assets

- Real estate financing conditions have been impacted by recent and sharp increases in interest rates, most notably in the US. The full effects upon capital flows, pricing and fundamentals are yet to be realized due to lagged effects.
- Looking forward, real estate investors are focused on the impact of the macroeconomic forces on the broader GDP growth outlook and, more specifically, on how these may translate into cap rate movements, which are tightening from very attractive levels across an array of benchmark bond measures.
- While present valuations are not likely representative of current clearing prices, we remain optimistic on long-term, secular drivers within real estate, taking a defensive approach while remaining opportunistic amid volatility.

Current environment

Asset class	Overall	Valuations	Fundamentals	Regime
Private credit	**Neutral**	Attractive	Neutral*	Unattractive
Private equity	**Neutral**	Neutral	Neutral	Unattractive
Real assets	**Neutral**	Neutral	Attractive	Unattractive

Note: Please see our Alternative Opportunities program for further insights into alternative investments and private markets.

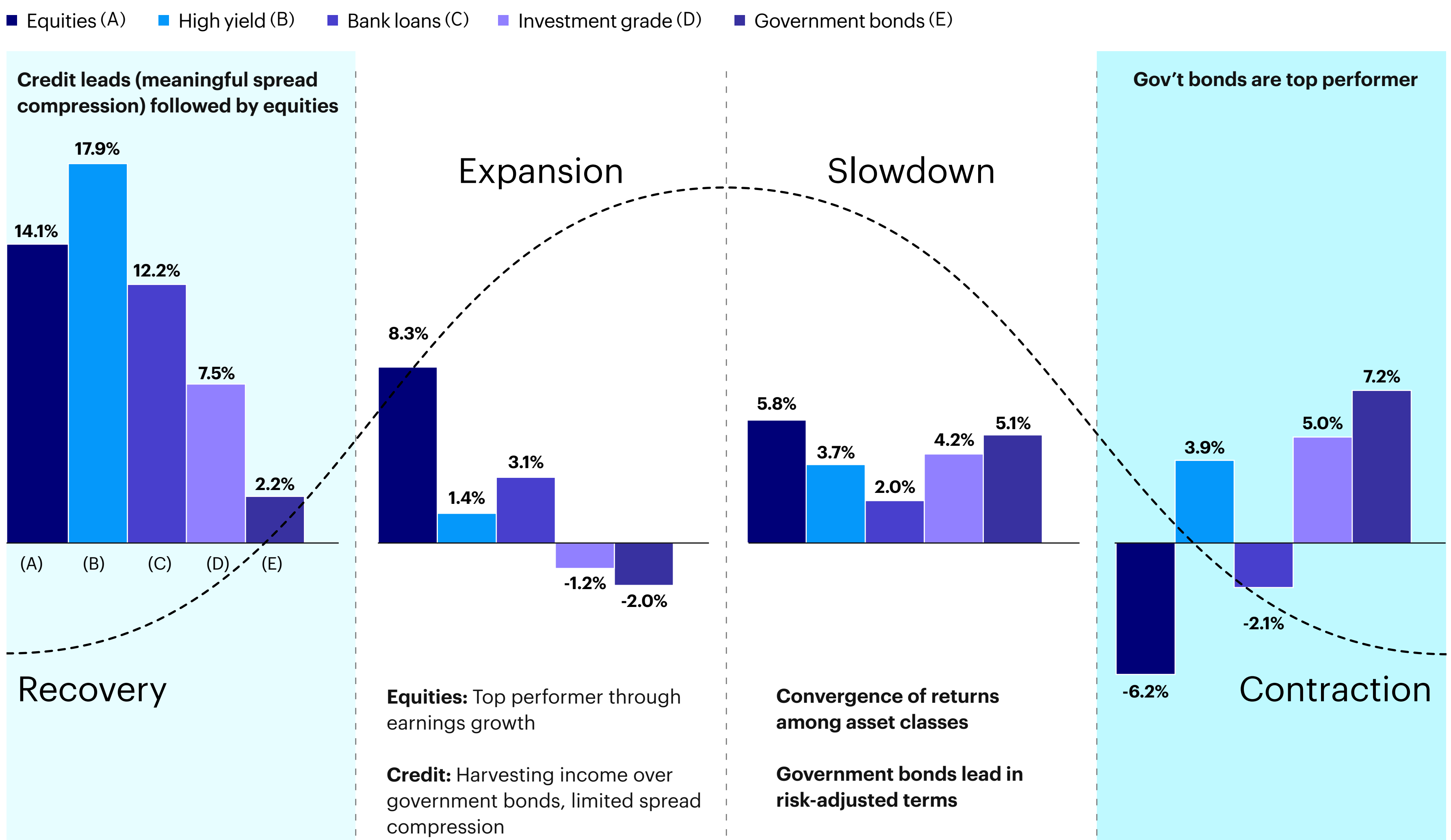
Source: Invesco Investment Solutions. **There is no guarantee these views will come to pass.**
* We have downgraded private credit fundamentals to neutral based on present market conditions and lagged effects in the data.

Potential equity and credit weakness in a contraction regime, reversing in the recovery phase

Compensation for duration risk increases, with a tilt toward defensive assets

- Government bonds and perceived safe-haven assets have historically outperformed in **contractions**. Within this regime, we observe equity and credit weakness due to earnings downgrades and the widening of credit spreads. As interest rates are expected to peak and begin falling, longer-duration assets become favorable. Higher-quality and defensive assets are preferable to their riskier counterparts.
- Risky credit tends to lead in **recoveries** as prior anticipated defaults become less likely. With easier lending standards, an optimistic growth outlook, and the potential for spread compression, high yield and bank loans tend to provide favorable compensation relative to their risk profile. Cyclical equities, namely value and (small) size factors, also tend to outperform as the economy recovers.

Global cycle: Historical excess returns across asset classes



Sources: Invesco Investment Solutions' proprietary global business cycle framework and Bloomberg L.P.
Notes: Index return information includes back-tested data. Returns, whether actual or back-tested, are no guarantee of future performance. Annualized monthly returns of the defined risk premia from January 1973 – December 2021, or since asset class inception if at later date. Includes latest available data as of most recent analysis. Asset classes excess returns defined as follows: Equities = MSCI ACWI - US T-bills 3-Month, High Yield = Bloomberg HY - US T-bills 3-Month, Bank loans = Credit Suisse Leveraged Loan Index – US T-bills 3-Month, Investment Grade = Bloomberg US Corporate - US T-bills 3-Month, Government bonds = US Treasuries 7-10y - US T-bills 3-Month. For illustrative purposes only.

Invesco Solutions model portfolio

Relative tactical asset allocation positioning for our base case scenario and a possible recovery

For investors seeking a holistic portfolio recommendation, Invesco Solutions has constructed a model portfolio with weightings derived from its proprietary macro-driven model.

Contraction:

Defensive risk stance, with a meaningful underweight to equities, tilted toward defensive sectors. Overweight duration risk and underweight credit, expecting rates to decline. Expect higher volatility and high dispersion in returns across asset classes.

Equities: Favor DM equities over EM with a bias towards quality and larger capitalization. Peaking rates and slower growth to favor a more defensive posture in factor/style exposures.

Fixed Income: Overweight duration risk and underweight credit risk. Within a contraction regime, expect credit spreads to widen, especially in lower-quality segments.

FX: Neutral the USD vs majors (EUR, GBP, JPY).

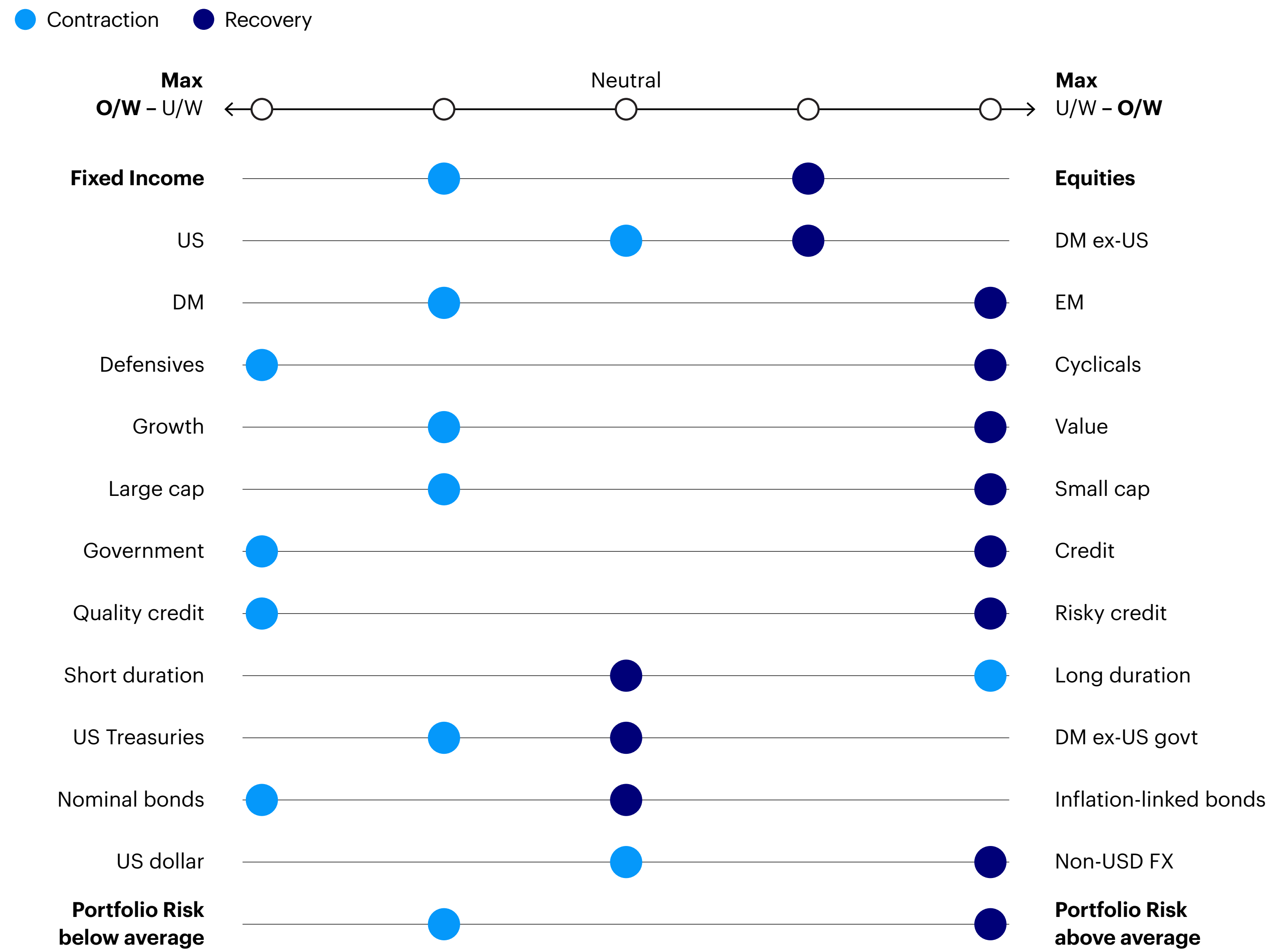
Recovery:

Above-average risk stance, with a meaningful overweight to equities, tilted toward cyclical sectors. Neutral duration expecting stable or moderately higher rates and credit spreads to fall. Expect high volatility and low dispersion in returns across asset classes.

Equities: Favor EM equities over DM with a bias towards value and smaller capitalization. Rising rates and accelerating growth to favor a more cyclical posture in factor/style exposures.

Fixed Income: Neutral duration. Within a recovery regime, expect credit spreads to tighten, especially in lower-quality segments.

Relative tactical asset allocation positioning: Base case



Source: Invesco Investment Solutions, November 2022. Note: For illustrative purposes only. Asset allocation does not guarantee a profit or eliminate the risk of loss.
There is no guarantee these views will come to pass.

Invesco Solutions model portfolio

Absolute tactical asset allocation positioning for base case scenario and a possible recovery

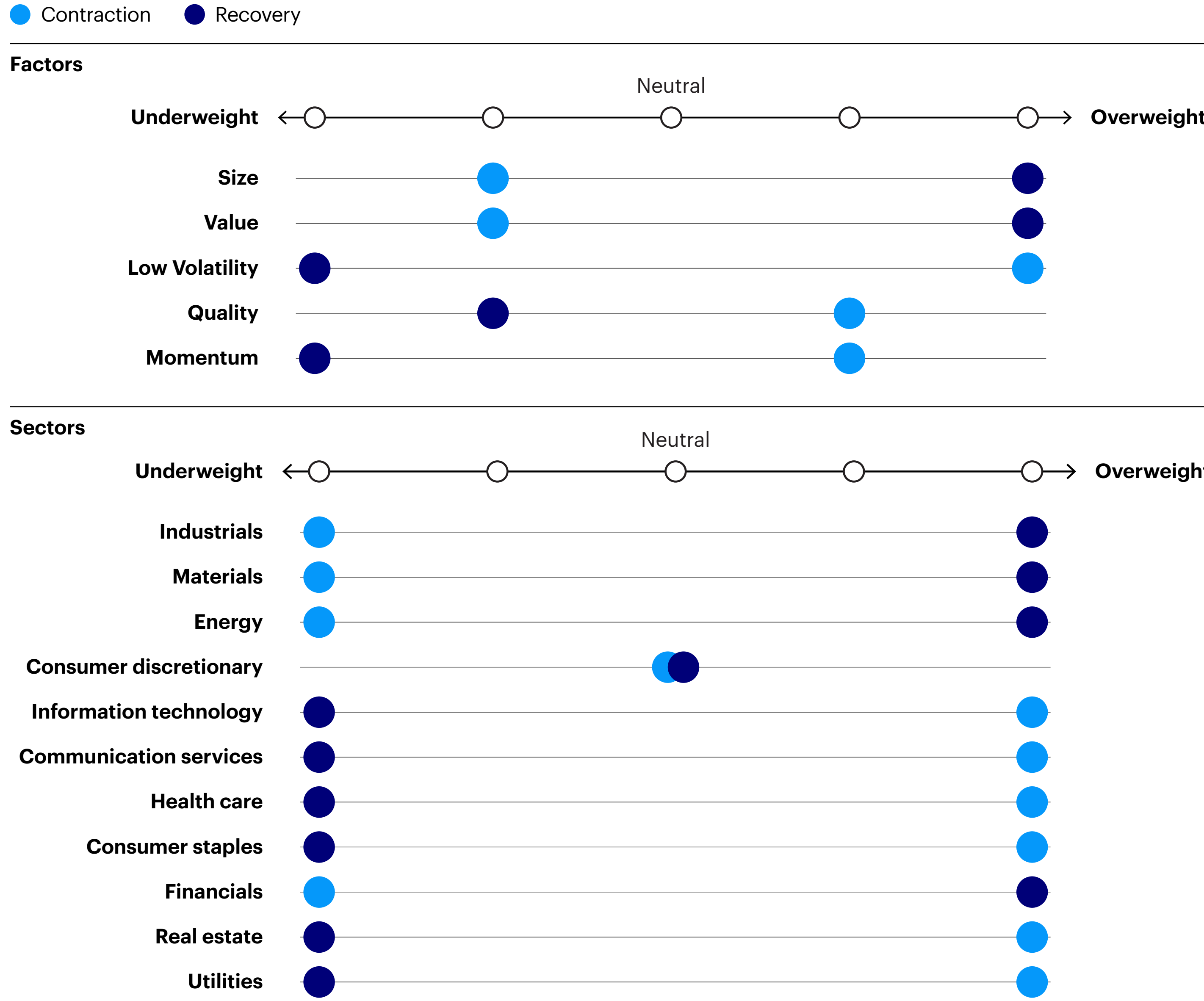
Contraction:

Within equities we are underweight value, small and mid-cap equities, favoring defensive factors like quality, low volatility, and momentum, resulting in defensive sector exposures with higher duration characteristics and lower operating leverage such as information technology, communication services and health care, at the expense of financials, industrials, and materials. We expect these defensive characteristics to outperform in an environment of below-trend and slowing growth, declining inflation, and peaking bond yields.

Recovery:

Within equities we are overweight small and mid-cap equities, favoring cyclical factors like value, (small) size, resulting in cyclical sector exposures with lower duration characteristics and higher operating leverage such as financials, industrials, materials and energy, at the expense of technology, healthcare, and consumer staples. We expect these cyclical characteristics to outperform in an environment of below-trend and accelerating growth, higher inflation, and rising bond yields.

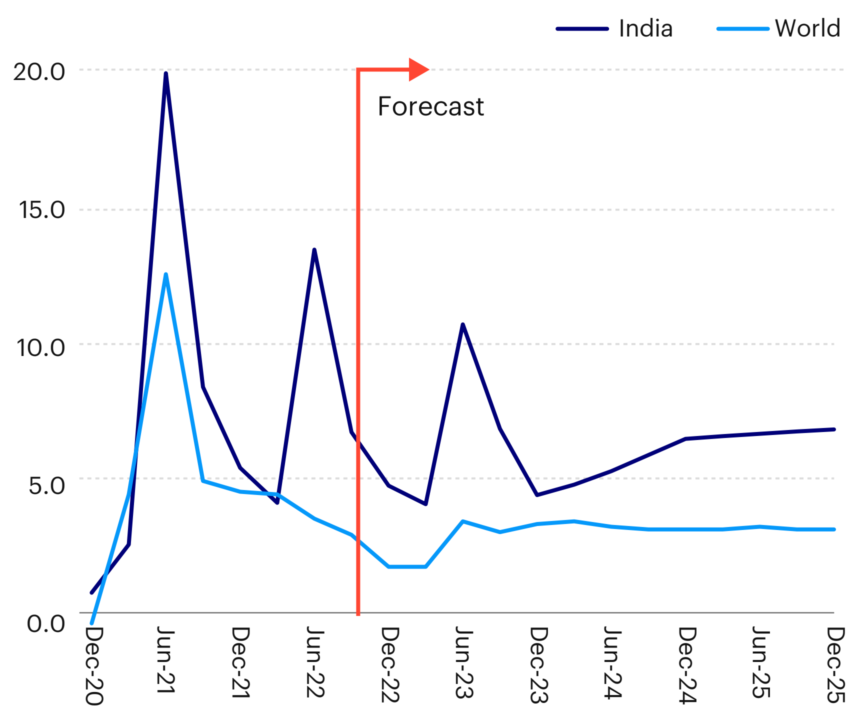
Absolute tactical asset allocation positioning: Base case



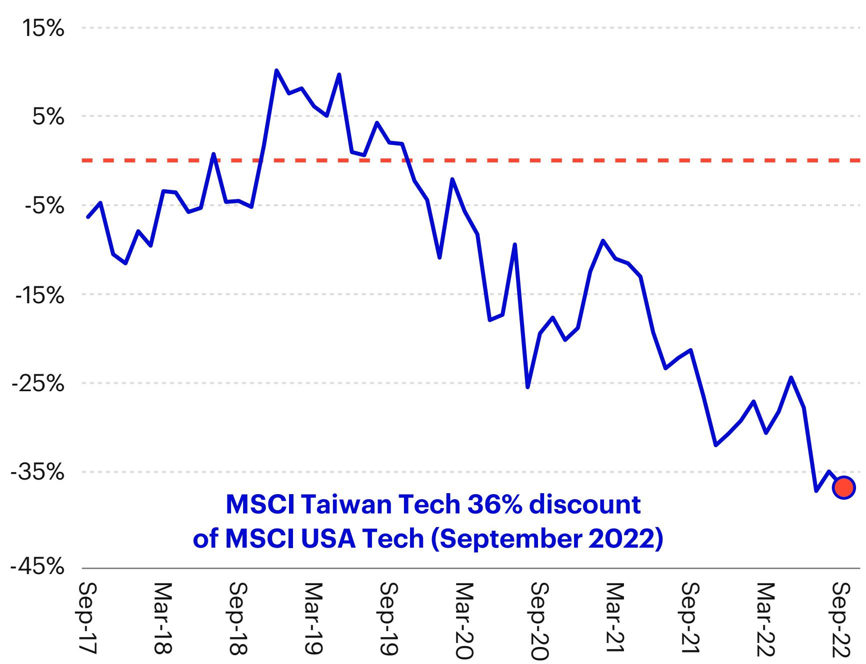
Source: Invesco Investment Solutions, November 2022. For illustrative purposes only. Sector allocations derived from factor and style allocations based on proprietary sector classification methodology. As of June 2022, Cyclicals: energy, financials, industrials, materials; Defensives: consumer staples, health care, information technology, real estate, communication services, utilities; Neutral: consumer discretionary. **There is no guarantee these views will come to pass.**

Asia equities: Unique economic dynamics and attractive valuations provide good opportunities for diversification

India vs World Real GDP Growth, YoY%



MSCI Taiwan Tech valuation discount vs MSCI USA Tech



Mike Shiao
Chief Investment Officer
Asia ex Japan

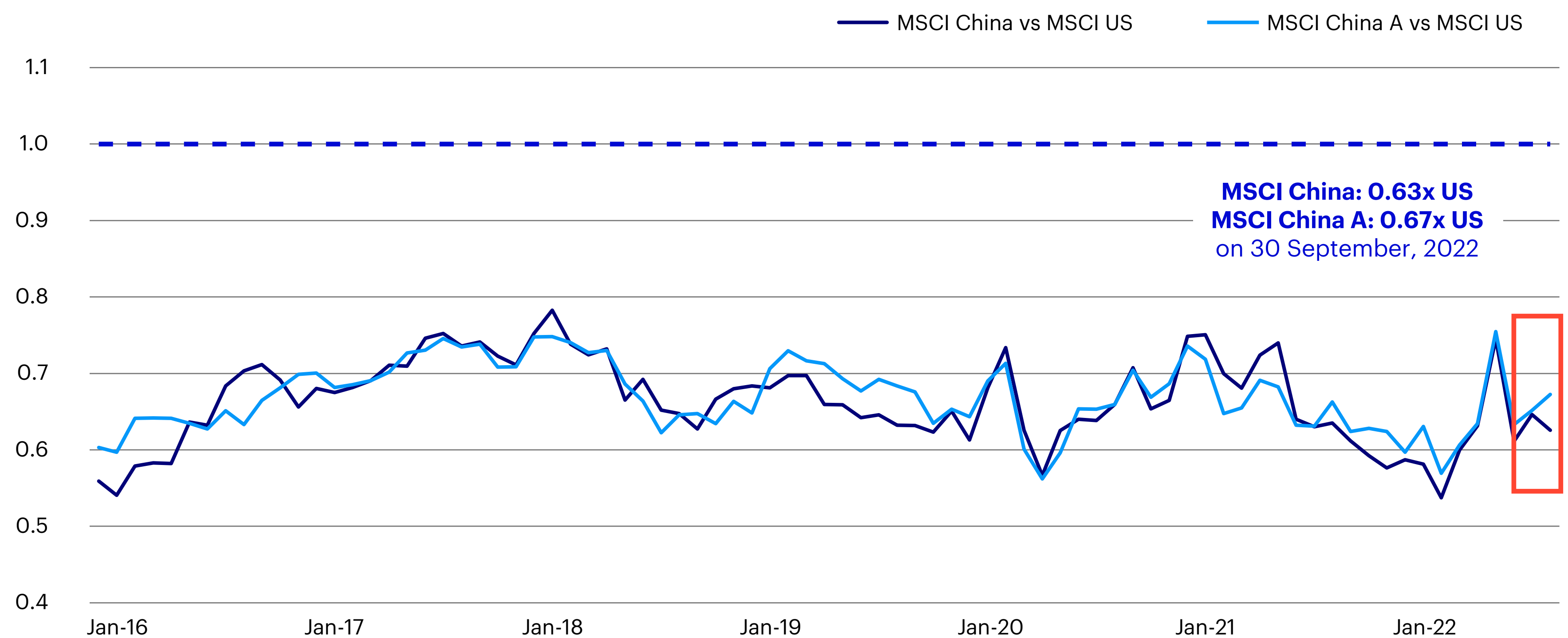
We believe Asia's economic growth will get back on track in 2023.

- India is fast-growing and contributes meaningfully toward Asian and global expansion.
- Taiwan and Korean markets have been impacted by softening global tech demand. The equity valuations in these two economies have lowered to comfortable levels and we hope to see a rerating of the sector next year.
- The unique economic dynamics of the region as well as the attractive valuations of Asia ex-Japan equities can provide global investors with good opportunities for diversification in 2023.

Source: CEIC, Goldman Sachs Global Investment Research estimates, September 2022.

China equities: Attractive valuations could provide a window of opportunity for investors

Forward P/E of MSCI China and MSCI China A vs US



Mike Shiao
Chief Investment Officer
Asia ex Japan

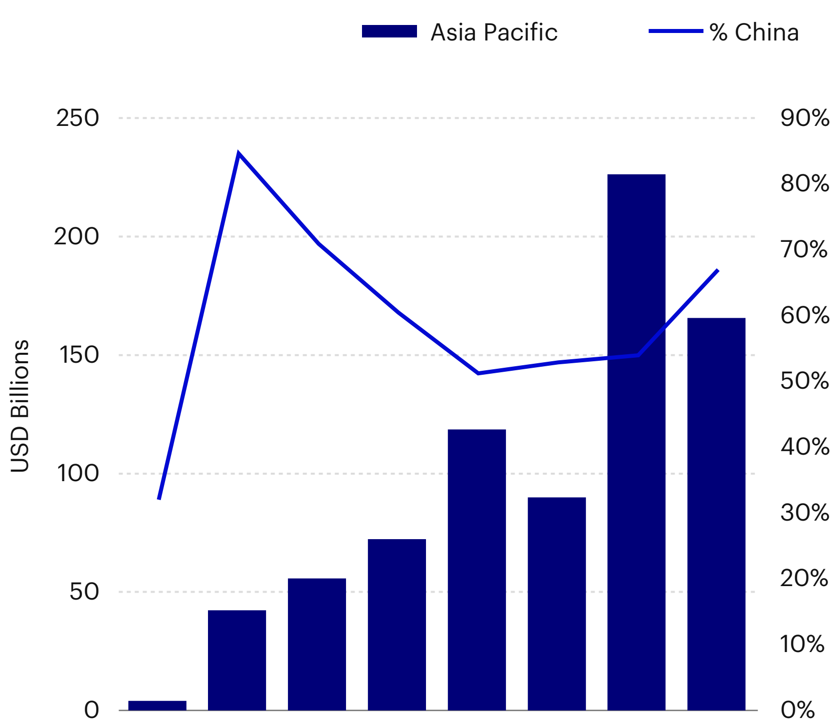
Against the backdrop of the zero-Covid policy, China has emphasized the importance of economic development and focusing on high-quality, balanced, and inclusive growth.

- Looking ahead, we expect regulators to target a reasonable growth rate of around 5%. This could prove to be a supportive environment for bottom-up stock selection.
- Chinese equities are currently trading at a discount relative to developed markets. We believe cheap valuations provide a window of opportunity for investors looking to invest in Chinese equities.
- We believe there are ample opportunities in both onshore and offshore China equity markets, including consumer-related, healthcare, and Internet companies that can benefit from domestic demand recovery and China's potential reopening.

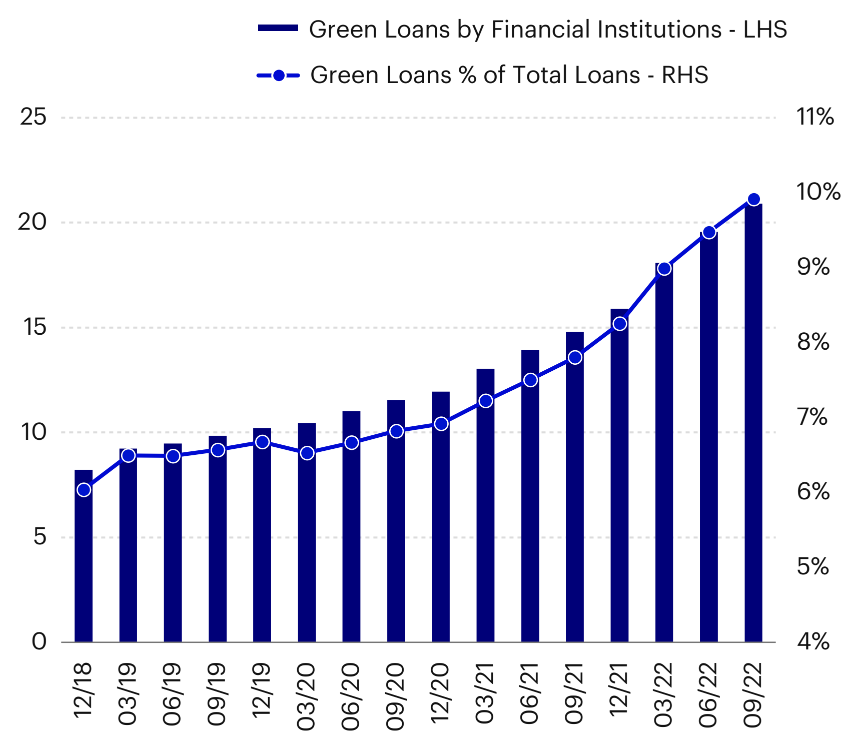
Source: FactSet, I/B/E/S, MSCI, Goldman Sachs Investment Research as of September 2022. Forward Price-Earnings refers to next 12 months' valuation.
Past performance does not guarantee future results. An investment cannot be made in an index.

Asia fixed income (ESG): ESG fixed income flows poised for takeoff in 2023

Asia Sustainable Bonds issuance is on the up



Green Loans from Chinese Financial Institutions



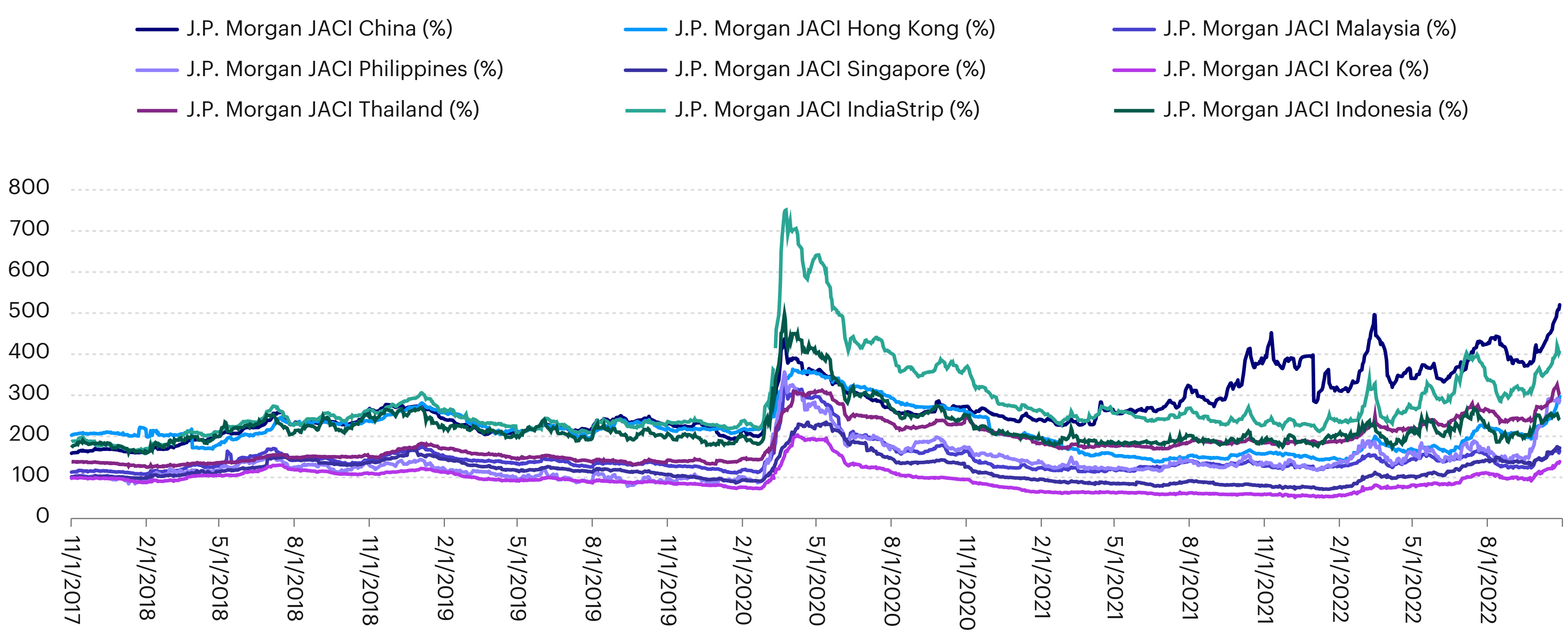
Norbert Ling
ESG Credit Portfolio Manager
Invesco Fixed Income

- China boasts the world's second largest green bond market. With the application of the Common Ground Taxonomy (CGT) it is likely that 2023 will see further growth in the sustainable labelled bond space, accompanied by further improvements in post-issuance reporting by issuers.
- China also remains the largest contributor to Asia-domiciled sustainable fund assets and from an asset class point of view, equities still makes up the lion's share of this at 60%. With the fixed income proportion at just 5%, we believe this asset class is poised for take-off particularly given the more supportive policy backdrop.
- The further roll out of the Common Ground Taxonomy is likely to drive more cross border sustainable financing flows in both ESG funds and debt financing instruments, alongside improved ESG data disclosures.

Source LHS: Climate Bonds Initiative, data as of 27th October 2022. Source RHS: WIND, data as of September 2022.

Asia fixed income (IG): Investors are likely to position cautiously in 2023 and avoid high beta Asia credit

JACI Spread to Worst (%)



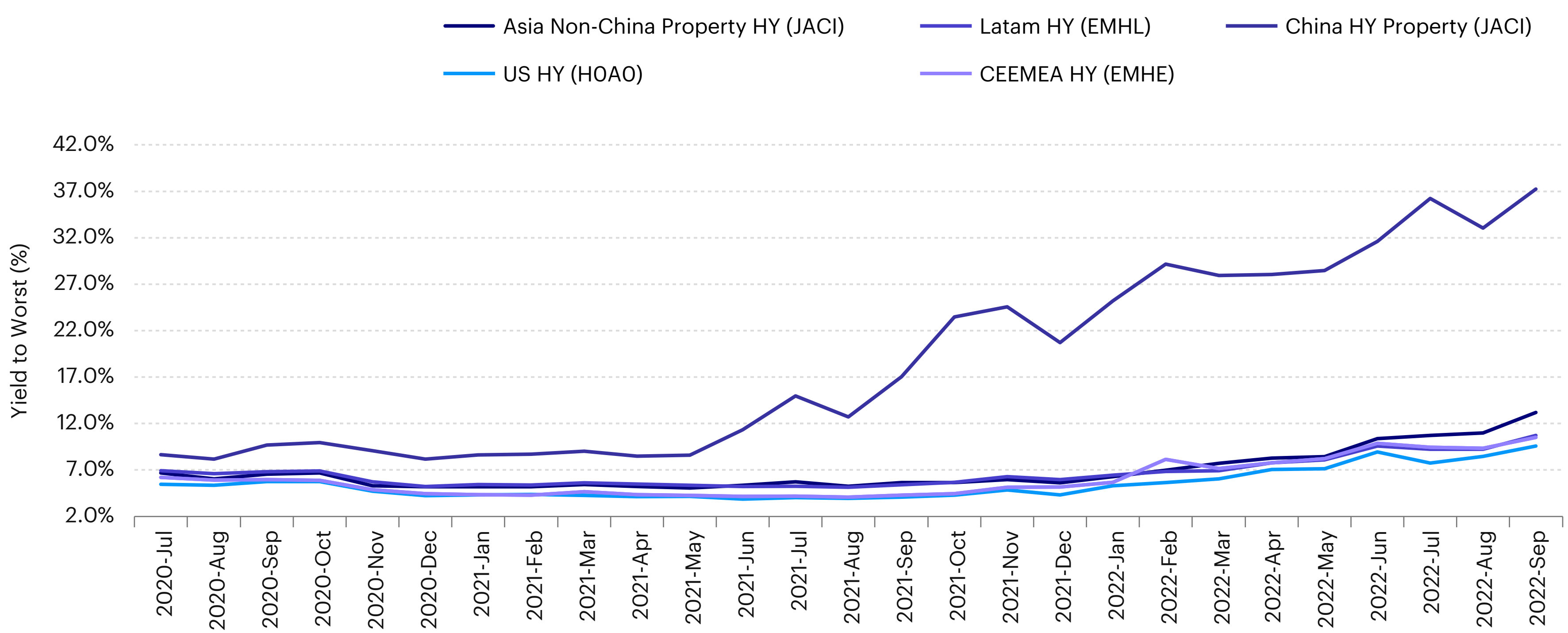
Chris Lau
Senior Portfolio Manager
Invesco Fixed Income

- Hawkish Fed stance is likely to remain until at least in 1H 2023 given the heightened inflation and tight labor market.
- Increasing signs of global recession risks and slower growth are likely to slow the pace of rate hikes
- No sign of China easing its zero-Covid policy yet. The stressed property sector and zero-Covid policy are the main drags to growth. Some easing measures and supportive policies are expected to be announced next March.
- Asia IG looks cheap relative to other regions – especially after adjusting for rating differentials and durations.
- Performance divergence is likely to remain between high quality and high beta names. Government-owned entities or state-owned enterprises are likely to outperform private credit in 2023.

Source: Bloomberg, JACI, Invesco, data as of 1st November 2022. Past performance does not guarantee future results.
An investment cannot be made in an index.

Asia fixed income (HY): Certain high yield corporates (ex-China property) are expected to remain resilient

Global major HY markets: Yield to worst (Jul 2020 – Sep 2022)



Gigi Guo
Credit Portfolio Manager
Invesco Fixed Income

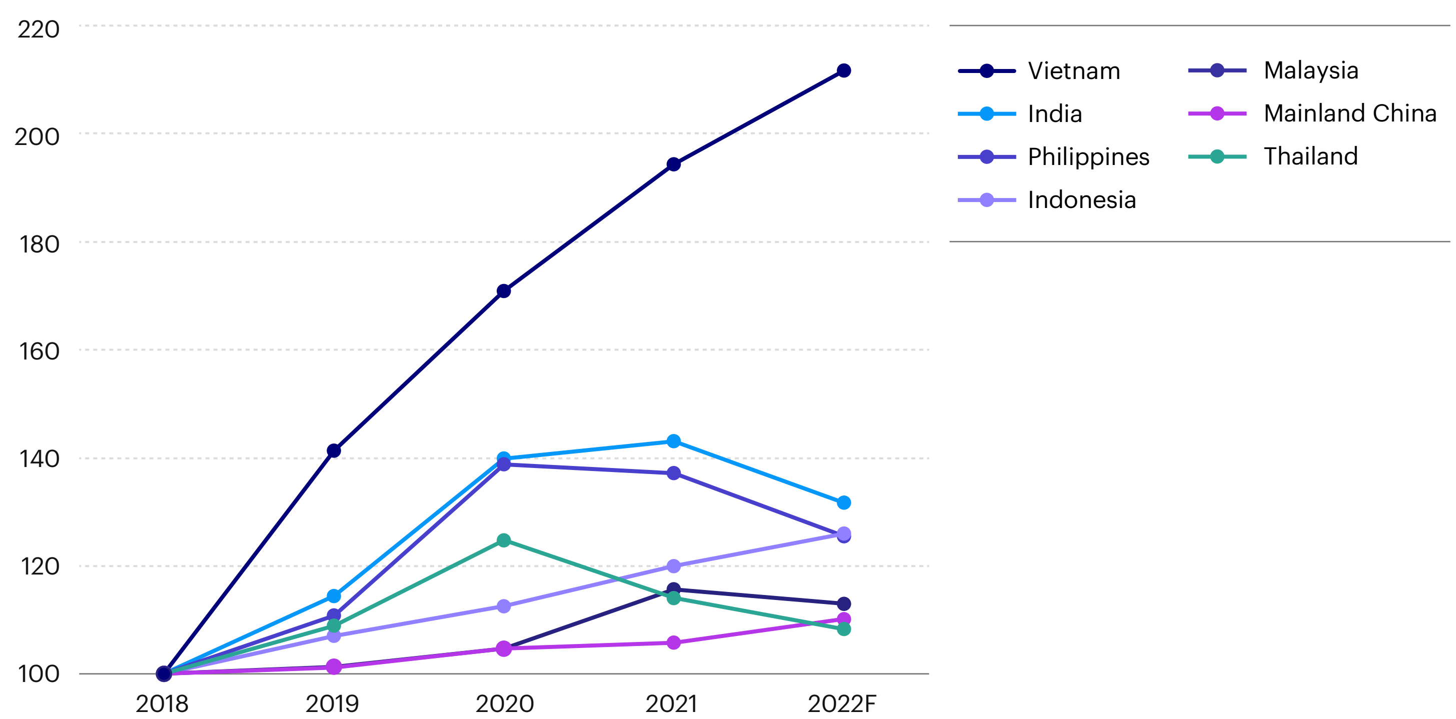
Coming into 2023, notwithstanding the hawkish central bank decisions that may bring unfavorable technicals and cause Asia HY to reprice further, we expect Asia HY corporates (excluding China property) to show certain resilience amid the turbulence.

- This is mainly backed by fundamentals: major corporates do not have excessive debt in the hard currency space. On top of this, the maturity wall in the next 12 months is relatively manageable.
- We expect that commodity exporting issuers will maintain a continuously improving credit profile.
- While China property developers could face additional challenges as they combat the current liquidity crunch, we do not expect China's government policies to add any material tailwinds in the short term. Defaults may reappear, especially among private property developers and may result in another round of price deterioration in 2023.

Note: Asia Non-China Property HY & China HY Property: J.P. Morgan Asia Credit Index; US HY: ICE BofA US High Yield Index; Latam HY: ICE BofA High Yield Latin America Emerging Markets Corporate Plus ; CEEMEA HY: ICE BofA High Yield EMEA Emerging Markets Corporate Plus Index. Data frequency: monthly. Past performance does not guarantee future results. An investment cannot be made in an index.

Asia fixed income (EM): Asian sovereigns expected to outperform other emerging markets

FX Reserves (Base Year: 2018 at 100)



Source: HSBC, Invesco, data as of Sep 2022.

Yifei Ding
Senior Portfolio Manager
Invesco Fixed Income

High levels of inflation in most of the developed world and the interest rate hiking cycle around the globe is certainly putting downward pressure on the growth outlook for Asia's domestic economies. Yet at the same time, many factors are working in Asian sovereign issuers' favor.

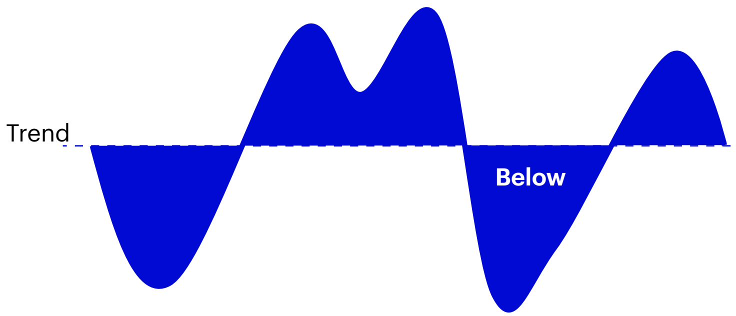
- If China's strict COVID controls ease, this could improve economic activity in neighboring Asian countries.
- Also, unlike other commodity-exporting EM countries where fiscal revenue has benefited from high commodity prices, most Asian sovereign issuers are not commodity exporters, so their fiscal policies have not been as expansionary as their other EM peers in the past two years or so.
- The short-term external bond maturities for most Asian countries do not pose high default risks in the short run given these nations have learned from the 2013 "taper tantrum" and have built up comfortable foreign exchange reserves.

Appendix

Global growth and risk appetite have been indicating deteriorating performance

The next step would normally be a transition to recovery

US Leading Economic Indicator (LEIs)

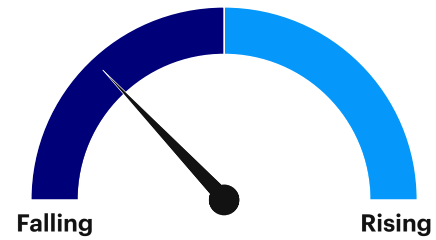


Below long-term trend

Forward-looking measure
of the level of economic activity.

US LEI as composite of:
- Manufacturing activity/business surveys
- Consumer sentiment surveys
- Monetary/Financial conditions
- Housing/Construction activity
- Labor market activity

Global Risk Appetite Cycle Indicator (GRACI)

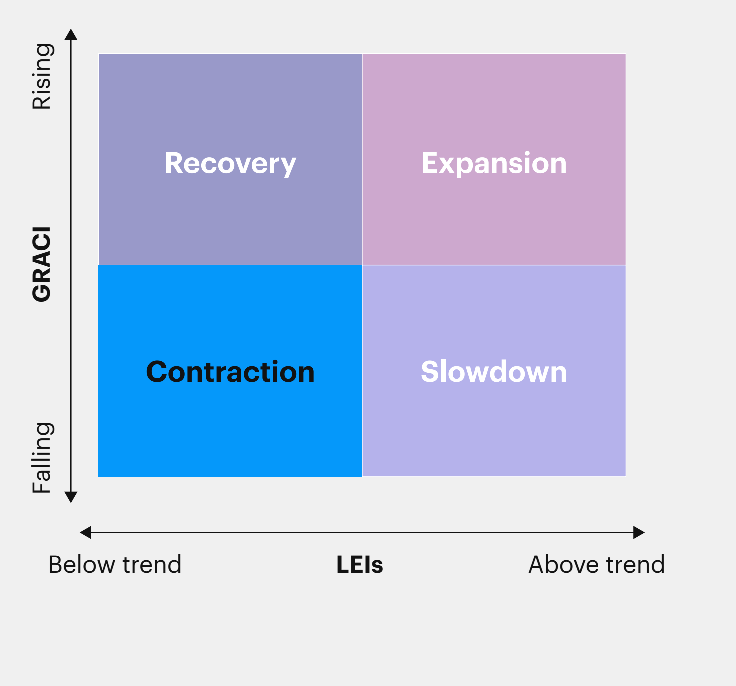


Falling risk appetite

Measure of the market's risk sentiment,
strongly correlated with changes in
economic growth expectations.

Asset universe
- Country-level total return indices across equity, credit, and fixed income markets
- Developed and emerging markets

Expected macro regime



Sources: de Longis, Alessio, "Dynamic Asset Allocation Through the Business Cycle: A Macro Regime Approach," Invesco Investment Solutions Manuscript (2019).
de Longis, Alessio and Dianne Ellis, "Market Sentiment and the Business Cycle: Identifying Macro Regimes Through Investor Risk Appetite," Invesco Investment Solutions Manuscript (2019).
Polk, Haghbin, de Longis. "Time-Series Variation in Factor Premia: The Influence of the Business Cycle." Journal of Investment Management 18, no. 1 (2020): 69–89.

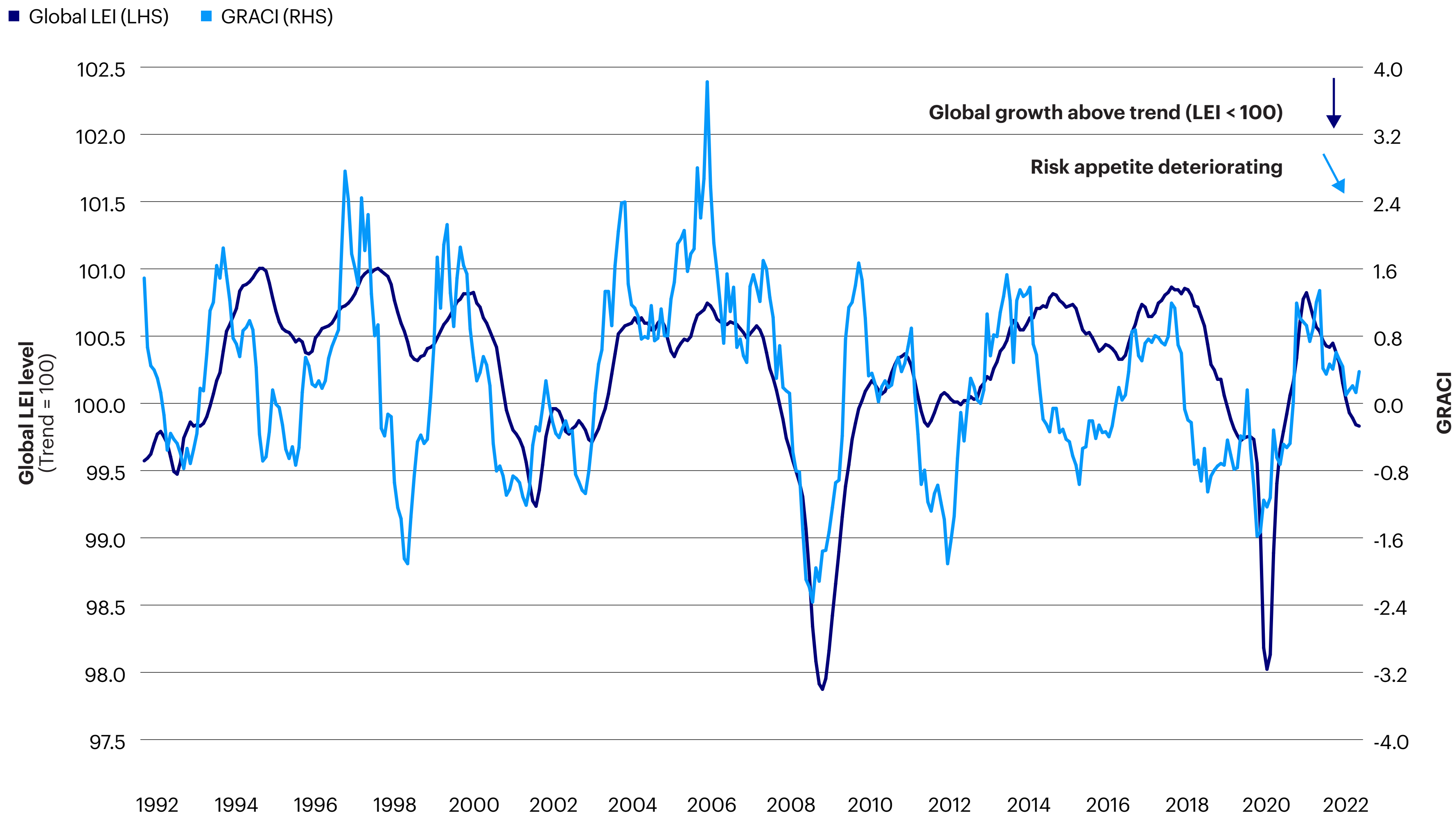
Global growth and risk appetite are currently indicating deteriorating performance

LEIs and GRACI are moving in lockstep

- Leading economic indicators continue to weaken, suggesting growth likely to be below trend across regions.
- Surveys of consumer sentiment remain around all-time lows in the United States, the eurozone, and the United Kingdom but have stabilized in the last three months.
- Business surveys, manufacturing activity, and the construction sector continue to decline towards their long-term trend while monetary conditions continue to tighten.
- Risk sentiment continues to deteriorate, with equity markets underperforming fixed income and credit spreads widening again to recent highs.
- When we transition to recovery many of these trends will reverse.

Market sentiment signals declining growth expectations

GRACI and the Global LEI



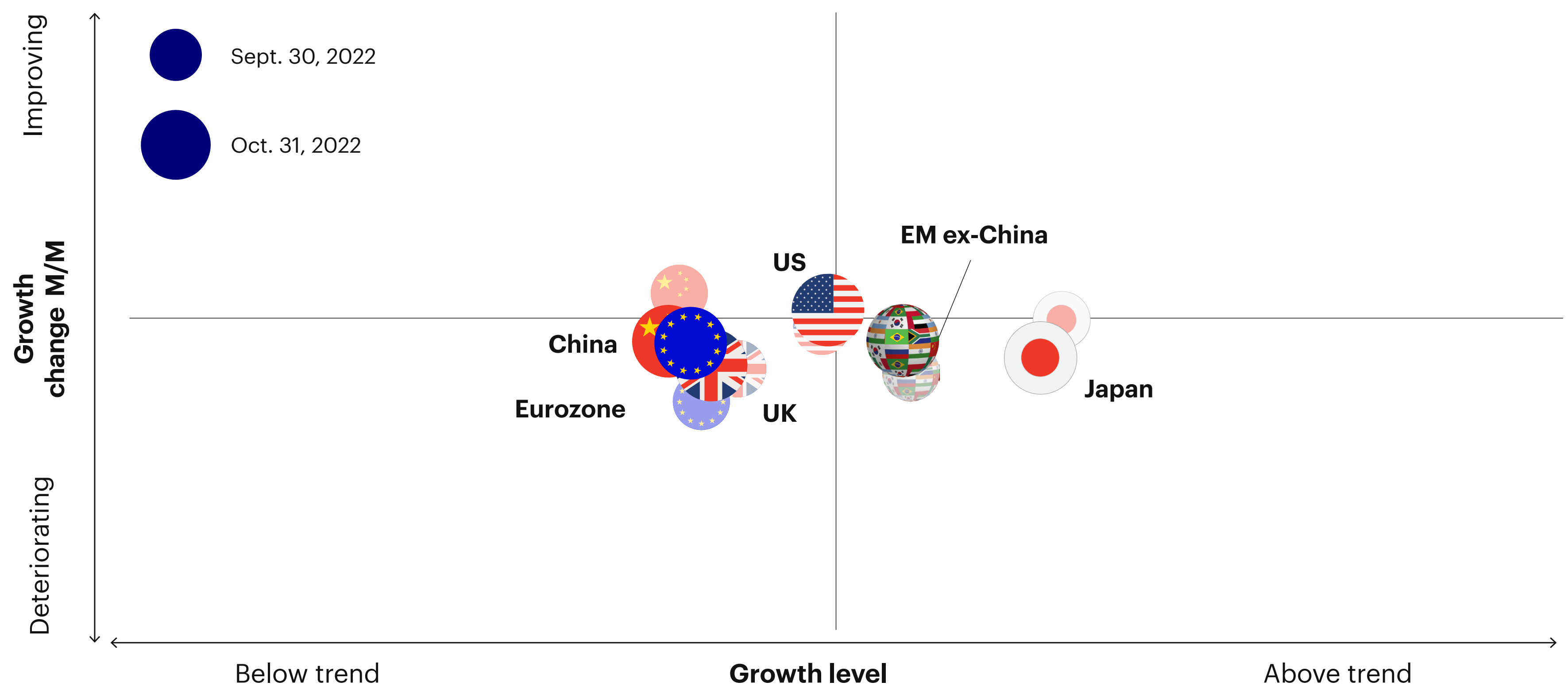
Sources: Bloomberg L.P., Macrobond. Invesco Investment Solutions research and calculations. Proprietary leading economic indicators of Invesco Investment Solutions. Macro regime data as of October 31, 2022. The Leading Economic Indicators (LEIs) are proprietary, forward-looking measures of the level of economic growth. The Global Risk Appetite Cycle Indicator (GRACI) is a proprietary measure of the markets' risk sentiment.

Developed and emerging markets continue to decelerate, with US marginally improved

From a regional perspective, we maintain a moderate underweight in emerging markets relative to developed markets. Historically, a global contraction regime with tightening financial conditions has provided headwinds to emerging markets, offsetting positive local momentum. We remain neutral between US and developed ex-US equities.

As we look ahead to the transition to a recovery regime, we imagine switching our preferences to emerging markets and non-US developed markets.

Developed markets continue to decelerate while China is bottoming out



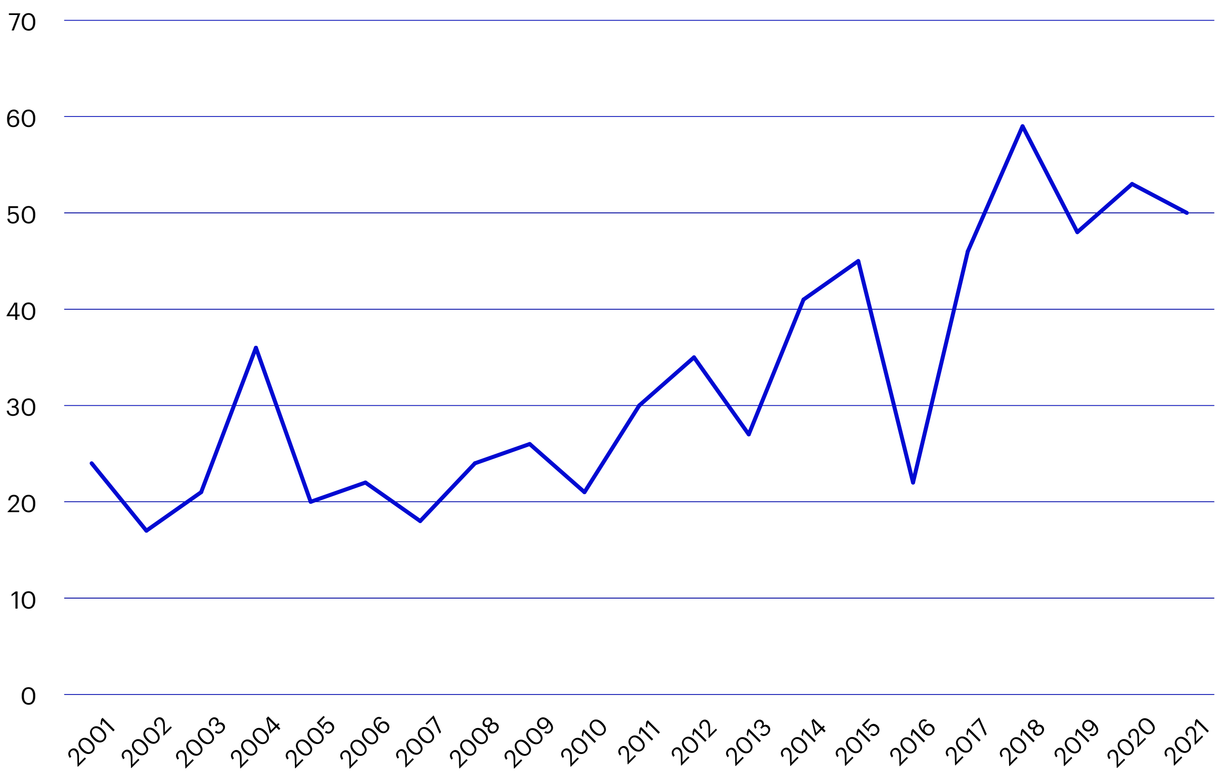
Sources: Bloomberg L.P., Macrobond. Invesco Investment Solutions research and calculations. Proprietary leading economic indicators of Invesco Investment Solutions. Macro regime data as of October 31, 2022. The Leading Economic Indicators (LEIs) are proprietary, forward-looking measures of the level of economic growth. The Global Risk Appetite Cycle Indicator (GRACI) is a proprietary measure of the markets' risk sentiment.

Thematic opportunities in equities

Health care innovation

The rapid development of highly effective vaccines to protect against COVID-19 is emblematic of the many breakthrough treatments being developed by the healthcare industry. From cancer therapies to genomics, the healthcare sector is poised to meet the growing needs of aging populations around the world.

FDA approvals by calendar year



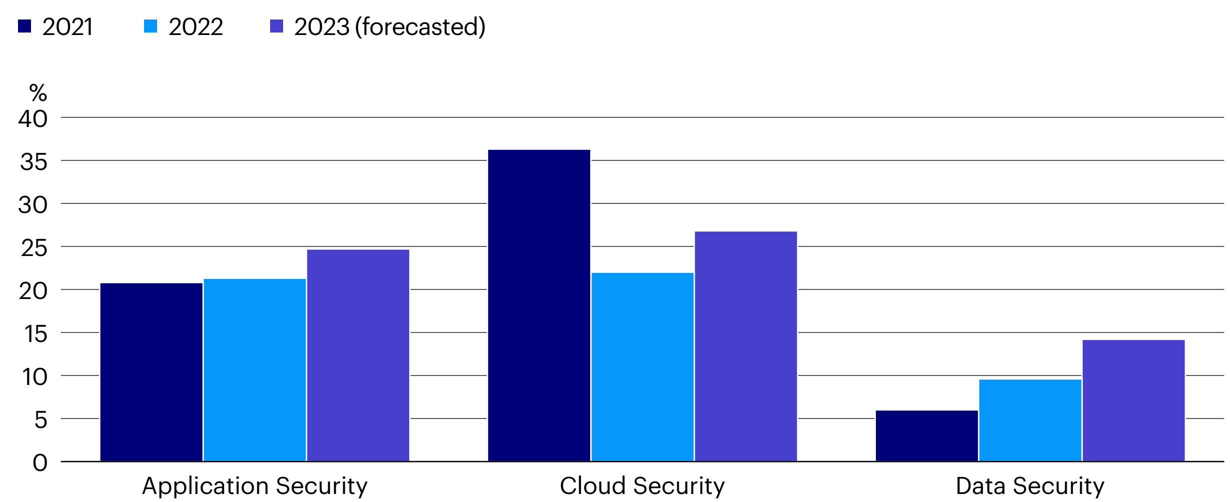
Left chart source: FDA, as of December 31, 2021

Right chart source: Gartner Group Research, October 2022

Cybersecurity

In its Global Cybersecurity Outlook 2022, the World Economic Forum warned that, "As digitalization continues to proliferate and new technologies are introduced, cyber risk will inevitably grow." In other words, the more the Internet is utilized in business and in life, the more we need to be worried about cybersecurity. In addition, we expect corporations' cybersecurity efforts to matter more to customers and investors in the future. Many regulators (most notably the U.S. Securities and Exchange Commission) require that businesses disclose risk factors in their filings to the public in the interest of transparency for investors. As a result, technology consultancy Gartner Group believes that organizations will start to mandate and use cybersecurity risk as a significant determinant when conducting business with all third parties, across the digital ecosystem. Those companies that do more and spend more to mitigate cybersecurity risk are likely to be rewarded by customers and investors.

Worldwide Information Security & Risk Management End-User Spending by Segment Increase, year over year



66% of organizations were hit by a ransomware attack in the past year, a **78%** increase over the previous year.

Source: Sophos, The State of Ransomware 2022

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Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested. Past performance is not a guide to future returns.

Back-tested index data (Page 24)

Pre-inception performance (i.e., back-tested) is not an indication of or guarantee of future results. Actual performance may vary significantly from any hypothetical or historical performance shown for the index. Charts and graphs herein may reflect hypothetical historical performance. All information prior to the inception date is back-tested, and is provided for informational purposes to illustrate the effects of a strategy during a specific period. Back-tested performance is not actual performance, but is hypothetical and based on criteria applied retroactively with the benefit of hindsight and knowledge of factors that may have positively affected its performance, and cannot account for all financial risks that may affect the actual performance. Back-tested data calculations are based on the same methodology that was in effect when the index(es) was officially incepted. Back-tested performance results have certain limitations. Such results do not represent the impact of material economic and market factors might have on an investment advisor's decision-making process if the advisor were actually managing client money. There is no assurance that the future performance of any specific investment strategy presented herein will be profitable or equal to past hypothetical performance levels. It is not possible to invest directly in an index.

Returns among asset classes tend to converge during slowdown regimes

- **Equities** = MSCI ACWI - US T-bills 3-Month
- **High Yield** = Bloomberg HY - US T-bills 3-Month
- **Bank Loans** = Credit Suisse Leveraged Loan Index – US T-bills 3-Month
- **Investment Grade** = Bloomberg US Corporate - US T-bills 3-Month
- **Government Bonds** = US Treasuries 7-10y - US T-bills 3-Month

Prior to 1985, history is back-filled with estimated total returns using 10-Yr yields from Bloomberg between 1970 and 1985.

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