A midyear update to the *Vanguard Economic and Market Outlook for 2023*

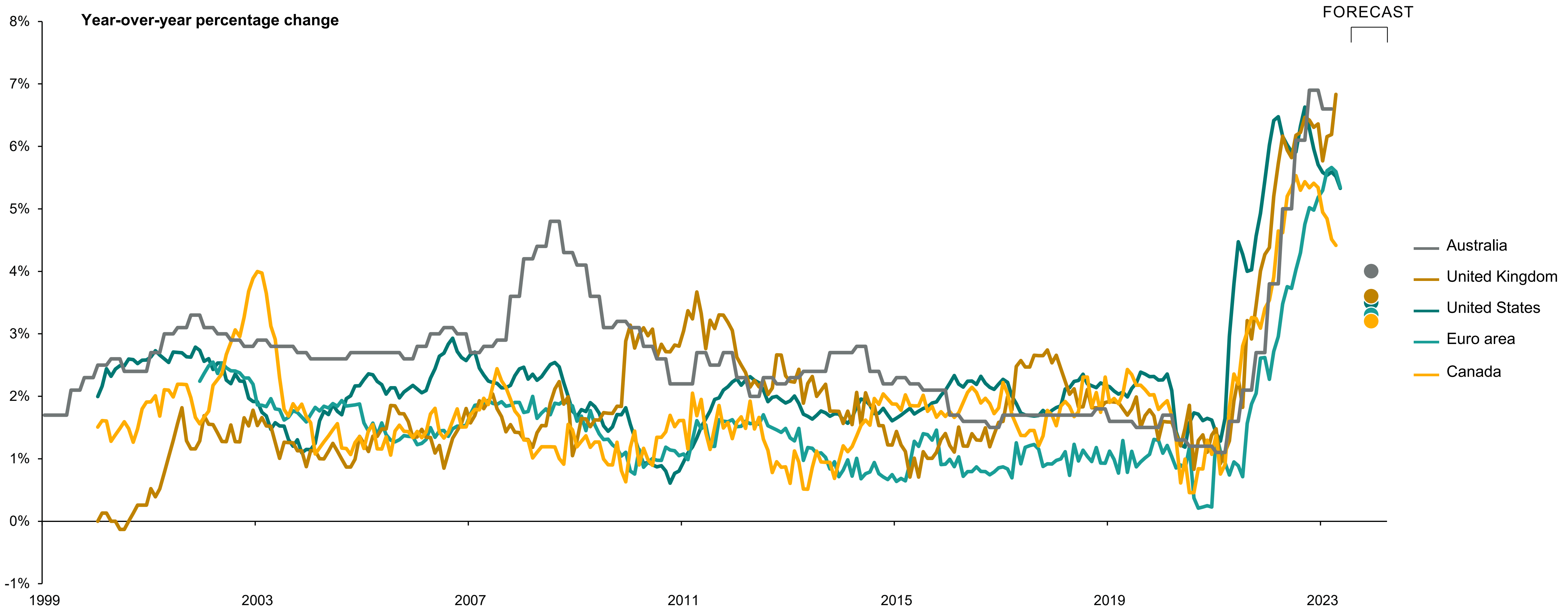
Still beating back inflation

Vanguard’s forecasts for year-end 2023

	2023 economic growth	2023 inflation*	2023 monetary policy**	2023 unemployment rate
United States	0.75%	3.3%	5.25%–5.5%	4.5%
United Kingdom	0%	4.9%	5.5%–5.75%	4%–4.5%
Euro area	0.5%	3.3%	3.75%–4%	7%–7.5%
China	5.5%–6%	1%	2.45%–2.55%	4.7%

Any projections should be regarded as hypothetical in nature and do not reflect or guarantee future results.
*Inflation forecasts are for core inflation, which excludes volatile energy and food prices.
**Our forecast for the United States year-end monetary policy rate reflects our expected Federal Reserve federal funds target range.
Notes: Figures related to economic growth, inflation, monetary policy, and unemployment rate are Vanguard forecasts for the end of 2023. Growth and inflation are comparisons with the end of the preceding year; monetary policy and unemployment rate are absolute levels.
Source: Vanguard, as at June 26, 2023.

Slow but sure progress on inflation



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Notes: We use the core Consumer Price Index (CPI) for all locations except Australia, where we use trimmed mean CPI. Year-end 2023 figures are Vanguard forecasts.
Sources: Vanguard calculations, based on data from the US Bureau of Labor Statistics, Statistics Canada, Eurostat, the UK Office for National Statistics, and the Australian Bureau of Statistics accessed through Macrobond on 15 June 2023.

United States

ECONOMIC GROWTH

0.75%

Recovery from the brief 2020 recession has endured an aggressive Federal Reserve interest rate-hiking cycle. Recent growth has been stable at about 2%, annualised. We still assign a high probability to a recession, though the odds have risen that it could be delayed from 2023 to 2024.

CORE INFLATION

3.3%

Our base case is for the pace of consumer price increases to continue easing. Shelter inflation should slow in the second half of 2023 and return to its pre-pandemic pace by 2024. Slowing momentum in labour markets should also lower ex-shelter services inflation later this year.

MONETARY POLICY

5.25%–5.5%

Given the lags between monetary policy shifts and discernible changes in the economy, Fed policymakers could decide that their 5 percentage points of interest rate hikes are enough to knock inflation down to their 2% target. But we view at least one more rate increase as probable.

UNEMPLOYMENT RATE

4.5%

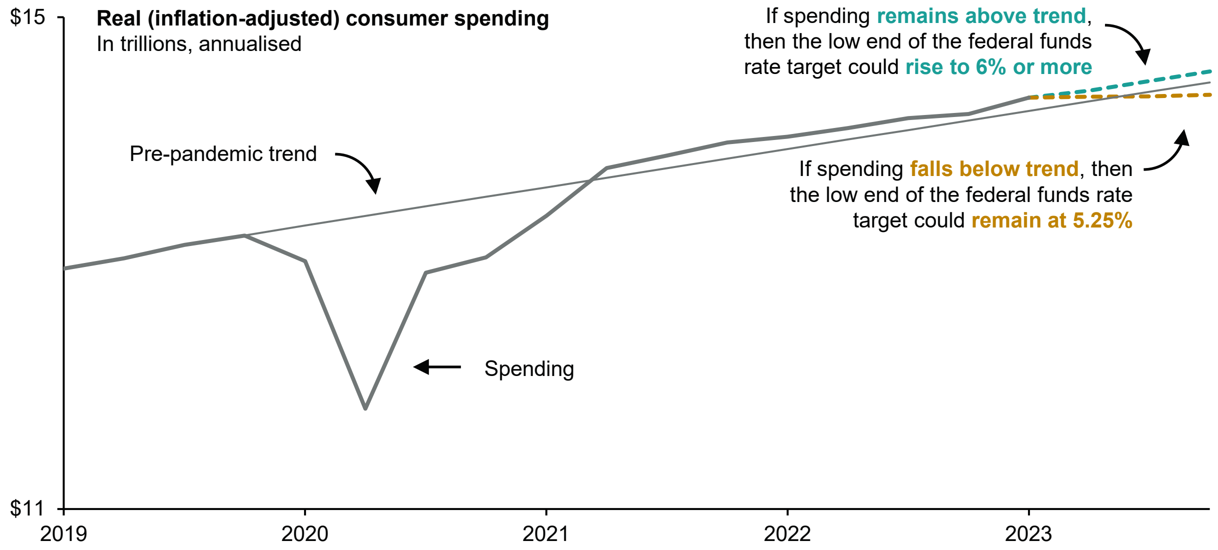
In our 2023 outlook, we described a weakening labour market as a condition for falling inflation. The labour market has remained resilient even as disinflation has continued. Unemployment remains below 4%, where it stood at the start of the Fed's rate-hiking cycle. We expect softening as a condition for progress on inflation.

Josh Hirt
Vanguard Senior Economist

WHAT I'M WATCHING

Consumer spending and the Fed's hiking cycle

Consumer spending has remained remarkably consistent over the past year despite persistent inflation. If spending remains on this path, the Federal Reserve will have more work to do. Increasing the policy rate another three-quarters of a percentage point is not out of the question under such conditions.



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Growth, inflation, monetary policy, and unemployment figures above are end-2023 Vanguard forecasts. Growth and inflation are comparisons with year-end 2022; monetary policy and unemployment are absolute.
Notes: The Federal Reserve sets the federal funds rate target—typically a range—as a goal for the level of short-term interest rates. The pre-pandemic trend shows the average pace of growth in real consumer spending between 2017 and 2019.
Sources: Vanguard calculations, based on US Bureau of Economic Analysis data as at 12 June 2023.

United States (continued)

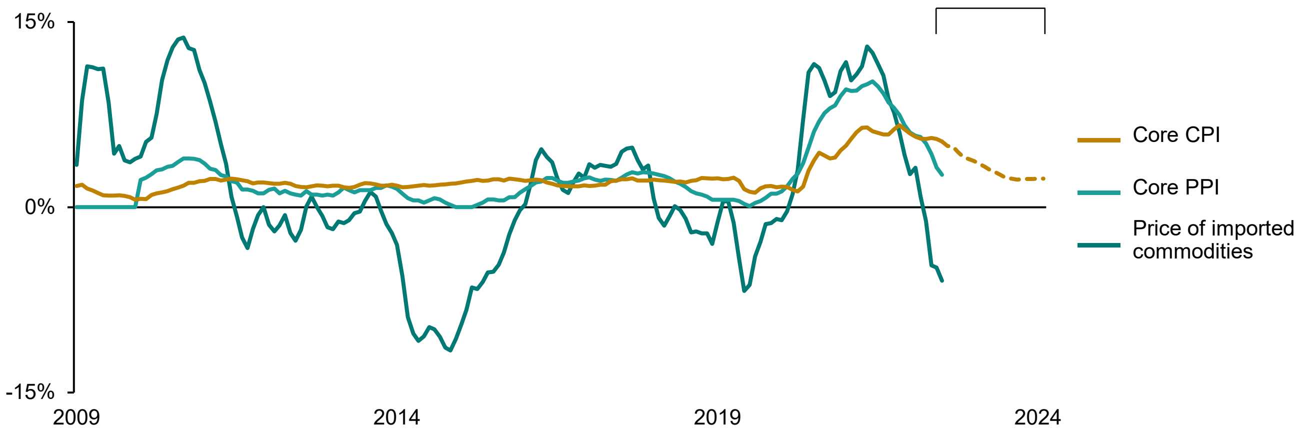
Asawari Sathe
Vanguard Senior Economist

WHAT I'M WATCHING

Declining import and wholesale prices

Import prices have been easing rapidly since March 2022—and outright declining since February 2023—thanks in part to the rebuilding of supply chains disrupted by the COVID-19 pandemic. Producer or wholesale prices have been falling almost as quickly, helping to curb actual and expected consumer inflation toward the 2% target set by Federal Reserve policymakers. We think they will get there in 2025.

Year-over-year changes in consumer and wholesale prices



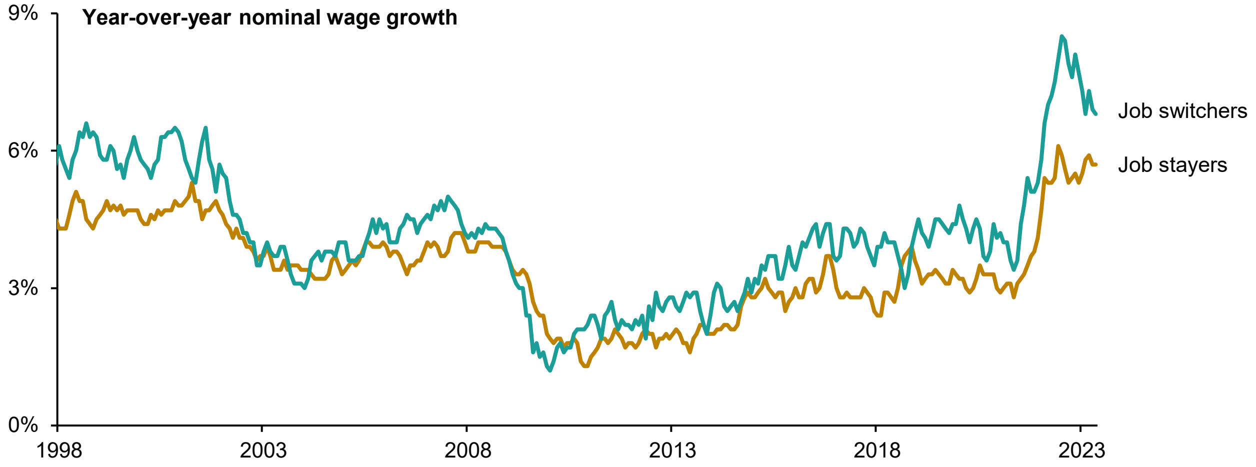
Notes: Changes in commodity prices use non-seasonally adjusted data for all commodities based on 2021 trade values. All other data include seasonal adjustments. Core prices exclude food and energy. The Producer Price Index (PPI) measures wholesale prices. The Consumer Price Index (CPI) measures retail prices.
Sources: Vanguard calculations, based on data from Refinitiv and Moody's through May 31, 2023.

Adam Schickling
Vanguard Economist

WHAT I'M WATCHING

Job switchers' fading wage premium

The wage increases typically commanded by workers who change employers over and above the gains made by workers who stick with their employers is a window into labour market conditions. When the labour market tightens, employers first raise wages to attract new talent and then to retain current workers, factors that can boost both economic growth and inflation. The wage-gain advantage for job switchers has been waning since the middle of 2022—an encouraging sign that inflationary pressures stemming from the labour market are abating.



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Notes: The chart is based on the Federal Reserve Bank of Atlanta's Wage Growth Tracker, which uses data from US Census Bureau surveys of nonfarm workers to estimate the median level of year-over-year changes in hourly wages. Each data point is an average of that month's median wage growth rate and the median rates of the two preceding months.
Source: Federal Reserve Bank of Atlanta data as at 30 April 2023.

Euro area

ECONOMIC GROWTH

0.5%

We believe the energy crisis drove the shallow 2022–2023 contraction. A muted recovery is likely before the lagged effects of monetary policy tightening trigger a new downturn. The peak impact of European Central Bank (ECB) interest rate hikes will occur in the second half of 2023, lowering output.

CORE INFLATION

3.3%

By any measure, inflation has declined meaningfully. Falling energy prices should help headline inflation ease further. Food prices are past their peak, too. Service-price inflation, linked to wage growth, is stickier and central to our expectation that core inflation will end 2023 at 3.3%, still well above the ECB's 2% target.

MONETARY POLICY

3.75%–4%

The ECB has hiked interest rates by 4 percentage points in 12 months. A deposit rate of 3.75%–4% would represent restrictive policy. It would exceed our inflation forecast and be more than twice our 1.5%–2% estimate of the region's neutral rate of interest, a theoretical rate that neither stimulates nor inhibits growth.

UNEMPLOYMENT RATE

7%–7.5%

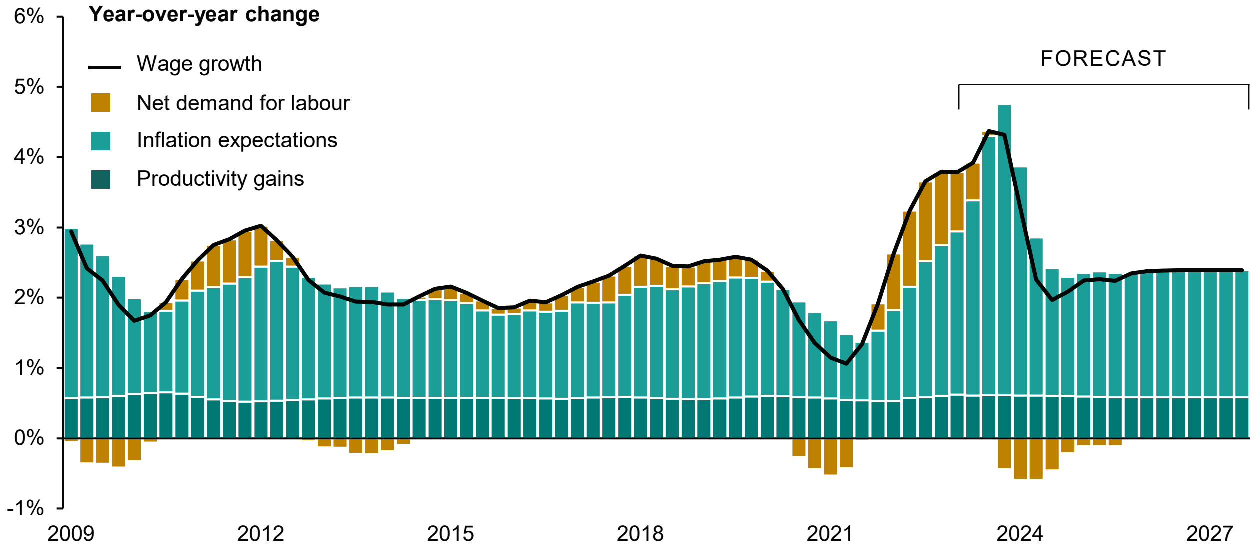
After peaking in 2020 at 8.6% amid the COVID-19 pandemic, the unemployment rate eased to 6.5% in April 2023. We foresee a partial retracement in the second half of 2023 as the ECB's inflation-fighting campaign passes the one-year mark and the lagged effects of changes in monetary policy are fully revealed.

Shaan Raithatha
Vanguard Senior Economist

WHAT I'M WATCHING

Euro area wage growth

More than half the rise in euro area inflation in 2021 and 2022 owed to corporate profit growth. We expect workers' pay to play a bigger role in setting the rate of inflation in the coming months. Even so, year-over-year wage growth is likely to decline sharply in 2024 amid declining inflation expectations and weakness in the labour market.



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Growth, inflation, monetary policy, and unemployment figures above are end-2023 Vanguard forecasts. Growth and inflation are comparisons with year-end 2022; monetary policy and unemployment are absolute.
Notes: Proprietary Vanguard forecasts of euro area wage growth from the beginning of 2023 to the end of 2027 are based on quarterly government-reported data from the second quarter of 2009 through the fourth quarter of 2022. Data reflect year-over-year changes. Net demand for labour reflects gross demand for labour minus supply of labour. Positive net demand boosts wages and vice versa.
Sources: Vanguard calculations, based on data from Eurostat and Bloomberg.

United Kingdom

ECONOMIC GROWTH

0%

As in other markets, we've been surprised by the resilience of the UK economy. Our initial forecast of a 2023 contraction in the production of goods and services has given way to an estimate of no change in output. As elsewhere, we believe a recession remains more likely than a soft landing.

CORE INFLATION

4.9%

Strengthening services inflation has driven core inflation to more than 30-year highs, whereas core inflation is retreating in many other developed markets. We expect core services inflation to drive broader headline inflation in the year ahead as prices for food, energy, and other goods wane.

MONETARY POLICY

5.5%–5.75%

We've recently raised our forecast for the Bank of England's terminal rate by three-quarters of a percentage point given stronger-than-expected inflation data, the continued tight labour market and accelerating wage growth. We maintain our view of no rate cuts until mid-2024 at the earliest.

UNEMPLOYMENT RATE

4%–4.5%

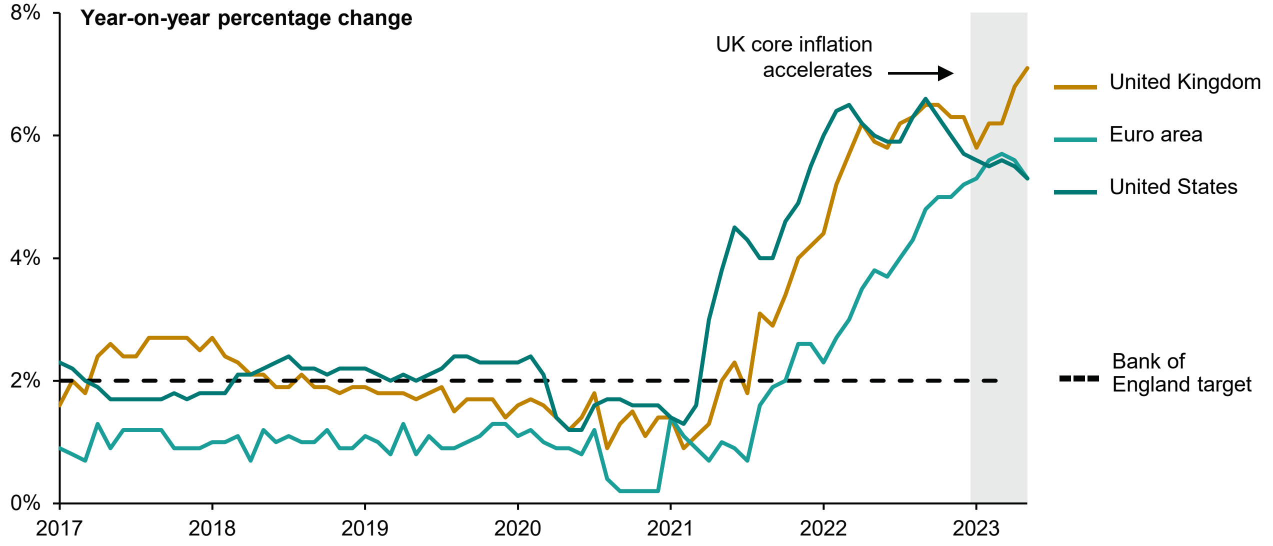
By a variety of measures, notably rates of employment and wage growth, the labour market displayed strength in the opening months of 2023. Yet consumers have not been confident about future employment. We expect a modest rise in unemployment in the second half of the year.

Shaan Raithatha
Vanguard Senior Economist

WHAT I'M WATCHING

Stubborn core inflation

Over the last two months, core inflation has accelerated, in stark contrast to the euro area and the United States, where rates appear to have peaked. Particularly concerning is that core pressures seem to be driven by strengthening services inflation. With the labour market still tight, the Bank of England likely has some hard work still to do to guide inflation back toward its 2% target.



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Note: The chart shows changes in the core Consumer Price Index (CPI) for all locations.
Sources: Vanguard calculations, using data as at 21 June 2023, from the US Bureau of Labor Statistics, Eurostat, and the UK Office for National Statistics.

China

ECONOMIC GROWTH

5.5%–6%

The bulk of gains in growth likely occurred in the first quarter when the end of COVID-19 restrictions unleashed pent-up demand. That scenario has yielded to a broad-based weakening. Full-year growth above a conservative government target is likely, but three years of policy uncertainty will weigh on confidence.

CORE INFLATION

1%

Lower energy and pork prices have contributed to a series of weak inflation prints. Alongside slowing growth, that has led us to nearly halve our inflation forecast from the start of the year. A rebound later this year is likely as credit demand strengthens and food and energy prices stabilise.

MONETARY POLICY

2.45%–2.55%

A recent People's Bank of China cut to 2.65% for the key 1-year medium-term lending facility should have little tangible economic effect. We believe an additional 10 to 20 basis points of cuts are likely. But China's challenge is a lack of demand for money, not a lack of supply. The likelihood of aggressive fiscal stimulus is low.

UNEMPLOYMENT RATE

4.7%

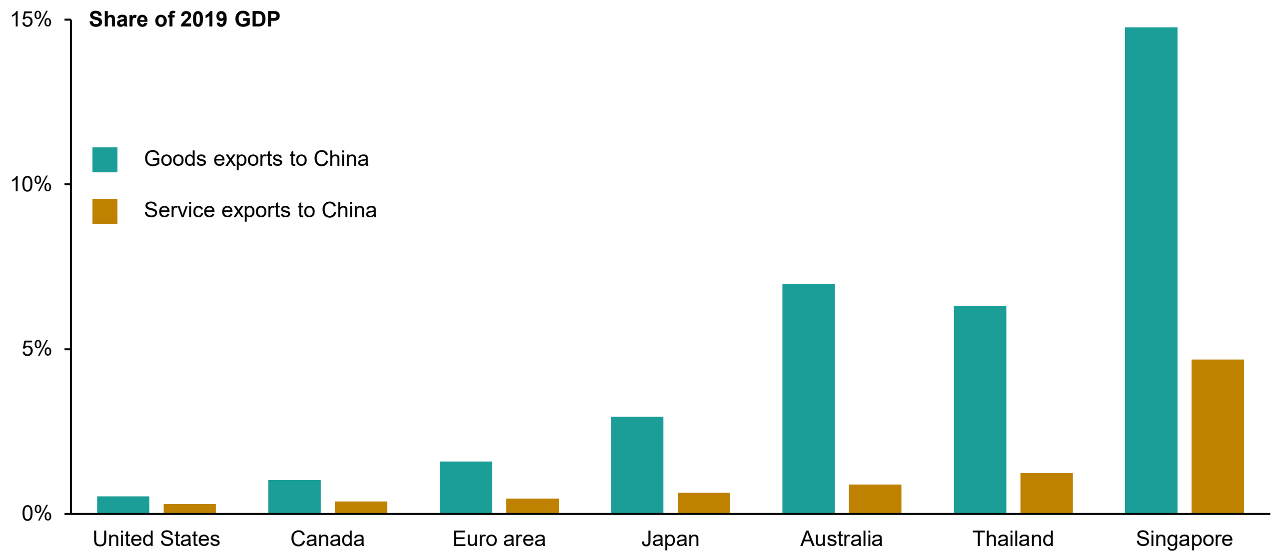
The labour market has improved steadily since China's post-pandemic reopening, with the headline unemployment rate declining to 5.2%. However, youth unemployment has climbed to a record high, posing a downside risk to growth.

Grant Feng
Vanguard Senior Economist

WHAT I'M WATCHING

China's global spillover effects

In past economic recoveries, China's appetite for commodities and other goods benefited its trade partners. Now, as its economy bounces back from COVID-19-related downturns, China is less likely to support global growth. That's because China's current recovery is being led by the services sector, and services exports account for much less of trading partners' gross domestic product than goods exports.



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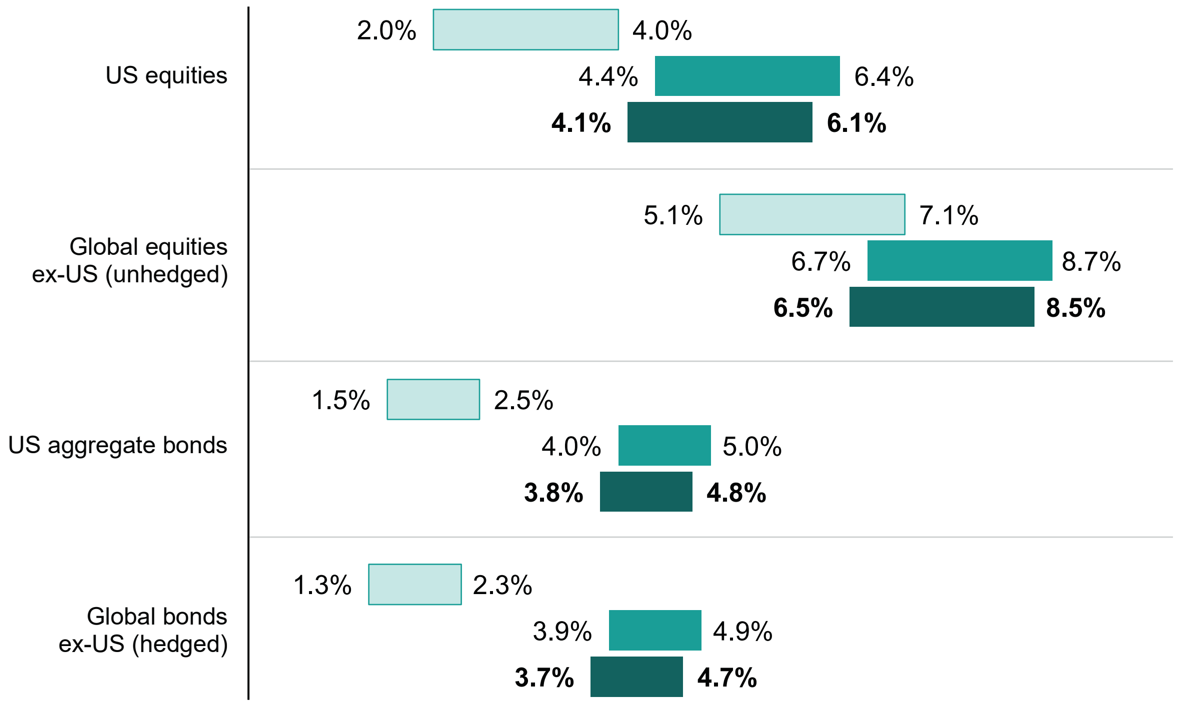
Note: The chart is based on 2019 Gross Domestic Product (GDP) because data from more recent years are skewed by the COVID-19 pandemic.
Sources: Vanguard calculations, using China General Administration of Customs data via CEIC.

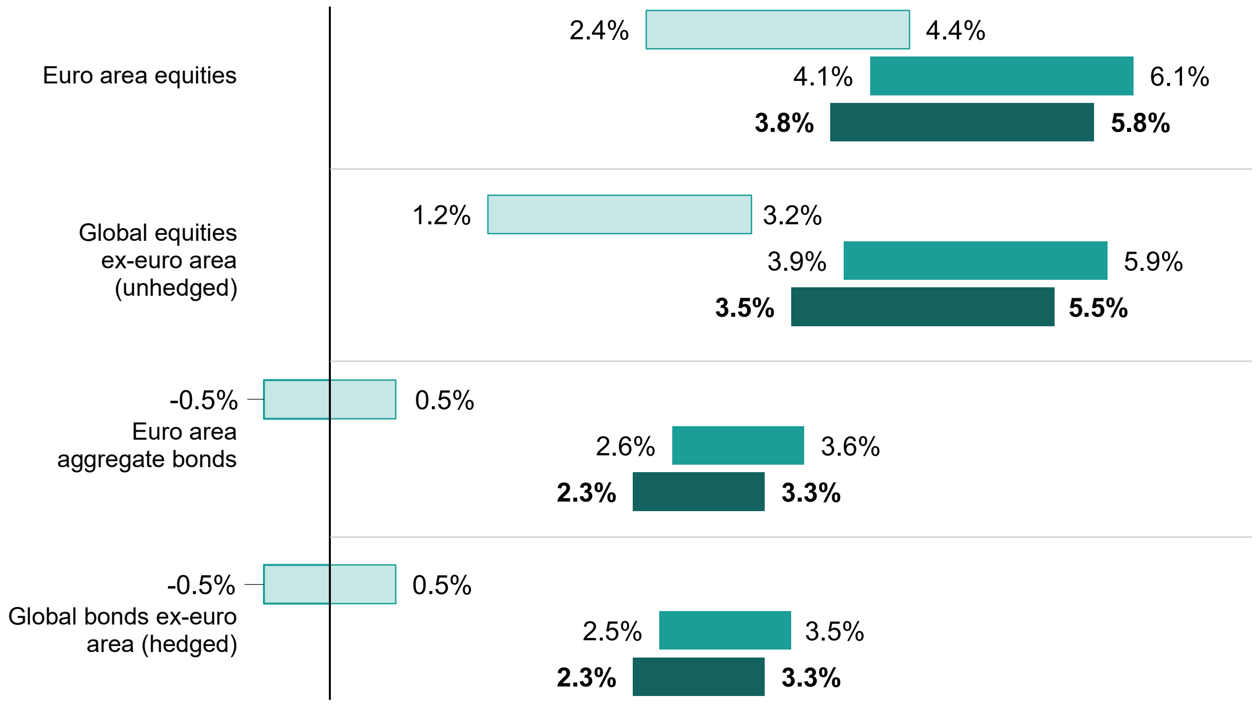
Global equity and fixed income outlook

Our 10-year annualised return forecasts are modestly lower since the start of the year for most developed markets. Equity prices (and valuations) have risen and long-term yields have settled lower as central bank policy rates near their expected highs. Forecasts are from the perspective of local investors in local currencies.

US dollar



Euro



Forecast 2021 year-end 2022 year-end 2023 midyear

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IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Distribution of return outcomes from the VCMM are derived from 10,000 simulations for each modeled asset class. Simulations are as at 31 December 2021; 31 December 2022; and 31 May 2023. Results from the model may vary with each use and over time. For more information, please see the important information slide.
Note: Figures are based on a 2-point range around the 50th percentile of the distribution of return outcomes for equities and a 1-point range around the 50th percentile for fixed income.
Source: Vanguard.

Global equity and fixed income outlook

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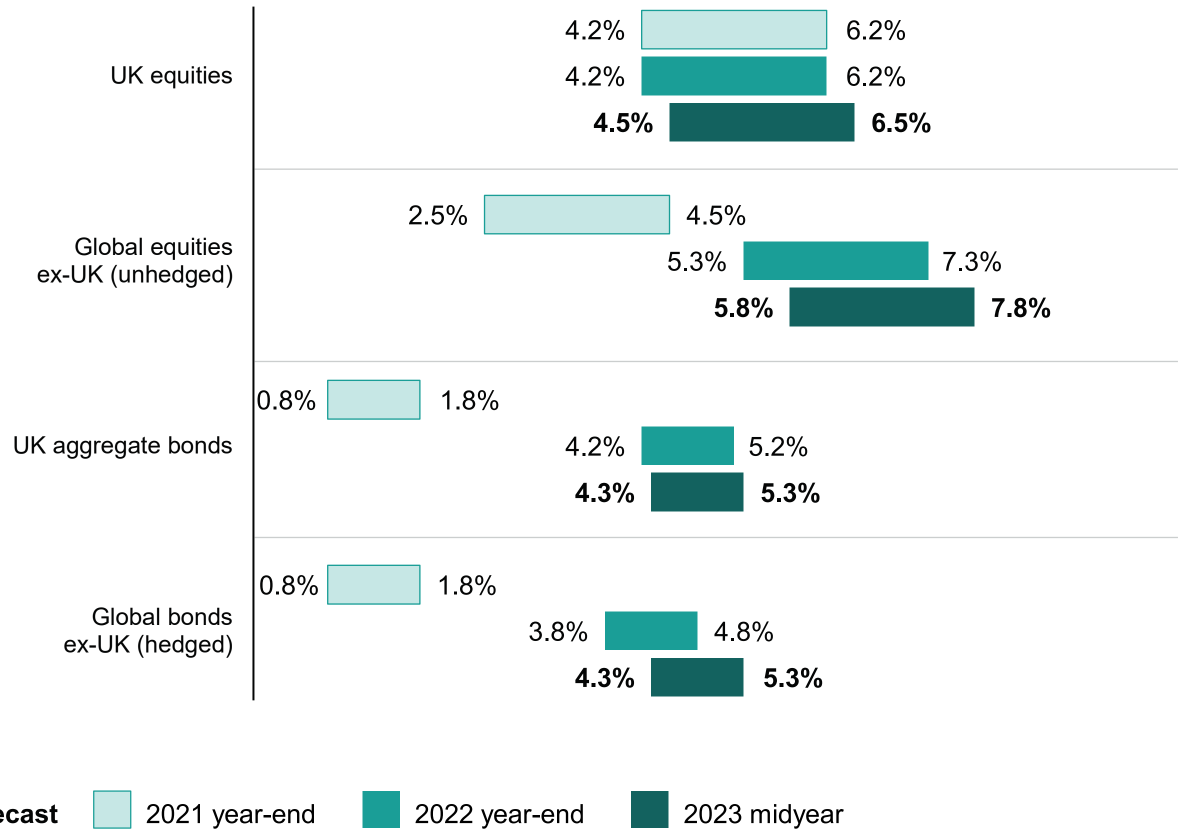
British pound



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Source: Vanguard.

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Important information

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The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More important, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard's primary investment research and advice teams. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include US and international equity markets, several maturities of the US Treasury and corporate fixed income markets, international fixed income markets, US money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data from as early as 1960. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.

Indices for VCMM simulations

The long-term returns of our hypothetical portfolios are based on data for the appropriate market indices to 31 March 2023. We chose these benchmarks to provide the most complete history possible, and we apportioned the global allocations to align with Vanguard's guidance in constructing diversified portfolios. Asset classes and their representative forecast indexes are as follows:

US equities: MSCI US Broad Market Index.
Global ex-US equities: MSCI All Country World ex USA Index.
US aggregate bonds: Bloomberg US Aggregate Bond Index.
Global ex-US bonds: Bloomberg Global Aggregate ex-USD Index.

UK equities: Bloomberg Equity Gilt Study from 1900 through 1964; Thomson Reuters Datastream UK Market Index from 1965 through 1969; MSCI UK thereafter.
Global ex-UK equities: Standard & Poor's 90 Index from January 1926 through March 3, 1957; S&P 500 Index from March 4, 1957, through 1969; MSCI World ex UK Index from 1970 through 1987; MSCI AC World ex UK thereafter.
UK aggregate bonds: Bloomberg Sterling Aggregate Bond Index.
Global ex-UK bonds: Standard & Poor's High Grade Corporate Index from 1926 through 1968; Citigroup High Grade Index from 1969 through 1972; Lehman Brothers US Long Credit AA Index from 1973 through 1975; Bloomberg US Aggregate Bond Index from 1976 through 1990; Bloomberg Global Aggregate Index from 1990 through 2001; Bloomberg Global Aggregate ex GBP Index thereafter.

Euro area equities: MSCI European Economic and Monetary Union (EMU) Index.
Global ex-euro area equities: MSCI AC World ex EMU Index.
Euro area aggregate bonds: Bloomberg Euro-Aggregate Bond Index.
Global ex-euro area bonds: Bloomberg Global Aggregate ex Euro Index.

Investment risk

The value of investments, and the income from them, may fall or rise and investors may get back less than they invested.

Past performance is not a reliable indicator of future results.

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