Vanguard

Vanguard research

December 2024

Vanguard economic and market outlook for 2025: Beyond the landing

The global monetary easing cycle will be in full swing in 2025, with inflation in most developed economies now within touching distance of central banks' targets. The good fortune of high productivity growth and a surge in available labour has propelled the US economy, while other economies have been less lucky. The potential for these positive supply-side factors to wane is a key risk to our US outlook, though expansionary fiscal policy may cushion any negative impact on growth.

We re-emphasise the view we put forth a year ago, that an era of sound money—with interest rates above the rate of inflation—lives on. That said, markets face a growing point of tension: assets with the strongest fundamentals have the most stretched valuations, and vice versa. Short-term economic and policy risks will help determine whether momentum or valuations dominate investment returns in 2025.

Still-sound money

As interest rates return towards neutral, we expect them to settle at higher levels than in the 2010s. This environment sets the foundation for solid fixed income returns over the next decade. **Page 6**.

US economic resilience

Positive labour supply and productivity developments drove US growth in 2024. Whether these drivers wane or accelerate, coupled with demand factors such as fiscal stimulus, holds the key in 2025. **Page 7**.

Growing market tension

The possibility that we are experiencing a valuation-supporting productivity boom must be balanced by the risk that economic developments could expose the vulnerability of stretched equity valuations. **Page 17**.

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Vanguard's 2025 economic forecasts

	GDP growth		Unemployment rate		Core inflation	Monetary policy		
	2025		2025		2025			
Country/region	Vanguard	Trend	Vanguard	NAIRU	Vanguard	Year-end 2024	Year-end 2025	Neutral rate
US	2.1%	2.7%	4.4%	4.5%	2.5%	4.5%	4.0%	3.5%
Euro area	0.5%	1.2%	6.9%	6.5%–7%	1.9%	3%	1.75%	2%–2.5%
UK	1.4%	1.2%	4.4%	4%–4.5%	2.4%	4.75%	3.75%	3%–3.5%
China	4.5%	4.2%	5.1%	5%	1.5%	1.4%	1.2%	4.5%–5%
Japan	1.2%	1.0%	2.4%	2.5%–3%	2.1%	0.5%	1.0%	0%

Notes: Forecasts are as at 2 December 2024. For the US, GDP growth is defined as the year-over-year change in fourth-quarter GDP. For all other countries/regions, GDP growth is defined as the annual change in GDP in the forecast year compared with the previous year. Unemployment rate forecasts are the average for the fourth quarter of 2025. NAIRU is the non-accelerating inflation rate of unemployment, a measure of labour market equilibrium. Core inflation excludes volatile food and energy prices. For the US, euro area, UK and Japan, core inflation is defined as the year-over-year change in the fourth quarter compared with the previous year. For China, core inflation is defined as the average annual change compared with the previous year. For the US, core inflation is based on the core Personal Consumption Expenditures Index. For all other countries/regions, core inflation is based on the core Consumer Price Index. For US monetary policy, Vanguard's forecast refers to the top end of the Federal Open Market Committee's target range. China's policy rate is the seven-day reverse repo rate. The neutral rate is the equilibrium policy rate at which no easing or tightening pressures are being placed on an economy or its financial markets.

Source: Vanguard.

Notes on asset-return distributions

The asset-return distributions shown here represent Vanguard's view on the potential range of risk premiums that may occur over the next 10 years; such long-term projections are not intended to be extrapolated into a short-term view. These potential outcomes for long-term investment returns are generated by the Vanguard Capital Markets Model® (VCMM) and reflect the collective perspective of our Investment Strategy Group. The expected risk premiums—and the uncertainty surrounding those expectations—are among a number of qualitative and quantitative inputs used in Vanguard's investment methodology and portfolio construction process.

IMPORTANT: The projections and other information generated by the VCMM 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 modelled asset class. Simulations are as at 8 November 2024. Results from the model may vary with each use and over time. For more information, please see "About the Vanguard Capital Markets Model" on page 22.

Global outlook summary

Global inflation has slowed sharply in the last two years and is now within touching distance of 2%. But the path to disinflation has been uneven across countries and regions, with most developed markets enduring monetary policy-induced slowdowns to get there. The US is a notable exception, having experienced accelerating economic growth and full employment with no discernible effect from restrictive monetary policy.

Has the US achieved a soft landing? Or will the impact of high interest rates eventually lead to a hard landing? These questions have dominated the market narrative over the last two years, with the focus on whether the US Federal Reserve (Fed) can perfectly time the rate-cutting cycle to achieve painless disinflation.

Yet this emphasis on the "landing" may not fully explain the pairing of exceptionally strong growth and falling inflation that we've witnessed in the US. The forces that do explain it suggest a new narrative for the economy and markets.

In our 2025 outlook, we adopt a framework centred on the supply-side forces that have shaped the US economy. These include a surge in both labour productivity and available labour. Supply-side forces offer a more satisfying explanation for the positive growth and inflation dynamic. Emerging risks—such as those related to immigration policies, geopolitics or potential tariffs—also fit more naturally into this supply side-aware framework.

US economic resilience has not been driven by Fed policy

Against the backdrop of restrictive monetary policy, the US economy has had the favourable combination of strong real GDP growth, the loosening of overly tight labour markets and falling inflation. It may be tempting to attribute this good fortune to a "soft landing" engineered by the Fed. However, a closer look suggests that this interpretation may be insufficient.

Rather, continued US robustness may owe more to fortuitous supply-side factors, including higher productivity growth and a surge in available labour. Higher output and lower inflation can generally coexist only when the supply-side forces are in the driver's seat. These dynamics have altered our baseline US economic outlook and point to the primary risks on the horizon.

While the positive supply-side drivers of growth may continue in 2025, emerging policy risks such as the implementation of trade tariffs and stricter immigration policies may offset gains. Under such a scenario, US real GDP growth would cool from its present rate of around 3% to closer to 2%. These offsetting policy risks may also increase inflationary pressures. Therefore, we anticipate that core inflation will remain above 2.5% for most of 2025. Although we expect the Fed to reduce its policy rate to 4%, cuts beyond that would prove difficult as any weakening in growth would have to be weighed against a potential inflation revival.

Less good fortune outside the US

Economies outside the US have been less lucky on the supply side, and thus unable to achieve the same combination of strong growth alongside significantly reduced inflation. While inflation is now close to target in Europe, that has come at the price of stagnation in 2023 and 2024, with muted external demand, weak productivity and the lingering effects of the energy crisis holding activity back. Growth is expected to remain below trend next year, as a slowdown in global trade represents a key risk. We expect the European Central Bank (ECB) to cut rates below neutral, to 1.75%, by the end of 2025. On the other hand, in the UK, we forecast growth to rise above trend in 2025, given the expansionary Autumn Budget. We are expecting the Bank of England (BoE) to follow a more hawkish easing cycle, with rates ending 2025 at 3.75%.

In China, policymakers still have work to do despite their coordinated policy pivot to both easier fiscal and monetary policy in late 2024.

Growth should pick up in the coming quarters as financing conditions ease and fiscal stimulus measures kick in. But more decisive and aggressive policies are needed to overcome intensifying external headwinds, structural issues in the property sector and weak confidence in both the household and business sectors. We maintain our weaker-than-consensus secular view on Chinese growth, and thus expect additional monetary and fiscal loosening in 2025.

The era of sound money lives on, with a new point of tension emerging

Although central banks are now easing monetary policy, we maintain our view that policy rates will settle at higher levels than in the 2010s. This environment sets the foundation for solid fixed income returns over the next decade, but the equity view is more cautious. This structural theme holds even in a scenario where central banks briefly cut rates below neutral to allay temporary growth wobbles. The era of sound money—characterised by positive real interest rates—lives on.

The investment challenge is a growing point of tension in risk assets between momentum and overvaluation. Assets with the strongest fundamentals have the most stretched relative valuations, and vice versa. The economic and policy risks for 2025 will help determine whether momentum or valuations dominate investment returns in the coming year.

The balance of risks favours bonds

Higher starting yields have greatly improved the risk-return trade-off in fixed income. Bonds are still back. Over the next decade, for sterling investors, we expect 4.3%-5.3% annualised returns for UK bonds and 4.5%-5.5% for currency-hedged (for sterling investors) global ex-UK bonds[1]. This view reflects a gradual normalisation in policy rates and yield curves, though important near-term risks remain.

We believe that yields across the curve are likely to remain above 4% in the US. A scenario where supply-side tailwinds persist will be supportive for trend growth and thus real rates. Alternatively, the emerging risks related to global trade and immigration policies would also keep rates high due to increased inflation expectations. These risks must be balanced with the possibility that a growth shock, and any associated monetary easing or "flight to safety", would cause yields to fall meaningfully from current levels. In the UK, we expect long-term yields to remain above 4%.

Higher starting yields mean that future bond returns are less exposed to modest increases in yields. These imply a "coupon wall" in that, even with modest increases in interest rates and associated price declines, coupons are sufficiently large such that total returns remain positive. In fact, for investors with the time horizon to see coupon payments catch up, interest rates that rise further would improve their total returns despite some near-term pain. We continue to believe fixed income plays an important role as a ballast in long-term portfolios. The greatest downside risk to bonds also applies to equities—namely, a rise in long-term rates due to a resurgence in inflation. These are the dynamics we are most closely monitoring.

Rational or irrational exuberance: Only time will tell

US equities have generally delivered strong returns in recent years. 2024 was no exception, with both earnings growth and price/earnings ratios exceeding expectations. The key question for investors is, "What happens next?"

In our view, US valuations are elevated but not as stretched as traditional metrics imply. Despite higher interest rates, many large corporations insulated themselves from tighter monetary policy by locking in low financing costs ahead of time. And more importantly, the market has been increasingly concentrated in growth-oriented sectors, such as technology, which support higher valuations.

1 UK bonds represented by the Bloomberg Sterling Aggregate Bond Index, global ex-UK bonds (hedged) represented by the Bloomberg Global Aggregate ex Sterling Bond Index Sterling Hedged.

Nevertheless, the likelihood that we are in the midst of a valuation-supporting productivity boom, akin to the mid-1990s, must be balanced with the possibility that the current environment may be more analogous to 1999. In the latter scenario, a negative economic development could expose the vulnerability of current stock market valuations.

While the US equity return outlook over the next decade at 2.9%-4.9% (for sterling investors) may appear cautious—as does the outlook for global equities at 4.3%-6.3%, given that 68% of this universe consists of US equities—the range of possible outcomes is wide and valuations are rarely a good timing tool[2]. Ultimately, high starting valuations will drag long-term returns down. But history shows that, absent an economic or earnings growth shock, US equity market returns can continue to defy their valuation gravity in the near term.

Valuations of equity markets outside the US are more attractive. We suspect this could continue as these economies are likely to be most exposed to rising global economic and policy risks. Differences in long-term price/earnings ratios are the biggest driver of relative returns over periods of more than five years. Over the next decade, we expect UK equities, developed markets ex-US equities and emerging market equities to return 5.7%-7.7%, 7.4%-9.4% and 5.3%-7.3%, respectively, all from a sterling investor's perspective[3]. However, economic growth and profits matter more over shorter horizons. During the past few years, persistently lacklustre growth in the economies and earnings outside the US kept global ex-US equity returns lukewarm relative to the remarkable return in the US market. Within emerging markets, China is the sole reason valuations are below fair value, but the risks of rising trade tensions and insufficient fiscal stimulus in China pose additional headwinds.

The strong outlook for fixed income together with a more cautious long-term view for US equities means that—for investors with an appropriate risk profile—more defensive portfolios may be appropriate, given that the extra compensation for taking on more risk remains low relative to history. We expect a 60/40 portfolio[4] to return 5.0%-7.0% over the next decade.

IMPORTANT: The projections and other information generated by the VCMM 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 modelled asset class. Simulations are as at 8 November 2024. Results from the model may vary with each use and over time. For more information, please see page 22.

2 US equities represented by the MSCI USA Total Return Index Sterling, global equities represented by the MSCI AC World Total Return Index Sterling.

3 UK equities represented by the MSCI UK Total Return Index, developed market ex-US equities represented by the MSCI World ex USA Total Return Index Sterling, emerging market equities represented by the MSCI Emerging Markets Total Return Index Sterling.

4 The 60% equity/40% fixed income portfolio is represented by UK and global ex-UK equities (MSCI UK Total Return Index and MSCI AC World ex UK Total Return Index) and UK and hedged, global ex-UK bonds (Bloomberg Sterling Aggregate Bond Index and Bloomberg Global Aggregate ex Sterling Bond Index Sterling Hedged). UK equity home bias: 25%, UK fixed income home bias: 35%.

Cutting to the chase: The global easing cycle in full swing

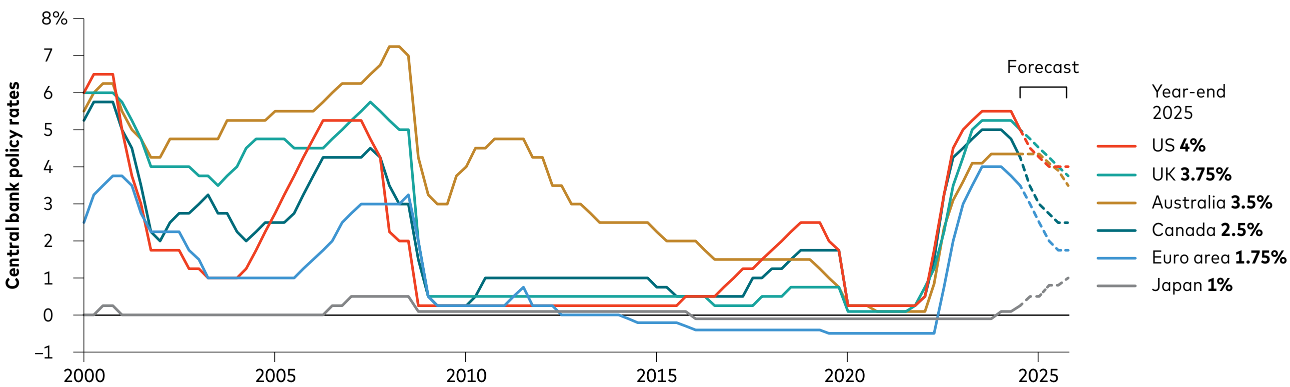
After two years of sharp inflation declines across developed markets, central banks are finally nearing their inflation targets of 2%. Confident that inflation was under control, and with a steady outlook for global economic growth, policymakers began lowering interest rates. The global easing cycle will be in full swing in 2025 as central banks gradually unwind restrictive monetary policies.

Despite significant progress against inflation in the US, we expect core inflation to remain above 2% throughout 2025 due to "sticky" shelter and services inflation. The Fed will most likely adopt a cautious stance towards further monetary easing. Our baseline is that policy rates will decrease to 4% by the end of the year, but risks are skewed towards inflationary pressures reigniting. If inflation were to rebound, the Fed would have to slow its pace of easing or potentially reverse course.

In the euro area, strong progress on inflation was achieved in 2023 and 2024 but at the expense of economic growth. With growth likely to remain below trend next year, we expect the ECB to cut rates below 2% by the end of 2025. Australia's struggle with stubborn inflation will probably keep rates elevated into 2025, while Canada is expected to quickly unwind higher rates to stimulate slumping growth. In China, stimulus measures may provide a short-term boost to the economy, but stringent fiscal and monetary measures will be needed to overcome structural headwinds to growth. Japan will likely be an exception, with a strengthening economy that has the potential to lift rates to 1% by year-end.

Although central banks are easing monetary policies, we believe that policy rates will settle at higher levels than in the 2010s. This structural theme holds even if central banks cut rates below neutral in the short term to alleviate temporary growth concerns. The era of sound money—characterised by positive real interest rates—will endure, setting the foundation for solid fixed income returns over the next decade.

Most policy rates will likely settle lower but above inflation



Notes: The chart shows central banks' nominal monetary policy rates for each quarter until 4 November 2024 and forecasts thereafter. Most major central banks have target inflation rates around 2%.

Sources: Vanguard calculations, using data from Macrobond, as at 4 November 2024.

US economic resilience: Good luck on the supply side

Disinflation in the US has, so far, been relatively painless. Over the last two years, annual inflation has fallen from 6.7% to 2.1%[5]. Meanwhile, the economy grew by about 3% in 2023 and we expect it to grow slightly above 2% in both 2024 and 2025. The labour market has softened only a little.

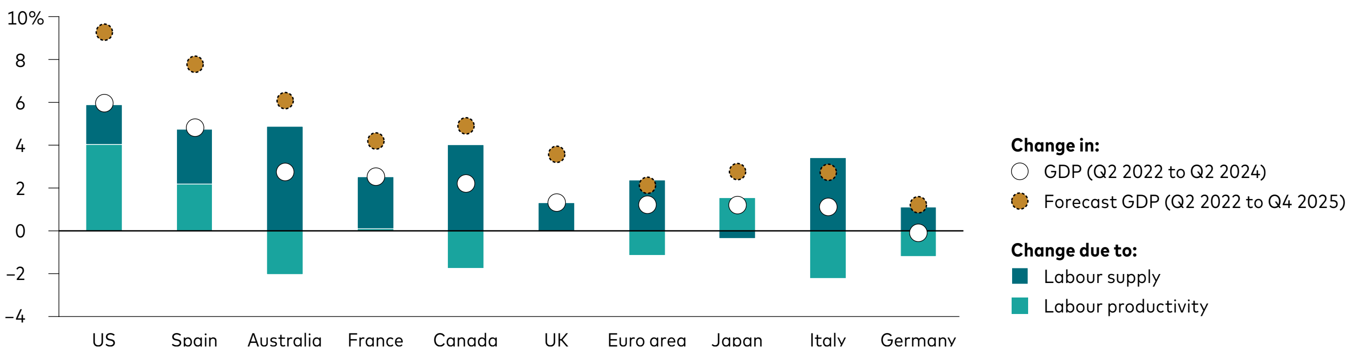
This resilience has stemmed primarily from positive supply-side developments, including strong productivity growth and a surge in available labour. Between the second quarter of 2022 and the second quarter of 2024, productivity increased by 4% and the labour supply grew by 1.8%[6]. Such good luck on the supply side explains both the strong inflation progress and the muted effect of restrictive monetary policy on growth.

As the chart illustrates, other advanced economies have been less lucky. Although most countries have had strong labour supply growth over the last two years, productivity growth has been very weak, notably in Australia, Canada, Italy and Germany. An exception is Spain, which has seen strong productivity growth.

Three reasons could explain this divergence in productivity between the US and other advanced economies. Firstly, the US had a surge in new business formations during the pandemic, especially in high-tech sectors, boosting innovation. Secondly, although the US experienced a pandemic-related spike in unemployment, it also saw a quick return to trend as workers reallocated to more productive jobs. In other economies, furloughs prevented reallocations that would have improved productivity. Finally, expansionary US fiscal policy helped to boost productivity in targeted sectors such as semiconductors and information technology, whereas fiscal policy was less expansive elsewhere.

Although these positive supply-side drivers of US growth may continue in 2025, emerging policy risks such as the implementation of trade tariffs and stricter immigration policies may act as offsetting negative supply impacts, while also increasing inflationary pressures.

Cumulative change in GDP since Q2 2022



Notes: The bars show the cumulative change in labour supply (as measured by hours worked) and labour productivity (as measured by output per hour worked) between Q2 2022 and Q2 2024. The white dots show the cumulative change in GDP for each economy between Q2 2022 and Q2 2024. The tan dots show the forecast cumulative change in GDP for each economy between Q2 2022 and Q4 2025.

Sources: Vanguard calculations, based on data from Bloomberg, the US Bureau of Economic Analysis, Eurostat, the Australian Bureau of Statistics, Statistics Canada, the Economic and Social Research Institute (Japan), the Office for National Statistics, the European Central Bank, the US Bureau of Labor Statistics and CEIC, as at 30 October 2024.

5 As measured by the Personal Consumption Expenditures (PCE) price index, as at 30 September 2024.

6 As measured by total hours worked.

Lessons from history: Mind supply-side surprises

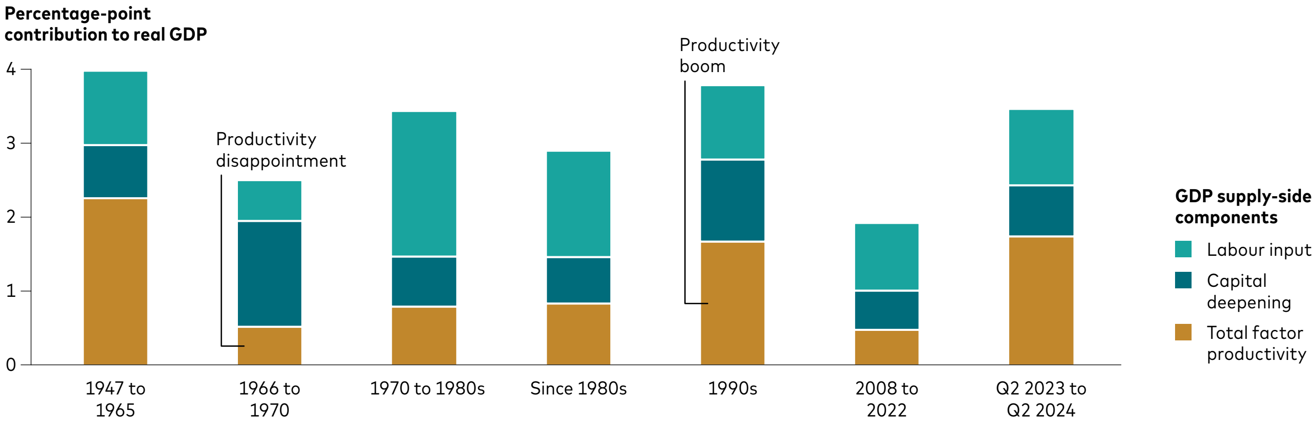
Historically, economies have faced turbulent periods following monetary tightening cycles, with many ending in economic downturns[7]. While monetary policy actions and external shocks—whether geopolitical events or wars—significantly influenced those conditions, unexpected shifts in the supply side of an economy cannot be overlooked. These "supply-side surprises" have often caught policymakers off guard due to the challenge of measuring such changes in real time.

In the late 1960s, for example, the Fed encountered challenges as it began an easing cycle. When favourable productivity conditions disappeared, a growing economy experienced a surge in inflation. This prompted the Fed to aggressively raise rates again, contributing to a painful recession. The surprise element of a shifting supply side complicated the Fed's ability to achieve continued growth without accelerating inflation.

The late 1990s, however, represented the classic example of a successful "soft landing"[8]. Despite some initial weakness as the Fed began to hike interest rates in late 1993, productivity gains—particularly driven by technological advancements—began to accelerate and helped cushion the economy. This surge in productivity allowed the Fed to maintain higher interest rates without stalling economic growth or fuelling inflation. Ultimately, the Fed recognised favourable supply-side conditions and guided the economy through continued growth with low inflation.

Over the past two years, the US economy has achieved a favourable balance of strong growth, low unemployment and cooling inflation. We attribute these conditions to recent supportive supply dynamics, including a surge in both productivity and available labour. As in past episodes, how these conditions evolve from here—and the ability of policymakers to recognise them—will play a decisive role in the trajectory of the economy in 2025.

Supply-side forces have driven much of the US economy through economic cycles



Notes: All variables are percentage-point changes at an annual rate. Labour input is the time people spend working to produce goods and services. Capital deepening is the ratio of capital to labour. Total factor productivity is the ratio of aggregate outputs to aggregate inputs.

Sources: Vanguard calculations, using data from the Federal Reserve Bank of San Francisco, as at 30 June 2024.

7 Alan S. Blinder. *Landings, Soft and Hard: The Federal Reserve, 1965–2022*. Journal of Economic Perspectives, Winter 2023. pubs.aeaweb.org/doi/pdfplus/10.1257/jep.37.1.101.

8 Philip N. Jefferson. *Philip N. Jefferson: Is This Time Different? Recent Monetary Policy Cycles in Retrospect*. Bank for International Settlements, 22 February 2023. bis.org/review/r240223a.htm.

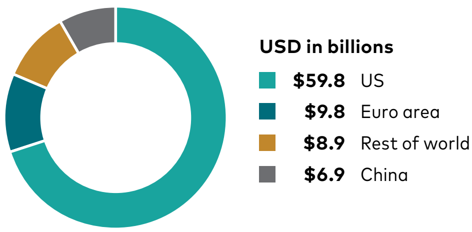
Artificial intelligence: Transformative potential, but 2025 is too soon for significant productivity growth

Excitement surrounding artificial intelligence (AI) and its potential to transform the global economy is warranted, but widespread adoption won't happen overnight. When new technologies emerge, firms can take years, sometimes decades, to find profitable commercial applications for them and see improved productivity. While we expect AI adoption to be relatively quicker than previous innovations (a common trait of digital technologies), significant productivity growth from AI utilisation likely wouldn't occur until the late 2020s even in our most optimistic scenario.

Although considerable uncertainty exists in predicting how technology and social attitudes towards AI will evolve in the coming years, we estimate that in developed economies, roughly 30% of current working hours are spent on tasks that will be performed by AI in 20 years. Contrary to dystopian fears, this will not cause 30% unemployment because many of these working hours will be reallocated to other, less AI-sensitive tasks.

AI adoption curves and economic significance will vary by country, but early indicators suggest a substantial first-mover advantage for the US, which financial markets have noticed. Based on our estimate of AI task displacement, we expect the US economy to grow at a real rate of 3.1% between 2028 and 2040, with nearly half of that growth attributable to AI. In a less rosy scenario, where AI technologies only marginally improve from current capabilities, the benefits would be insufficient to overcome growing government deficits, and economic growth would be about 1% per year.

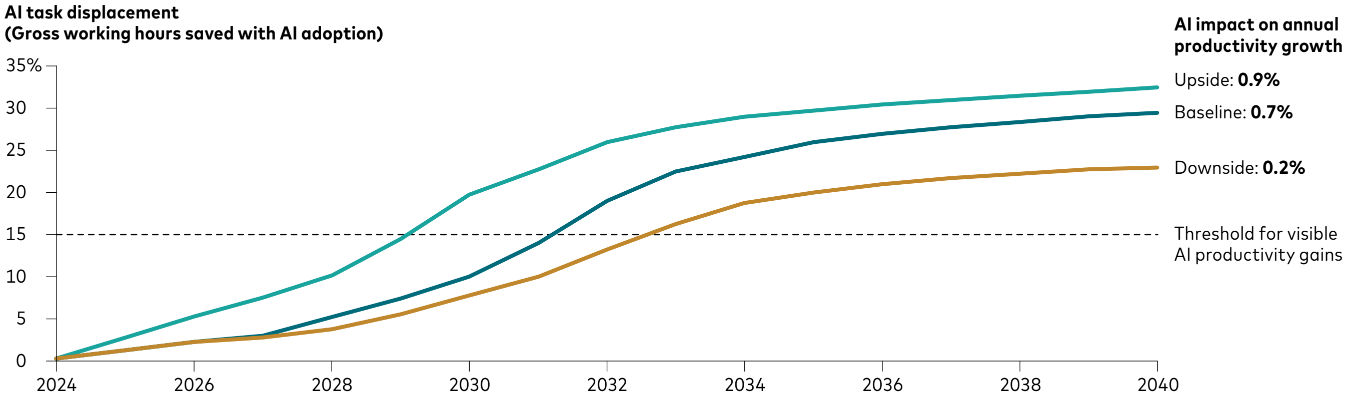
US leads the pack in AI



Notes: The chart shows private investment in AI for 2023 and includes only companies that received more than $1.5 million in investment. The data likely understate global AI investment as they reflect only private equity transactions.

Sources: Vanguard calculations, using data from Our World in Data, Stanford University's *AI Index Report 2024*, and the US Bureau of Labor Statistics, as at 31 December 2023.

An AI boom in 2025 would require rapid commercial adoption



Sources: Vanguard calculations, using data from O*NET, the US Bureau of Labor Statistics and the Congressional Budget Office, as at 30 June 2024.

US: Resilience and recalibration

The Fed began easing interest rates for the first time this cycle at its September 2024 meeting, acknowledging the progress towards restoring price stability. Indeed, the US economy has achieved a favourable balance of strong GDP growth, low unemployment and cooling inflation. We attribute this confluence to recent supply dynamics—labour force and productivity growth—that have shaped the economic landscape over the past two years. Going forward, these conditions along with a shifting policy environment will require the Fed to recalibrate its current expectations about how far it needs to, or can, ease policy rates.

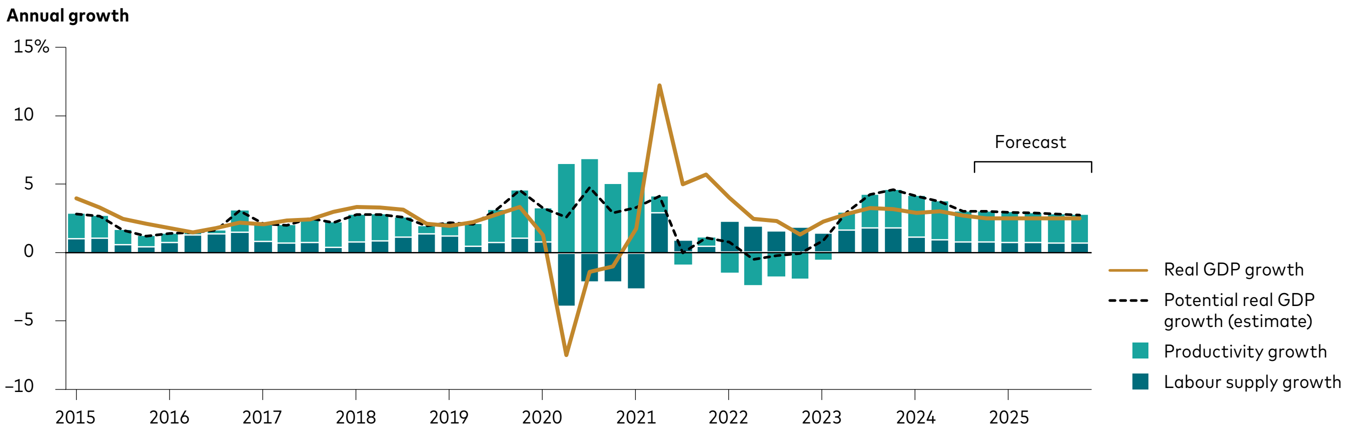
We anticipate that growth momentum will remain solid in 2025, supported by less restrictive monetary policy as well as ongoing productivity tailwinds that have increased our estimate of potential growth. We forecast GDP growth of 2.1%, reflecting a modest drag from potential changes to trade and immigration policies.

Labour supply dynamics, especially immigration policy, will be a key factor influencing the US labour market trajectory in 2025. Strong macroeconomic fundamentals, an ageing domestic labour force and stricter immigration policies could all contribute to a potentially tighter labour market. While hiring has slowed in recent months, we expect the unemployment rate to remain in the low 4% range. An outright contraction in available labour is a risk that could reignite wage inflation in the service and construction sectors.

We expect core inflation to remain near 2.5% in 2025, above the Fed's 2% target, due to strong economic momentum coupled with potential inflationary effects from new immigration and trade policies.

In response, the Fed will have to adjust to those policies and recalibrate to the likelihood that a neutral policy rate is above its currently assumed 2.9%. We expect a more cautious reaction in 2025, with the policy rate remaining at or above 4% by year-end.

Productivity growth will likely keep the US going strong



Sources: Vanguard calculations, using data from the Federal Reserve Bank of St. Louis, as at 30 September 2024.

Euro area: Policy rate to dip below neutral to support the economy

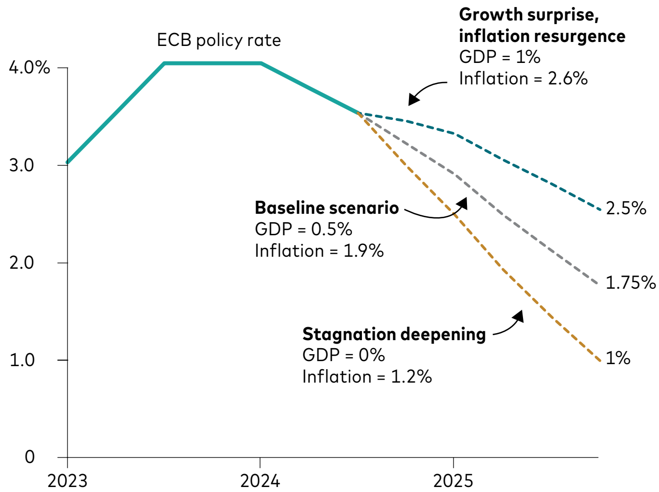
The euro area experienced a modest recovery in 2024, following a year of stagnation in 2023. However, concerns about growth remain heightened. Manufacturing continues to face headwinds due to the lingering effects of the energy crisis and weakening external demand. The services sector is also slowing due to restrictive fiscal and monetary policies. We expect the euro area to continue experiencing below-trend growth, with a slowdown in global trade representing a key risk.

Disinflation has been strong and fast. Since reaching a peak of 10.6% in October 2022, annual inflation has dropped over 8 percentage points, standing at 2.0% in October 2024. Core inflation remains slightly elevated because of the slower-moving services component. But with anaemic growth set to continue next year, we expect both headline and core inflation to end 2025 below 2%.

The ECB will continue easing policy. We expect the policy rate to dip below neutral in 2025 and end the year at 1.75%. The risks to this outlook are skewed to the downside. A sharp intensification of trade tensions and a significant slowdown in global growth would each likely result in a more dovish monetary policy stance.

Taking a step back, euro area growth in 2023 and 2024 has struggled mainly because of very weak productivity growth. Finding a way to rejuvenate productivity is vital to the long-term outlook. Advances in AI and a stated desire by governments to reduce red tape are encouraging. In 2025 and 2026, we anticipate a modest recovery in productivity growth and a moderation in the growth of hours worked.

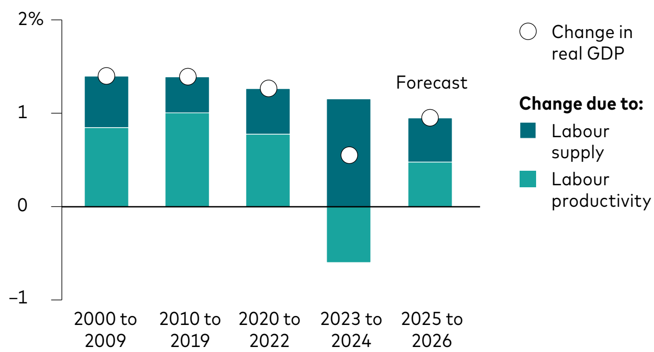
ECB policy rate will fall, but by how much?



Notes: The chart shows the ECB policy rate at the end of each quarter through to September 2024, then its forecast path through to year-end 2025 under three scenarios: our baseline, a downside surprise and an upside surprise. GDP refers to annual GDP growth for 2025 and inflation refers to core inflation at year-end 2025.

Sources: Vanguard calculations, using data from the ECB, as at 30 September 2024.

Decline in labour productivity was a drag on growth in recent years



Notes: The chart shows the average annualised growth of real GDP, labour productivity (measured as output per hour worked) and labour supply (measured as hours worked) for different periods. Projections were used for periods after Q3 2024.

Sources: Vanguard calculations, using data from Eurostat and the ECB, as at 30 September 2024.

UK: Fiscal loosening to revive growth in 2025

After a lacklustre end to 2023, the UK economy recovered in 2024. However, growth has been uninspiring. Unlike in the US, supply-side forces in the UK, particularly productivity, have been weak.

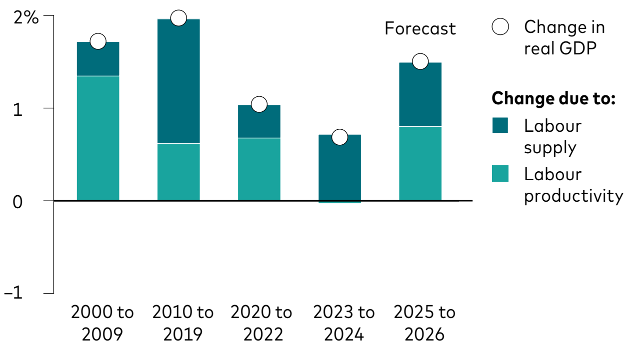
In 2025, UK growth is expected to accelerate above potential, driven by fiscal stimulus. The Autumn Budget announced in October 2024 represented the largest fiscal-loosening event in decades, bar the Covid-19 pandemic, with much of the spending expected to be realised in 2025 and 2026. This loosening comes despite taxes also rising significantly. The size of the government's role in the economy is increasing.

Meanwhile, strong progress has been made on inflation. Core inflation, which excludes food and energy prices, fell from an annual rate of 7.1% in May 2023 to 3.3% in October 2024. We expect progress to be slower in 2025. Services inflation remains elevated and is more stubborn and fiscal easing will support demand. An intensification of global trade tensions also poses an inflation risk. We expect core inflation to be around 2.4% by year-end.

The BoE will continue lowering interest rates in 2025, but at a gradual pace. We expect the policy rate to end 2025 at 3.75%, still above our estimate of neutral.

Over the next two years, we expect productivity growth to recover to a rate similar to the average since 2010, helped by the extra public investment announced in the Autumn Budget. However, this would still be lower than the productivity growth seen in the 2000s. Labour supply growth in 2025 and 2026 is expected to remain broadly similar to the figures from 2023 and 2024.

Stagnant labour productivity inhibited growth in recent years



Notes: The chart shows the average annualised growth of real GDP, labour productivity (measured as output per hour worked) and labour supply (measured as hours worked) for different periods. Projections were used for periods after Q3 2024.

Sources: Vanguard calculations, using data from Bloomberg and the Office for National Statistics, as at 30 September 2024.

China: More work to do after a policy pivot

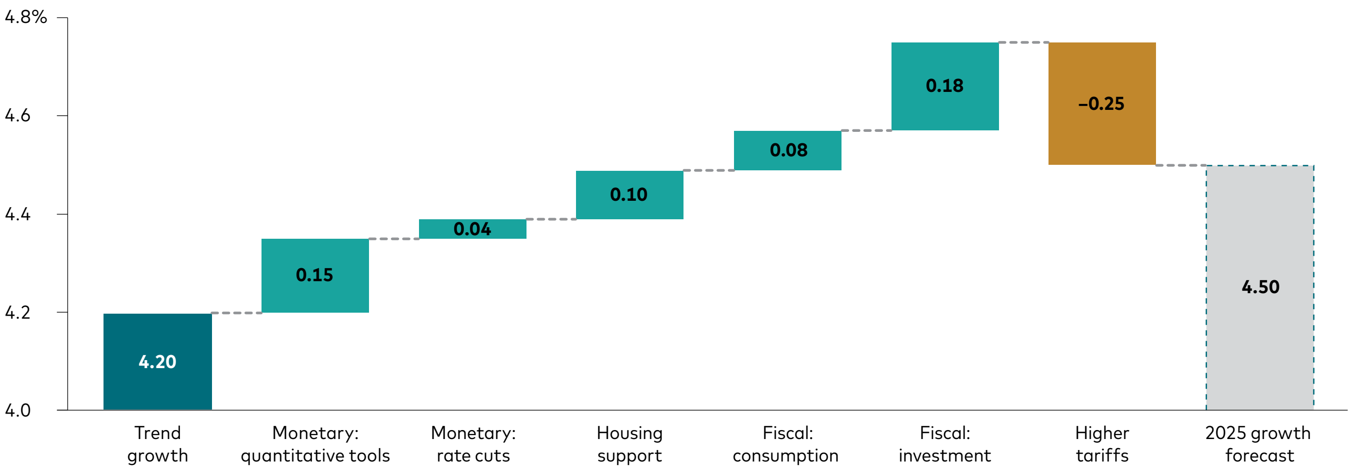
Despite resilient Chinese manufacturing and export activities, subdued domestic demand prompted a coordinated policy pivot in late 2024, encompassing monetary easing and an aggressive local government debt-resolution programme. While these moves boost sentiment and mitigate risks to growth and financial stability, a more decisive fiscal push will be needed to engineer a meaningful recovery in private confidence and spending.

While near-term growth momentum may improve, we expect full-year GDP growth to decelerate to 4.5% in 2025 amid persistent structural and external headwinds, including the prolonged housing downturn, deepening supply-demand imbalances and global trade developments. We expect staged US tariff hikes to have a mildly negative impact on growth compared with the impact of tariffs in 2018 and 2019. We anticipate that policymakers could respond with more comprehensive stimulus to cushion the downside risk.

Further monetary easing, including interest rate and reserve requirement ratio (RRR) cuts, is expected to counter persistent deflationary pressure. Although we see a modest inflationary thrust from currency depreciation in the face of higher tariffs, the magnitude is limited. Instead, the supply-centric policy support so far has reinforced the negative feedback loop between weak demand and low prices, widening the gap between real and nominal growth. Hence, both the magnitude and composition (that is, more support to consumers) of policy stimulus are critical to break the cycle.

Still, cyclical stimulus isn't sufficient without structural reforms, given declining trend growth. Contrary to most developed markets central banks' "higher for longer" interest rate trajectory, China is likely to stay "lower for longer" in the coming years.

China's policy stimulus will be partly offset by tariff hikes



Notes: The chart shows the projected impact of each policy stimulus on GDP growth in 2025. The monetary quantitative tools include RRR and other targeted liquidity facility instruments. Fiscal stimulus to consumption and investment includes fiscal tools such as targeted local government bond issuance.
Sources: Vanguard calculations, using data from the Ministry of Finance, the People's Bank of China and CEIC, as at 12 November 2024.

Japan: Bank of Japan to continue its gradual hiking cycle

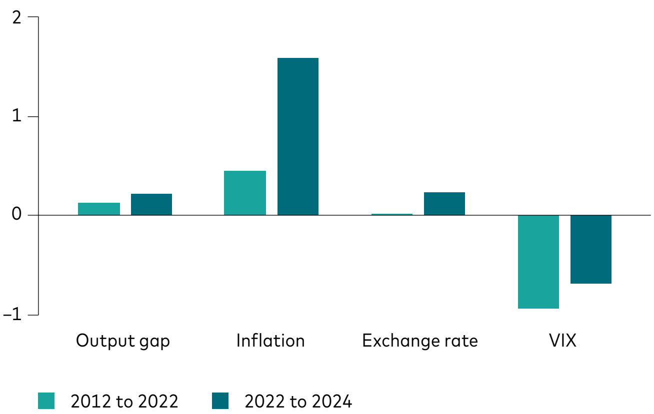
In 2024, amid persistent inflationary pressure, the Bank of Japan (BoJ) increased interest rates for the first time in 18 years. In 2025, we expect the BoJ to continue to gradually normalise monetary policy, as economic activity recovers and inflation momentum holds steady.

We also expect Japan's economy to recover to a growth rate above 1% in 2025, with the driver shifting from exports to a pickup in domestic demand. Risks from the global economy may increase uncertainty, with potential tariffs by the US offsetting China's policy stimulus, though the overall impact for Japan is likely to be limited.

As for inflation, steady wage growth on the back of strong corporate profits and structural labour shortages will likely support a recovery in domestic consumption and keep core inflation robust at around 2% in 2025. More importantly, a virtuous cycle of wages and inflation will continue to strengthen—a positive development after decades of economic and market stagnation—potentially justifying further BoJ rate hikes.

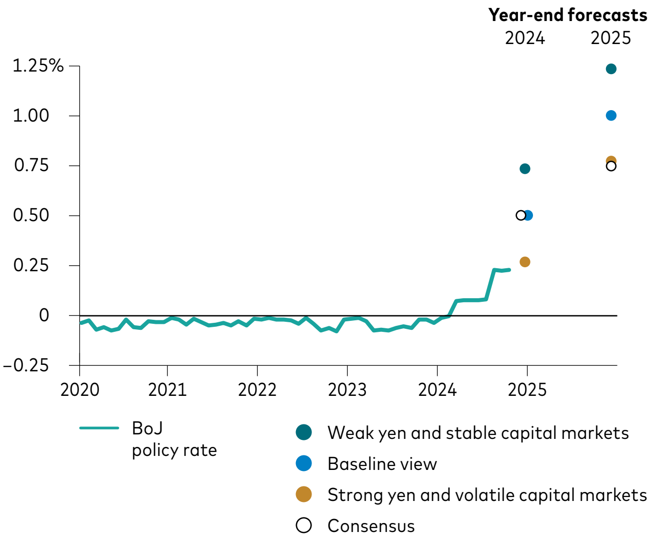
Therefore, we expect the BoJ to embark on a rate-hiking cycle, with the policy rate rising to 1% by the end of 2025. However, we expect the pace of rate hikes to be gradual given concerns about the yen and capital market stability. Global trade developments may also prompt the BoJ to proceed with caution. On the other hand, a pace of Fed easing that is only mild would weaken the yen, giving the BoJ more conviction to hike. On balance, the risk is tilted towards the downside, and the BoJ will likely exercise a prudent policy stance with accommodative financial conditions over an extended period.

The BoJ has become more responsive to inflation post-Abenomics



Notes: The chart shows Vanguard's estimate of the augmented Taylor rule, which incorporates exchange rates and capital market volatility as well as traditional Taylor rule measures of economic growth and inflation. The y-axis represents the degrees to which we estimate that specific variables, represented on the x-axis, have been important to the BoJ in rate-setting as measured by the Taylor rule, an equation introduced by the economist John Taylor in 1993. Y-axis values are Taylor rule coefficients. The Chicago Board Options Exchange Volatility Index (VIX) is used as a proxy for capital market volatility. Output gap is the difference between actual and potential growth. The Abenomics period (when the policies of Shinzo Abe, whose second term as prime minister ran from 2012 to 2020, were in force) is from Q1 2012 until the end of Q1 2022; the post-Abenomics period is from Q2 2022 until the end of Q2 2024. For sources, see the source line under the chart below.

The yen and capital markets will also determine the policy rate



Notes: The chart shows the BoJ's policy rate until the end of October 2024, and then our projections for year-end 2024 and year-end 2025 under three scenarios: our baseline view, an environment with a weak yen and stable capital markets and an environment with a strong yen and volatile markets. The consensus projections of the financial markets are also shown.

Sources: Vanguard calculations, using data from the Statistics Bureau of Japan, the Bank of Japan and CEIC, as at 31 October 2024. Consensus views are from Bloomberg, as at 11 November 2024.

Emerging markets: High real rates will continue to restrict growth

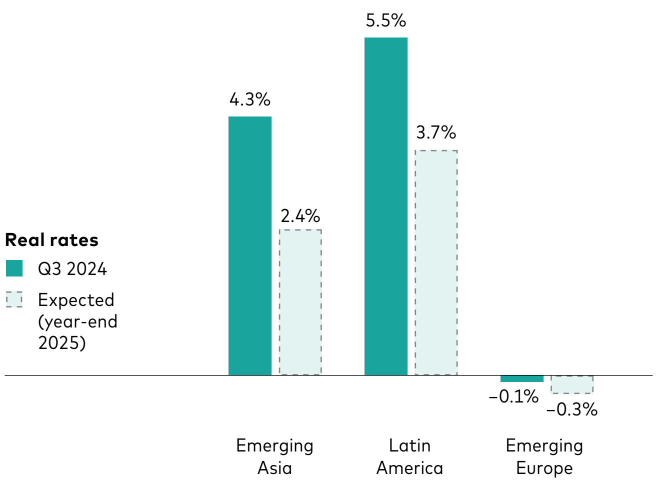
Across many emerging markets (EM), proactive policymaking has led to significant progress in reducing inflation. Indeed, most central banks in these markets felt comfortable enough to start easing policy from restrictive levels before their developed markets counterparts did. This was partly due to high real rates restricting economic activity in 2024.

In 2025, we expect the easing cycle across EM to both continue and broaden. But rates will remain in restrictive territory and thus continue to pin back growth. We expect EM growth in aggregate to be around 4% in 2025, consistent with the growth seen in 2024, but potential escalation in global trade tensions presents downside risk. With the Fed and other central banks in developed markets now easing monetary policy too, the rate differential to developed markets should narrow. This development would decrease many EM central banks' concerns about foreign exchange depreciation and capital flows.

Within emerging Asia, inflation has generally remained near or below target. Deflationary risks are mounting in China. Most emerging Asia central banks are easing monetary policy and we expect slightly higher inflation in this region. We are most constructive on the outlooks for India, the Philippines and Indonesia, where we expect growth to average around 5% in 2025.

In Latin America, inflationary pressures persist, with services inflation expected to remain above central banks' targets in 2025. This is primarily due to still-elevated wage growth. Easier monetary policy should keep growth steady at 2%–2.5% in 2025. Pro-cyclical fiscal policy in Brazil is expected to continue to boost the economy, while restrictive interest rates and US-related policy uncertainty make us more bearish on Mexico. Finally, in emerging Europe, lower commodity prices should help inflation reach target in 2025. We expect below-trend growth of around 2.5%.

Real interest rates will likely fall across EM



Note: Real rate is calculated as a GDP-weighted policy rate minus the GDP-weighted year-over-year CPI rate.

Sources: Vanguard calculations, using data from Refinitiv, as at 30 September 2024.

US outperformance rides on earnings growth

Over the past decade, US equities have delivered an astounding 15.5% annualised return, far outpacing global ex-US equities (7.7%) and UK equities (6.1%)[9]. While valuation expansion and the technology sector have attracted attention in the US, broad earnings growth (primarily driven by revenue) has largely been responsible for US outperformance. Conversely, ex-US developed markets have had stagnant earnings growth, partly due to negative output gaps since 2010. Non-US technology has been a bright spot, but its lower index weight (13% in the MSCI ACWI ex USA Index versus 32% in the S&P 500 Index) dampened returns.

Historically, rotations from US to global ex-US outperformance have coincided with US earnings contractions. Global ex-US equities outperformed in six of the eight rolling 12-month periods since 1980 when US earnings declined substantially.

Stretched valuations: A long-term hurdle

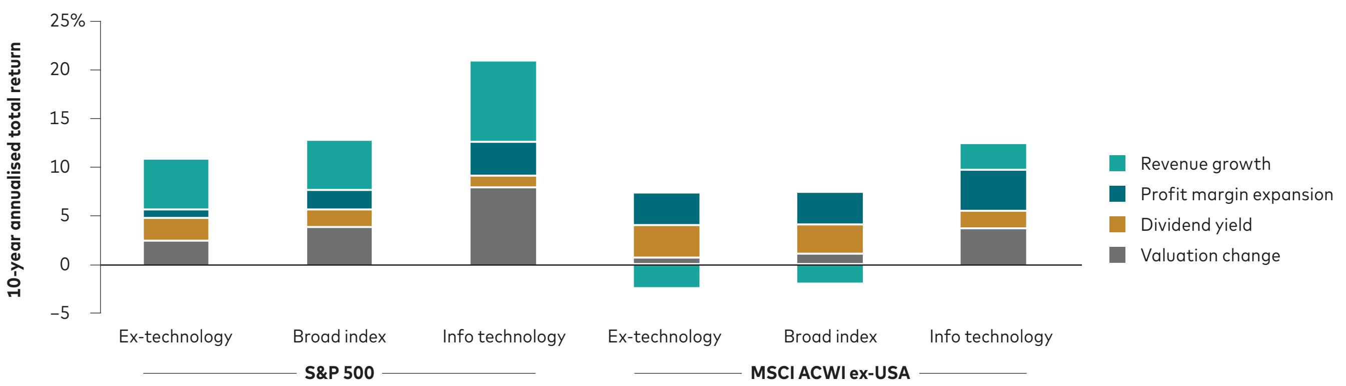
Here is the catch: replicating the past decade's stellar returns is not an easy feat—it would require unprecedented earnings growth or historically high valuations. But the time horizon matters. Over the short term, our analysis suggests that if economic growth and earnings hold up, US equities could sustain elevated valuations. However, as the horizon extends, growth and earnings impacts diminish, with valuations eventually dominating returns as a "fundamental gravity".

For these reasons, our 10-year outlook leans towards the US underperforming global ex-US equities. However, there remains a 30% probability that the US could still outperform over the long term, but by a narrower margin than in recent years.

The push and pull of policy shifts

Looking ahead, the challenge is that regions with the most attractive valuations are also most exposed to economic policy risks. EM and Europe have low valuations but are particularly vulnerable to US trade policy. A tug-of-war between tax cuts and tariffs will be key to reconciling near-term US equity earnings. This policy tension raises the prospect of an adverse economic development that may expose the current overvaluation of US equities.

Valuations, revenue and the technology sector drove US outperformance



Notes: The chart shows the component drivers behind the 10-year annualised returns between 30 September 2014 and 30 September 2024 for technology stocks versus the broad market and versus the broad market minus technology stocks–first for the US market and then for global ex-US markets. The drivers were P/E ratios (valuation change), dividend yield and earnings per share broken down by profit margin expansion and revenue growth. The following indices were used: Standard & Poor's 500 Index, S&P 500 Information Technology Sector Index, MSCI ACWI ex USA Total Return USD Index and MSCI ACWI ex USA Information Technology Total Return USD Index. **Past performance is no guarantee of future returns. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index.**

Sources: Vanguard calculations in USD, based on data from Bloomberg, as at 30 September 2024.

9 As measured by the S&P 500 Index, the MSCI ACWI ex USA Index and the MSCI UK Index, from 30 September 2014 to 30 September 2024. Vanguard calculations in GBP, based on data from Refinitiv, as at 8 November 2024.

Digging deeper into US equity overvaluation

Valuations have been a central theme driving equity returns over the past few years. The cyclically adjusted price/earnings (CAPE) ratio for the US equity market has been above our estimate of fair value since late 2020, aside from a brief sell-off in 2022. Market concentration and corporate interest rate-lock both support this trend. Both may support equity valuations in the near term. But there is growing tension between momentum and overvaluation.

Adjusting for these factors paints a less-severe picture of US overvaluation. The chart shows our "standard" fair-value CAPE estimate compared with an estimate factoring in the market concentration and lower cost of debt for large technology companies. This analysis suggests that valuations could be about 25% above fair value instead of 72% and that getting back to the new fair value would not require as much of a market correction.

Deconstructing US valuations

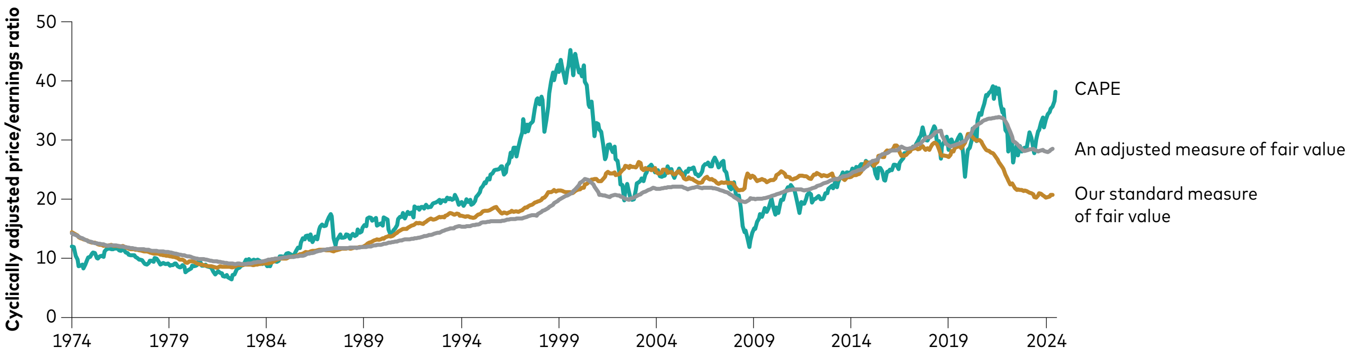
High market concentration means that several large growth companies are dominating the Standard & Poor's 500 Index (in fact, the six largest companies in the index currently account for about 30% of its overall market capitalisation). These companies benefit from competitive moats and winner-take-all business models that have translated into earnings resilience despite rising interest rates.

Large companies also took advantage of the low borrowing costs that prevailed before 2022 to protect their balance sheets from rising interest rates – a luxury that was not as easily available to non-US and smaller US companies.

Three paths forward for US returns

Moving forward, we see three possible scenarios for US equities. Firstly, a boom in productivity, akin to the mid-1990s, could continue to support large-cap and growth stock valuations and drive the market higher. Secondly, a shift towards lower rates and broadening growth could catalyse a rotation into undervalued factors such as value and small-cap. Finally, the current environment may be more analogous to 1999: an adverse economic development could expose the vulnerability of current stock market valuations and increase the odds of a market drawdown. While these risks will be important in the near term, we expect high valuations and stretched margins to be meaningful headwinds to US equity returns over the long term.

Fair value may not be that far away



Notes: The chart shows the CAPE ratio for US equities, measured by the MSCI USA Index until 30 April 2003, and the MSCI US Broad Market Index thereafter. It also depicts our "standard" fair-value estimate based on a statistical model considering interest rates and inflation, and an adjusted fair-value estimate taking into account the recent divergence between companies' after-tax cost of debt and market yields and the rising share of the technology sector in the overall equity index.

Sources: Vanguard calculations, based on data from Refinitiv, Bloomberg and Global Financial Data. Fair-value estimates as at 30 September 2024 and actual data as at 8 November 2024.

"Coupon wall" strengthens the case for bonds

Higher starting yields cushion bond returns while still allowing investors to take advantage of falling rates. This development, which we refer to as the "coupon wall", creates an asymmetric and favourable risk/return environment. The long-term case for bonds remains solid.

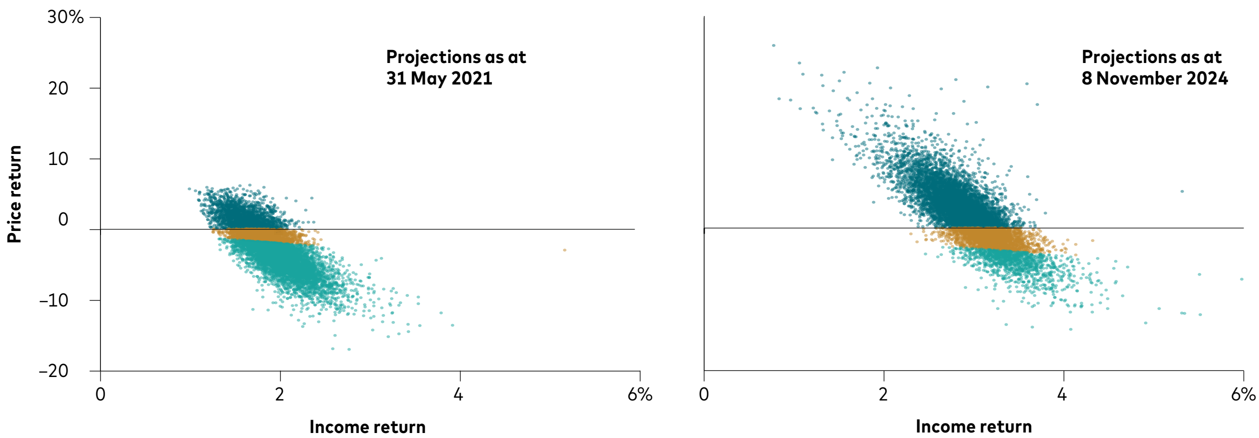
In the US, the Treasury yield curve is near our estimate of fair value that considers our baseline US economic view of strong productivity growth and a cautious Fed. We expect most of the yield curve to stay near current levels above 4% and for relatively high coupons to drive returns.

Similarly, in other developed markets, we expect long-term yields to remain elevated over the next decade as the era of sound money lives on – characterised by positive real interest rates and a higher neutral rate than during the 2010s. While this means that we do not forecast material price appreciation from falling yields, we continue to expect solid income returns to support global bonds.

Near-term risks to this view hinge on the balance of global growth and inflation dynamics. If inflation were to resurface, we believe yields across the curve would likely rise and the stock/bond correlation would turn positive as investors demand more compensation for uncertainty. Instead, if a significant shock to demand spurs a return to monetary easing or "flight to safety", bonds should provide a hedge in multi-asset portfolios.

We estimate an 88% probability that the Bloomberg Global Aggregate Index (Hedged) will provide a positive total return over the next year. Negative returns would result only if yields were to rise enough to breach the coupon wall and induce a capital loss that is larger than the income generated from coupons.

Starting yields are much higher than they were three years ago



	Net effect on total return	2021	2024
Positive price and income return	Positive total return	22%	63%
Negative price return and positive income return	Positive total return	21%	25%
Negative price return and positive income return	Negative total return	57%	12%

Notes: The two charts show the one-year-ahead price (y-axis) and income (x-axis) Vanguard Capital Markets Model (VCMM) return projections for the Bloomberg Global Aggregate Index GBP Hedged as at 31 May 2021 and 8 November 2024. The forecasts are sorted by positive price returns (interest rates fall) and two scenarios under negative price returns (interest rates rise): income returns from coupons offset price losses and income returns do not offset price losses, leading to negative total returns.

Sources: Vanguard calculations in GBP, based on data from Bloomberg, as at 31 May 2021 and 8 November 2024.

IMPORTANT: The projections and other information generated by the VCMM 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 modelled asset class. Simulations are as at 31 May 2021 and 8 November 2024. Results from the model may vary with each use and over time. For more information, please see page 22.

Emerging markets equities: Soft earnings growth dampens outlook

Investors looking to EM equities to bolster returns are likely to be disappointed in the near term. A soft earnings profile, driven by our underwhelming outlook for Chinese growth and coupled with our expectations for limited upside valuation potential, suggests muted return prospects.

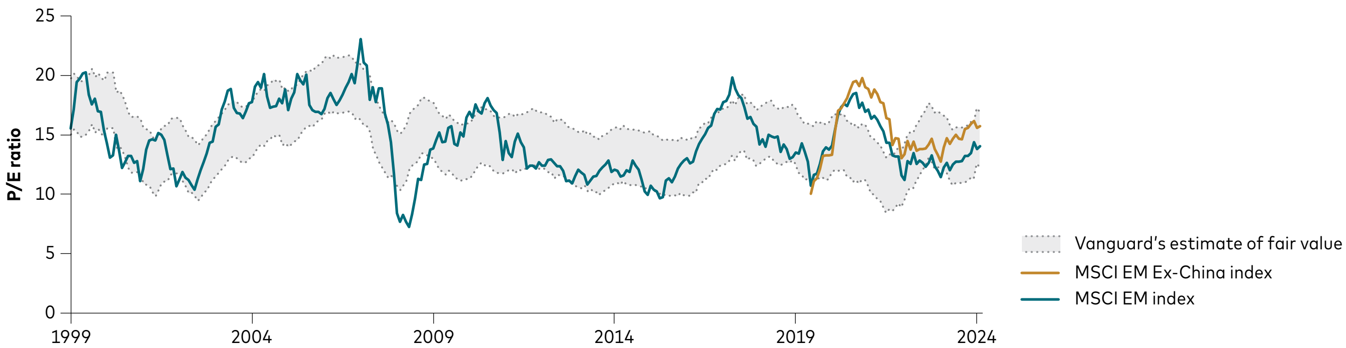
We expect corporate earnings growth within EM equities to be just 2.2% per year over the next decade. This is less than one-third of their 20-year historical average (7.2%) and about half of the earnings growth expected from the US stock market. Our subdued outlook is driven by the weaker-than-consensus view we have on economic growth in China, which accounts for 27% of the MSCI Emerging Markets Index.

Meanwhile, EM equity valuations have increased over the past year, driven in large part by expectations for stimulus in China in the second half of 2024. In our assessment, EM equity valuations are now "fair" rather than "undervalued" and even approaching "overvalued" when China is excluded. Continued US dollar strength and additional trade policy uncertainty could further limit the upside in EM returns in the near term.

What could cause us to change our mind? The main possibility is a China policy "bazooka" that significantly and sustainably raises earnings growth prospects for both the local market and broader EM. Another influence that could benefit EM over a longer time horizon is the ongoing reshaping of manufacturing supply chains. Some EM could benefit more than we expect if they are able to successfully position themselves as integral pieces of an evolving global trade network.

Despite the near-term risks, the long-term outlook for EM is reasonable relative to developed markets where valuations are more stretched. Furthermore, EM continue to bring diversification benefits to a global portfolio given their low correlation with the rest of the world.

EM equity valuations are within our fair-value range

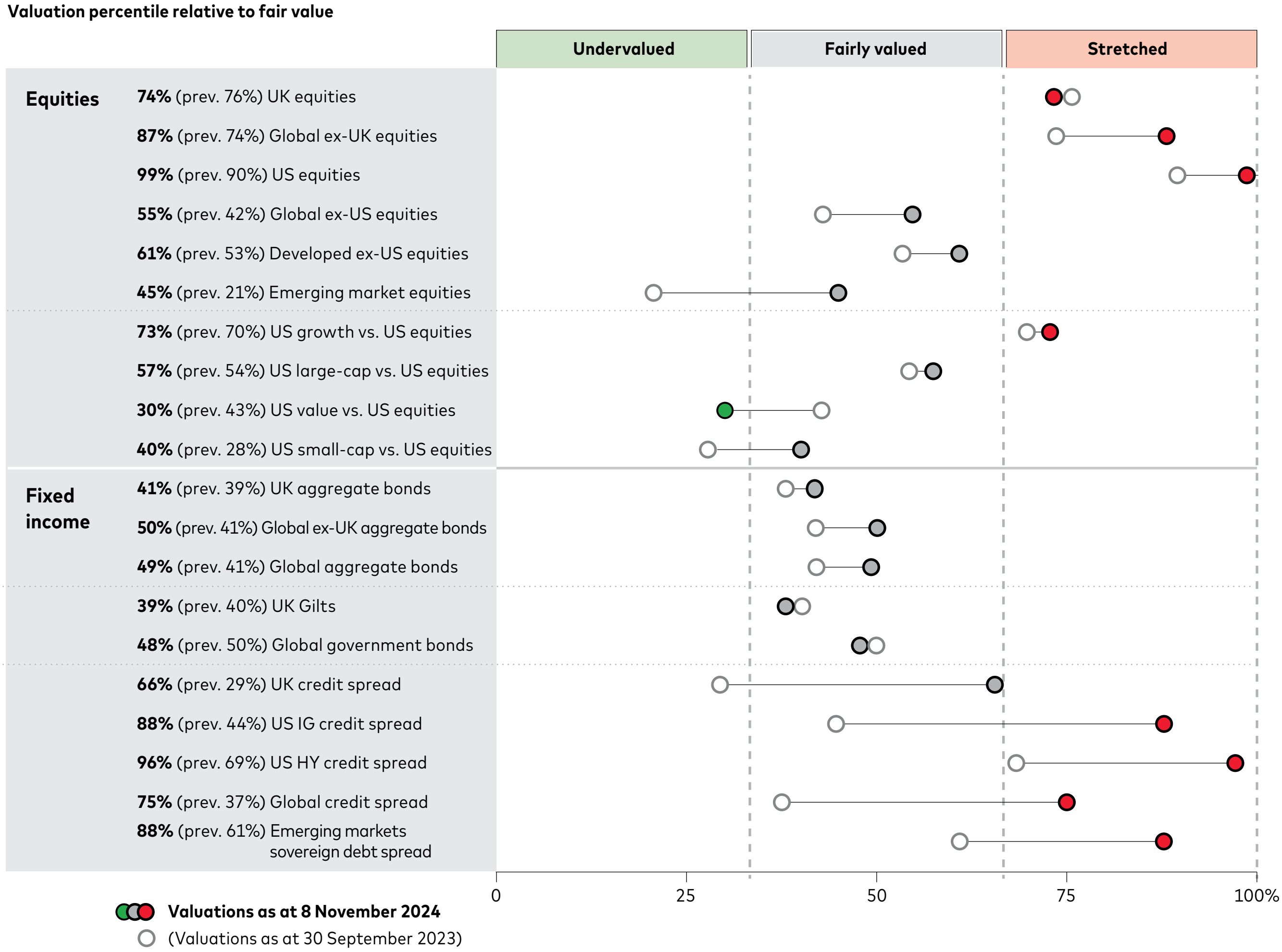


Notes: The price-to-earnings ratio reflects the price divided by the trailing 3-year average earnings for the MSCI Emerging Markets Index. Our fair-value estimate (the "predicted" value midway between the top and bottom of our fair-value range) is based on a statistical model where the inputs include EM inflation, EM policy rates minus the federal funds rate, Vanguard's Leading Economic Indicators for EM and the inflation-adjusted 2-year US Treasury yield.

Sources: Vanguard calculations, based on data from the Federal Reserve Bank of St. Louis FRED database and Bloomberg, as at 8 November 2024.

How stock and bond valuations have changed in the last year

Risk asset valuations are more stretched, but opportunities exist



Notes: The US and UK equity valuation measures are the current cyclically adjusted price/earnings ratio (CAPE) percentile relative to our fair-value CAPE estimates for the MSCI US Broad Market Index and the MSCI UK Index. The global, developed ex-US, global ex-US equity and global ex-UK equity valuation measures are the market-capitalisation-weighted CAPE percentiles relative to our fair-value CAPE estimate for the MSCI US Broad Market (global and global ex-UK only), MSCI EMU Index, MSCI UK Index (not in global ex-UK), MSCI Japan Index, MSCI Canada Index, MSCI Australia Index and the EM valuation measure (not in developed ex-US). The EM valuation measure is the price-to-trailing 3-year average earnings ratio percentile to our fair-value estimate for the MSCI Emerging Markets Index. Factor valuations are relative to US equities as the base at the 50th percentile. Growth, value and small-cap valuation measures are all based on the percentile rank based on our fair-value model relative to the market. The large-cap valuation measure is a composite valuation measure of the style factor to US relative valuations and the current US CAPE percentile relative to its fair-value CAPE.

Aggregate bond valuation measures are market-capitalisation-weighted averages of credit and government bond valuation percentiles. Government bond valuation percentiles are based on current yields relative to the VCMM simulation of equilibrium yields. Credit spread valuation measures are based on current spreads relative to the VCMM simulation of equilibrium spreads. Global and global ex-UK bond valuation measures are the market-capitalisation-weighted average of the US, euro area, the UK (not in global ex-UK), Japan, Canada and Australia bond valuation measures.

The valuation percentiles are as at 8 November 2024 and 30 September 2023.

Sources: Vanguard calculations, based on data from Robert Shiller's website at shillerdata.com/, the US Bureau of Labor Statistics, the Federal Reserve Board and Refinitiv, as at 8 November 2024.

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About the Vanguard Capital Markets Model

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. VCMM results will vary with each use and over time.

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 VCMM 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 VCMM 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.

The primary value of the VCMM is in its application to analysing potential client portfolios. VCMM asset-class forecasts—comprising distributions of expected returns, volatilities and correlations—are key to the evaluation of potential downside risks, various risk–return trade-offs and the diversification benefits of various asset classes. Although central tendencies are generated in any return distribution, Vanguard stresses that focusing on the full range of potential outcomes for the assets considered, such as the data presented in this paper, is the most effective way to use VCMM output.

The VCMM seeks to represent the uncertainty in the forecast by generating a wide range of potential outcomes. It is important to recognise that the VCMM does not impose "normality" on the return distributions, but rather is influenced by the so-called fat tails and skewness in the empirical distribution of modelled asset-class returns. Within the range of outcomes, individual experiences can be quite different, underscoring the varied nature of potential future paths. Indeed, this is a key reason why we approach asset-return outlooks in a distributional framework.

Indices for VCMM simulations

The long-term returns of our hypothetical portfolios are based on data for the appropriate market indices through to 8 November 2024. 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 indices are as follows:

- **US equities:** MSCI US Broad Market Index.
- **UK equities:** MSCI UK Index.
- **Global ex-UK equities:** MSCI All Country World ex UK Index.
- **Global ex-US equities:** MSCI All Country World ex USA Index.
- **Developed market ex-US equities:** MSCI World ex USA Index.
- **Developed market ex-US & ex-UK equities:** Market-capitalisation-weighted index of the MSCI EMU Index, the MSCI Japan Index, the MSCI Australia Index and the MSCI Canada Index.
- **EM equities:** MSCI Emerging Markets Index.
- **UK aggregate bonds:** Bloomberg Sterling Aggregate Bond Index.
- **Global ex-UK aggregate bonds:** Bloomberg Global Aggregate ex-Sterling Bond Index Sterling Hedged.
- **Global aggregate bonds:** Bloomberg Global Aggregate Bond Index Sterling Hedged.
- **UK government bonds:** Bloomberg Sterling Gilts Total Return Index.
- **Global government bonds:** Bloomberg Global Treasury Bond Index Sterling Hedged.
- **Global credit:** Bloomberg Global Aggregate—Corporates Sterling Hedged.
- **US investment grade credit:** Bloomberg US Credit Bond Index Sterling Hedged.
- **US high-yield corporate bonds:** Bloomberg US High Yield Bond Index Sterling Hedged.
- **UK credit:** Bloomberg Sterling Aggregate—Credit Bond Index.
- **EM sovereign debt:** Bloomberg Emerging Markets USD Sovereign Bond Index—10% Country Capped Sterling Hedged.

All equity indices below are weighted by market capitalisation:

- **US small-cap:** Stocks with a market cap in the lowest two-thirds of the Russell 3000 Index.
- **US large-cap:** Stocks with a market cap in the highest one-third of the Russell 1000 Index.
- **US growth:** Stocks with a price/book ratio in the highest one-third of the Russell 1000 Index.
- **US value:** Stocks with a price/book ratio in the lowest one-third of the Russell 1000 Index.

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