

RATHBONES

Investment Insights

Our monthly look at what's driving global markets

Seasonal scares
We consider ways of coping with investment risk

Pharma's changing formula
New treatments and AI offer hope amid pricing and patent pressures

Made in Japan
The country has much to offer in the age of AI

Issue 60 | November 2026

Quick take
In this month's issue

Seasonal scares
We consider ways of coping with investment risk

Global markets remain influenced by the Iran War, AI investment, and monetary policy, with balanced portfolios little changed in October.

Government bonds recovered as investors reassessed their defensive qualities, although persistent inflation and large fiscal deficits remain concerns.

The prolonged Iran conflict continues to threaten energy supplies and fuel inflation, complicating central banks' decisions on interest rates.

AI investment remains a powerful driver of growth, but questions are mounting, including whether future revenues will justify the spending.

Against this uncertain backdrop, diversification remains essential, with broad exposure to AI opportunities, inflation-linked bonds, and other assets.

Read the full story on page 3.

Pharma's changing formula
New treatments and AI offer hope amid pricing and patent pressures

The pharmaceutical sector offers long-term growth potential, supported by ageing populations, rising rates of chronic disease, and medical advances.

Breakthrough treatments for cancer, obesity, and other conditions offer opportunities, although growth is concentrated in a handful of blockbuster medicines.

AI could transform drug discovery, helping companies reduce development costs, improve success rates, and bring new treatments to market more efficiently.

However, pressure to make medicines more affordable and the expiry of patents on major drugs present significant challenges for the industry.

For investors, careful stock selection remains essential, favouring firms with strong drug pipelines, competitive advantages, and sustainable growth prospects.

Read the full story on page 5.



Made in Japan
The country has much to offer in the age of AI

This month's cover shows a humanoid robot serving sushi, highlighting Japan's expertise in automation and the country's growing importance in the age of AI.

An ageing population and shrinking workforce have encouraged Japanese companies to develop technologies that improve productivity, efficiency, and energy use.

Japan is a global leader in industrial robotics, precision manufacturing, and semiconductor equipment – technologies that are increasingly important to the AI revolution.

Corporate governance reforms are also encouraging companies to improve returns, invest capital more effectively, and reward shareholders.

For investors, Japan offers opportunities in businesses with specialist expertise, strong competitive advantages, and the ability to benefit from long-term technological change.

Read the full story on page 7.

Snapshot
The global economy and markets

Key facts and figures from around the world, including Isaac Newton's costly lesson in market speculation, a sharp fall in Alphabet's value, weak UK income growth, and rising French bond yields. Also features political uncertainty in Brazil and longer-term trends across global equities, bonds, and commodities.

Find out more on page 9.

This information reflects our general views and should not be taken as a recommendation or advice as to how any specific market is likely to perform. The value of investments can go down as well as up and you could get back less than you invested.

Seasonal scares
We consider ways of coping with investment risk



John Wyn-Evans, Head of Market Analysis

Investors are focused on three key global themes: AI, the Iran War, and monetary policy. All are interconnected. Many market commentators and strategists attempt to isolate a single factor when attributing market moves, but, in reality, the right box to tick is often the one saying "all of the above".

One key shift during October was the rehabilitation of government bond markets. Yields fell back (meaning that prices rose) as investors re-evaluated their 'safe haven' properties amid rising concerns about the sustainability of the AI capital spending (capex) trade (figure 1.1).

There was also evidence that forced selling of bonds had pushed yields too high, at least for the current environment. Even so, with inflation remaining sticky at elevated levels and fiscal deficits still an issue, it feels premature to signal an 'all clear' for bonds.

One issue that was resolved was the UK Budget. Chancellor John Healey displayed the hoped-for safe pair of hands, and the market impact was limited. But difficult, and potentially highly unpopular, decisions about spending cuts lie ahead.

Figure 1.1: Passing a peak
10-year government bond yields have fallen back as investors re-evaluate their safe-haven properties.



Source: LSEG, Rathbones

Overall, balanced portfolios were little changed over the month as investors rotated within markets rather than making a wholesale exit. This was supported by a strong start to the third-quarter corporate reporting season.

Iran – no resolution
With the Iran War in its ninth month, there's a diplomatic impasse. Our game theory approach to the situation maintained that both sides would ultimately discover their pain thresholds and reach an agreement. The fact that this has not materialised before the US mid-terms is a worry. Speculation abounds that military re-escalation could follow the election, particularly now that the Democrats have gained control of both houses of Congress.

Meanwhile, the global economy has held up far better than expected, given the rising cost of energy and related commodities (figure 1.2). Much of this has to do with AI-related spending in the private sector and fiscal support in the public sector. Suppliers and consumers have played their part, too. New routes have been found to export oil from the Middle East, and strategic reserves have been tapped.

Even so, there is only so much capacity in these reserves – and those of the US are falling towards the level where further releases would compromise the structural integrity of the vast caverns in which oil is stored.

A resolution to the Iran War could be the single most positive driver of equities at this stage, especially if accompanied by a ceasefire in Ukraine. Unfortunately, neither can be relied upon, so we need to invest accordingly. This includes maintaining allocations to inflation-linked government bonds, as we help you invest well to live well.

> "A resolution to the Iran War could be the single most positive driver of equities at this stage."

Inflation and interest rates

The global economy is much less energy-intensive than 50 years ago: it uses about a third as much per unit of output. But fuel costs still play a strong role in driving inflation. The headline rate of UK consumer price inflation has risen to 3.5%.

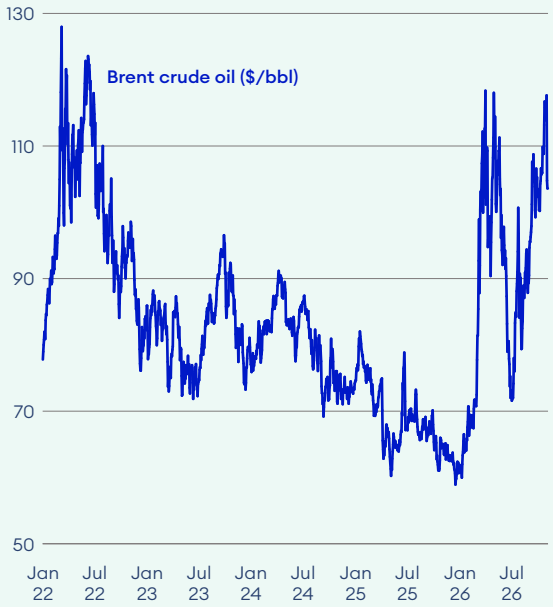
Central banks want to head off the risk of higher inflation setting off a vicious circle of higher wage demands and even higher prices to accommodate them. But policymakers are aware of the depressing effect that elevated energy prices have on consumption in the rest of the economy. There's evidence that across the world, consumers are putting off consumption of durable goods as consumer prices rise – a possible drag on growth. This calls for a more measured approach.

The US Federal Reserve (Fed) has so far increased the Fed funds rate by 0.25 percentage points, taking the upper bound from 3.75% to 4%. Market expectations are for more increases.

The Bank of England is expected to raise the base rate by 0.25 percentage points to 4% in November. The market is pricing in as many as four quarter-point increases by September 2027, taking the base rate to 4.75%. A lot will depend on energy prices over that period, but, in our opinion, that looks too high.

Still, we acknowledge that more central banks around the world are currently raising interest rates than at any time since 2022. This raises a risk that the higher cost of capital will begin to weigh on economic activity.

Figure 1.2: Oil roiled
But the Iran War hasn't pushed the price of crude oil up to its Ukraine War high.



Source: LSEG, Rathbones

> "We acknowledge that more central banks around the world are currently raising interest rates than at any time since 2022."

AI – more questions than answers

A lot of questions are being asked about the future of AI. More immediately, there are at least three major concerns for investors.

First, will capital be available to sustain the investment boom? The US hyperscalers, the companies building data centres, maintained their spending projections during the latest results season. These total more than $1tn a year for the next three years. But with interest rates and bond yields rising, the costs are rising too. There's also considerable competition for funds from governments, which continue to run fiscal deficits. Weaker players could be squeezed out.

Second, are there roadblocks ahead to development? These might include insufficient power or raw material supplies. Having gained control of Congress, Democratic politicians may seek to apply the brakes to AI expansion.

Third, there's the question of returns. Will enough users spend enough money to justify the expense of both developing the frontier models and providing the computing power to use them?

A recent paper by Stijn van Nieuwerburgh, a Professor of Finance at Columbia Business School in New York, casts doubt on the outcome. By his calculations, this fledgling industry will have to be generating annual revenue of $3.5tn by 2032 to make a (still slightly underwhelming) 10% return on capital. That's equivalent to around 8.5% of US GDP. That's just for the US players.

We still see AI as a paradigm-shifting technology, enhancing productivity in ways that we cannot even currently imagine. Even so, we're cognisant of the risks and are spreading our exposure broadly across hyperscalers, chip manufacturers, and 'picks and shovels' suppliers, as well as investing in companies that might benefit from adoption. The healthcare industry, for example, is a potential winner.

We also eschew the more highly leveraged companies that are almost solely reliant on increasing amounts of debt to fund their ambitions. In the AI space, these are the so-called 'neoclouds'. We maintain allocations to government bonds as a counterweight to the risk that AI-related growth disappoints.

Pharma's changing formula
New treatments and AI offer hope amid pricing and patent pressures



Ozge Brinkworth, Equity Analyst

The pharmaceutical industry's outlook is less miracle cure and more complicated course of treatment. Breakthroughs in cancer therapies, precision medicine, and obesity treatments could reshape public health, but rising costs are intensifying the debate over affordability, healthcare budgets, and who ultimately pays for innovation.

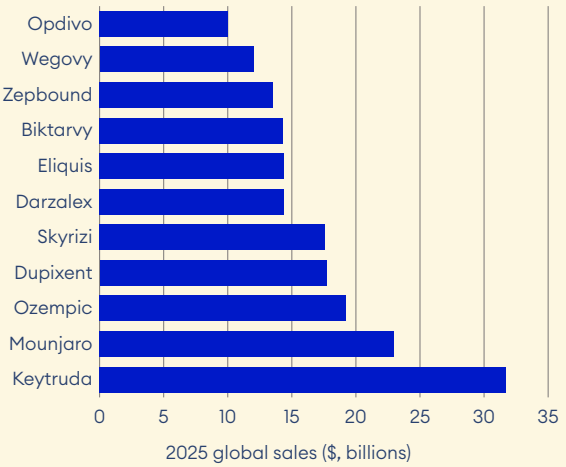
The sector's long-term prognosis remains healthy, though future winners will be determined as much by economics and policy as by scientific discovery.

Blockbuster medicines: a concentrated dose

Global pharmaceutical sales are approaching $2tn and are expected to continue growing at a mid-to-high single-digit rate over the coming years. Sales are supported by ageing populations, rising rates of chronic disease, and expanding access to healthcare in emerging markets.

This is a slightly more moderate pace than in recent years, when growth was boosted by the pandemic and the emergence of GLP-1 therapies, which regulate blood sugar and appetite. Even so, the sector is still expanding faster than its historical average.

Figure 2.1: A healthy dose of sales
The world's biggest-selling medicines generated billions of dollars in revenue in 2025.



Source: Drug Discovery & Development, Rathbones

Growth is increasingly concentrated in a handful of lucrative therapeutic areas and their leading brands. Firms that successfully develop and commercialise these mega-blockbuster medicines can reap large rewards, with sales reaching several billion dollars. This concentration also increases the importance of individual product cycles, competitive positioning and patent protection (which gives a company the exclusive right to sell a medicine for a set period).

Consequently, stock selection is more important than ever, since companies vary widely in the quality of their drug pipelines, competitive positioning, and patent durability.

Drug innovation: raising the bar

Approvals from health regulators have risen significantly over the past decade, and scientific progress continues to expand the range of diseases that can be treated effectively. New treatment approaches include:

- Antibody-drug conjugates, which use antibodies to deliver drugs to targeted cells
- Radioligand therapies, which deliver radiation to specific diseased cells
- Cell and gene therapies
- Next-generation obesity medicines

Together, these treatments are helping address significant unmet medical needs, where existing options are inadequate or unavailable.

Drug discovery: can AI beat the odds?

AI could transform the pace and scale of innovation in the sector. The economics of pharmaceutical research help explain both the sector's high returns and the controversy surrounding its prices.

Developing a drug takes 10 to 15 years and around $1bn of investment, on average. If we include the cost of failures, the average investment is closer to $2.5bn.

Improving this process, even a little, can create enormous economic value because of the wastage at every stage. Only one or two of every 10,000 substances tested as possible medicines eventually reach the market. Of those that progress to testing on

people, only one in ten receives approval. These clinical trials account for half of the industry's substantial research and development investment, with Phase III studies (the large-scale final stage of testing before approval) alone accounting for about a quarter.

AI is already influencing several stages of the development process. Researchers are using advanced computer models to identify disease targets, analyse genetic data and interrogate scientific literature at a speed impossible through traditional methods alone. AI tools are helping design and optimise molecules with desirable properties. Predictive systems are being developed to identify potential safety risks before compounds enter expensive human studies.

One challenge AI cannot yet overcome is pharmacokinetics: how a medicine moves through, is broken down by, and leaves the body. Time-based toxicology studies, which assess whether a potential medicine could cause harm, and pharmacokinetic testing in early human trials are therefore still needed before drugs can safely progress to late-stage trials.

If AI can improve clinical trial success rates, reduce the number of failed development programmes or shorten timelines to approval, the impact on industry returns could be substantial. Given the time and money involved in pharmaceutical research and development, even modest improvements in efficiency can lead to meaningful gains in productivity.

Drug pricing: the bitter pill

Scientific progress alone does not guarantee commercial success. The central challenge facing the industry is affordability. Healthcare systems around the world are struggling to balance growing demand from ageing populations for innovative medicines against limited budgets.

The debate over drug pricing has become one of the most important influences on investors' valuations of pharmaceutical companies. For more than a decade, concerns over potential drug pricing reform in the US, cutting the prices companies would be able to charge, have weighed on the pharmaceutical sector. The US remains the world's largest pharmaceutical market, accounting for more than half of global drug sales.

Recent policy developments have made the picture clearer. These include negotiations over the prices paid by the US Medicare public health insurance programme. They also encompass revised pricing frameworks under 'most-favoured-nation' deals, which are agreements between the US government and drug manufacturers. Greater clarity over US policy has supported the sector's strong performance, but drug pricing remains a key risk for investors to monitor as rising healthcare costs keep the issue high on the US political agenda.

Figure 2.2: Pharma's five-year cliffhanger
Major drugmakers face the loss of patent protection on some of their biggest sellers by 2030.

Drug	Company	Major patent expiry or loss of exclusivity	Expected sales, year before expiry	Portfolio contribution (% of revenue)
Keytruda	Merck	Dec 2028	$32.6bn	53%
Darzalex	J&J	May 2029	$17.8bn	27%
Eliquis	Bristol Myers Squibb	Nov 2026	$14.3bn	31%
Jardiance	Boehringer Ingelheim	Aug 2028	$11.8bn	51%
Ocrevus	Roche	Mar 2029	$9.9bn	15%
Opdivo	Bristol Myers Squibb	Dec 2028	$9.2bn	22%
Vabysmo	Roche	Mar 2030	$8.9bn	13%
Cosentyx	Novartis	Dec 2029	$8.3bn	14%
Gardasil 9	Merck	Jun 2028	$6.8bn	11%
Prevnar 13	Pfizer	Dec 2026	$6.4bn	13%

Source: Evaluate, Rathbones

Patent cliffs: expiry looms

Another key consideration for investors is patent expiry. When several blockbuster medicines lose patent protection at around the same time, revenues can fall sharply as cheaper competitors enter the market. These periods, known as patent cliffs, increase reliance on drugs in development and new product launches to sustain industry growth.

In the next five years, some of the world's largest medicines will lose patent protection. These include the cancer immunotherapies Keytruda and Opdivo, the GLP-1 medicine semaglutide, sold as Ozempic for diabetes and Wegovy for obesity, and the immunology drug Dupixent. Despite this heavy schedule of patent expiries, industry sales look set to continue growing as new drugs replace those losing protection.

Pick your prescription carefully

Overall, the sector offers compelling long-term potential. Demand has strong structural drivers, scientific innovation is accelerating and AI could greatly improve the economics of drug development.

Although pharma is being influenced by AI, like almost every industry, it remains a defensive sector, which tends to hold up better when stock markets are falling. This means it could provide some diversification from the AI trade, which has left portfolios heavily exposed to the fortunes of technology companies.

But while the sector offers strong opportunities, the growth profiles of individual companies vary greatly, depending on their degree of innovation and exposure to patent expiries. That makes careful stock selection increasingly important because poor returns would be a bitter pill to swallow.

Made in Japan
The country has much to offer in the age of AI



Saif Sajid, Collectives Analyst, and Alex Waters, Head of Asset Allocation

Japan's image is often futuristic: visitors encounter talking toilets, conveyor-belt sushi, and vending machines proffering almost everything.

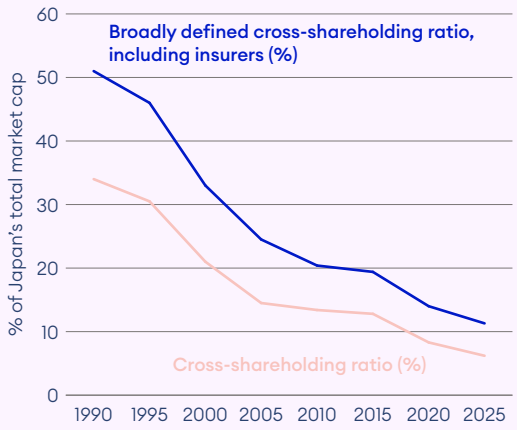
Beyond such curiosities lies an important investment story. Japan's shrinking workforce has forced its companies to use technology to solve problems that many developed economies are only now starting to confront: too few workers and the need to produce more with less.

Close to three in ten people are aged 65-plus, and the population has fallen for 14 straight years. That is a drag on domestic economic growth. But it has also created an unusually demanding home market for automation, precision manufacturing, and energy efficiency. In the age of AI, that experience is becoming more valuable, not less.

Robots: doing the jobs no one is left to do

Japan has one of the world's largest industrial robotics markets. The next opportunity is not simply to install more robots, but to make them useful in less predictable settings. For example, Fanuc is combining its motion-control expertise with Nvidia's simulation and physical-AI technology, including tests of 'imitation learning', in which robots learn movements and visual information from skilled workers. Physical AI broadens what robots can do; Japan already controls important parts of the machinery that will turn that advance into practical use.

Figure 3.1: It's good to unwind
Cross-shareholdings, where a large part of a company is owned by other companies, have been falling for decades.



Source: Nomura Institute of Capital Markets Research, compiled by JPX, Rathbones

The opportunity extends beyond the robot. Leaks, excess pressure, and idle machinery waste energy in factories. SMC's air-management pneumatic systems monitor flow, pressure, and temperature, then reduce supply during standby periods.

Fanuc and SMC capture two sides of the same structural need for improved efficiency: more flexible automation and lower running costs.

There are threats. Notably, Chinese competitors gained ground in their domestic industrial robot market in 2024, so Japan cannot rely on reputation alone. But Japanese companies often enjoy a durable advantage in continuous improvement, service, and system integration.

AI's less obvious beneficiaries

AI offers another example of Japan's importance further down the supply chain. More powerful chips require increasingly complex manufacturing. Tokyo Electron's 3D-integration technology facilitates the precise combination of logic and memory, increasing the processing power and speed of chips. It also lowers power consumption. Japan may not build the world's leading consumer AI model, but companies such as Tokyo Electron help make the chips on which those models depend.

The AI opportunity is partly cyclical. Semiconductor capital spending can be lumpy and expectations are high. The key, for investors, is to separate businesses benefiting from the rising complexity of chip manufacturing from those relying mainly on the next upswing in spending. This is where Japan comes into play, since it has companies grappling with this complexity.

Japanese companies also have much to offer the world in climate technology. For example, they have expertise in the use of hydrogen and ammonia as low-carbon sources of electricity.

Corporate Japan also has technologies that help enable a greener global economy to operate. For example, Hitachi Energy is a global leader in smart grid technology. Without such systems, power grids could become unstable when sudden changes in wind power threaten to upset the essential balance between power in and power out.

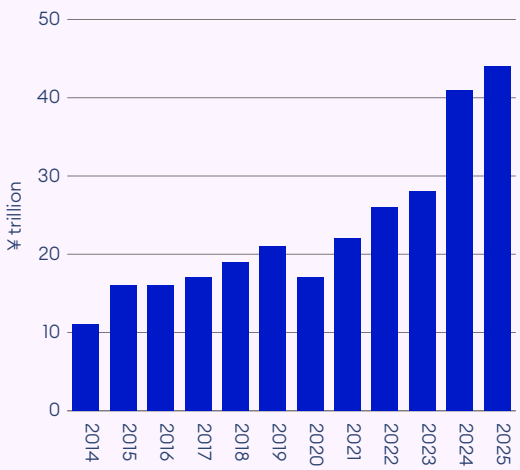
Rewiring the boardroom

These technologies become more valuable when management allocates capital well – towards promising opportunities and away from low-returning divisions. Governance reform encourages this – the Tokyo Stock Exchange has pushed companies to improve returns. Meanwhile, cross-shareholdings, where different companies hold stakes in each other, creating a base of undemanding shareholders, continue to be unwound (figure 3.1).

Better boards, clearer return targets, and greater pressure on low-return assets can change how companies invest and return cash. Japanese shareholder returns have risen every year since 2020. But the next phase of Japanese shareholder capitalism should be judged less by the number of buyback announcements and more by whether companies can lift future returns on capital.

The stronger opportunity may lie with companies that reinvest released capital at higher returns, while also improving cash returns to shareholders. Meanwhile, in a world of increasing debt, Japan's low-debt balance sheets stand as a welcome anomaly.

Figure 3.2: Many happy returns
Japan's shareholder returns keep climbing.



Source: JPX, Ichiyoshi Securities, SBI Okasan Securities, Bloomberg, Rathbones. The biggest source of shareholder returns is dividends, followed by share buybacks.

Digging the moat

When considering which companies can create a moat to defend against competition, investors must look for those that offer precision manufacturing, intellectual property, tailor-made solutions for clients' factories, and manufacturing know-how.

Ironically, Japan's increasingly elderly population has forced its companies to become good at the modern technologies of today's brave new world. That's why Japan is so interesting to investors.

Land of the rising price

Japan's inflation is, overall, home-grown. Higher costs for food, materials, and labour are contributing to rising prices. Wages have been rising because a tighter labour market is giving workers more bargaining power. This has made it politically and socially acceptable for companies to raise prices because workers are more able to afford them. Yen weakness is also raising import prices. Both headline and core consumer price inflation are sitting below the Bank of Japan's 2% inflation target.

However, there's a risk of higher inflation. This is partly because higher wages could increase the cost of services – a much more labour-intensive sector than manufacturing. With a relatively strong economy and inflationary pressures mounting both domestically and externally, the Bank of Japan increased its policy rate for a second time in 2026 at its September meeting, to 1.25%. The market now expects further – and faster – rate hikes to suppress inflation.

Households and businesses have been shielded from the energy price increase by the petrol price cap. The recently approved VAT cut on food and drink from 8% to 1%, due in April, will further support consumption and remove some of the supply-side inflationary pressures. Premier Sanae Takaichi's expansionary fiscal policy – both spending increases and tax cuts – continues to support the domestic outlook.

Japan's manufacturing sector, particularly machinery related to semiconductors, has been a big beneficiary of the AI boom. This is why Japan's equity markets have been among the best-performing in 2026. However, spillovers to the wider economy have so far been limited.

The healthy economic conditions are reflected in surveys of economic sentiment. For example, the quarterly Tankan survey of business conditions recently rose to a 35-year high, bolstered by manufacturing and non-manufacturing alike.

Snapshot
The global economy and markets

Figure of the month



£20,000

Roughly what Sir Isaac Newton is said to have lost in the South Sea Bubble of 1720, worth £3.7m today. He sold early at a profit, then bought back in near the top. Even geniuses can fall for the fear of missing out – a lesson that still holds for investors today.

At a glance

$0.5tn
Fall in Alphabet's market cap on 29 Oct

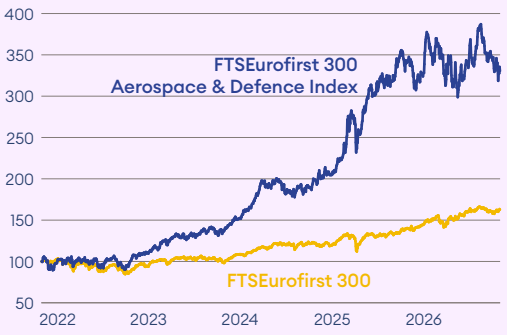
5%
French 10-year bond yield, the highest since 2002

1%
Forecast total increase in UK real disposable income a decade after the pandemic (OBR)

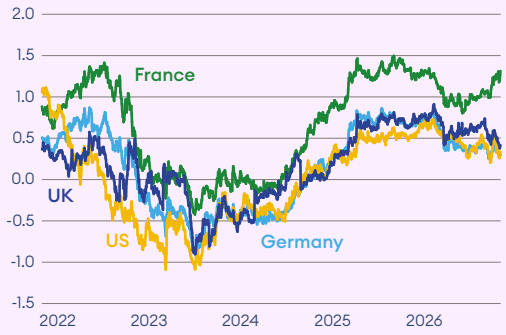
13.9%
Fall in Brazilian stocks after presidential election

Key market indicators

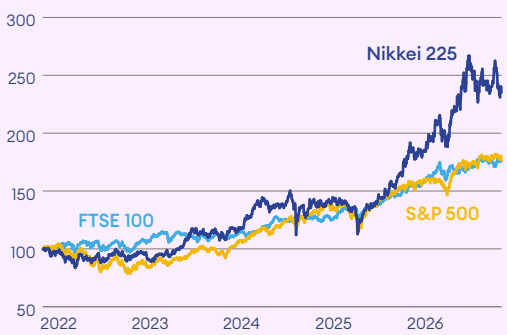
Equities
Total return in local currencies (1 Nov 2021 = 100)



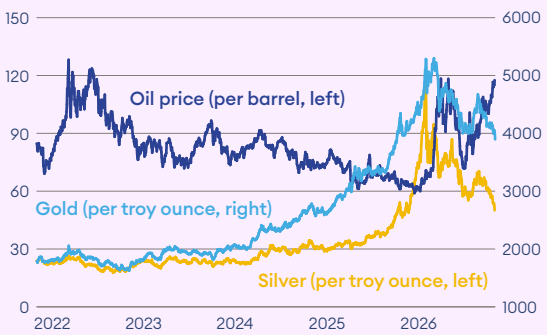
Government bonds
Difference between 2- and 10-year yields (%)



Equities
Total return in local currencies (1 Nov 2021 = 100)



Commodities
Oil, gold, and silver prices in US dollars



Sources: FactSet, LSEG, Rathbones. Past performance is not a reliable indicator of future performance.

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Knowledge and insight

Alongside this monthly *Investment Insights* publication, we share a wide range of updates and analysis, from regular strategy commentary and video briefings to in-depth reports, all designed to help you understand what's driving the global economy, financial markets, and the outlook for investment returns. To explore more, visit www.rathbones.com/en-gb/wealth-management/knowledge-and-insight



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What does the 2026 UK Autumn Budget mean for the economy?
Read our update and see our slideshow on what's holding back economic growth.



The world is growing older. *The longevity economy* looks at the wider economic challenges, and the risks and opportunities in four sectors in which we invest: property, healthcare, must-have consumer goods, and nice-to-have consumer goods. Please also see our slideshow.

Experience and expertise
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You can access this expertise in a range of ways, from fully bespoke discretionary portfolios to ready-made multi-asset funds, tax-efficient investment strategies, and specialist services for complex needs. To find out more and for details of your local office, visit www.rathbones.com/en-gb/wealth-management/contact-us



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