

February 2025

Capital market assumptions

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Modest decline in equity and bond estimates

- Our **2025 capital market assumptions** (CMAs) are lower across stocks and bonds relative to last year. The outsized returns on equities over the past two years, increasing markets concentration and high stock valuations give us pause. Return expectations for fixed income are also slightly lower relative to last year.
- The **geopolitical landscape** has shifted with elections having been held in about 70 countries in 2024. Several incumbents were replaced, including in the US and the UK. Regimes in a few of the major European economies are also in flux. Even so, overall prospects for economic growth around the world remain healthy.
- Most **major global central banks** have started to ease monetary policy. Amid softening inflationary pressures, authorities have shifted their focus to supporting growth. Our assumptions for **economic growth** and **inflation** across developed and emerging markets remain largely intact.
- We expect the **US dollar** to depreciate against a broad basket of currencies, but we have marked down the pace of that depreciation relative to last year due to wider differentials on productivity between the US and other countries.
- We expect a 6.3% annualised return for **US equities**, supported by estimates of earnings growth driven by a high degree of innovation and productivity gains. Stretched valuations and market concentration remain areas to watch.
- **Europe (including UK)** and **Japanese equities** have better valuation support and higher dividend yields relative to the US, although a more gradual US dollar depreciation translates into lesser currency support for USD-based investors. We have slightly lowered our estimates for Europe ex-UK equities to 5.7%, with UK falling to 6.5% and Japan to 7.0%.
- While our assumptions for **emerging markets equities** remain high at 6.8%, the asset class is expected to have reduced support from valuations and currencies.
- **Most fixed income return expectations** have decreased slightly relative to last year as starting yields are modestly lower across rates and credit markets globally (as of 30 September 2024) and spreads have experienced meaningful compression. Central banks have made good progress at mitigating and reversing inflationary trends. We expect higher interest rates to persist across major markets amid relatively robust economic growth. Record issuance of US Treasuries, a growing public debt burden and a shift to more price sensitive buyers of Treasuries can also put upward pressure on yields.
- Our CMAs are over a 20-year horizon and all in USD terms. We believe return opportunities in fixed income over the coming two decades will be higher than what was realized over the prior 20 years, while our expectations for global equities are lower relative to the returns of the prior two decades.
- Overall, the **outlook** is still bright for long-term investors, with return expectations for stocks in the mid- to high-single digits and for bonds in the low- to mid-single digits.

Economic commentary

- The **geopolitical landscape has shifted with elections** having been held in about 70 countries in 2024. Several incumbents were replaced, including in the US and UK, multiple regimes in major European economies are in flux, and tensions related to global trade make for a fluid political environment.
- Most **major global central banks** have started to **ease monetary policy**, even as the pace of that easing varies across markets. These rate cuts aim to support growth amid easing inflationary pressures. Markets anticipate further rate cuts across many developed and emerging markets.
- Our assumptions for **economic growth** and **inflation** across **developed and emerging markets** are similar relative to last year. We expect average annualised real gross domestic product (GDP) of 2% for developed markets (DM) over the coming 20 years, 1.4% for non-US developed markets (DM ex-US) and 3.2% for emerging markets (EM). Estimates for US real GDP growth is unchanged at 2.3%, with productivity becoming a larger engine for growth. We believe the US will remain a dominant engine of global growth.
- An uptick in **capital expenditure**, especially in developed markets, the deepening of capital markets, productivity enhancements from artificial intelligence (AI) and a broader adoption of digitisation across the world are expected to support growth in both developed and emerging markets. On the other hand, declining fertility rates worldwide are likely to provide a headwind for growth as will declining immigration in developed economies.

US economic growth continues to outpace peers

	Long-term real GDP estimates (%)		Long-term inflation estimates (%)	
	2025	2024	2025	2024
United States	2.3	2.3	2.3	2.3
Emerging markets	3.2	3.0	2.4	2.4
Japan	0.8	0.5	1.8	1.5
Eurozone	1.3	1.3	2.0	2.0
United Kingdom	1.3	1.0	2.3	2.3

Source: Capital Group. Estimates as of 30 September 2024.

Economic commentary

- Our **inflation forecasts** are largely unchanged from last year, and lower than their long-term historical averages.
- Our **US inflation** forecast is unchanged at 2.25% for the consumer price index (CPI), as is eurozone inflation at 2%. Central banks have largely reaffirmed their ability to bring inflation back toward target although the prospect of increased trade tensions and tariffs might provide a new challenge in the quest for price stability.
- Within the **eurozone**, structurally tighter labour markets and looser fiscal policy are expected to keep trend inflation from falling below 2%, consistent with last year's forecast and above the pre-pandemic average. Our forecast is also unchanged from last year for the UK, where the Brexit supply shock and looser fiscal policy could keep inflation above pre-pandemic levels at 2.25%.
- **Japan's** inflation forecast has increased 25 bps to 1.75% to reflect the realities of labour shortages driving inflation through wage pressures. Companies are increasingly willing to raise pay, and workers are demanding higher wages, with consumers more willing to accept higher prices. In aggregate, long-term inflation expectations for **emerging markets** are 2.4% similar to last year.
- We are encouraged by recent monetary policy action and believe **most central banks** will succeed in achieving their **inflation goals** over time. That said, inflation risks remain tilted to the upside. In addition to trade tensions, tight labor markets, the energy transition and potential geopolitical flare-ups could all keep inflation above target for some time.
- The new administration in Washington has put out an **aggressive policy agenda**. The positive impact of a potential boost in fiscal spending, corporate tax cuts and reduced regulatory burden should be supportive while higher tariffs, reduced immigration and higher inflation present a counterbalance.
- Many **developed and emerging economies**, such as the US, Japan and China, are grappling with **high debt and large fiscal deficits**. Without substantial efforts to increase revenues and implement expenditure cuts, these nations risk heightened vulnerabilities to debt and financial repression (policies aimed at keeping a lid on interest rates to finance public debt). This is especially true in an environment where interest rates remain elevated, which in turn worsen public debt dynamics and increase the urgency of fiscal restraint.
- **Eurozone economic growth** prospects remain subdued with our estimates unchanged at 1.25%. The components of growth have changed slightly, with labour force growth increased, while productivity was lowered. The productivity revision widens the gap with the US, influenced by our views on de-industrialisation in parts of Europe, limited capacity for fiscal stimulus and policy challenges toward progress on the EU reform agenda. Persistently tight labour markets and loose fiscal policy are expected to keep trend inflation from falling below 2%.
- Our estimate for the **United Kingdom's growth rate** has increased by 25 bps to 1.25% due to stronger-than-expected migration flows post-Brexit. As such, labour force growth was also raised, reflecting the belief that migration will offset challenges stemming from low fertility rates.

Economic commentary

- **Japan's expected real GDP growth** was increased by 25 bps to 0.75%, reflecting the assumption that firms will be forced to make efficiency gains due to continued labour shortages. These shortages are driving inflation and wage pressures but also pushing companies to enhance operational efficiencies, boosting productivity through digitisation and the creation of nimble startups. The Tokyo Stock Exchange's focus on improving return on invested capital (ROIC) and return on equity (ROE) among its constituents is also expected to further support productivity gains and GDP growth in the coming decades.
- The **Australian growth** forecast has been reduced by 25 bps to 2%, reflecting a downgrade in expected inward migration due to political pressures. On the other hand, capital expenditure is projected to have higher growth. This upgrade comes on the back of an increase in expected investments in transport, utilities and telecom infrastructure, with green transition incentives expected to gradually attract private sector investment.
- In **China**, we expect the ongoing structural challenges to continue to constrain the economy. These challenges include a slowdown in capital investment, limited labour market growth due to demographic challenges and poor productivity growth.
- We have revised **India's growth** rate slightly higher at 5.6%, reflecting an increase in capital formation and a focus on increasing capital efficiency and productivity. Labor force participation has improved modestly, but not by a meaningful magnitude.

Equities

- We expect equity returns in mid-single digits per annum over our 20-year horizon. After two years of double-digit gains, our return expectations for **global equities** have tempered, especially as price appreciation has outpaced earnings growth, lower policy rates have emerged, and a robust US economy has boosted investor confidence. Looking ahead, we expect earnings growth will drive equity returns.
- We expect annualised returns for **US equities** of 6.3% and expect earnings growth will become a bigger driver of returns given the multiple expansion we have seen over the last couple of years. Return expectations for **developed markets outside the US** are more subdued at 6.0% but vary across regions. **Japan** and **UK** equity forecasts are higher at 7.0% and 6.5% respectively, but **Europe ex-UK** is lower at 5.7%. Forecasts for all three regions are lower than last year. **Emerging markets** forecasts, while lower than last year, remain attractive at 6.8%.
- This year, results were underpinned by strong sales and earnings growth along with valuation expansion across key regions. **Corporate earnings** came through with the US leading globally. Profit margins expanded in the US but contracted slightly in Europe and in emerging markets. Cyclical stocks outpaced the more defensive areas of the market.

Equities return estimates

20-year geometric expected returns (%)	2025 estimates	2024 estimates
All Country World Equity	6.3	6.9
Developed markets equity (ex-US)	6.0	6.7
US equity	6.3	6.9
Europe ex-UK equity	5.7	5.8
UK equity	6.5	7.7
Japan equity	7.0	7.8
Pacific ex-Japan equity	4.4	6.7
Emerging markets equity	6.8	7.6

Source: Capital Group. The 2025 estimates are as of 31 December 2024, with valuations as of September 2024. The 2024 estimates are as of 31 December 2023, with valuations as of September 2023.

Equities

- Given these outsized gains and positive backdrop, we believe it is prudent to take a more cautious view: Our estimates for **future equity returns** are lower, as we expect price-to-earnings (P/E) multiples to contract in most regions and expand only modestly in emerging markets. Our framework suggests that valuations for growth stocks will contract the most because that is where valuations are the most extended. Still, growth stocks, especially the technology heavyweights, have shown the prowess to deliver earnings growth year-after-year, and given the innovation cycle triggered by AI, we are likely to see these powerhouses continue to deliver profits, albeit at a slower pace and magnitude, resulting in some multiple contraction.
- Market concentration in the US is an area that has continued to garner a lot of attention. We'd observe that the outperformance of the dominant technology stocks, popularly known as the **Magnificent Seven**, has been accompanied by stronger profit growth versus the broader market. Moreover, our CMAs methodology is designed to temper the **impact of concentration by utilising cyclically adjusted price-to-earnings ratios (CAPE) vs. straightforward P/E**, whereby we consider cyclical earnings growth over a 10-year period. When looking at extended periods of market gains, in addition to the traditional mean reversion framework, we utilise a fundamentally oriented valuation framework that can help avoid the dangers of being stuck in a value trap.
- **Non-US developed markets** return expectations at 6.0% are also lower relative to last year. European stocks have powered ahead even as domestic economies have struggled with anaemic growth, the after-effects of the 2022 energy shock, political turmoil and policy uncertainty. The overhang of potential tariffs, trade tensions and slower exports to China continue to weigh on future prospects. Earnings growth has also been more muted in Europe. As a result, our forecasts for Europe ex-UK and UK equities have decreased to 5.7% and 6.5%, respectively.
- We expect **Japanese equities** to be underpinned by a spate of secular positive improvements, spurred in part by the regulators. These include better corporate governance, wider profit margins, and improving ROIC and ROE. The focus on fundamentals has been showing up on the numbers: Earnings per share (EPS) has grown 6.9% over the past decade. As these trends persist, we expect Japanese equities to return 7.0% annualised over the 20-year horizon. The high return estimate is supported in part by expectations of a meaningful appreciation of the Japanese yen against the US dollar.
- **Emerging markets equities** represent one of the most attractive areas in public stock markets with an expected annualised return of 6.8%. Economies like India have shown strength and China's growth rate remains positive even though it has slowed. Economic growth estimates for EM are higher and valuations remain supportive, which should translate to higher expected returns. That said, weak corporate governance in many countries, capital markets that are still maturing, a lack of labour participation, weak infrastructure, unstable politics and high family ownership of corporations can prevent the flow of wealth creation from accruing to public stock markets. Emerging markets companies are also expected to continue issuing more stock than they buy back to fund growth. As a result, EPS growth may be diluted, but at a much slower pace than what we have observed over the past decades. These areas remain watch items for us.

- **EPS growth** is projected to average 3.6% in the US, 1% in developed markets outside the US and 0.6% in emerging markets. Over the past decade, EPS growth has been stronger in the US and Japan than at any time since 1969. It should not be surprising that EPS expansion has been the greatest among growth stocks, given the prevalence of share buybacks by companies for their extensive use of stock options in total employee compensation.

Earnings growth is expected to drive future returns for equities



Source: Capital Group, MSCI. Data as of 30 September 2024. Estimates are 20-year forward figures and the non-estimated are 10-year trailing figures.

- Share buybacks are gaining popularity outside the US, likely outpacing issuance as corporate managers enjoy the flexibility buybacks give in managing employee compensation and capital structure. **Developed markets**, including Europe, the UK and Japan, are projected to experience higher accretion or less dilution, in line with recent trends. Share count-reducing buybacks provide companies with opportunity to engineer EPS growth above earnings growth and manage the dilution from stock-based compensation and M&A. We suspect these reasons are why many companies will continue to focus on buybacks over the long term and their use will continue to expand in markets around the world.

Fixed income

- **Most fixed income returns** estimates are slightly lower relative to last year given modestly lower starting yields and credit markets globally (as of 30 September 2024). Spreads have also experienced meaningful compression. Nevertheless, our expectation for fixed income returns for the next 20 years are higher than the returns realised over the prior two decades.
- **Global central banks**, with a few exceptions in developed and emerging markets, have embarked on rate cuts as inflationary pressures have eased. Although inflation remains above policy targets in many markets, central banks appear focused on balancing inflation concerns with supporting economic growth.
- As mentioned earlier, our **macroeconomic assumptions for the US** remain steady, with inflation at 2.25%, real GDP at 2.3%, and nominal GDP at 4.6%. Our assumptions have not changed in the past three years. The US growth rate is expected to outpace that of other developed markets, suggesting it can support higher yields. That said, concerns over the sustainability of high **US public debt** may put a cap on how high bond yields can rise before potentially triggering various forms of government intervention. **US Treasury Inflation-Protected Securities (TIPS)** and break-even assumptions align with our long-run average inflation expectations.

Estimates for fixed income asset classes





20-year geometric expected returns (%)	2025 estimates	2024 estimates
Global aggregate (hedged to USD)	4.4	4.6
US Treasury intermediate term	4.0	4.0
US TIPS	4.1	4.2
US aggregate	4.6	4.7
US high yield	6.2	6.5
Emerging markets debt (USD)	7.0	7.1
Global corporate (hedged to USD)	5.1	5.6
US corporate	5.3	5.5
Cash (USD)	3.4	3.3

Source: Capital Group. The 2025 estimates are as of 31 December 2024, with valuations as of September 2024. The 2024 estimates are as of 31 December 2023, with valuations as of September 2023..

Fixed income

- Our estimates are for **higher terminal rates** across the board. A significant part of our discussion focused on the drivers of the real neutral rate of interest (r^*), including demographics, productivity, the deepening of capital markets, and debt sustainability.
- These **higher neutral rates** are in part a reflection of rising concerns over debt sustainability, record US Treasury issuance and a shifting buyer base for Treasuries, which is moving away from the Fed and foreign official buyers to private investors who are much more price sensitive. Another key point of discussion has been whether future rates will be higher or lower than the growth assumptions based on a nominal GDP of 4.6%. Significantly higher rates, while aligning with market expectations, would increase both government and corporate debt burdens and would probably trigger policy responses.

R-star is expected to rise as supporting factors outweigh countervailing forces

Theme	Factors	R* Implications
Demographics	Aging Population	R* falls 
	Low Fertility rates	
	Restrictions on immigration	
	Higher Precautionary Savings	
Productivity	Technology Adoption	R* rises 
	Productivity Enhancing CAPEX	
Capital Investments	Energy investments	R* rises 
	Digitisation	
	Roads and Bridges	
	Onshoring and Reshoring	
Government Debt	Higher fiscal deficits	R* rises 
	Ballooning Debt	

Source: Capital Group. R-star (R^*): The real neutral rate of interest that equilibrates the economy in the long run. CAPEX: capital expenditure.

- Our estimates for **Treasury yields** are higher relative to last year. We have pegged our estimate for the 10-year Treasury yield at 3.9% over a 20-year horizon, embedding a risk premium of 40 bps to 65 bps over the neutral rate and inflation expectations. We expect intermediate-term Treasuries to attain a terminal yield of 3.7%. Ongoing concerns about the stickiness of certain inflation components and the potential for inflationary policies from a new administration could result in higher policy and cash rates than in the era following the global financial crisis.
- Over a 20-year horizon, we expect the **US Treasury yield curve** to normalise toward its historical median and for the Treasury yield curve to be slightly steeper overall than our 2024 estimate.

Fixed income

- A strong US economy has provided a strong tailwind for rates and credit sectors. Long-duration assets have especially benefited from declining interest rates. The **investment-grade oriented Bloomberg US Aggregate Index and Bloomberg US Corporate Index**, with durations of 6.2 and 7.2 years respectively, have also shown substantial gains and spread compression. With these gains over the past year, our return assumptions are slightly lower than last year.
- Our assumptions for credit spreads and defaults remain largely the same across many of the sectors that we track. With the normalisation of rates and return expectations relative to the past decade, **real bond returns** are expected to be positive. Bonds are expected to be a reliable source of income via the carry resulting from higher yields. And given their historically low-to-negative correlations with stocks, bonds can serve as a ballast from economic shocks that would disproportionately impact equity markets. As such, bonds can be an effective recession hedge.
- We expect **higher interest rates** to persist across major markets globally. In arriving at our estimates, we consider implications for growth, inflation, debt, central bank policy and historical spreads to US rates. Overall, our expectations for 10-year yields for the Eurozone, Japan and Switzerland are at less than 3%, while 10-year rates for the UK, Australia and Canada are clustered around 4%.
- The **Eurozone, Japan and Switzerland** are also expected to sustain lower cash rates of less than 2% due to lower growth potential, lagged productivity versus the US, lower neutral rates and lower inflation relative to other developed markets.
- Meanwhile, **Australia, Canada and the UK** are expected to sustain higher cash rates of more than 2% due to stickier inflation estimates. They also have lower R* estimates relative to the US, given lower growth potential and productivity that is expected to lag that of the US. That said, Canada's monetary policy is very closely aligned with that of the US, so in this case, we have relied more heavily on the historical rate differentials.
- In **US investment grade (IG) corporates**, our assumptions are for spreads to widen and remain above their historical median, reflective of an asset class that has experienced a lengthening of duration and a higher proportion of BBB-rated bonds in the index. The slightly wider spread assumptions are partly a function of a steepening rates curve and its impact on a long-duration asset class. IG credit has also historically captured a large percentage of starting yields. Relative to the spread widening that was observed in IG credit in 2023, the option-adjusted spread (OAS) has compressed meaningfully for both the Bloomberg US Aggregate Index and the Bloomberg US Corporate Index, and our return expectations for those indexes are 4.6% and 5.3%, respectively.

Fixed income

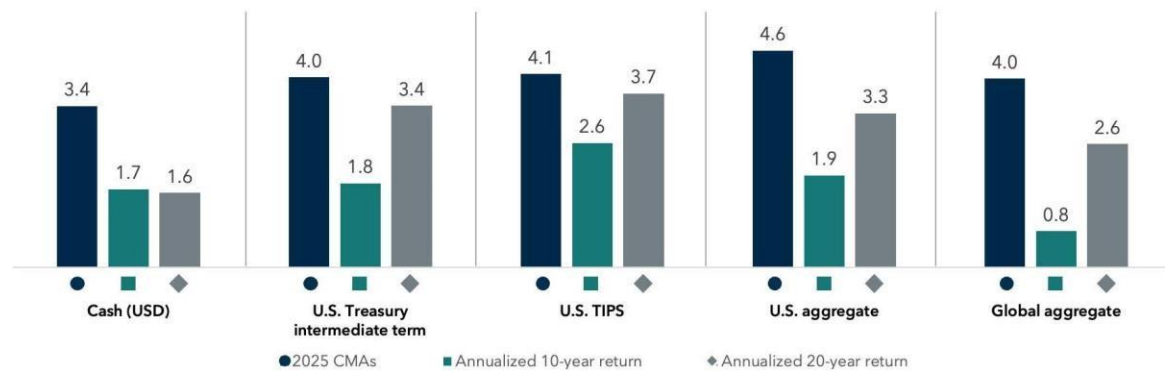
- For **high yield**, our assumptions for spreads and defaults remain below historical medians, recognising this is an asset class that continues to migrate up in quality and lower in duration. Despite the recent uptick in the percentage of bonds rated CCC in the post-pandemic period, over the long run, they have become a smaller portion of the index with BB-rated bonds gaining market share. The risk of defaults hasn't dissipated entirely, but the big shift in leveraged buyout financing away from high yield to the leveraged loan and private markets has contributed to the decline in default rates. We expect this trend to continue given private equity's strong preference for prepayable debt over callable bonds, which is characteristic of the high-yield markets. Our estimates are for 6.2% annualised returns, (30 bps, lower than last year).
- As a large buyer of **agency mortgage-backed securities (MBS)**, the Fed had an outsized impact on the market. Now, as the Fed unwinds its quantitative easing program, it has capped MBS paydowns to avoid market disruptions, but actual monthly paydowns, slowed by reduced mortgage prepayments. With no change in supply, the Fed's absence as a buyer requires higher demand from other investors, who are more price sensitive. Against this backdrop, we expect the OAS for agency MBS to widen modestly. We expect agency MBS annualized returns of about 4.5%, lower than last year.
- Historically, the **commercial mortgage-backed securities (CMBS)** market has faced rolling crises every five to seven years, with recent concerns shifting from retail to office space due to the COVID-19 pandemic and the subsequent period of rising rates. The sector experienced significant devaluation, but the Federal Reserve's dovish rhetoric brought some stability, reducing refinancing risks and leading to spread compression in 2024. The CMBS market is expected to continue healing, with rates and spreads improving, particularly for high-quality assets. Despite the challenges, CMBS is projected to have strong returns in securitized markets over the next few years. The market's recovery is anticipated to be front-loaded, with yield and spread normalisation extending over a period of five years.

Fixed income

- The impact on **EM debt**, both sovereign and corporate, will likely be negative if tariffs weigh on global growth. Manufacturing exporters are likely more at risk than commodity producers. A more positive scenario is also plausible if tariffs are modest, inflation remains well contained, US growth remains robust, and the Fed can deliver gradual rate cuts. Our return expectations are 7.0% per annum for dollar-denominated debt and 6.8% for local currency EM debt.

Bonds may produce higher returns relative to history

Fixed income indices: 2025 estimates versus historical annual returns (%)

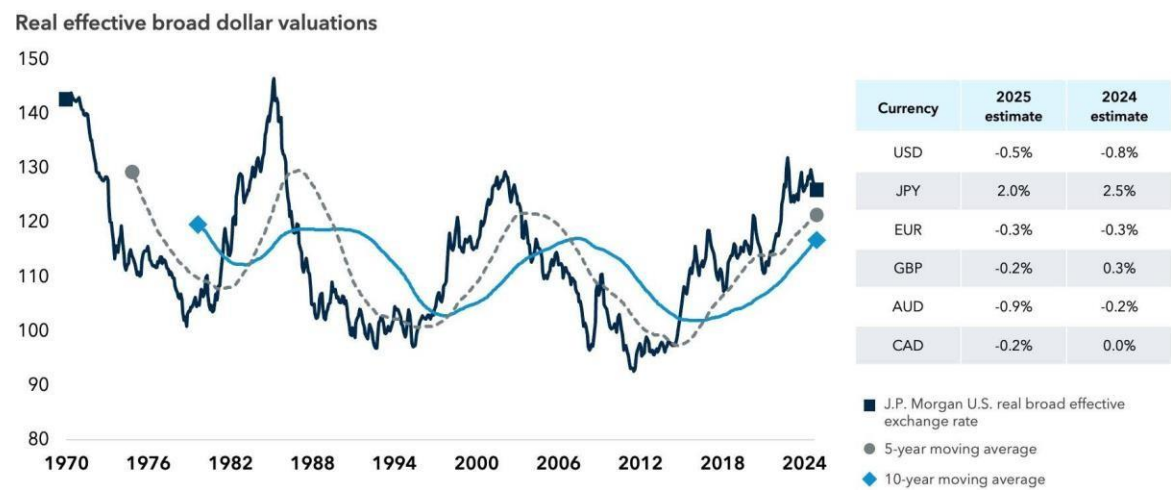


Source: Capital Group. All asset classes reflect asset class proxy benchmarks used in CMAs in US dollars. TIPS = Treasury Inflation-Protected Securities. See CMAs analysis methodology notes on important disclosures slide. See Index definitions page for asset class proxy benchmark information. Past results are not predictive of results in future periods.

Currencies

- We expect the **US dollar** to depreciate against a broad basket of currencies over the 20-year horizon. We have marked down the pace of that depreciation to about -0.5% per annum from -0.8% last year, driven primarily by expectations of wider differentials on productivity between the US and other countries.
- **US dollar valuations** appear less stretched than prior episodes of extended dollar strength observed in 1985, 2002, 2016 and 2020. We expect the Japanese yen and the Chinese yuan to appreciate versus the US dollar, while the euro, the Australian dollar, the Canadian dollar and British pound are expected to depreciate.
- We expect the **euro** to depreciate at about -0.3% per annum, reflective of productivity differentials in favor of both the US and a 2022 terms of trade shock that contributed to the structural derating of the euro's fair value.
- The US investor is expected to earn less from **hedging developed market currencies**, considering the compression in current forward-implied interest rate differentials in the wake of global central bank easing.
- We recognise that there are short run risks to this **valuation-centric view of the US dollar** that include concerns over slow growth in China, geopolitical risks, the positive carry associated with the US dollar, the dynamics associated with a late cycle global economy and the role of the US dollar as a funding currency. All of these factors have traditionally been supportive for the greenback.

Dollar depreciation likely to be more gradual

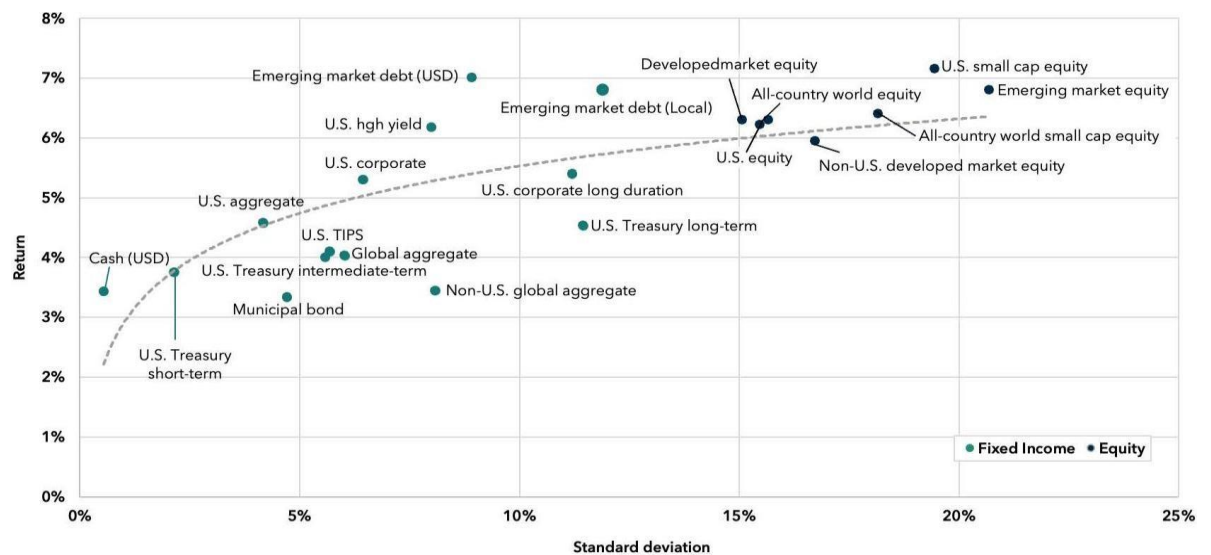


Sources: Capital Group, J.P. Morgan. As of 30 September 2024. The real effective exchange rate adjusts each bilateral nominal exchange rate by the relative price of the two countries' products. USD – United States dollar, JPY – Japanese yen, EUR – euro, GBP – British pound sterling, AUD – Australian dollar, CAD – Canadian dollar. Apart from the USD, estimated percentage change for other currencies measured against USD.

Stock-bond dynamics

- Sharpe ratios were lower across the board given generally lower returns and slightly higher volatility.
- In absolute terms, US equities stand out with the highest Sharpe ratios among the major equity asset classes. Within fixed income, global high yield, US high yield and emerging markets debt across local and US dollar-denominated have the highest Sharpe ratios.
- The risk-return chart shows the spectrum of equity and fixed income asset classes available for asset allocators to build diversified portfolios. It's interesting that in an environment where returns and risk premiums have compressed, US broad equities, which have gained the preponderance of global equity indices, also fare well on risk-adjusted return parameters.
- In fixed income, it's interesting to us that what are perceived as higher risk asset classes – US high yield and emerging markets debt – also rank well on a risk-adjusted basis. As investors calibrate the impact of potentially higher interest rate volatility in the years ahead, the higher income-generating, or “plus” sectors, of fixed income can play a useful role in portfolios. That said, these asset classes require an active approach given the high degree of idiosyncratic, issuer-specific risk.

2025 Risk and return assumptions



Source: Capital Group. The 2025 estimates as of 30 September 2024. All assumptions are for market asset classes only and are reviewed at least annually. These figures represent the views of a small group of investment professionals based on their individual research and are approved by the Capital Market Assumptions Oversight Committee. They should not be interpreted as the view of Capital Group as a whole. As Capital Group employs The Capital System™, the views of other individual analysts and portfolio managers may differ from those presented here. They are provided for informational purposes only and are not intended to provide any assurance or promise of actual returns. They reflect long-term projections of asset class returns and are based on the respective benchmark indexes or other proxies and therefore do not include any outperformance gain or loss that may result from active portfolio management. Note that the actual results will be affected by any adjustments to the mix of asset classes. All market forecasts are subject to a wide margin of error.

Past results are not a guarantee of future results. Estimates are shown for illustrative purposes only.

Capital market assumptions (CMAs)

Standard deviation (%)																							
Long-term expected returns (%)		Correlation matrix																					
Asset class			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1 Cash (USD)	3.4	0.5	1.00																				
2 Municipal bond	3.3	4.7	0.04	1.00																			
3 US Treasury short term	3.8	2.1	0.26	0.45	1.00																		
4 US Treasury intermediate term	4.0	5.6	0.11	0.55	0.87	1.00																	
5 US Treasury long term	4.5	11.4	0.06	0.54	0.72	0.89	1.00																
6 US TIPS	4.1	5.7	0.05	0.56	0.57	0.67	0.60	1.00															
7 US aggregate	4.6	4.2	0.11	0.72	0.76	0.86	0.84	0.75	1.00														
8 US corporate	5.3	6.4	0.04	0.70	0.47	0.59	0.60	0.71	0.84	1.00													
9 US corporate long duration	5.4	11.2	0.03	0.67	0.49	0.66	0.74	0.67	0.86	0.92	1.00												
10 US high yield	6.2	8.0	0.00	0.44	-0.05	0.00	0.00	0.47	0.36	0.65	0.50	1.00											
11 Global aggregate	4.0	6.0	0.11	0.58	0.62	0.65	0.60	0.71	0.79	0.75	0.73	0.46	1.00										
12 Non-US global aggregate	3.4	8.1	0.11	0.48	0.51	0.52	0.46	0.63	0.66	0.65	0.62	0.45	0.94	1.00									
13 Emerging markets debt USD	7.0	8.9	0.06	0.60	0.23	0.33	0.33	0.63	0.61	0.79	0.69	0.77	0.67	0.62	1.00								
14 Emerging markets debt local	6.8	11.9	0.12	0.38	0.19	0.21	0.17	0.47	0.43	0.59	0.50	0.64	0.68	0.70	0.78	1.00							
15 US equity	6.3	15.1	0.03	0.27	-0.07	-0.04	-0.03	0.33	0.25	0.47	0.37	0.73	0.40	0.42	0.62	0.59	1.00						
16 US small-cap equity	7.2	19.4	-0.01	0.24	-0.13	-0.10	-0.09	0.26	0.19	0.43	0.32	0.74	0.33	0.35	0.58	0.56	0.89	1.00					
17 Developed markets equity	6.2	15.5	0.06	0.29	-0.06	-0.04	-0.03	0.35	0.27	0.51	0.40	0.76	0.46	0.49	0.67	0.68	0.94	0.87	1.00				
18 All-country world equity	6.3	15.7	0.06	0.29	-0.06	-0.04	-0.04	0.35	0.27	0.52	0.40	0.77	0.48	0.51	0.69	0.71	0.93	0.87	0.96	1.00			
19 All-country world small-cap equity	6.4	18.2	0.02	0.28	-0.10	-0.07	-0.07	0.33	0.25	0.51	0.39	0.79	0.44	0.47	0.67	0.68	0.89	0.93	0.92	0.93	1.00		
20 Non-US developed markets equity	6.0	16.7	0.08	0.30	-0.04	-0.03	-0.04	0.35	0.27	0.52	0.41	0.75	0.51	0.55	0.69	0.73	0.85	0.81	0.93	0.94	0.90	1.00	
21 Emerging markets equity	6.8	20.7	0.09	0.28	-0.04	-0.02	-0.02	0.35	0.26	0.49	0.38	0.70	0.49	0.53	0.69	0.79	0.72	0.70	0.80	0.84	0.82	0.84	1.00
22 Inflation	2.3	1.8																					

Source: Capital Group. Estimates as of 30 September 2024. All assumptions are for market asset classes only and are reviewed at least annually. These figures represent the views of a small group of investment professionals based on their individual research and are approved by the Capital Market Assumptions Oversight Committee. They should not be interpreted as the view of Capital Group as a whole. As Capital Group employs The Capital System™, the views of other individual analysts and portfolio managers may differ from those presented here. They are provided for informational purposes only and are not intended to provide any assurance or promise of actual returns. They reflect long-term projections of asset class returns and are based on the respective benchmark indexes or other proxies and therefore do not include any outperformance gain or loss that may result from active portfolio management. Note that the actual results will be affected by any adjustments to the mix of asset classes. All market forecasts are subject to a wide margin of error. All asset classes reflect asset class proxy benchmarks used in CMAs in US dollars.

Past results are not a guarantee of future results. Estimates are shown for illustrative purposes only.

How we build our CMAs

Long-term capital market assumptions – 2025

These assumptions are intended to reflect our forward-looking views over a 20-year period spanning multiple market cycles. We believe these are reasonable expectations to use as a starting point for strategic asset allocation considerations. They are meant to capture the relative return/volatility of asset classes within a total portfolio context. Central to the design of our approach are that the starting point of the analysis matters and that a number of key asset class variables demonstrate some level of mean reversion over the long term.

Equities

We use a building blocks approach for our equity return assumptions, as defined by this formula.

Equity return	Earnings growth
	-/+ Dilution/accretion
	+ Dividend yield
	+ Valuation impact
	+ Currency impact

Earnings growth: We use expected real GDP growth plus inflation as the proxy for earnings growth, in line with standard practices. For inflation and real earnings growth assumptions, we seek the input of economists on our Capital Strategy Research team and reference a global macro model.

Dividend yield: For the dividend yield component, for most equities, we take an average of the prevailing dividend yield and the median historical yield for the corresponding MSCI regional or country index.

Net dilution/accretion: We account for net dilution/accretion to capture the expected gap between GDP growth and EPS growth, and the impact of EPS dilution or accretion. Net dilution is estimated as in Bernstein and Arnott (2003)*, which suggests using the ratio of an index's market cap to its price level as a simple measure of the net impact of share issuance and buybacks. As markets grow through new issuance, the number of listed shares increases, diluting the ownership of existing shareholders. Hence, high economic growth doesn't necessarily translate to higher EPS growth, as we have seen in several emerging markets over the last decade.

We combine two approaches in determining our estimates: (1) regression using various productivity measures (the theory being that productivity growth coincides with economic growth and has also empirically been shown to be meaningful to net dilution), and (2) regression to estimate net buyback yield using cash and cash equivalents, long-term debt and tax-rate estimates as the variables, and supplement that with views from our economist team and historical trends.

Valuation: The impact of valuations is computed as the multiple expansion or contraction from current valuation levels to a target valuation. The valuation measure we consider is the cyclically adjusted price-to-earnings ratio (CAPE) of the corresponding MSCI regional or country indexes. This ratio measures the real price in the numerator and the average of real earnings over the last 10 years in the denominator. The target valuation is a blend of mean reversion and "fair value" CAPE. The latter is calculated using a multivariate regression of CAPE to real GDP growth and the 10-year yields. The current CAPE ratio is measured against the target CAPE ratio to determine if a market is over- or undervalued.

* Bernstein, W.J. and R.D. Arnott (2003), "Earnings Growth: The Two Percent Dilution," *Financial Analysts Journal*, 59:5, 47-55.

How we build our CMAs (continued)

Additionally, for mean reversion, the impact of valuation for each country or region is not based on CAPE for that country or region in isolation; rather, we assume that regional and global linkages are important. Here, the target CAPE is calculated as the composite of the country, region and global CAPEs. For example, for the US market, we compute the target CAPE as two-thirds of the US CAPE and one-third of the global (MSCI World) CAPE. These ratios allow us to acknowledge the importance of global linkages and concurrently mitigate the impact of outliers on the impact of valuation figures.

Fixed income

To arrive at our expected returns for each fixed income asset class, we compute its projected annual return for each year over the investment horizon, which we then geometrically compound before calculating the annualized return for the full period.

Bond return	Yield to worst
	+ Valuation impact
	+ Default losses
	+ Currency impact

Yield to worst: We start with the trailing 12-month yield to worst for the corresponding proxy index (principally Bloomberg and J.P. Morgan indexes) and generally project ending yields in 10 years’ time.

The projected ending yields are based on historical spreads over the US intermediate-duration Treasuries Index with a view as to whether spreads will be tighter or wider in the future relative to where they are today. The return for each year is calculated based on the prevailing duration of the index and a change in yields, plus any impact from default losses and currencies.

Default losses: The assumptions we use for default losses are based on historical averages

How we build our CMAs (continued)

Currencies

Our currency projections are based on long-run currency fair values using both the bilateral and multilateral models. Fair values are determined by a combination of relative inflation and relative productivity differential estimates along with their historical trends. Both models are complementary and ensure that our foreign exchange (FX) projections are in line with the remainder of our CMAs.

The expected nominal FX return calculations assume that currencies revert to fair values in the long run. The currency impact for each asset class is calculated based on the underlying currency weights in their respective benchmark proxies.

Each model uses one framework to value all currencies such that the estimates are globally consistent, coherent and easily interpretable. Both models assume that current FX spot rates will gradually converge to their implied fair values. We produce forecasts across 25 currency pairs versus the US dollar. Output from both models is averaged.

Volatility and correlation assumptions

Our assumptions about asset class volatilities and correlations are based largely on estimates from the historical return data. Estimating the correlation matrix using purely historical data is subject to estimation error and outliers in the sample data. As a result, we derive our estimates by transforming the sample matrix using a statistical method called shrinkage, which tends to pull the most extreme values toward the center, reducing estimation error.

Valuation-independent CMAs

We have created an alternative set of valuation-independent CMAs for long-horizon solutions. Our view is that for very long horizons of 40 to 50 years, it is also useful to look at a set of CMAs that strip out factors such as the impact of mean-reverting valuations, the effect of market accretion or dilution and currency moves. These valuations are primarily used for the long-term strategic design of our solution offerings. We share here the valuation-independent CMAs for the major asset classes, assuming:

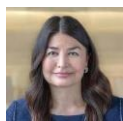
- Equity valuations do not revert
- There is no currency impact
- We do not account for net dilution or accretion
- We use only expected yields 10 years out to project bond returns and disregard starting yields

Asset class	Long-horizon expected returns (%)	Volatility (%)	Historical proxy
Cash (USD)	2.7	0.5	FTSE 3-Month UST-Bill Index
US Treasury short term	3.3	2.1	Bloomberg 1-5 Year US Treasury Index
US Treasury intermediate term	3.7	5.6	Bloomberg 5-10 Year US Treasury Index
US TIPS	3.7	5.7	Bloomberg US Treasury Inflation-Protected Securities (TIPS) Index
US aggregate	4.3	4.2	Bloomberg US Aggregate Bond Index
US high yield	6.1	8.0	Bloomberg US Corporate High Yield Index 2% Issuer Cap
Non-US global aggregate	3.0	8.1	Bloomberg Global Aggregate ex-USD Index
Global aggregate	3.7	6.0	Bloomberg Global Aggregate Bond Index
US equity	6.1	15.1	MSCI USA Index
US small-cap equity	7.2	19.4	MSCI USA Small Cap Index
Developed markets equity	6.2	15.5	MSCI World Index
All-country world equity	6.4	15.7	MSCI All Country World Index (ACWI)
All-country world small-cap equity	6.9	18.2	MSCI All Country World Small Cap Index
Non-US developed markets equity	6.3	16.7	MSCI World ex USA Index
Emerging market equity	8.1	20.7	MSCI Emerging Markets Index
Emerging market debt USD	6.9	8.9	JPMorgan Emerging Markets Bond Index Global Diversified (EMBI Global Diversified)
Emerging market debt local	6.7	11.09	JPMorgan Government Bond Index-Emerging Markets (GBI-EM)

The indexes are unmanaged and, therefore, have no expenses. Investors cannot invest directly in an index.

Capital Group. Estimates as of 30 September 2024. All assumptions are for market asset classes only and are reviewed at least annually. These figures represent the views of a small group of investment professionals based on their individual research and are approved by the Capital Market Assumptions Oversight Committee. They should not be interpreted as the view of Capital Group as a whole. As Capital Group employs The Capital System™, the views of other individual analysts and portfolio managers may differ from those presented here. They are provided for informational purposes only and are not intended to provide any assurance or promise of actual returns. They reflect long-term projections of asset class returns and are based on the respective benchmark indexes or other proxies and therefore do not include any outperformance gain or loss that may result from active portfolio management. Note that the actual results will be affected by any adjustments to the mix of asset classes. All market forecasts are subject to a wide margin of error.

Capital Market Assumptions Oversight Committee



Michelle Black
Solutions Portfolio
Manager



Philip Chitty
Fixed Income
Portfolio Manager



Raj Paramaguru
Solutions Portfolio
Manager and
Research Director



John Queen
Fixed Income
Portfolio Manager



William Robbins
Equity Portfolio
Manager

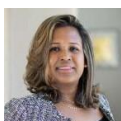
Capital market assumptions team



Samir Mathur
Solutions Portfolio
Manager



Wesley Phoa, Ph.D.
Solutions Portfolio
Manager



Eswarie Balan
Solutions Analyst



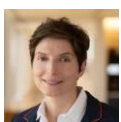
Steve Fox
Client Analytics
Director



Darrell Spence
Economist



Jared Franz
Economist



Anne Vandenabeele
Economist



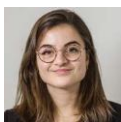
Robert Lind
Economist



Stephen Green
Economist



Trygvi Gudmundsson
Economist



Beth Beckett
Economist



Chau Nguyen
Economist



Jens Søndergaard
Currency Analyst



Matt Miller
Political Economist



Anirudha Dutta
Macro Analyst



Dane Mott
Accounting Analyst



Tom Cooney
International Policy
Adviser

Glossary

Break-even: The difference in yield between inflation-protected debt and nominal debt of the same maturity.

Carry: The difference between a bond's yield and cost to finance its purchase.

Capital expenditure (CapEx): The money a company spends to acquire, upgrade and maintain fixed assets such as equipment, property and buildings.

Capital market assumptions: Long-term projections of the future performance of asset class returns based on their respective benchmark indexes or other proxies that incorporate analysis and observations.

Correlation: A statistical measure of how a security and an index move in relation to each other. A correlation ranges from -1 to 1. A positive correlation close to 1 implies that as one moved, either up or down, the other moved in lockstep, in the same direction. A negative correlation close to -1 indicates the two have moved in the opposite direction.

Credit spreads: The difference between the yield (return) of two different debt instruments with the same maturity but different credit ratings.

Cyclically adjusted price-to-earnings ratio (CAPE): A valuation measure that uses real earnings per share over a 10-year period to smooth out fluctuations in profits that occur over different periods of time.

Currency impact: An increase or decrease in the value of a foreign investment or of something bought or sold in a foreign country caused by a change in the exchange rate.

Dividend yield: The dividends a company pays out to investors as a percentage of the share price.

Duration: The measurement of the sensitivity of the price of a bond or debt instrument to the change in interest rates. The higher the duration, the more a bond's price will drop as interest rates rise (and the greater the interest rate risk).

Geometric return: Also known as the compound annual growth rate (CAGR), it is a measure of compound growth rates of investment results over multiple periods.

J.P. Morgan real effective exchange rate (REER): A nominal effective exchange rate with the exception that the nominal bilateral exchanges rates are replaced with the bilateral real exchange rates, that is the nominal bilateral exchange rates adjusted for prices.

Magnificent Seven: The seven largest contributors to returns in the S&P 500 in 2023. The companies are Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia and Tesla.

Mean reversion: The assumption that an asset's price will tend to converge with its average price over time, despite long-term variations.

Multiple: A way of assessing the value of a company by comparing it to peers, usually by a ratio. This helps to quantify a company's health and find investment opportunities.

Net dilution: The reduction of a shareholder's ownership percentage caused by the issuance of additional shares.

Neutral rate of interest (r-star, r*): The short-term interest rate that would prevail when the economy is at full employment and stable inflation, in which monetary policy is neither contractionary nor expansionary.

Price-to-earnings (P/E): The ratio for valuing a company that measures its current share price relative to its earnings per share (EPS).

Glossary (continued)

Quantitative easing: A program through which the Federal Reserve has purchased Treasury securities and mortgage-backed securities issued by government-sponsored enterprises and federal agencies to achieve its monetary policy objectives.

Real bond returns: Returns adjusted for inflation.

Return on equity (ROE): A financial performance metric used to measure profitability.

Return on invested capital (ROIC): A ratio that measures how well a company uses its capital to generate profits.

Sharpe ratio: A measure of risk-adjusted return on an investment.

Standard deviation: A statistical measure of dispersion of the observed return that depicts how widely a stock or portfolio's returns varied over a certain period of time. When a stock or portfolio has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

Terminal yield: The value of a debt asset beyond the forecasted period when future cash flows can be estimated. In our analysis, terminal yield occurs in year 10 and stays the same for years 11-20.

Total factor productivity (TFP): A measure of an economy's ability to generate income from its labor and capital inputs.

Value trap: A stock that appears to be valued attractively but ultimately fails to provide outsized gains for investors.

Volatility: The degree of variation in the price of a financial instrument over time, usually measured by standard deviation or variance.

Yield curve: An illustration of the yields on similar bonds across various maturities. An inverted yield curve occurs when yields on short-term bonds are higher than yields on long-term bonds. Yield curve steepening occurs when long-term rates rise more than short-term rates, or short-term rates fall more than long-term rates.

Index definitions

All indexes are unmanaged, and their results include reinvested distributions but do not reflect the effect of sales charges, commissions, account fees, expenses or US federal income taxes.

Cash (USD): The **FTSE 3-Month US T-Bill Index Series** is intended to track the daily performance of three-month US Treasury bills. The indexes are designed to operate as a reference rate for a series of funds.

US Treasury short term: The **Bloomberg 1-5 Year US Treasury Index** measures USD-denominated, fixed-rate, nominal debt issued by the US Treasury with maturities of one to five years.

US Treasury intermediate term: The **Bloomberg 5-10 Year US Treasury Index** measures USD-denominated, fixed-rate, nominal debt issued by the US Treasury with maturities of five to 10 years.

US Treasury long term: The **Bloomberg 10-20 Year US Treasury Index** measures USD-denominated, fixed-rate, nominal debt issued by the US Treasury with maturities of 10 to 20 years. The **Bloomberg 20+ Year US Treasury Index** measures USD-denominated, fixed-rate, nominal debt issued by the US Treasury with maturities of 20 years or more.

US TIPS: The **Bloomberg US Treasury Inflation-Protected Securities (TIPS) Index** consists of investment-grade, fixed-rate, publicly placed, USD-denominated and non-convertible inflation-protected securities issued by the US Treasury that have at least one year remaining to maturity and \$250 million par amount outstanding.

US aggregate: The **Bloomberg US Aggregate Bond Index** represents the US investment-grade fixed-rate bond market.

US corporate: The **Bloomberg US Corporate Investment Grade Index** represents the universe of investment-grade, publicly issued US corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity and quality requirements.

US corporate long duration: The **Bloomberg US 20+ Year AAA-A Corporate Bond Liquid Index** measures fixed-rate, taxable corporate bonds with at least 20 years remaining to maturity. It includes USD-denominated securities issued by US and non-US industrial, utility and financial issuers with an index rating of at least AAA and at least \$750 million par amount outstanding and excludes subordinated debt.

US high yield: The **Bloomberg US Corporate High Yield Index 2% Issuer Cap** covers the universe of fixed-rate, non-investment-grade debt. The index limits the maximum exposure of any one issuer to 2%.

Non-US global aggregate: The **Bloomberg Global Aggregate ex-USD Index** measures the performance of global investment-grade bonds, excluding the United States. This multicurrency benchmark includes Treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging market issuers.

Global aggregate: The **Bloomberg Global Aggregate Bond Index** measures the performance of global investment-grade bonds. This multicurrency benchmark includes Treasury, government-related, corporate and securitized fixed-rate bonds from both developed and emerging market issuers.

Index definitions (continued)

Emerging markets debt USD: The **J.P. Morgan Emerging Markets Bond Index (EMBI) Global Diversified** is a uniquely weighted emerging markets debt benchmark that tracks total returns for USD-denominated bonds issued by emerging markets sovereign and quasi-sovereign entities.

Emerging markets debt local: The **J.P. Morgan Government Bond Index – Emerging Markets (GBI-EM) Global Diversified** covers the universe of regularly traded, liquid fixed-rate, domestic-currency emerging markets government bonds to which international investors can gain exposure.

Municipal bonds: The **Bloomberg Municipal Bond Index** is a market-value-weighted index designed to represent the long-term investment-grade tax-exempt bond market.

US equity: The **MSCI USA Index** is a free-float-adjusted, market-capitalisation-weighted index that measures the US portion of the world market. Results reflect dividends gross of withholding taxes.

US small-cap equity: The **MSCI USA Small Cap Index** is a free-float-adjusted, market-capitalisation-weighted index that measures the performance of the small-cap segment of US markets.

Developed markets equity: The **MSCI World Index** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results in global developed markets, consisting of 23 developed market country indexes.

All-country world equity: The **MSCI All Country World Index (ACWI)** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results in global developed and emerging markets, consisting of more than 40 developed and emerging markets country indexes.

All-country world small-cap equity: The **MSCI All Country World Small Cap Index** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results of smaller capitalisation companies in both developed and emerging markets. Results reflect dividends net of withholding taxes.

Non-US developed markets equity: The **MSCI World ex USA Index** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results in global developed markets, consisting of 22 of 23 developed markets country indexes, excluding the United States.

Europe ex-UK equity: The **MSCI Europe Ex UK Index** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results in European markets.

UK equity: The **MSCI UK Index** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results in the UK market.

Japan equity: The **MSCI Japan Index** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results in the Japanese market.

Pacific ex-JP equity: The **MSCI Pacific Ex Japan Index** is a free-float-adjusted, market-capitalisation-weighted index that measures equity market results in Pacific markets.

Emerging markets equity: The **MSCI Emerging Markets Index** is a free-float-adjusted, market-capitalisation index that measures equity market performance of emerging markets.

Agency mortgage-backed securities: The **Bloomberg US Mortgage-Backed Securities** Index measures a market-value-weighted index that covers fixed-rate, publicly placed, dollar-denominated obligations issued by the US Treasury, US government agencies, quasi-federal corporations, corporate or foreign debt guaranteed by the US government, and the mortgage-backed pass-through securities of Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation and the Government National Mortgage Association.

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