

Capital Markets Outlook and Opportunities Q2 2025

Latest insights as of 03/31/25

Review and outlook

Macroeconomic

Global equity

Global fixed income

Multi-asset

Review and outlook

Macroeconomic

Global equity

Global fixed income

Multi-asset

This capital markets review and outlook is designed to help you stay up to date on the economic influences affecting portfolios as well as specific challenges and opportunities across global asset classes.

As always, please reach out to your Columbia Threadneedle Investments regional consultant with any questions.



Tip: Click or tap on the tabs at the top of every page to jump to the beginning of each section.

Review: Asset class performance Q1 2025 and 2024

Review and outlook

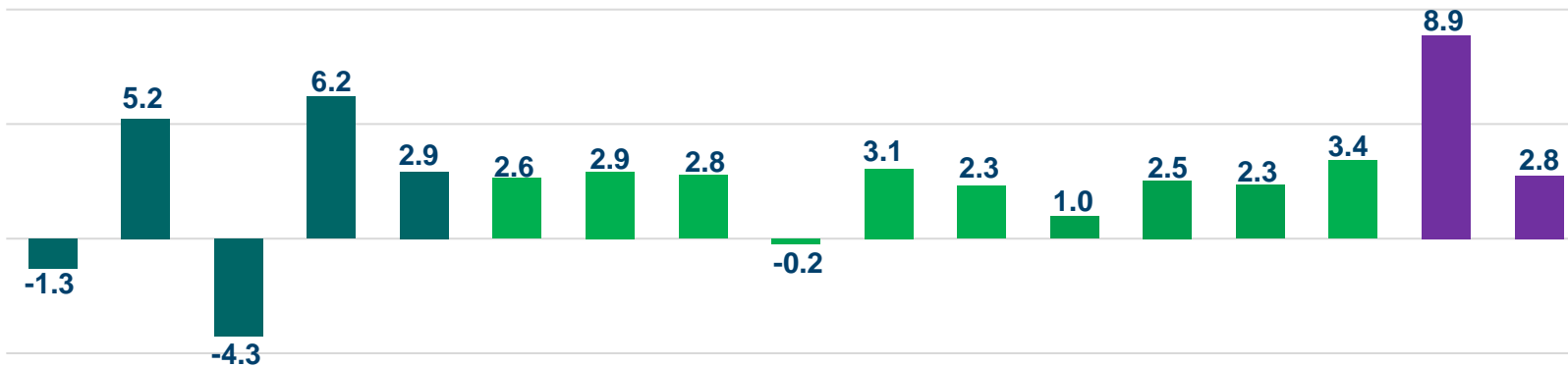
Macroeconomic

Global equity

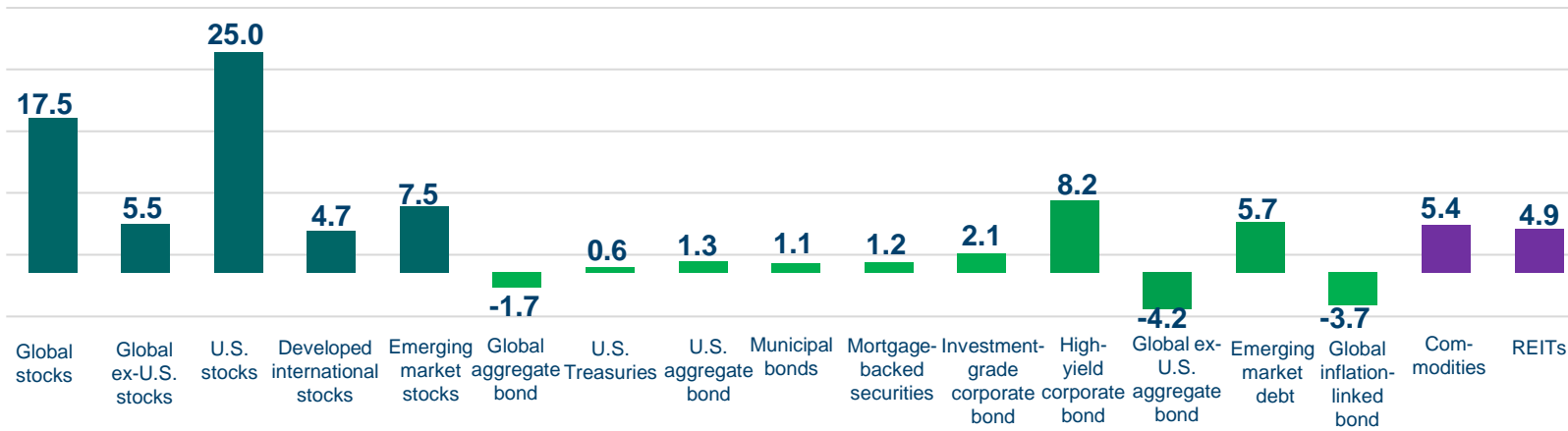
Global fixed income

Multi-asset

► Q1 2025 asset class returns (12/31/24–03/31/25, %)



► 2024 asset class returns (12/31/23–12/31/24, %)



Source: Columbia Management Investment Advisers, LLC. See disclosure for full index descriptions. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

Review: Style performance Q1 2025 and 2024

Review and outlook

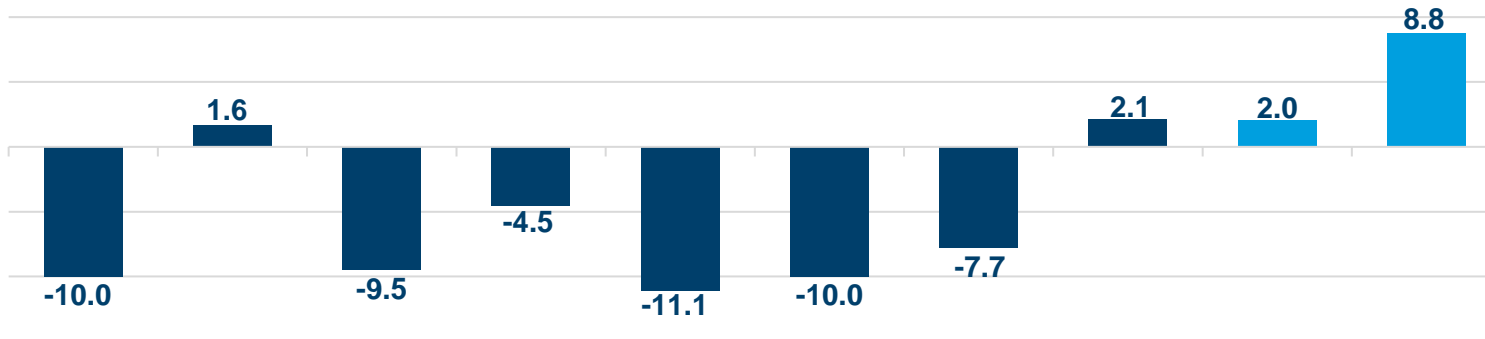
Macroeconomic

Global equity

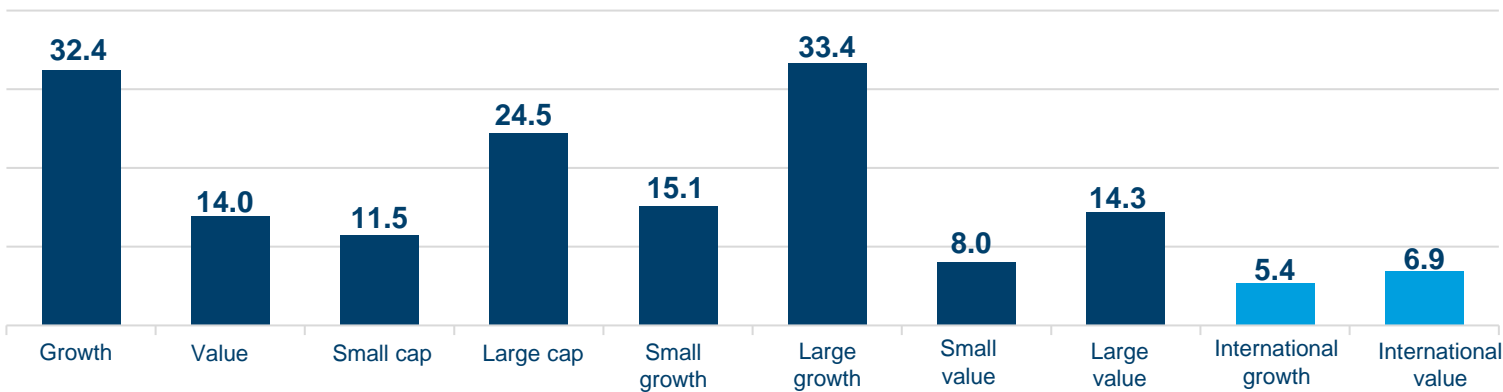
Global fixed income

Multi-asset

► Q1 2025 style returns (12/31/24–03/31/25, %)



► 2024 style returns (12/31/23–12/31/24, %)

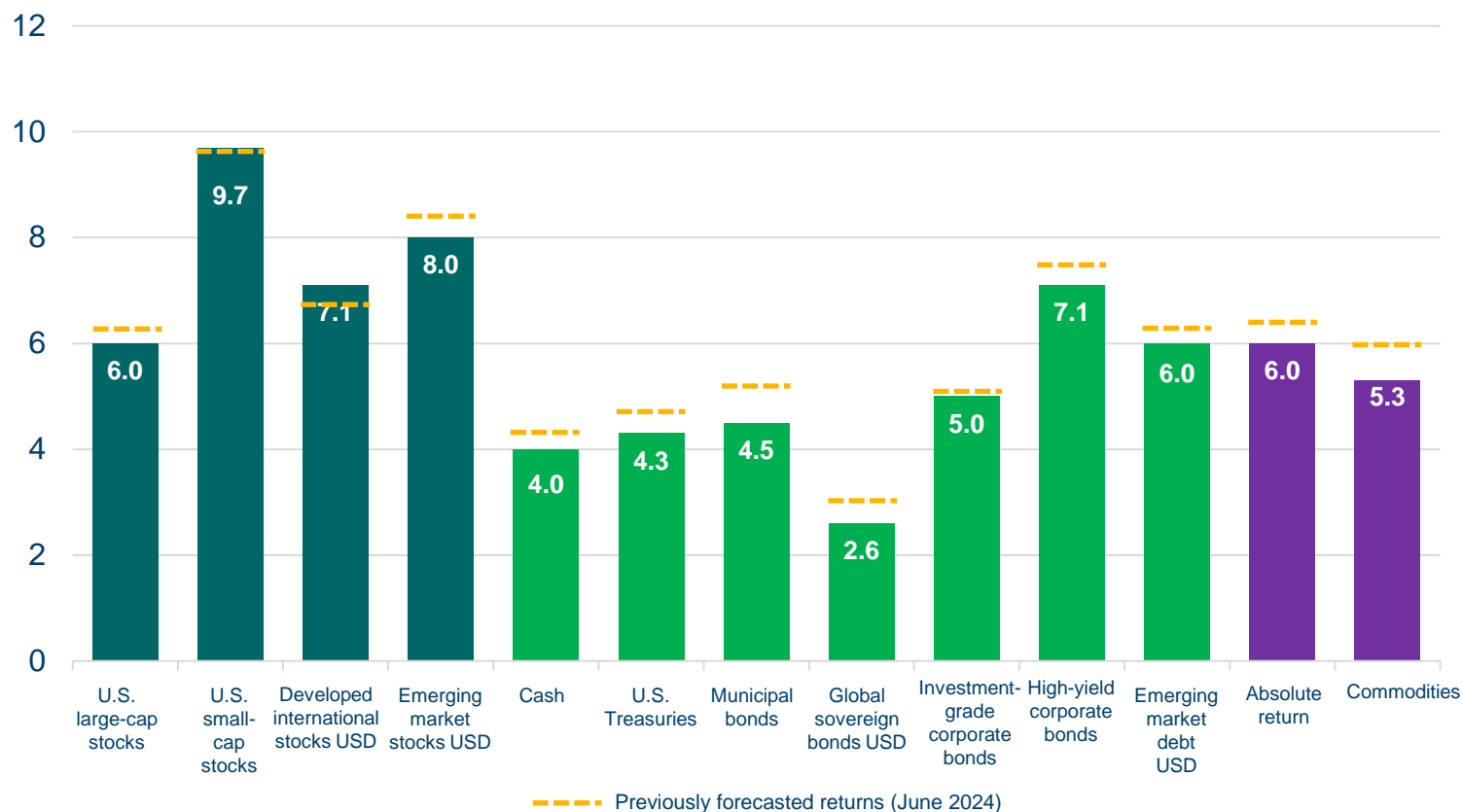


Source: Columbia Threadneedle Investments. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

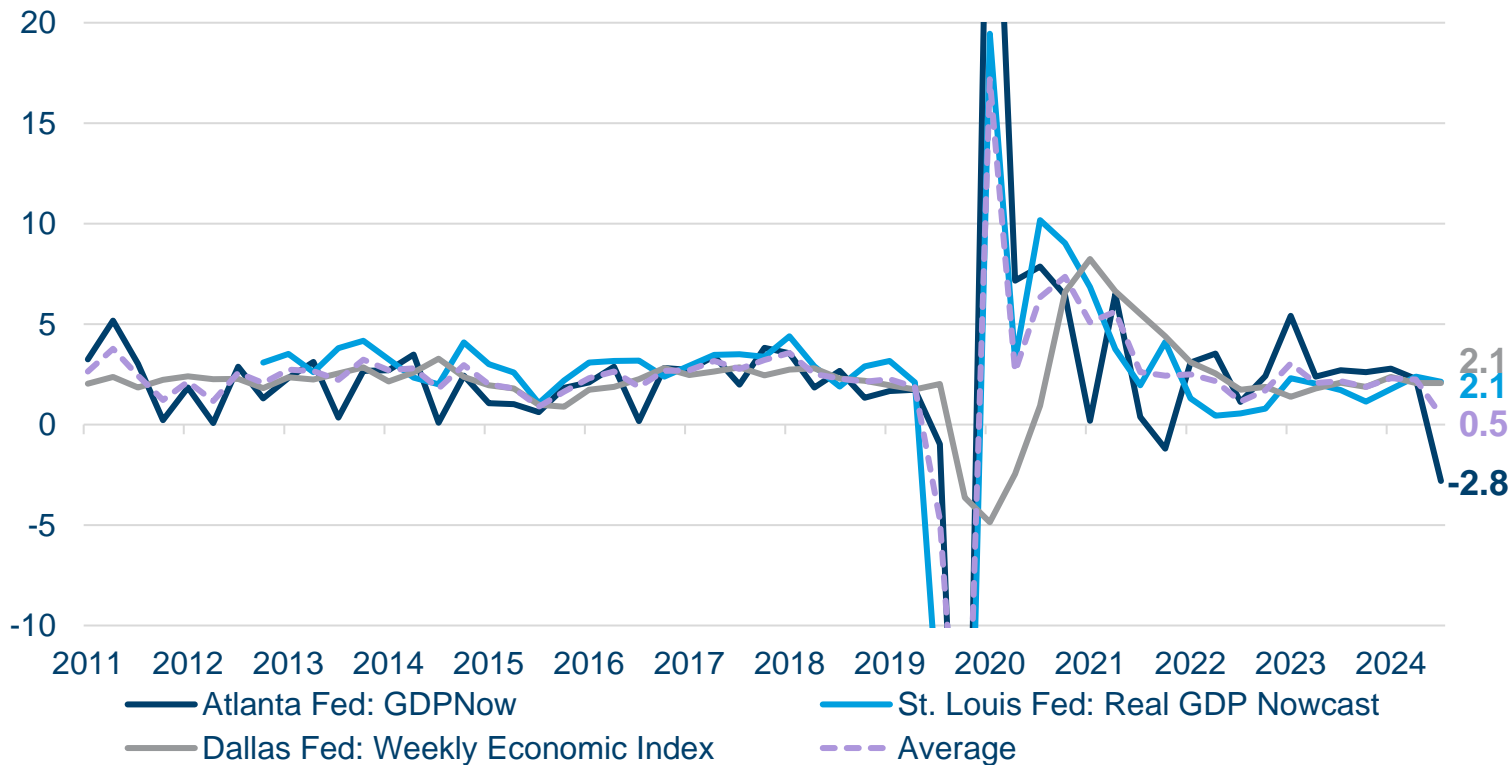
Growth represented by Russell 3000 Growth Index; value by Russell 3000 Value Index; small cap by Russell 2000 Index; large cap by Russell 1000 Index; small growth by Russell 2000 Growth Index; large growth by Russell 1000 Growth Index; small value by Russell 2000 Value Index; large value by Russell 1000 Value Index; international growth by MSCI ACWI ex USA Growth Index; and international value by MSCI ACWI ex USA Value Index. Please see notes for index descriptions.

► Five-year forecasted returns

(Updated twice a year, latest data as of December 2024, annualized %)



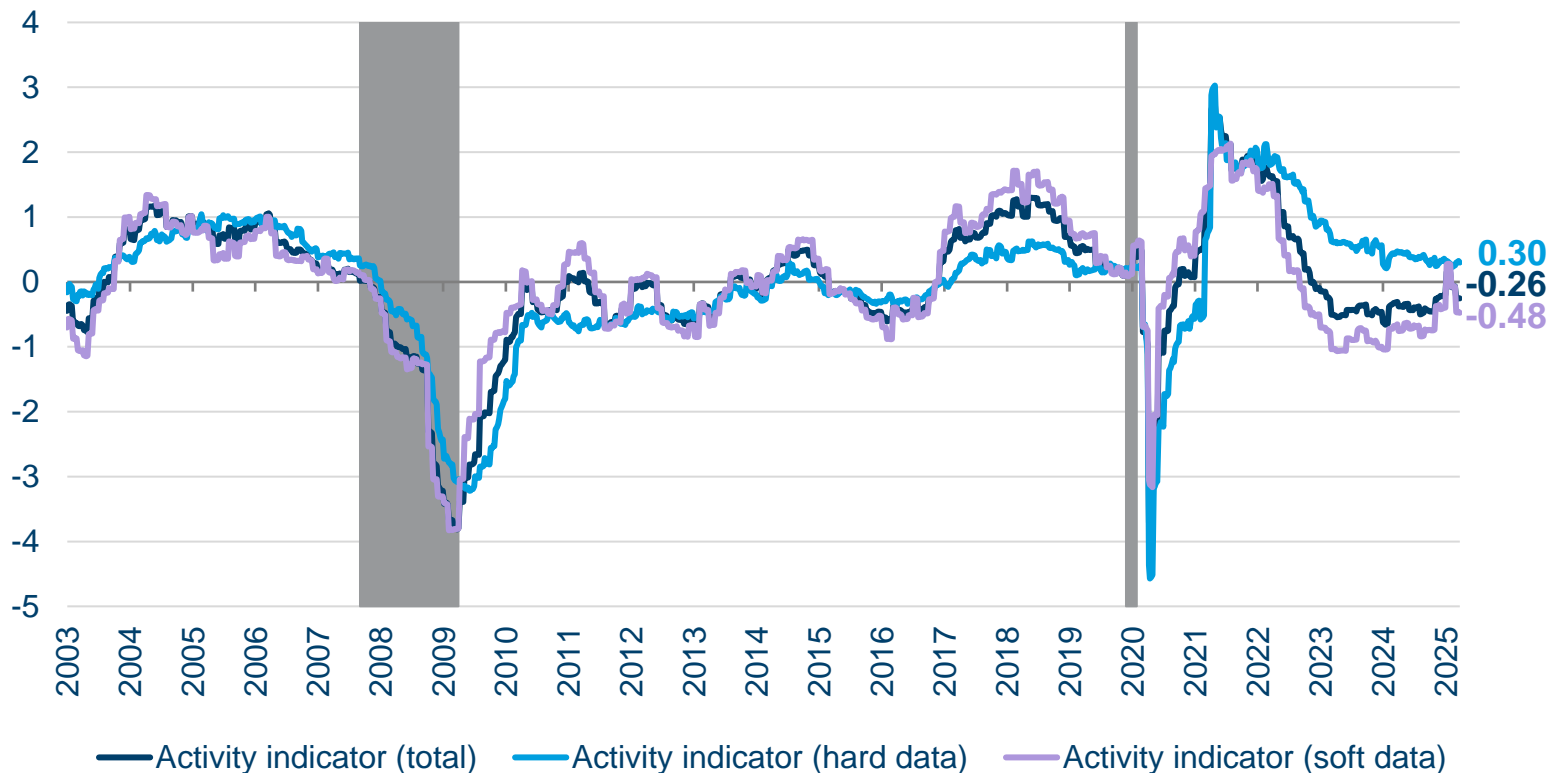
► **Average of “GDP Now” is currently at 0.5%**
(Percent change at annual rate)



Source: Atlanta Fed, St. Louis Fed and Dallas Fed, data as of 03/31/25. Atlanta Fed: GDPNow model forecasts GDP growth by aggregating 13 subcomponents that make up GDP with the chain-weighting methodology used by the US Bureau of Economic Analysis. St. Louis Fed: Real GDP Nowcast uses economic content from key monthly economic data releases to forecast the growth of real GDP during that quarter. Dallas Fed: Weekly Economic Index is an index of real economic activity using timely and relevant high-frequency data. It represents the common component of ten different daily and weekly series covering consumer behavior, the labor market, and production.

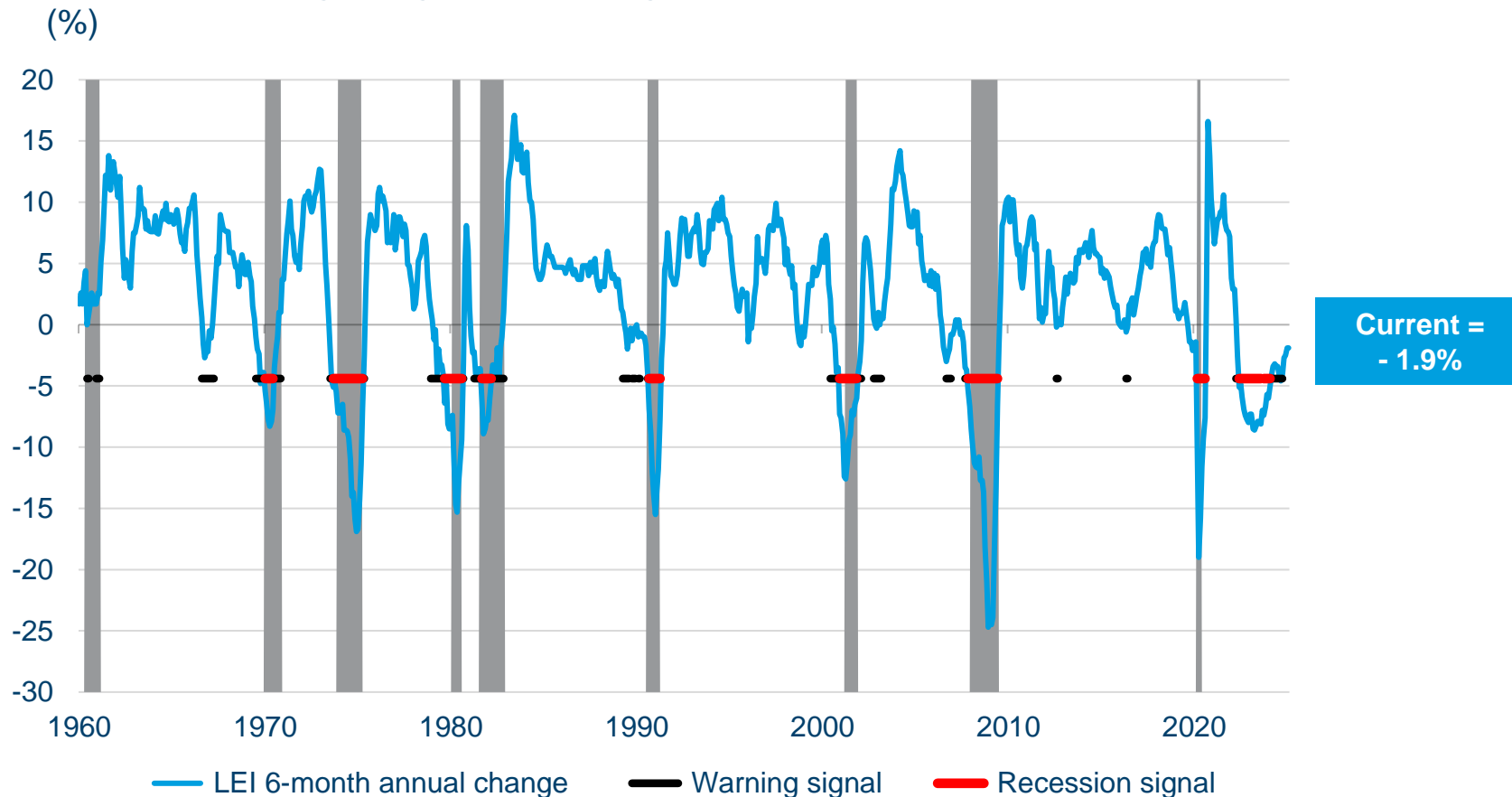
The data feeding the Atlanta Fed: GDPNow model is not predicted; it's actual data. Therefore, GDPNow estimates at the beginning of a quarter are based on limited data and can result in volatile forecasts. For example, GDPNow fell from +2.5% to -2.8%, on the net trade balance data in late February.

► While sentiment indicators have plunged amidst heightened trade uncertainty, measures of real economic activity remain stable
(Z score, where 0 = trend growth)



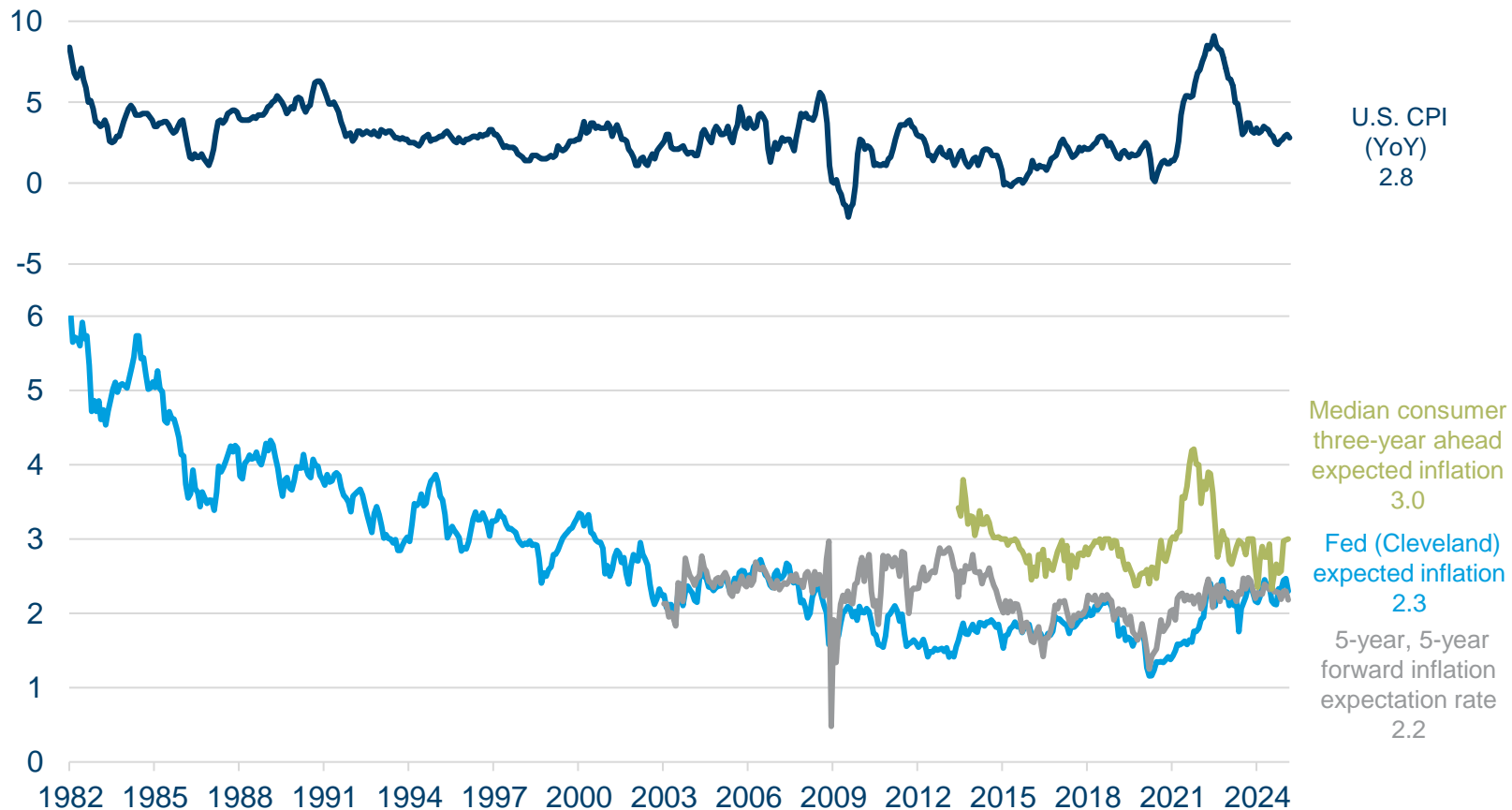
Source: Columbia Threadneedle Investments as of 03/24/25. The Columbia Threadneedle hard data, soft data, and activity indicators are proprietary measures of economic activity based on established metrics published by the U.S. federal government and other sources. Hard data tracks realized economic activity aggregated across various data releases. Soft data is based on surveys that reflect forecasts and opinions, and subjective assessments about the economy. Grey-shaded periods indicate recessions.

► The LEI is not signaling an impending recession



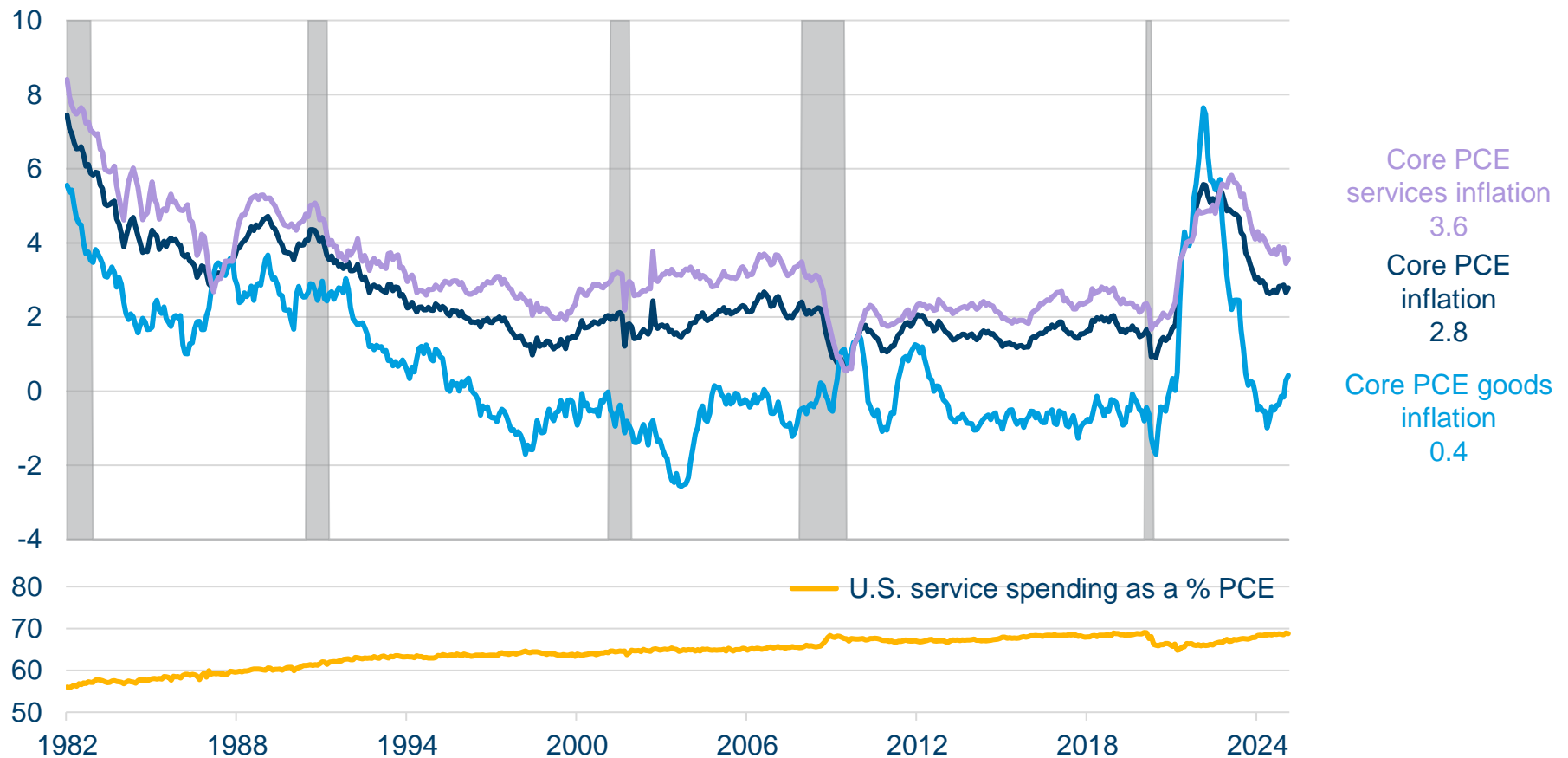
Source: Bloomberg, TCB, data as of 02/28/25. The chart illustrates the 3Ds — duration, depth, and diffusion — for interpreting a downward movement in the LEI. Duration refers to how long the decline has lasted. Depth denotes the size of decline. Duration and depth are measured by the rate of change of the index over the most recent six months. Diffusion is a measure of how widespread the decline is among the LEI's component indicators — on a scale of 0 to 100, a diffusion index reading below 50 indicates most components are weakening. The 3Ds rule signals an impending recession when: 1) the six-month diffusion index lies below 50, shown by the black warning signal lines in the chart; and 2) the LEI's six-month rate of decline falls below the threshold of -4.4% . The red recession signal lines indicate months when both criteria are met simultaneously — and thus that a recession is likely imminent or underway.

► **CPI has declined significantly, to 2.8% from 9.1% (06/22), with expectations for future inflation around 2.5% (Inflation, %)**



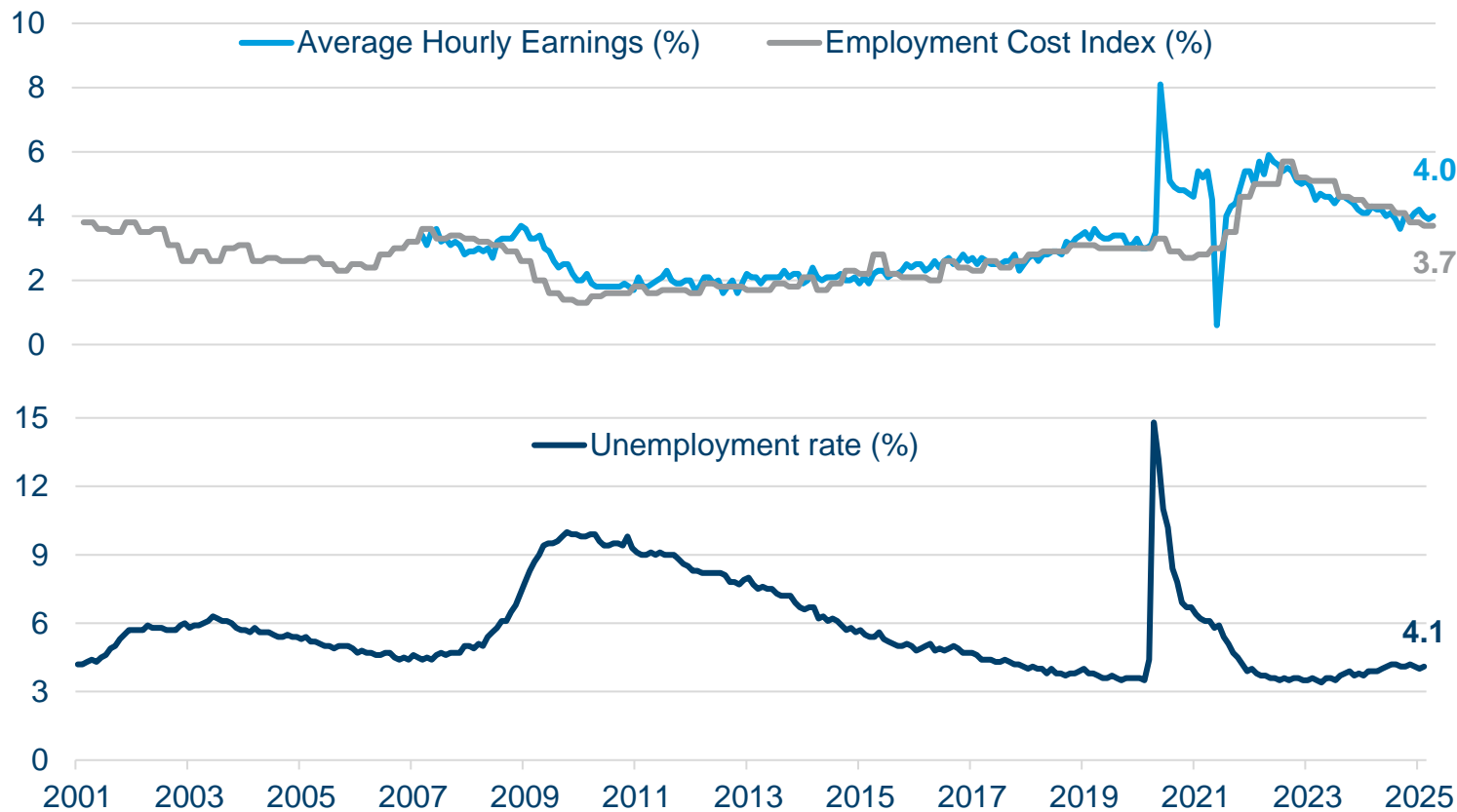
Source: Bureau of Labor Statistics, Federal Reserve Bank of Cleveland, Federal Reserve Bank of St. Louis. Federal Reserve Bank of New York, as of 02/28/25. Note: Cleveland Fed estimates of the expected rate of inflation over the next 10 years are calculated using treasury yields, inflation data, inflation swaps and survey-based measures of inflation expectations. 5-year, 5-year forward inflation expectation rate represents a measure of expected inflation derived from 5-year treasury constant maturity securities and 5-year treasury inflation-indexed constant maturity securities. Median consumer three-year ahead expected inflation rate is calculated using an individual's density forecasts, obtained by asking each survey participant to assign probabilities to intervals of future inflation outcomes.

► **Core PCE inflation, the Fed's preferred inflation gauge, is 2.8%, down from 5.6% (02/22). Core goods PCE inflation is 0.4%, down from 7.6% (02/22). Core services PCE inflation is 3.6%, down from 5.8% (02/23). Services is around two-thirds of core PCE. (%)**



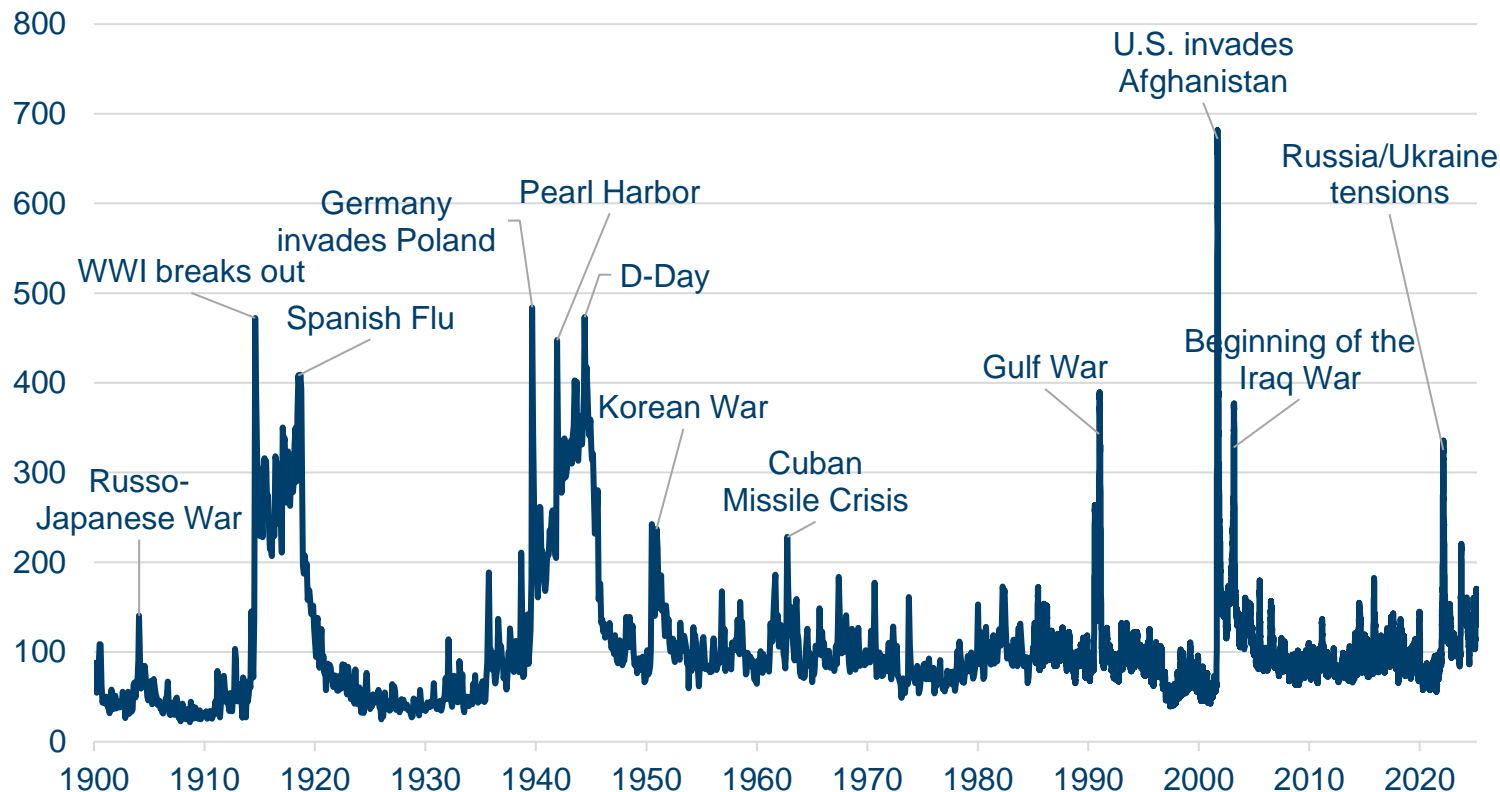
Source: Bureau of Labor Statistics, data as of 02/28/25. Grey-shaded periods indicate recessions.

► Labor cost increase has slowed, to ~3.9% from ~5.6% (08/22), with the unemployment rate rising to 4.1% from 3.4% (04/23)



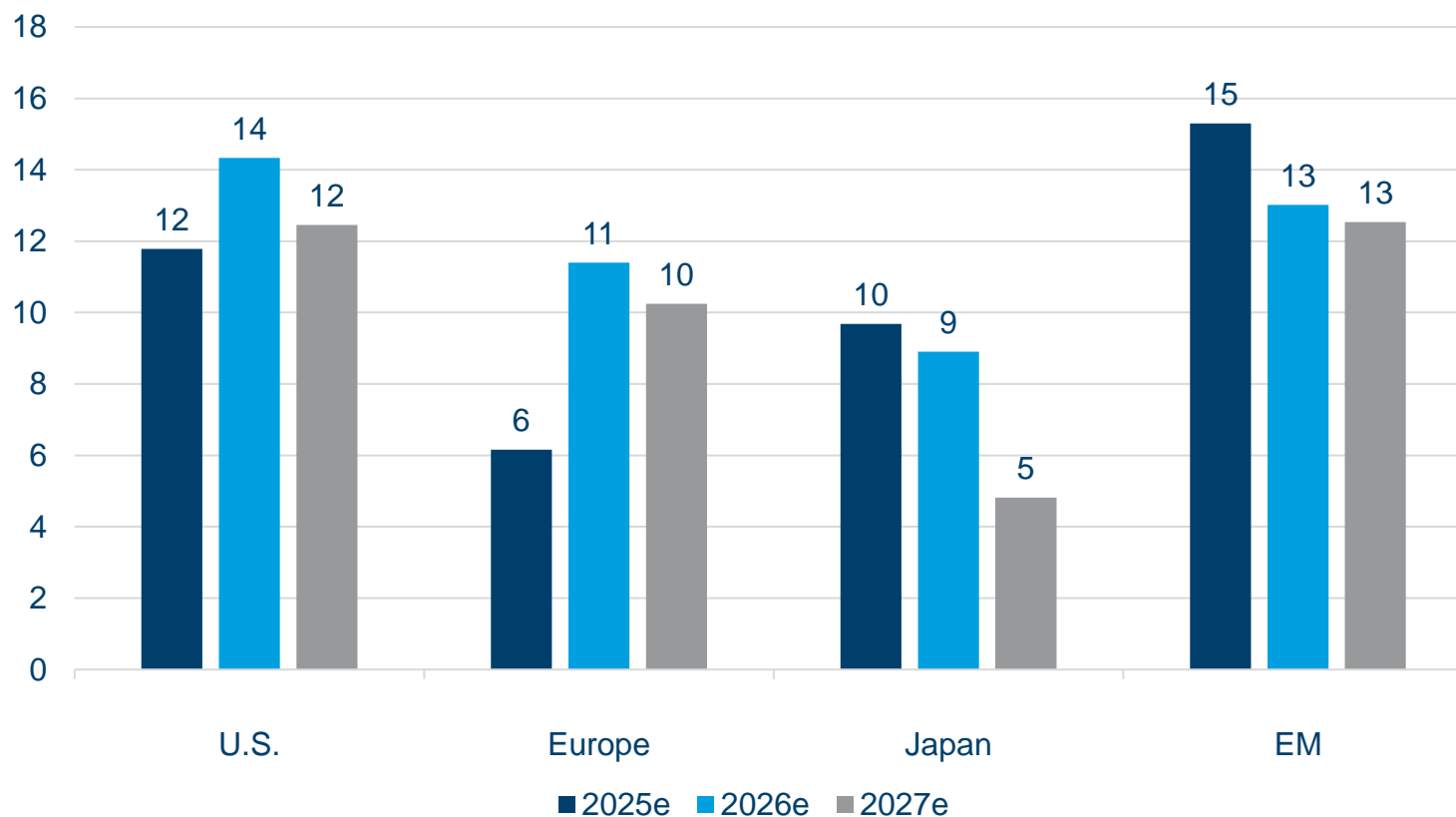
Source: U.S. Bureau of Labor Statistics, data as of 02/28/25. Note: The Employment Cost Index (ECI) is quarterly and covers total compensation costs including benefits, while Average Hourly Earnings is monthly and excludes benefits.

► Concerns about geopolitical risk (Hamas/Israel, Russia/Ukraine, China/Taiwan, etc.) remain (Geopolitical risk index)



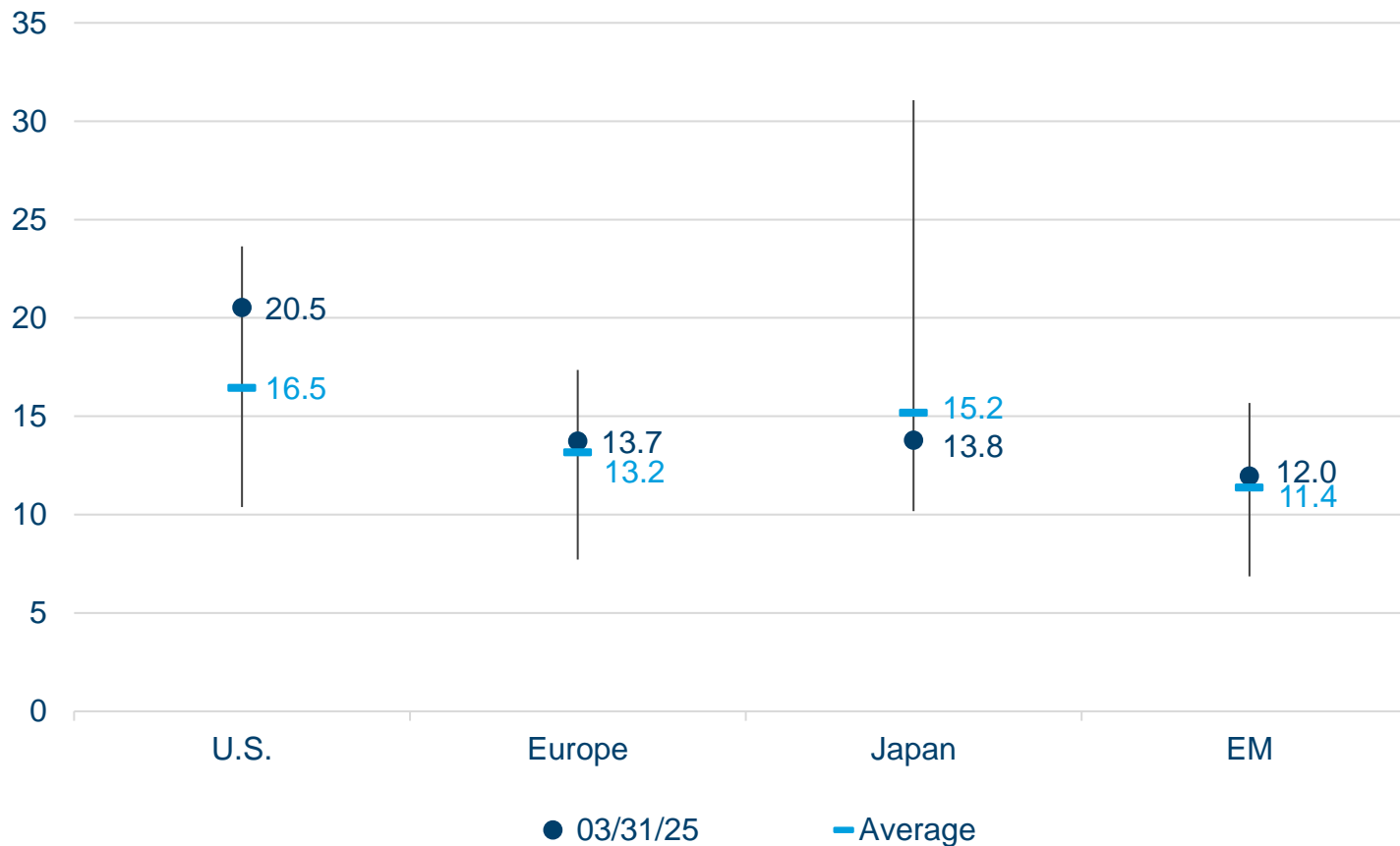
Source: 'Measuring Geopolitical Risk,' by Dario Caldara and Matteo Iacoviello; American Economic Review, 2022. Data as of 03/31/25. The index measure of adverse geopolitical events and associated risks is based on a tally of newspaper articles covering geopolitical tensions since 1900. The data series is monthly till 1985 and daily post that.

► U.S. consensus earnings is anticipated for double-digit growth through 2027 (Earnings growth, %)



Source: FactSet, MSCI, data as of 03/31/25. U.S. is represented by MSCI US Index; Europe by MSCI Europe Index; Japan by MSCI Japan Index; EM by MSCI Emerging Markets Index.
It is not possible to invest directly in an index.

► The U.S. P/E is 25% above average; Europe is 4% above average; Japan is 9% below average; and EM is 5% above average (12-month forward P/E ratio)



Source: MSCI, data as of 03/31/25. U.S. is represented by MSCI US Index; Europe by MSCI Europe Index; Japan by MSCI Japan Index; EM by MSCI Emerging Markets Index. The data series starts June 2003. P/E on 12-month forward earnings. **It is not possible to invest directly in an index.**

U.S. equity: S&P 500 P/E levels vs. bond yields

Review and outlook

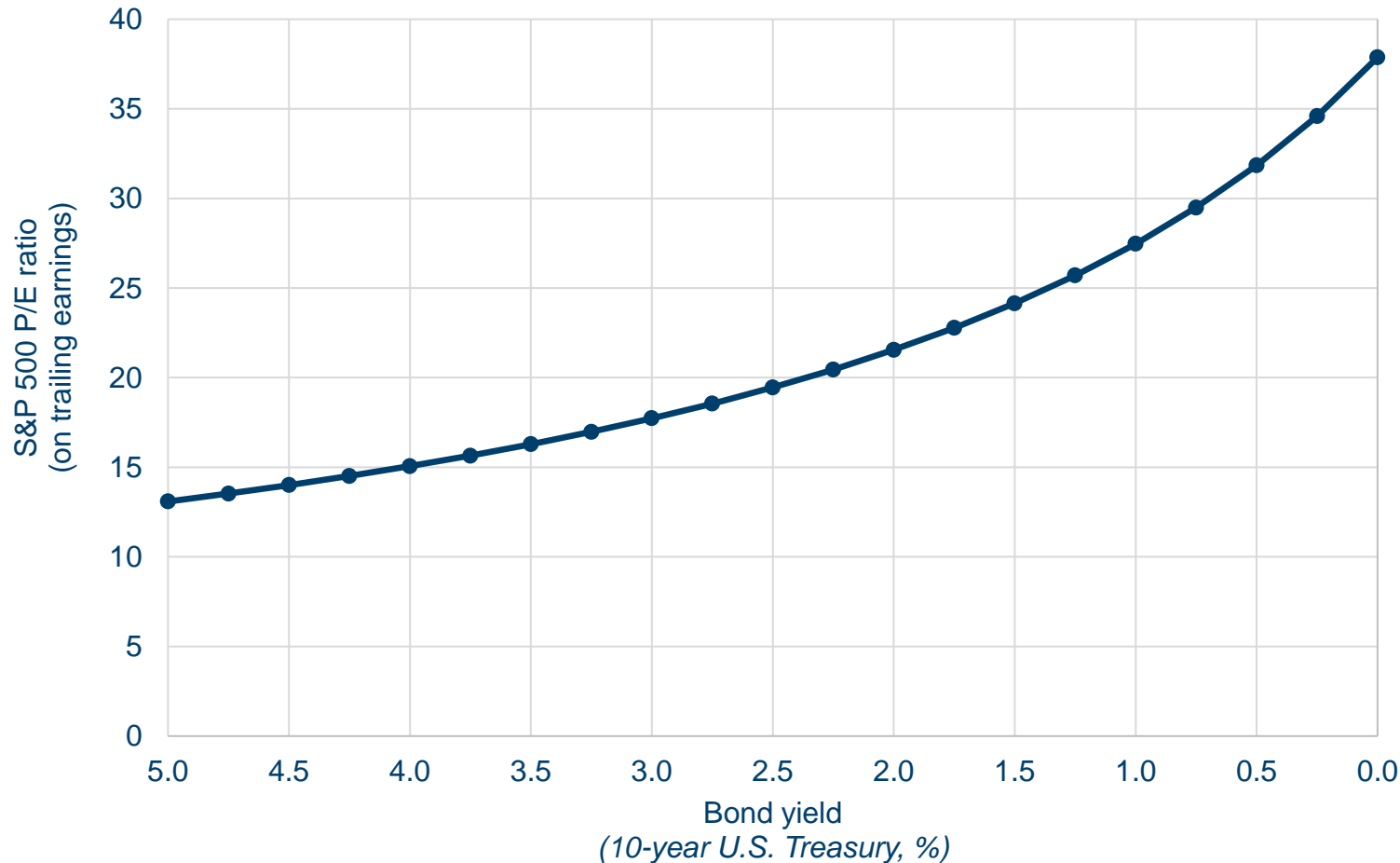
Macroeconomic

Global equity

Global fixed income

Multi-asset

► P/E levels tend to rise with lower bond yields, and vice versa



Source: Bloomberg, as of 03/31/25. The calculation for P/E ratio takes into consideration the average spread (from June 2003) of 251 basis points between the S&P 500 Index earnings yield and U.S. 10-year bonds. A basis point is 1/100th of a percent. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

U.S. equity: S&P 500 earnings yield minus 10-year U.S. Treasury yield

Review and outlook

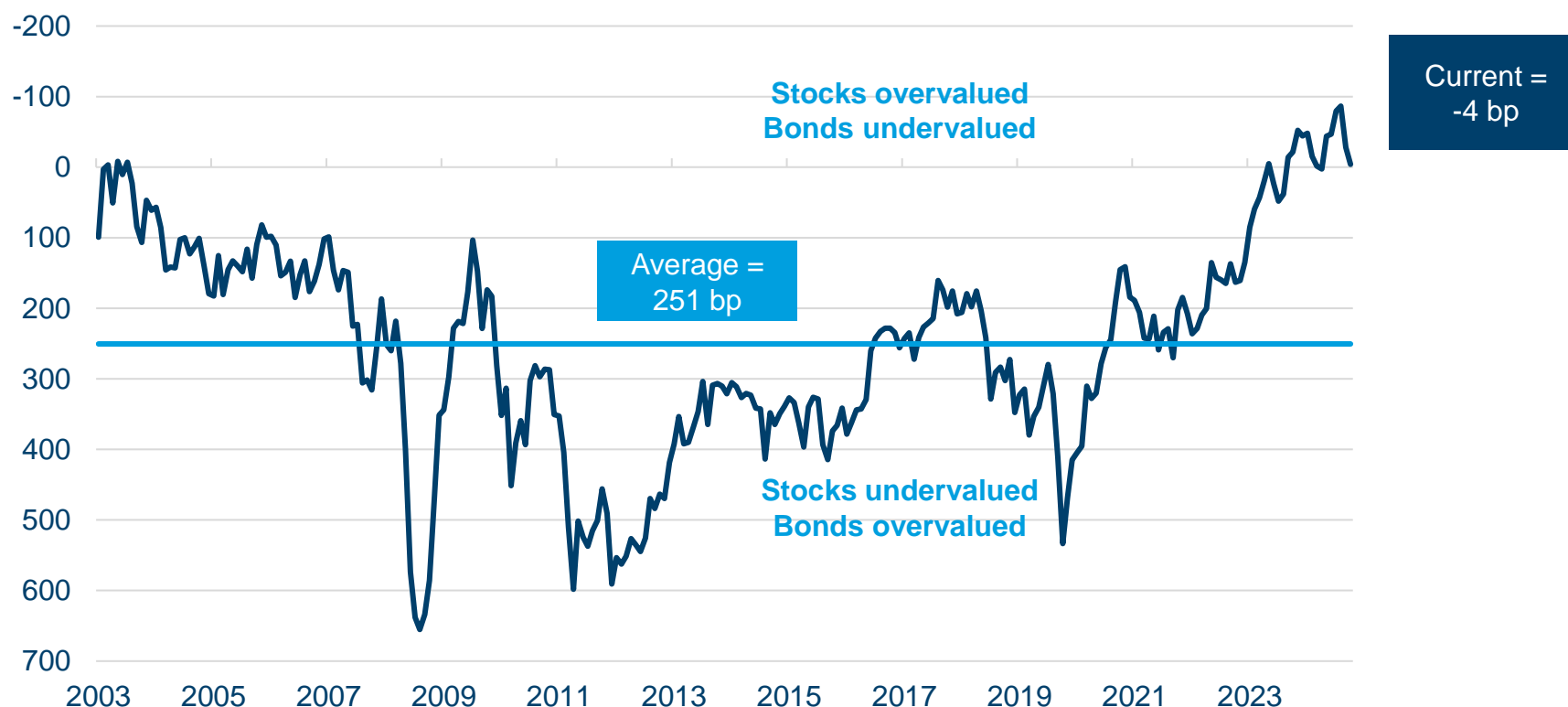
Macroeconomic

Global equity

Global fixed income

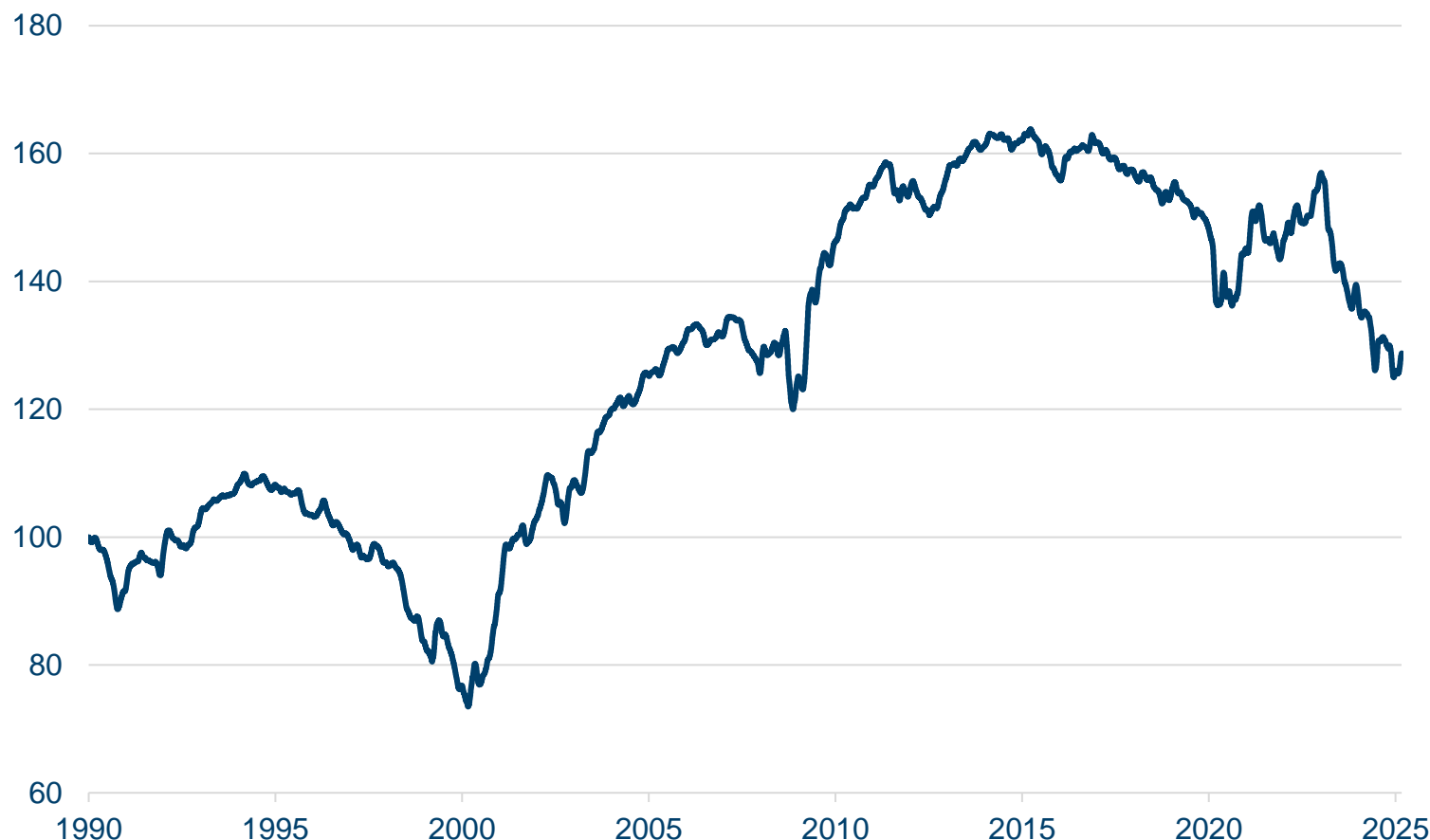
Multi-asset

- The earnings yield imbalance can be corrected if bond yields (currently 4.21%) fall 255 bp or earnings yield (currently 4.17%) rises 255 bp or a combination of those events. Earnings yield would rise 255 bp if stock prices fall by 38% or earnings rise by 61%. (Spread between the S&P 500 earnings yield and 10-year U.S. Treasury yield, bp)



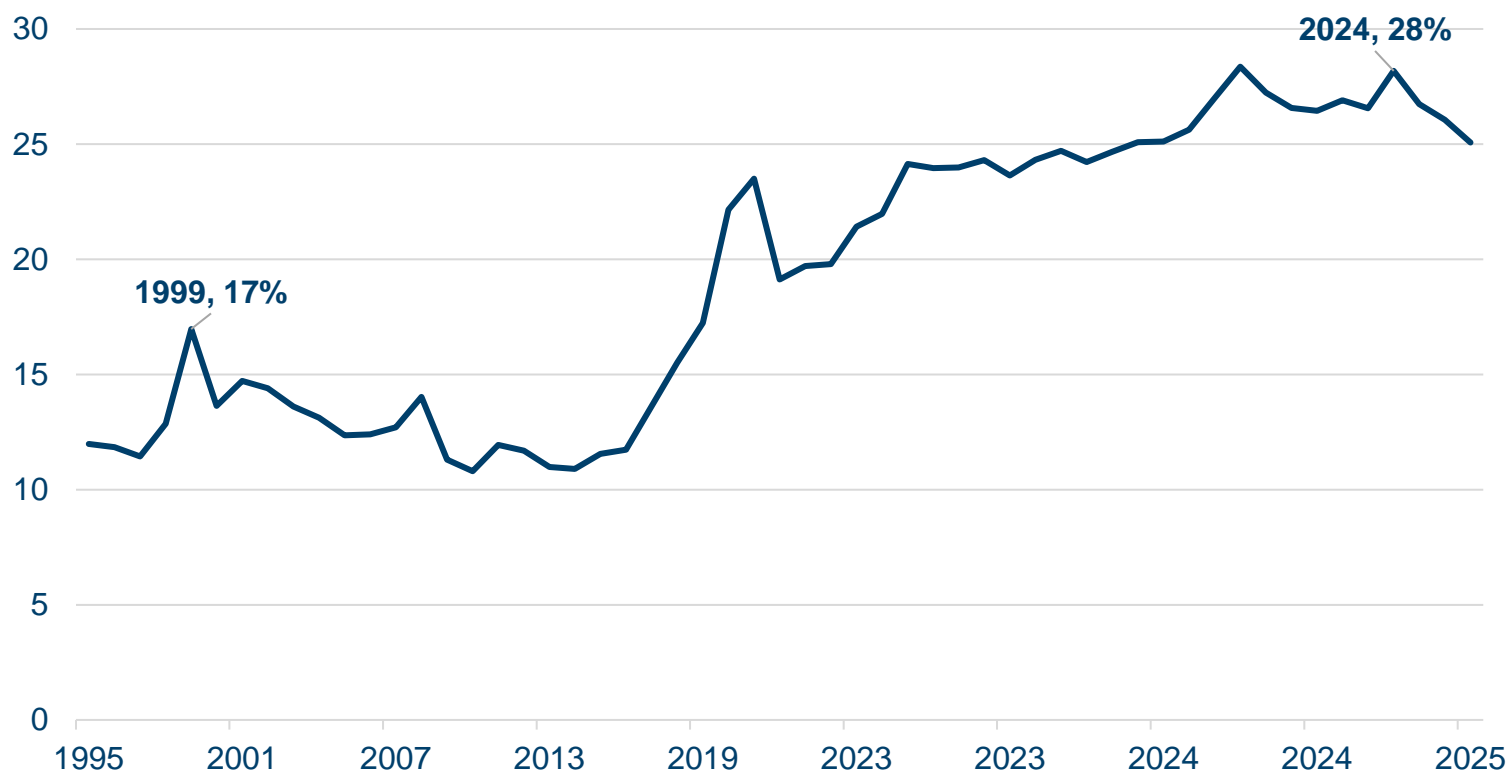
Source: Bloomberg as of 03/31/25. The data series starts June 2003. A basis point is 1/100th of a percent. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

► **S&P 500 Equal Weighted Index has underperformed S&P 500 since 02/23**
(S&P 500 Equal Weighted Index relative to S&P 500 daily returns, 30-day moving average)



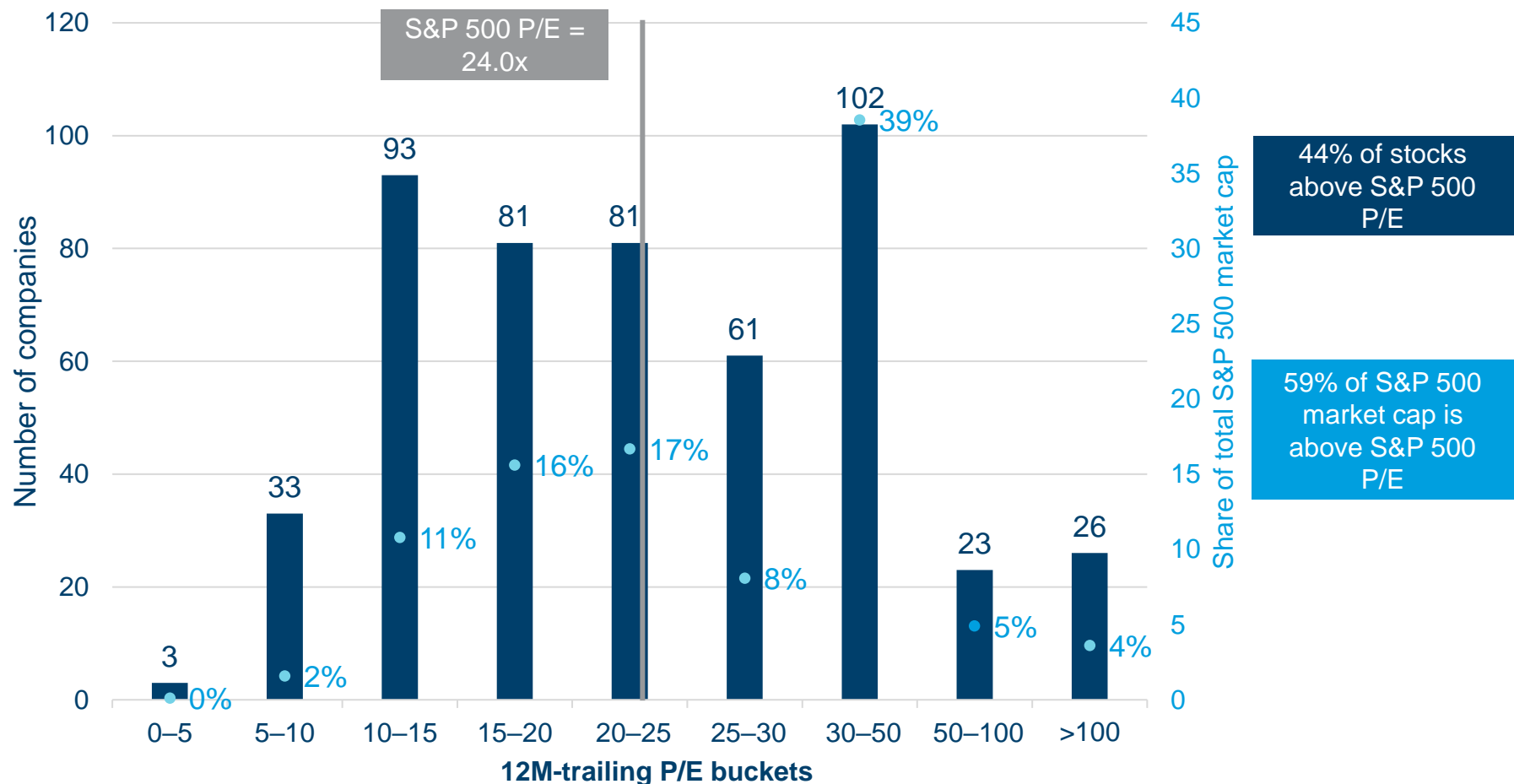
Source: Bloomberg, as of 03/31/25. Indexed, 01/31/90 = 100. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

► Big has been getting bigger (Market value share of five largest stocks in S&P 500, %)



Source: Bloomberg, as of 03/31/25. The data series is annual from 1995–2022, and thereafter it is monthly. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

► While stock market performance has been driven by just a few stocks, the market P/E valuation is not (Number of companies and market cap for the S&P 500)



Source: Bloomberg, as of 03/31/25. P/E ratio is based on S&P 500 trailing earnings. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

Opportunities

Increased productivity: AI can automate repetitive and time-consuming tasks, leading to increased efficiency and productivity in various industries.

Improved health care: AI can analyze large amounts of medical data and provide personalized treatment recommendations, leading to better health outcomes and cost savings for patients and health care providers.

Enhanced customer experience: AI can be used to personalize customer experiences and improve customer service in various industries.

Innovation: AI is already driving innovation in various fields, including health care, finance and transportation, leading to new products and services.

Risks

Valuation: Disruptive technology can lead to bubbles. The internet dot-com boom led to increased productivity and efficiency, but many early participants failed.

Regulation: AI may face increased regulation from governments and regulatory bodies, which could impact profitability and valuations.

Ethical concerns: There are ethical concerns surrounding the use of AI, such as privacy and bias issues. These concerns could lead to negative public perception and impact the success of AI companies.

AI data wall: The availability of high-quality, diverse data for training AI models becomes limited, as the performance gains from adding more publicly available data diminish.

► With productivity now around historical lows, how high can AI drive productivity?

Period	Total factor productivity*	Main sources of growth
1760–1870	~ 0.2% to 1%	Industrial Revolution
1870–1900	~ 1.5% to 2%	Transportation, communications, trade, business organization
1900–1920	~ 1%	
1920s	~ 2%	Electricity, internal combustion engines, chemicals, telecommunications
1930s	~ 3%	
1940s	~ 2.5%	
1950–1973	~ 2%	Widespread
1973–1990	< 1%	<i>IT “Productivity Paradox”**</i>
1990s	> 1%	Internet
2000s	~ 1.5%	
2010–2023	0.5%	
2023	0.3%	
2023–????	??	Artificial intelligence

Source: Bureau of Labor Statistic and Congressional Budget Office (CBO). **Total factor productivity (TFP)** reflects the overall efficiency with which labor and capital inputs are used together in the production process. *Average annual growth rate. Total factor productivity; San Francisco Fed (frbsf.org) 03/28/24. ** Erik Brynjolfsson coined the term “productivity paradox” in his 1993 paper, “The Productivity Paradox of IT.” The term refers to the slowdown in productivity growth in the United States in the 1970s and 1980s, despite the rapid development of information technology (IT). Brynjolfsson’s paper was inspired by a comment made by Nobel Laureate Robert Solow, who said, “You can see the computer age everywhere but in the productivity statistics.” This is why the productivity paradox is also sometimes called the Solow paradox.

U.S. equity: P/E vs. productivity at varying bond yields

Review and outlook

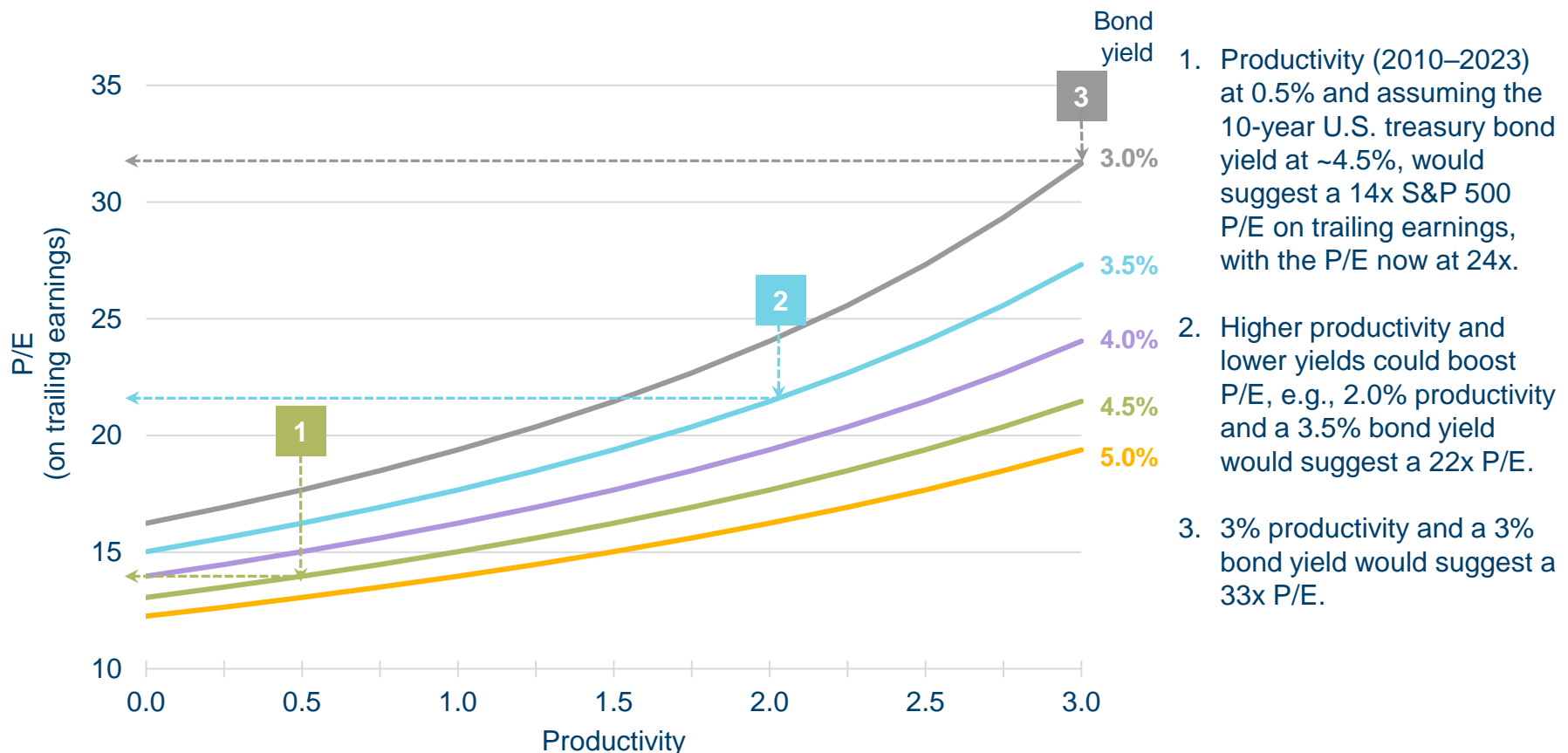
Macroeconomic

Global equity

Global fixed income

Multi-asset

► **Normal stock market P/E could be higher than the historical average, *if* AI can significantly boost productivity and thereby earnings growth, and depending upon where bond yields settle**
(Analysis based on total factor productivity, and 10-year U.S. Treasury bonds, %)



Source: Bloomberg, Bureau of Labor Statistic, Bloomberg as of 03/31/25. **Total factor productivity (TFP)** reflects the overall efficiency with which labor and capital inputs are used together in the production process. P/E reflects 2003–2024 average of spread between S&P 500 trailing earnings yield vs. 10-year U.S. Treasury bonds. bond yields.

- Lags in adoption, organizational and workforce adjustments, as well as regulatory and legal barriers, make it challenging to accurately forecast the productivity gains from AI, with some forecasts ranging from 0.5% to 3.4%

Generative AI could enable labor productivity growth of 0.1% to 0.6% annually through 2040, depending on the rate of technology adoption and redeployment of worker time into other activities. Combining generative AI with all other technologies, work automation could add 0.5% to 3.4% annually to productivity growth.¹

Estimate a baseline case in which the widespread adoption of AI could contribute 1.5% to annual productivity growth over a 10-year period, lifting global GDP by nearly \$7 trillion. The upside case carries a remarkable 2.9% total uplift.²

Only a quarter of AI-exposed tasks will be cost-effective to automate within the next 10 years, consequently total factor productivity gains over the next 10 years are predicted to be less than 0.53%.⁴

Generative AI will turbocharge productivity in the U.S. economy over the coming decade, with non-agricultural productivity growth averaging over 1.8% annually through 2029.³

A big percentage of the work that is done in a modern economy is amenable to being augmented by LLMs and generative AI. I'm betting that productivity growth (could be) closer to 3% — maybe more.⁵

Source: ¹The economic potential of generative AI The next productivity frontier, McKinsey, June 2023; ²The generative world order: AI, geopolitics, and power, Goldman Sachs, 12/14/23; ³Generative AI Can Boost Productivity Without Replacing Workers, Stanford Business Graduate School, 12/11/23 ; ⁴The Simple Macroeconomics of AI, Daron Acemoglu, Institute Professor of Economics, Department of Economics, Massachusetts Institute of Technology; ⁵NBER Working Paper No. 2487, May 2024, Erik Brynjolfsson, Director, Stanford Digital Economy Lab.

U.S. equity: Region valuations vs. momentum

Review and outlook

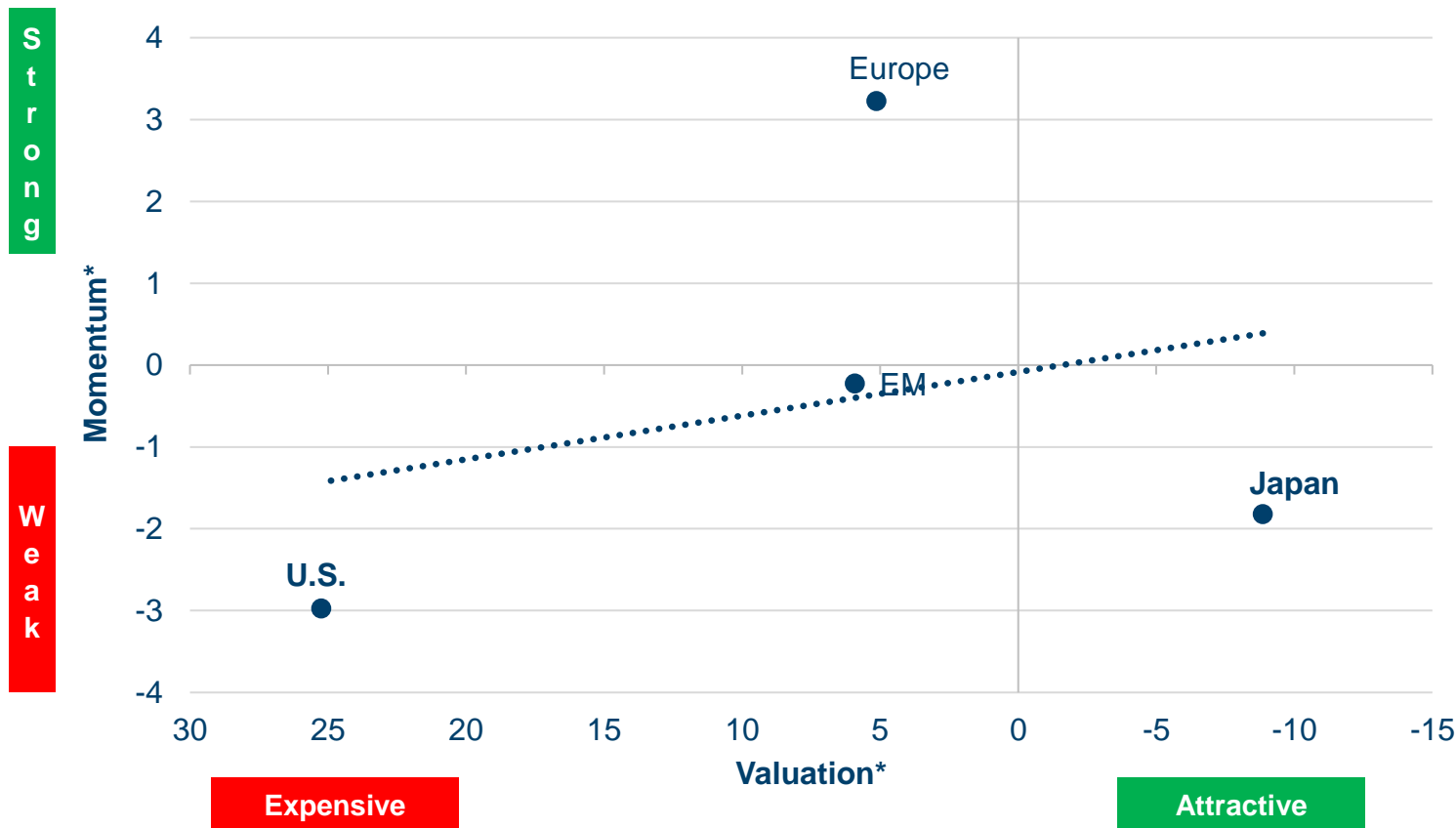
Macroeconomic

Global equity

Global fixed income

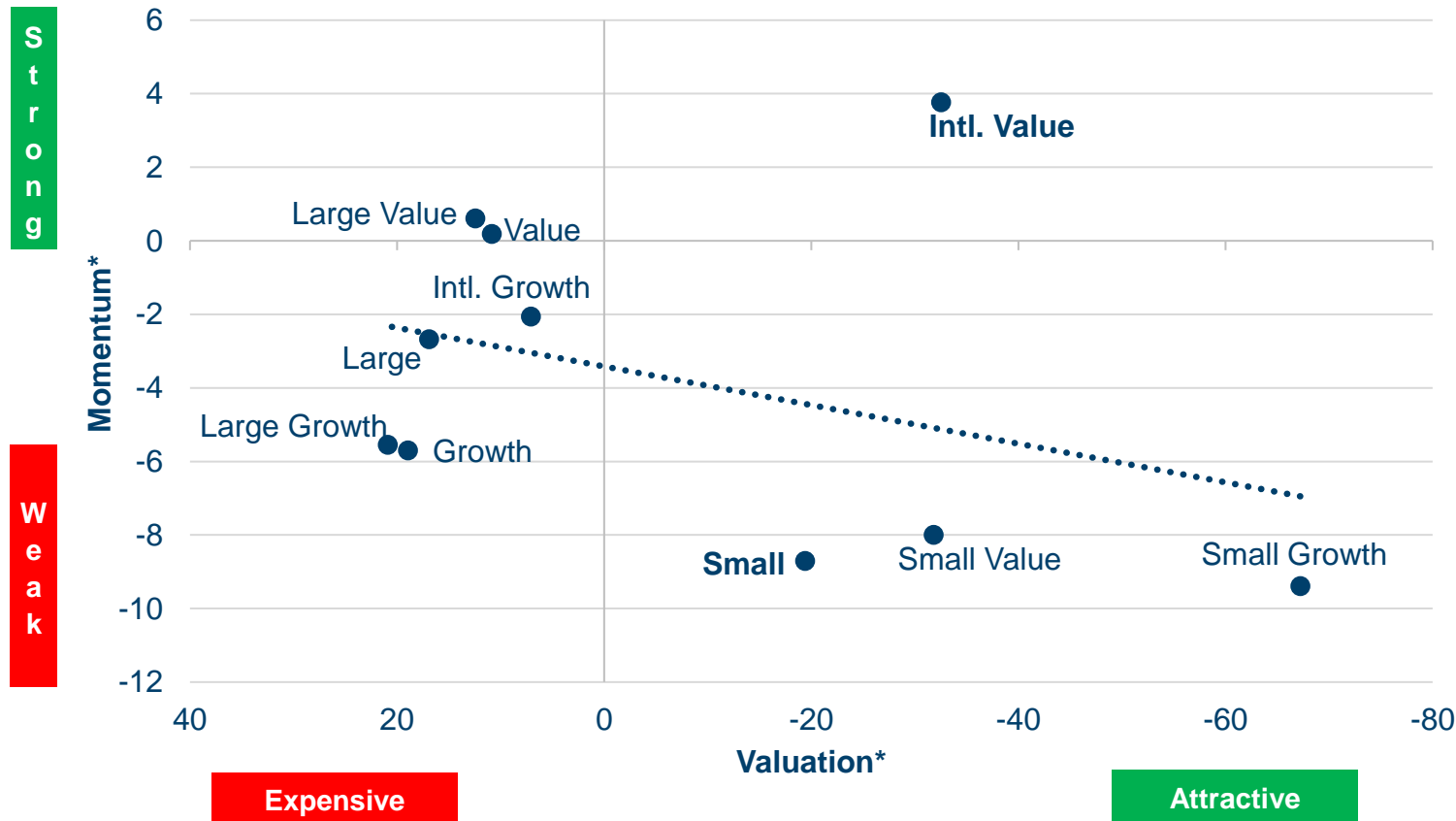
Multi-asset

► The region with the best combined valuation/momentum is Japan; the worst is U.S.



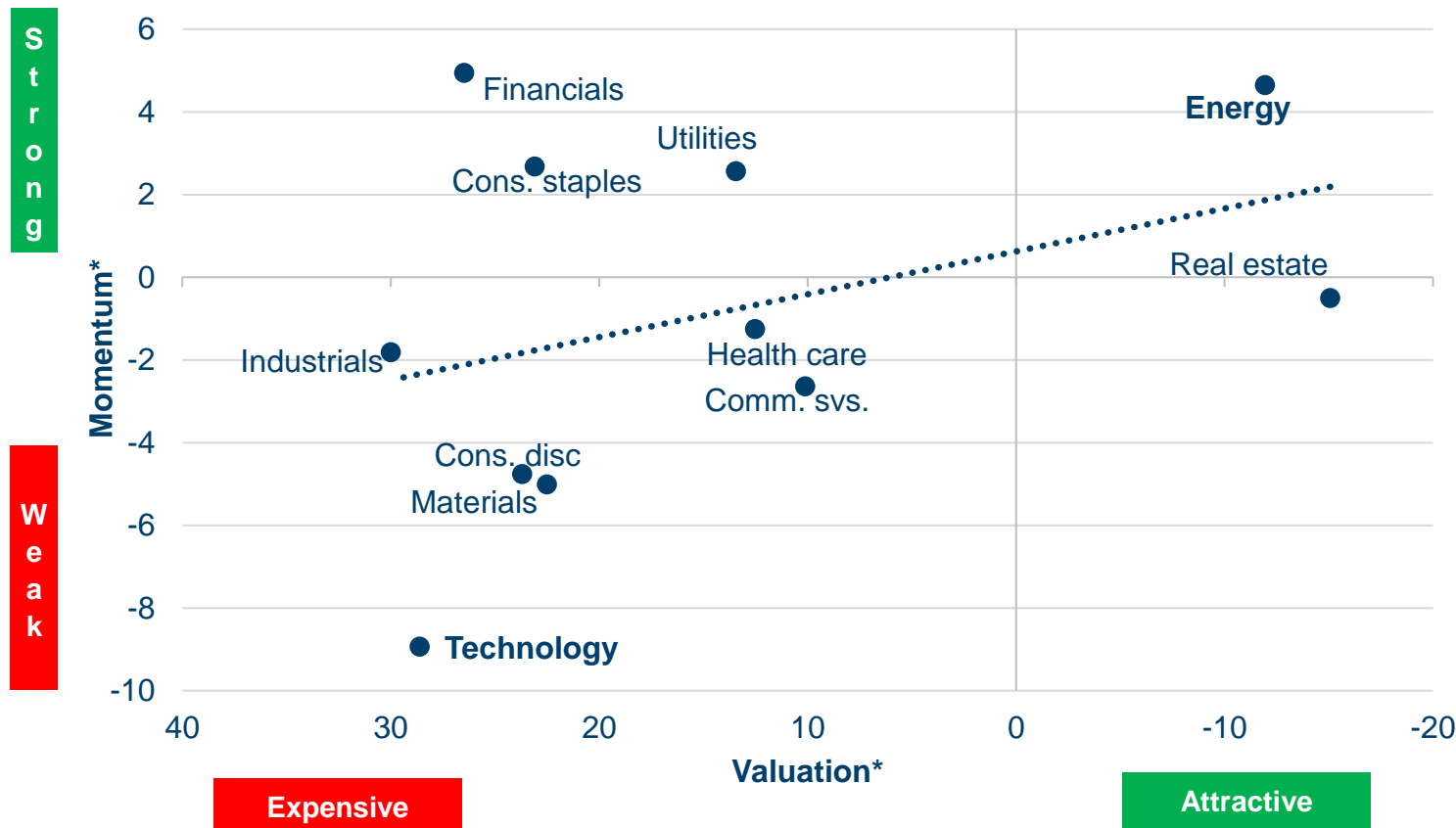
Source: MSCI, Bloomberg, data as of 03/31/25. * The valuation axis is calculated using 12-month forward P/E ratio, average vs. current (since June 2003). The momentum axis is calculated by current level vs. 200 daily moving average. U.S. is represented by MSCI US Index; Europe by MSCI Europe Index; Japan by MSCI Japan Index; EM by MSCI Emerging Markets Index. The data series starts June 2003. **It is not possible to invest directly in an index.**

► The style with the best combined valuation/momentum is international value;
the worst is small



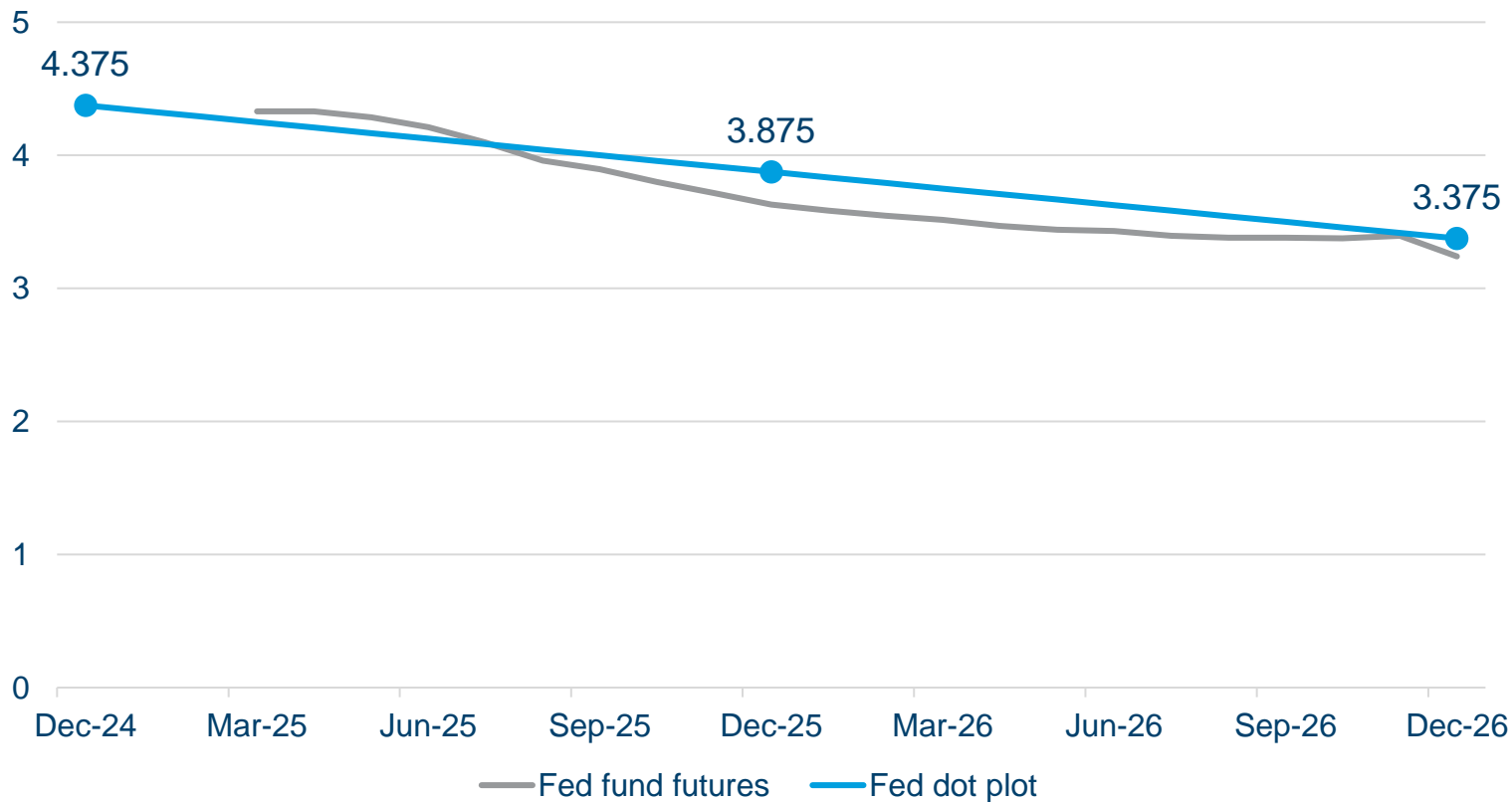
Source: MSCI, Bloomberg, data as of 03/31/25. * The valuation axis is calculated using 12-month forward P/E ratio, average vs. current (since June 2003, except for international value and growth, which starts from March 2006). The momentum axis is calculated by current level vs. 200 daily moving average. Growth represented by Russell 3000 Growth Index; value by Russell 3000 Value Index; small cap by Russell 2000 Index; large cap by Russell 1000 Index; small growth by Russell 2000 Growth Index; large growth by Russell 1000 Growth Index; small value by Russell 2000 Value Index; large value by Russell 1000 Value Index; international growth by MSCI ACWI ex USA Growth Index; and international value by MSCI ACWI ex USA Value Index. Please see notes for index descriptions. **It is not possible to invest directly in an index.**

► The sector with the best combined valuation/momentum is energy; the worst is technology

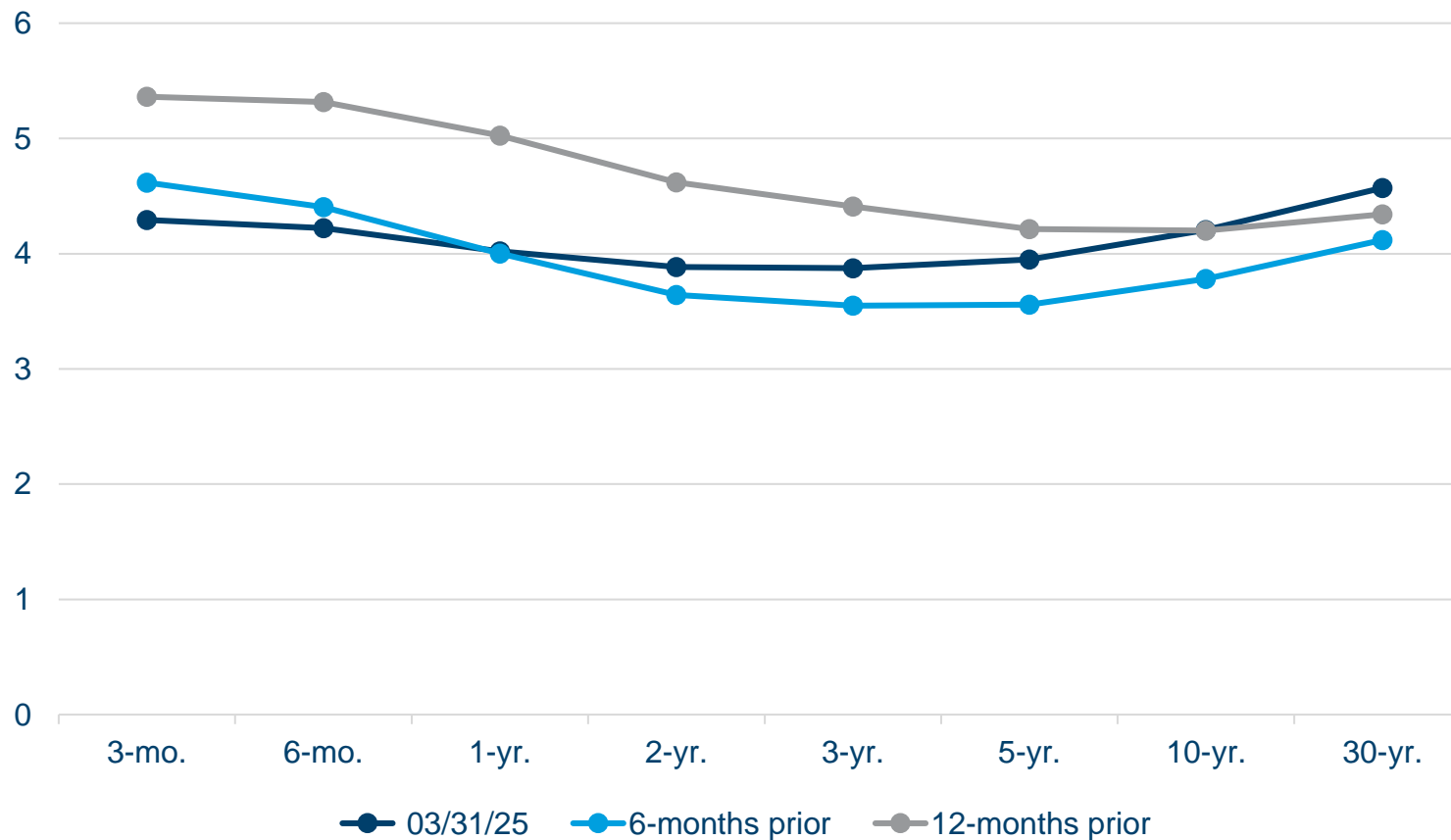


Source: MSCI, Bloomberg, data as of 03/31/25. *The valuation axis is calculated using 12-month forward P/E ratio, average vs. current (since June 2003, except real estate, which starts from October 2016). The momentum axis is calculated by current level vs. 200 daily moving average. Each sector is represented by the sector indices of the MSCI US Index. **It is not possible to invest directly in an index.**

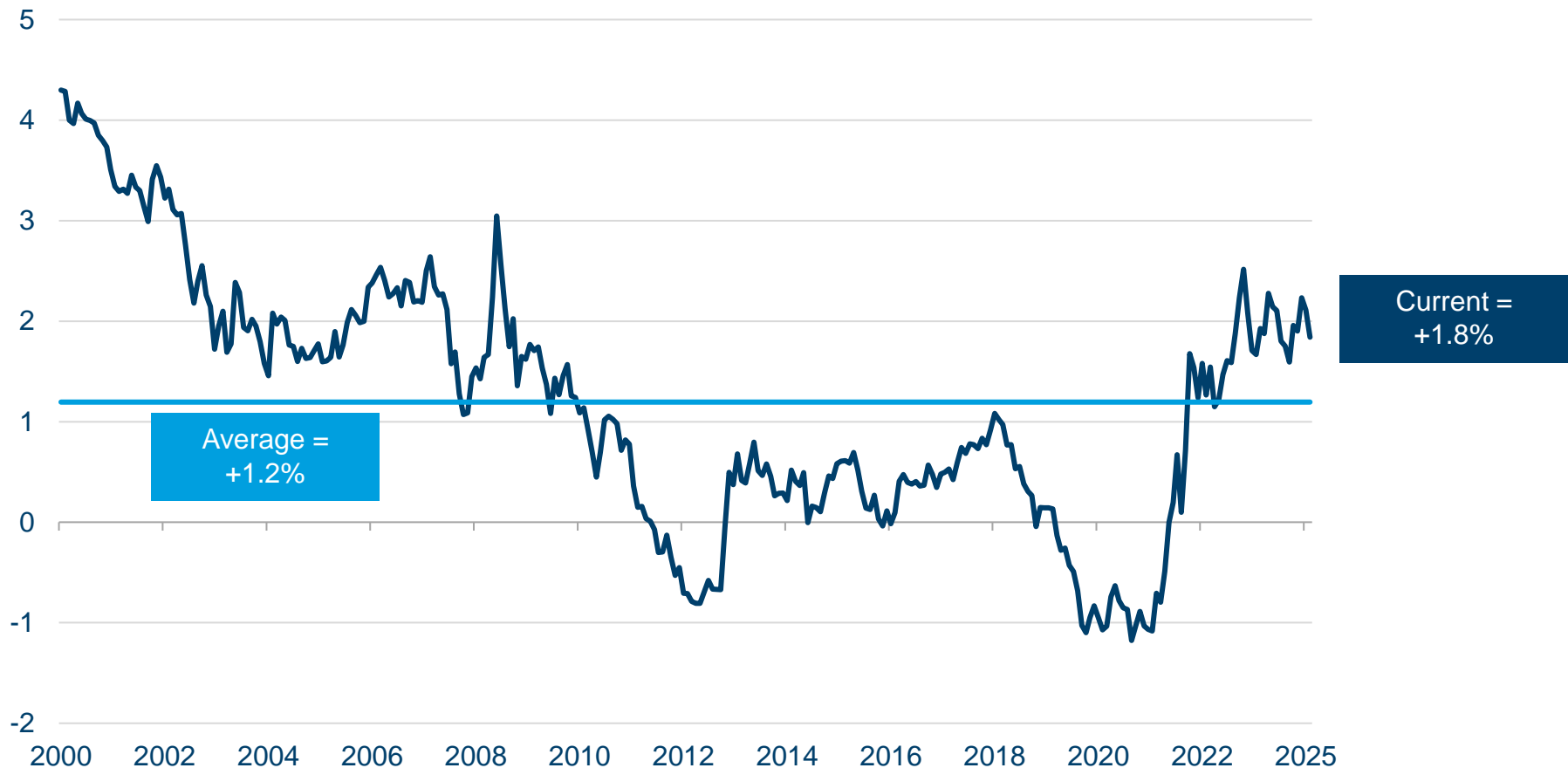
► **The Fed dot plot projects a cumulative 1.00-point reduction in the federal funds rate by the end of 2026, with fed funds futures expecting the same**
(Fed funds dot plot and futures, %)



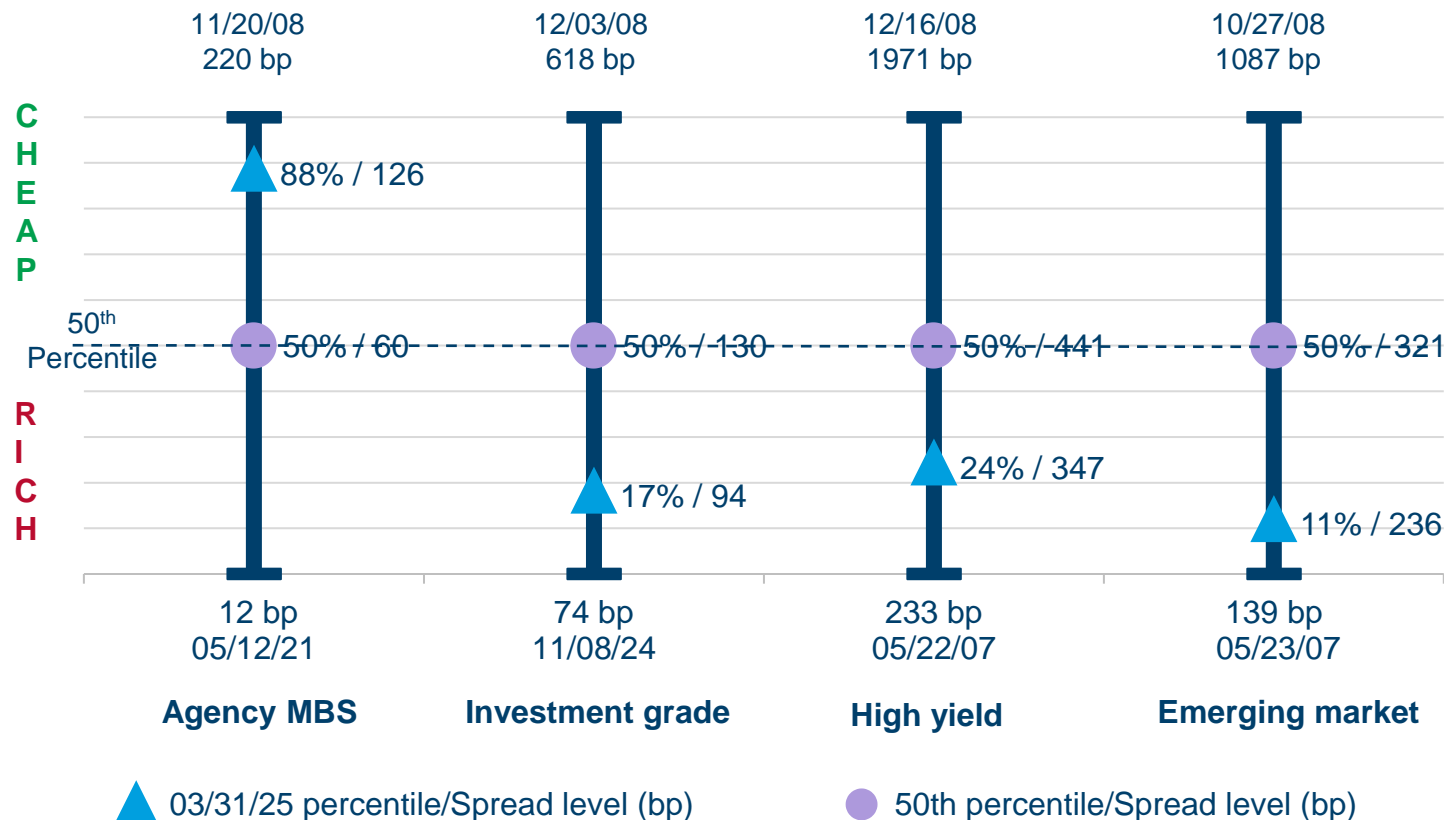
► The yield curve has steepened such that key relationships, including the 2s10s curve, are no longer inverted (U.S. Treasury yields, %)



► Real yield on the 10-year U.S. Treasury bond remain quite elevated (Real yield = nominal yield - breakeven inflation expectations, %)



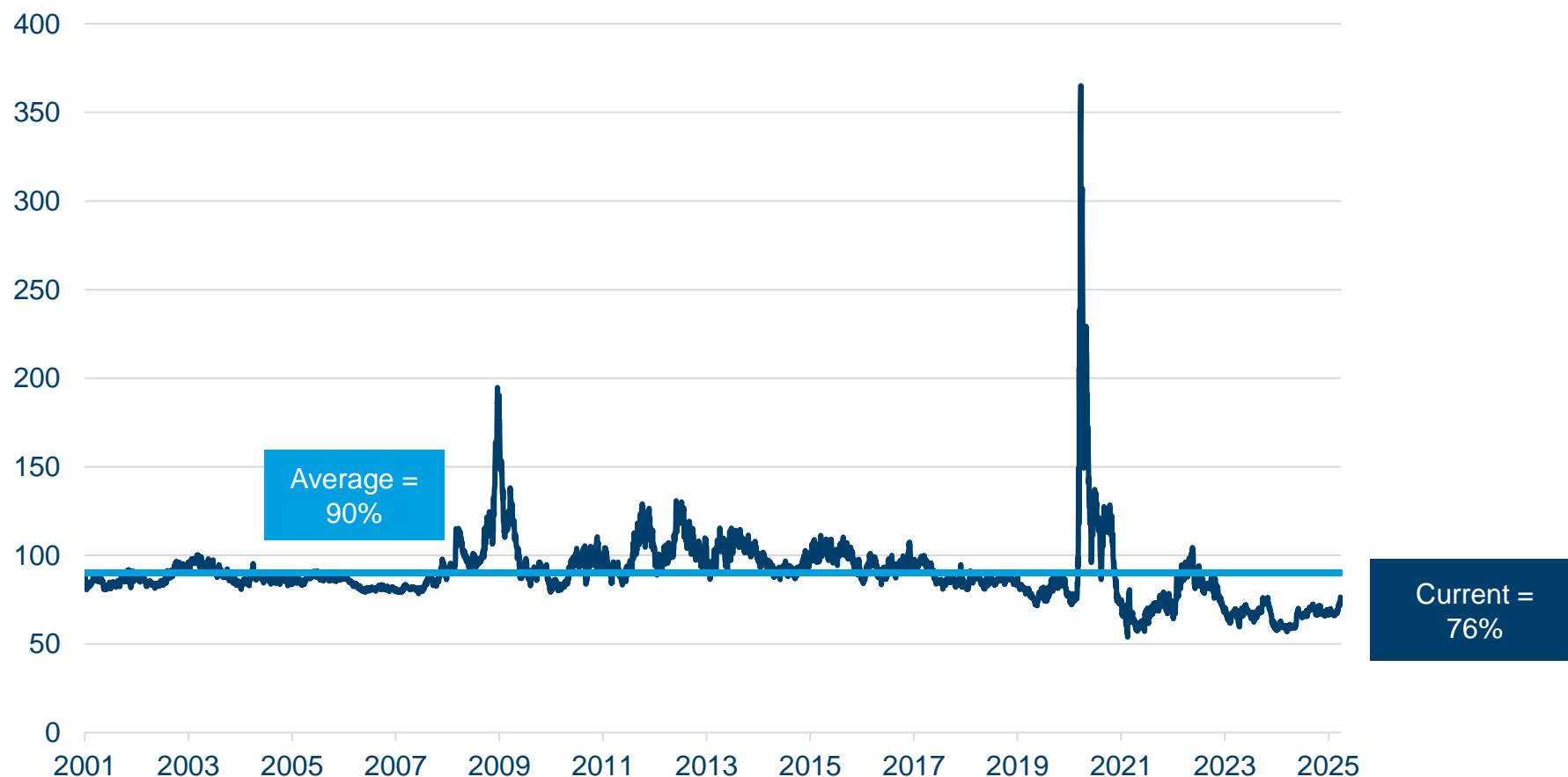
► Corporate and emerging market credit spreads have improved but remain below their historical average (Fixed income spreads)



Source: Bloomberg as of 03/31/25. Daily spreads since 2001; Agency MBS spreads since 2003. See disclosure for index details. **It is not possible to invest directly in an index.** A basis point is 1/100th of a percent. Note: Spread is the difference in quoted rates of return for a security with credit risk over a risk-free security (e.g., Treasuries or 3-month LIBOR).

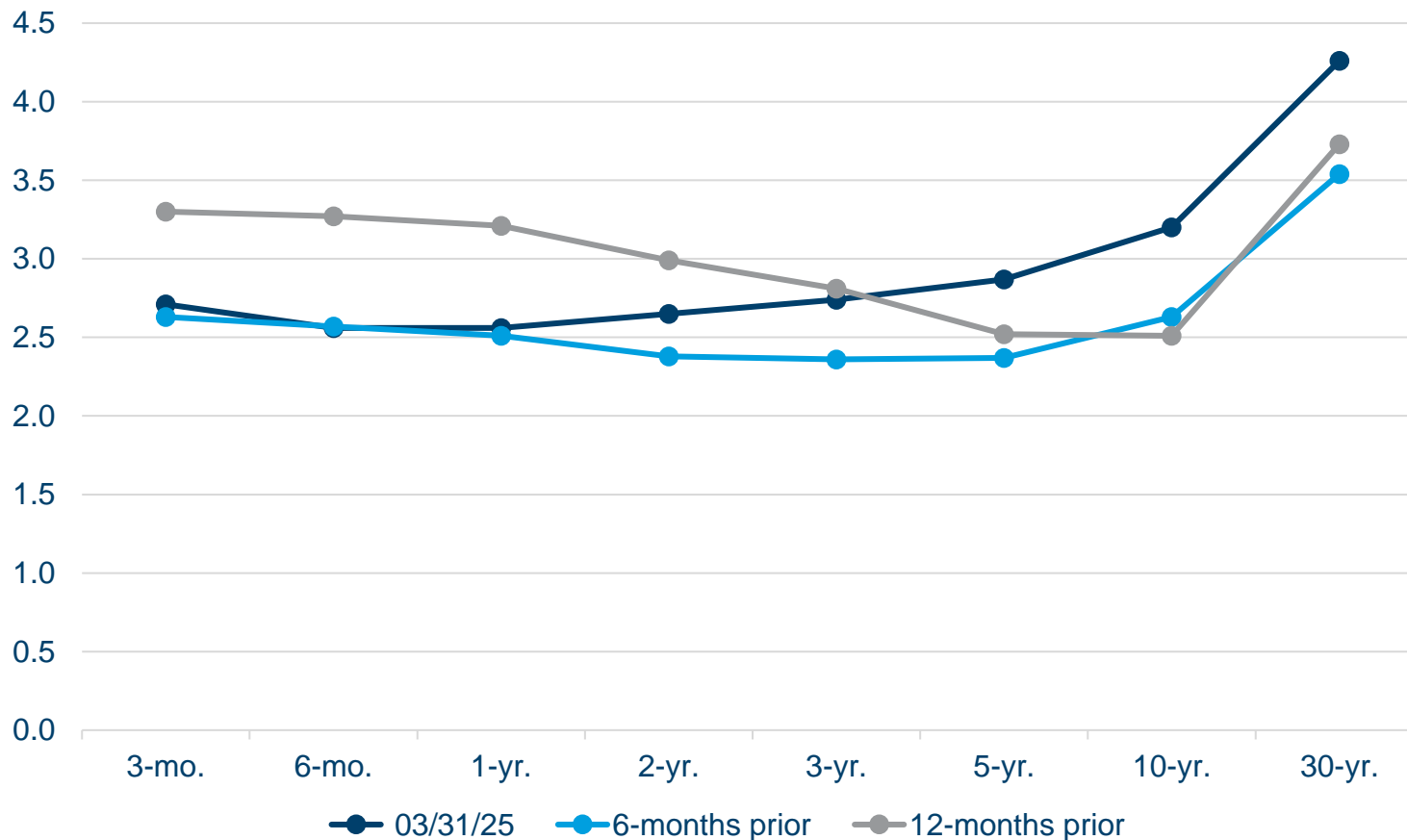
► Benchmark Muni yields are below average vs. taxable bonds

(AAA Muni to U.S. Treasury yield ratio, 10-year, %)



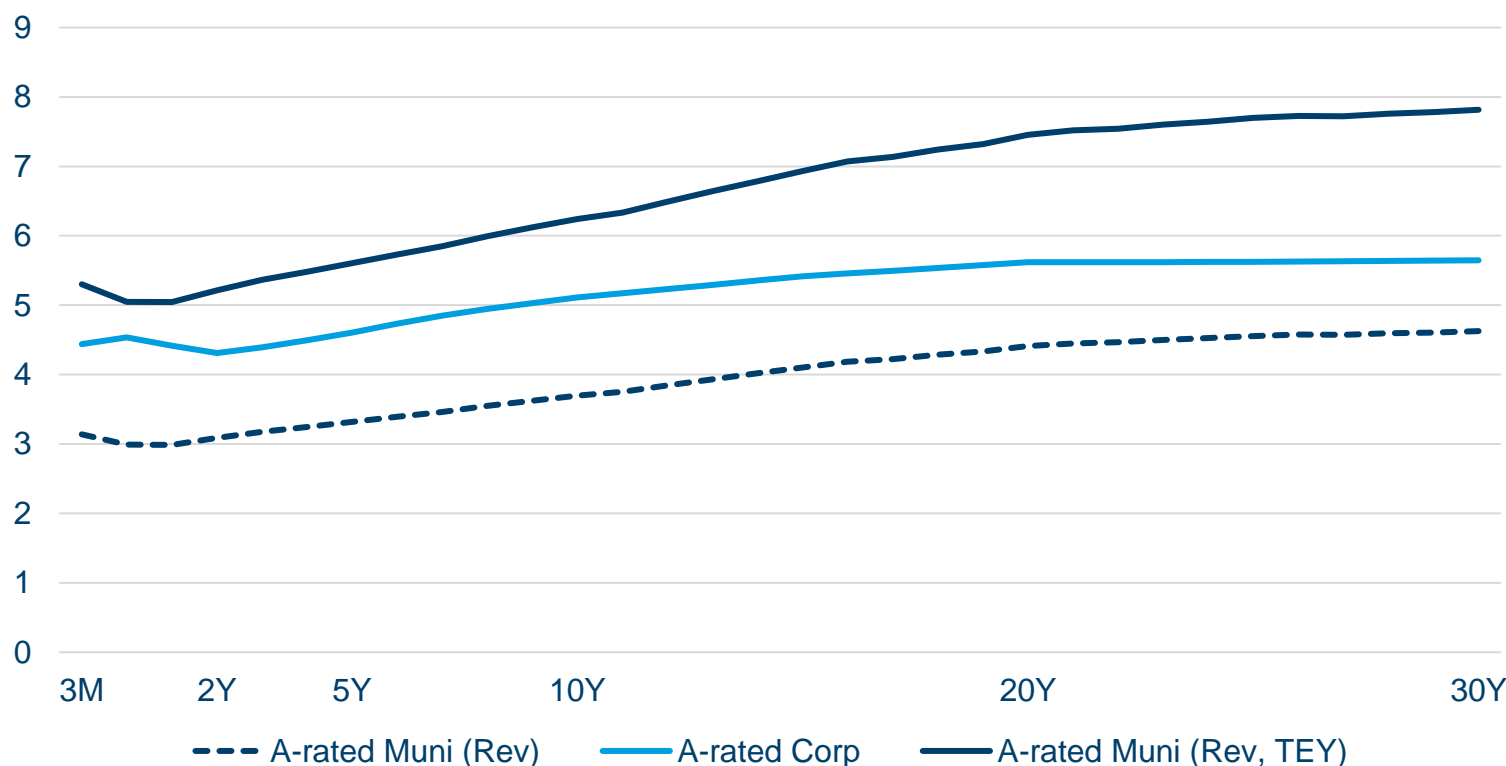
Source: Bloomberg as of 03/31/25. **Past performance does not guarantee future results. It is not possible to invest directly in an index.**

► **The Muni curve is positively sloped, with higher yields available on longer maturity bonds**
(AAA Muni yields, %)



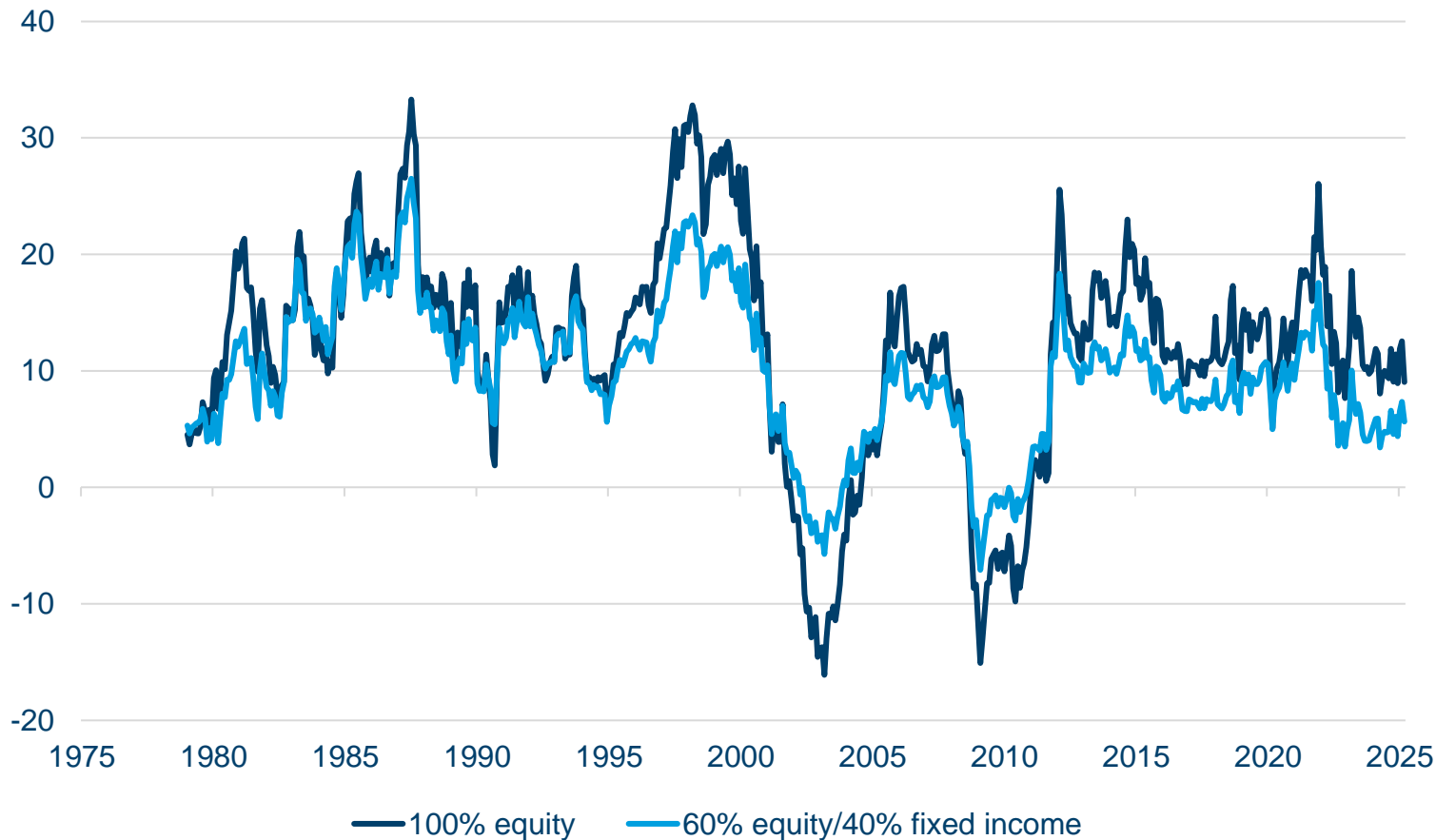
Source: Bloomberg, Columbia Threadneedle Investments as of 03/31/25. **Past performance does not guarantee future results.**

► Muni bonds offer attractive taxable-equivalent yield compared to corporate bonds (Muni yields vs. corporate bond yields, %)



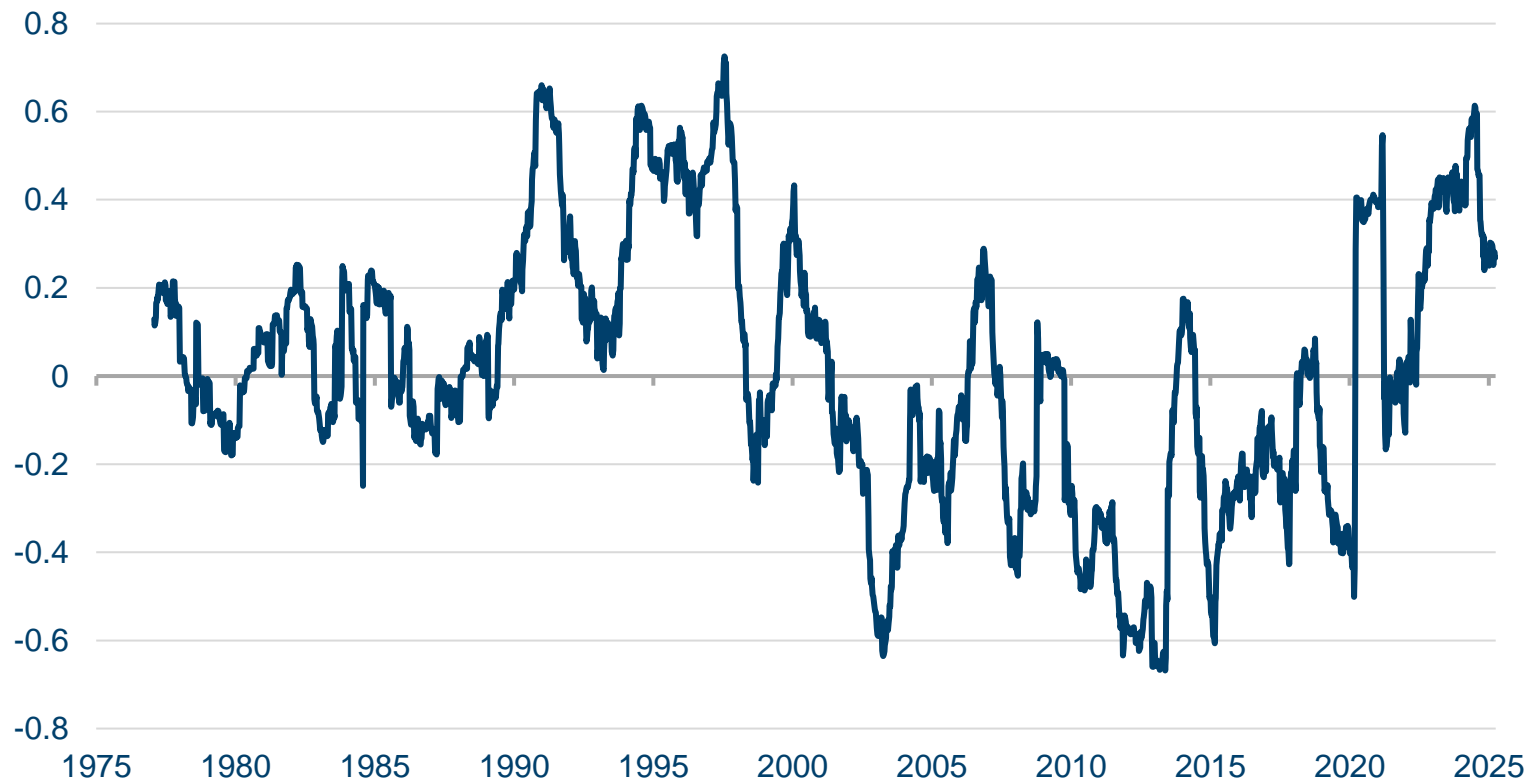
Source: Bloomberg, as of 03/31/25. Based on Bloomberg US Revenue A Muni BVAL Yield Curve and Bloomberg US Corporate A+, A, A- BVAL Yield Curve. TEY is taxable-equivalent yield and assumes federal income tax rate of 40.8% (37% income tax rate + 3.8% net investment income tax rate). Other taxes are possible. There is no guarantee that the investment objective will be achieved or that return expectations will be met. An investment involves substantial risks, including the loss of principal. **It is not possible to invest directly in an index.**

► **Returns from a traditional 60% equity and 40% fixed-income portfolio have been highly correlated with equity markets** (Rolling three-year returns annualized, %)



Sources: Bloomberg, Columbia Threadneedle Investments as of 03/31/25. Equity is represented by S&P 500 Index, and fixed income is represented by the Bloomberg U.S. Aggregate Bond Index. Correlation based on rolling three-year returns annualized (%). **Past performance is not a guarantee of future results. It is not possible to invest directly in an index.** Diversification and asset allocation do not assure a profit or protect against loss.

► **Recent research¹ found that the stock-bond correlation depends on the relative volatility of growth and inflation and the correlation between them**
(Correlation, 52-week rolling average)



Sources: Bloomberg, Columbia Threadneedle Investments as of 03/28/25. Equity is represented by S&P 500, and fixed income is represented by the Bloomberg U.S. Aggregate Bond index.

¹The Journal of Portfolio Management, Multi-Asset Strategies, *A Changing Stock–Bond Correlation: Drivers and Implications*, March 2023.

Past performance is not a guarantee of future results. It is not possible to invest directly in an index. Diversification and asset allocation do not assure a profit or protect against loss.

Multi-asset: Sharpe ratio

Review and outlook

Macroeconomic

Global equity

Global fixed income

Multi-asset

► Over the past 20 years, a diversified portfolio consistently avoided low risk-adjusted returns (Sharpe ratio)

Period Ending (annual)	S&P 500 Index	Russell 2000 Index	MSCI EAFE Index Net	MSCI EM Index Net	Bloomberg US Agg - Treasury Index	Bloomberg US Agg - Investment Grade	Bloomberg US Agg - High Yield Index	JP Morgan EMBI Global Diversified Index	HFRX Global Hedge Fund Index	DJ UBS Commodity Index	Equal Blend
2003	2.52	2.97	2.68	3.76	0.17	1.02	4.98	2.91	4.99	1.54	3.96
2004	1.37	1.22	2.08	1.61	0.48	0.84	2.55	1.33	0.44	0.63	1.90
2005	0.24	0.11	1.09	1.65	-0.07	-0.36	-0.07	1.46	-0.08	1.25	1.06
2006	2.03	1.04	2.39	1.53	-0.65	-0.16	3.21	0.97	1.17	-0.18	1.52
2007	0.05	-0.55	0.67	1.95	1.11	-0.16	-0.53	0.26	-0.13	1.03	0.78
2008	-1.94	-1.31	-1.76	-1.54	1.83	-0.54	-1.36	-0.74	-2.32	-1.17	-1.62
2009	1.23	0.96	1.29	2.83	-0.72	2.85	4.65	4.36	3.73	1.19	2.24
2010	0.81	1.15	0.35	0.93	1.42	2.33	2.18	1.89	1.14	0.91	1.28
2011	0.13	-0.19	-0.66	-0.79	2.73	1.83	0.53	1.06	-1.92	-0.72	-0.23
2012	1.58	1.31	1.08	0.96	0.66	2.77	4.11	3.34	1.14	-0.08	1.54
2013	3.98	3.71	1.95	-0.24	-1.06	-0.35	1.61	-0.63	2.30	-1.11	1.39
2014	1.73	0.33	-0.53	-0.17	2.45	2.48	0.56	1.33	-0.20	-1.32	0.26
2015	0.10	-0.32	-0.06	-0.89	0.23	-0.18	-0.74	0.26	-0.86	-1.69	-0.74
2016	1.18	1.20	0.05	0.64	0.16	1.21	2.90	1.43	0.59	0.96	1.40
2017	5.57	1.86	6.08	5.82	0.86	3.24	3.19	3.93	4.55	0.15	7.65
2018	-0.43	-0.70	-1.32	-1.11	-0.29	-1.39	-1.16	-1.22	-1.77	-1.46	-1.30
2019	2.37	1.36	1.79	1.02	1.04	3.10	2.56	2.60	2.54	0.58	2.04
2020	0.71	0.55	0.28	0.71	1.63	0.91	0.44	0.27	0.77	-0.19	0.60
2021	2.71	1.33	1.20	-0.24	-0.71	-0.28	2.14	-0.36	1.30	2.01	1.63
2022	-0.89	-0.89	-0.77	-1.04	-2.20	-1.62	-1.13	-1.36	-2.04	0.73	-1.05
2023	1.51	0.51	0.82	0.28	-0.13	0.36	1.23	0.68	-0.64	-1.19	0.53
2024	1.93	0.31	-0.15	0.19	-0.90	-0.52	0.93	0.24	-0.02	0.02	0.42
Average	1.30	0.72	0.84	0.81	0.36	0.79	1.49	1.09	0.67	0.09	1.15

Sources: FactSet, Columbia Threadneedle Investments as of 12/31/24, updated annually. Data based upon monthly rebalancing. Equal blend is a hypothetical portfolio with equal weights to all the asset classes in the table. Returns used to calculate Sharpe Ratios are monthly. The cells highlighted in red and green show the bottom three and top three performers, respectively, for the particular year. **Past performance is not a guarantee of future results. It is not possible to invest directly in an index.** Diversification and asset allocation do not assure a profit or protect against loss. Indices are unmanaged and do not reflect the impact of fees

Disclosures

Index definitions

It is not possible to invest directly in an index.

The **Bank of America Merrill Lynch All Convertibles All Qualities Index** is a widely used index that measures convertible securities' performance. It measures the performance of U.S. dollar-denominated convertible securities not currently in bankruptcy with a total market value greater than \$50 million at issuance.

The **Bloomberg Emerging Markets Bond Index** includes USD-denominated debt from sovereign, quasi-sovereign and corporate EM issuers.

The **Bloomberg Global Aggregate Bond Index** is an unmanaged, broad-based, market-capitalization-weighted index that is designed to measure the broad global markets for U.S. and non-U.S. corporate, government, governmental agency, supranational, mortgage-backed and asset-backed fixed-income securities.

The **Bloomberg Global Inflation Linked Bond Index** is designed to include those markets in which a global government-linked fund is likely and able to invest.

The **Bloomberg Global Treasury Index ex-U.S.** tracks fixed-rate, local currency government debt of investment-grade countries, including both developed and emerging markets but excluding the U.S.

The **Bloomberg Multiverse Index** provides a broad-based measure of the global fixed-income bond market. The index represents the union of the Global Aggregate Index and the Global High-Yield Index and captures investment-grade and high-yield securities in all eligible currencies.

The **Bloomberg Municipal Bond Index** is an unmanaged index that is considered representative of the broad market for investment-grade tax-exempt bonds with a maturity of at least one year.

The **Bloomberg Muni BBB-rated index** is an unmanaged index of tax-exempt bonds with a BBB credit rating.

The **Bloomberg U.S. Aggregate Corporate Bond Index** consists of publicly issued, fixed-rate, nonconvertible, investment-grade debt securities.

The **Bloomberg U.S. Corporate Investment Grade Index** measures the investment-grade, taxable corporate bond market.

The **Bloomberg U.S. High Yield Corporate Bond Index** represents the universe of fixed-rate, non-investment-grade debt.

The **Bloomberg U.S. Mortgage-Backed Securities Index** includes 15- and 30-year fixed-rate securities backed by mortgage pools of Government National Mortgage Association (GNMA), Federal Home Loan Mortgage Corporation (FHLMC) and Federal National Mortgage Association (FNMA).

The **Bloomberg U.S. Treasury Index ("U.S. Treasuries")** measures U.S. dollar-denominated, fixed-rate, nominal debt issued by the U.S. Treasury.

The **Bloomberg Commodity Index** (formerly, DJ UBS Commodity Index) is a broadly diversified index composed of commodities traded on U.S. exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange (LME).

The **BofA Merrill Lynch 10-Year T-Bill Index** is an unmanaged market index of U.S. Treasury securities that assumes reinvestment of all income.

The **ICE BofA Merrill Lynch U.S. High Yield Constrained Bond index** is a commonly used benchmark index for high-yield corporate bonds.

The **Bloomberg Treasury Index** tracks the total return of U.S. Treasury notes.

Floating rate loans are represented by the **Credit Suisse Leveraged Loan Index**, also known as the Bank Loan Index, which provides broad and comprehensive total return metrics of the universe of syndicated term loans.

The **FTSE Broad Investment-Grade (BIG) Index** tracks the performance of U.S. dollar-denominated bonds issued in the U.S. investment-grade bond market.

The **FTSE National Association of Real Estate Investment Trusts (NAREIT) Index** is an index that reflects the performance of all publicly traded equity real estate investment trusts.

The **FTSE U.S. Domestic 3-month T-Bill Index** is intended to track the daily performance of 3-month U.S. Treasury bills.

The **FTSE World Government Bond Index** measures the performance of fixed-rate, local currency, investment-grade sovereign bonds.

The **JPMorgan Emerging Market Bond Index** tracks total returns for traded external debt instruments in emerging markets and is an expanded version of the JPMorgan EMBI+. As with the EMBI+, the EMBI Global includes U.S. dollar-denominated Brady bonds, loans and Eurobonds with an outstanding face value of at least \$500 million. It covers more of the eligible instruments than the EMBI+ by relaxing somewhat the strict EMBI+ limits on secondary market trading liquidity.

The **JPMorgan Leveraged Loan Index** is designed to mirror the investable universe of U.S. dollar institutional leveraged loans.

Index definitions

The **MSCI ACWI Index** is a market capitalization-weighted index designed to provide a broad measure of equity market performance throughout the world.

The **MSCI ACWI ex USA Growth Index** is a market capitalization-weighted index designed to provide a broad measure of growth stocks outside the U.S.

The **MSCI ACWI ex USA Value Index** is a market capitalization-weighted index designed to provide a broad measure of growth stocks outside the U.S.

The **MSCI Europe Index** is a market capitalization-weighted index designed to provide a broad measure of European equities.

The **MSCI Europe, Australasia, Far East (EAFE) Index** captures large- and mid-cap stocks across developed market countries around the world, excluding the U.S. and Canada.

The **MSCI Emerging Markets Index**, an unmanaged market capitalization-weighted index, is compiled from a composite of securities markets of 27 emerging market countries.

The **MSCI Japan Index** is designed to measure the performance of the large- and mid-cap segments of the Japanese markets.

The **MSCI U.S. Index** is designed to measure the performance of the large- and mid-cap segments; it aims to represent ~85% of the U.S. market.

The **MSCI USA High Dividend Yield Index** is based on the MSCI USA Index, its parent index, and is designed to reflect the performance of equities with higher dividend income and quality characteristics.

The **MSCI World ex-U.S. Index** captures large- and mid-cap representation across 22 of 23 Developed Markets (DM) countries, excluding the United States.

The **Russell 1000 Value Index** is a stock market index that represents stocks from the Russell 1000 Index with lower price-to-book ratios and lower expected growth rates.

The **Russell 1000 Growth Index** is a market capitalization-weighted index of those firms in the Russell 1000 with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Value Index** is a stock market index that represents stocks from the Russell 2000 Index with lower price-to-book ratios and lower expected growth rates.

The **Russell 2000 Growth Index** is a market capitalization-weighted index of those firms in the Russell 2000 with higher price-to-book ratios and higher forecasted growth values.

The **Russell 3000 Value Index** is a stock market index that represents stocks from the Russell 3000 Index with lower price-to-book ratios and lower expected growth rates.

The **Russell 3000 Growth Index** is a market capitalization-weighted index of those firms in the Russell 3000 with higher price-to-book ratios and higher forecasted growth values.

The **Russell 2000 Index** is composed of the smallest 2,000 companies in the Russell 3000 Index, representing approximately 8% of the Russell 3000 total market capitalization.

The **Russell 3000 Index** measures the performance of the 3,000 largest publicly held companies incorporated in America as measured by total market capitalization.

The **S&P 500** tracks the performance of 500 widely held, large-capitalization U.S. stocks. Index returns assume the reinvestment of all distributions unless otherwise indicated.

The **S&P 500 Geometric Equal-Weighted Total Return Index** is the returns based on monthly equal-weighted geometric average of total returns of the S&P 500 component stocks, with components reconstituted monthly.

The **S&P GSCI** is a composite index of commodity sector returns that represents a broadly diversified, unleveraged, long-only position in commodity futures. The index's components qualify for inclusion in the index based on liquidity measures and are weighted in relation to their global production levels.

The **S&P U.S. Preferred Stock Index** is designed to serve the investment community's need for an investable benchmark representing the U.S. preferred stock market.

The **U.S. Dollar Index** is an index of the value of the United States dollar relative to a basket of foreign currencies. It is a weighted geometric mean of the dollar's value relative to the following select currencies: Euro (EUR) 57.6%, Japanese yen (JPY) 13.6%, Pound sterling (GBP) 11.9%, Canadian dollar (CAD) 9.1%, Swedish krona (SEK) 4.2%, Swiss franc (CHF) 3.6%.

VIX is the ticker symbol for the Chicago Board Options Exchange's CBOE Volatility Index, a measure of the stock market's expectation of volatility based on S&P 500 index options.

Disclosure

YTD asset class returns slides: The shown asset class descriptors reference the following indices: MSCI ACWI Index (Global stocks), S&P 500 Index (U.S. stocks), MSCI World ex-U.S. Index (International developed equity), MSCI Emerging Markets Index (Emerging market equity), Bloomberg Treasury Index (Treasury), Bloomberg US Aggregate Bond Index (U.S. aggregate bond), Bloomberg Municipal Bond Index (U.S. municipal bond), Bloomberg Global Aggregate TR USD (Global aggregate bond), Bloomberg US MBS TR USD (Mortgage-backed securities), FTSE Broad Investment-Grade (BIG) Index (Investment-grade corporate bond), Merrill Lynch US High Yield Constrained Index (High-yield corporate bond), Bloomberg Global ex-U.S. Aggregate TR USD (Global ex-US aggregate bond), JP Morgan EM Bond Index (Emerging market bond), Bloomberg Global Infl Linked TR USD (unhedged) (Global Inflation-linked bond), Bloomberg Commodity Index (Commodities), FTSE All Equity NAREIT Index (REITs).

Five-year forecast slide: Equity forecasts are based on three components: expected dividend payments, expected earnings growth and change in valuation levels (price-to-earnings ratios). Expected earnings growth is driven by expected economic growth, input cost changes and pricing power. Fixed-income forecasts are based on the shape of the yield curve, direction of interest rates, increase/decrease in yield spreads and timing of those changes. The major asset classes are based on the following indices: U.S. large-cap stocks (S&P 500 Index), U.S. small-cap stocks (Russell 2000 Index), Developed market stocks USD (MSCI EAFE Index), Emerging market stocks USD (MSCI EM Index), Cash (FTSE U.S. Domestic 3-Month T-Bill Index), U.S. Treasuries (Bloomberg U.S. Treasury Index), Municipal Bonds (Bloomberg Municipal Bond Index), Global sovereign bonds USD (Bloomberg Global Treasury Index (excl. U.S.)), Investment-grade corporate bonds (Bloomberg U.S. Aggregate Credit Index), High-yield corporate bonds (Bloomberg Corporate High Yield Index), Emerging market debt USD (JPMorgan EMBI Global Diversified Index), Absolute return (FTSE U.S. Domestic 3-Month T-Bill Index), Commodities (Bloomberg Commodity Index).

Factor calculations are based on the S&P 500 and are calculated monthly. Factor spreads reflect the top 20% of stocks minus bottom 20% of stocks based on square root market cap weighted. Free Cash Flow to Enterprise Value (FCF to EV) – Trailing twelve months (TTM) of free cash flow divided by enterprise value. Earnings before interest, taxes, depreciation, and amortization. (EBITDA) Margin – TTM EBITDA dividend divided by TTM revenues. Return on Equity (ROE) – TTM net income scaled by average common equity over past year. Forward Earnings to Price (E/P) – Next twelve-month earnings per share forecast divided by current price. Earnings Quality – Twelve-month change in net operating assets scaled by average total assets over past year. Otherwise known as Total Operating Accruals factor. Share Buyback – Twelve-month change in common shares outstanding reported on balance sheet. Operating Cash Flow (OCF) surprise – Change in reported OCF vs. result from four quarters ago scaled by standard deviation of OCF surprises over past 12 quarters. Final factor is weighted average of past four quarters of change. Prior 1-month Return – Return of stock over past one month. Price Momentum – Twelve-month price momentum excluding most recent month. Debt to Assets – Average total debt over past year scaled by average total assets over past year. Revenue Stability – Standard deviation of past 12 quarters of Revenue scaled by average of past 12 quarters of revenue multiplied by -1. Analyst Sentiment – Change in analyst earnings per share (EPS) forecasts. Book to Price – Current common equity divided by current market cap. Long-term (LT) Growth Rate – Analyst forecast of LT Earnings Growth. Size – Market Cap of company. Dividend Yield – Current Dividend per share forecast scaled by current price. Beta – Stock's correlation with overall market over past two years

The Agg is not diversified slide: Bloomberg U.S. Treasury Index (U.S. Treasuries), Bloomberg Global Treasury x-U.S. Index (Global Treasury ex-U.S.), Bloomberg U.S. Mortgage-Backed Securities Index (Agency MBS), Bloomberg Emerging Markets Bond Index (Emerging market), Bloomberg U.S. Corporate Index (Investment grade corporate), Bloomberg U.S. High Yield Index (U.S. Corporate high yield). Data starts from January 2006.

Fixed-income spread slide: Morgan Stanley 30Y Conventional Current Coupon (\$100) ZV Indicator (Agency MBS); Bloomberg US Agg Corporate Index (Investment Grade); Bloomberg US Corporate High Yield Index (High Yield); Bloomberg EM USD Agg Index (Emerging Markets); Bloomberg US Agg CMBS (CMBS).

Multi-asset annual return slide: The chart represents returns of an equally weighted portfolio comprising the following asset class (with their proxy): U.S. Equity (S&P 500 Index); Non U.S. Developed Equity (MSCI EAFE); Emerging Markets (MSCI EM Equity Index); U.S. Treasuries (Bloomberg U.S. Treasury Total Return Unhedged USD Index); Global Bonds (FTSE World Government Bond Index); Emerging Market Bonds (J.P. Morgan EM Bond Index Global Index); Investment Grade Bonds (Bloomberg U.S. Corporate Total Return Index); High Yield (Bloomberg U.S. Corporate High Yield Total Return Index); Mortgage-backed Securities (Bloomberg U.S. MBS Index); TIPS (Bloomberg Global Inflation-Linked Total Return index); REITs (FTSE NAREIT ALL Equity REITs Index); Commodities (Bloomberg Commodity Index).

Disclosure

Bloomberg Index Services Limited. BLOOMBERG® is a trademark and service mark of Bloomberg Finance L.P. and its affiliates (collectively "Bloomberg"). Bloomberg owns all proprietary rights in the Bloomberg Indices. Bloomberg does not approve or endorse this material, or guarantee the accuracy or completeness of any information herein, or make any warranty, express or implied, as to the results to be obtained therefrom and, to the maximum extent allowed by law, shall not have any liability or responsibility for injury or damages arising in connection therewith.

The views expressed are as of the date provided, may change as market or other conditions change and may differ from views expressed by other Columbia Management Investment Advisers, LLC (CMIA) associates or affiliates. Actual investments or investment decisions made by CMIA and its affiliates, whether for its own account or on behalf of clients, will not necessarily reflect the views expressed. This information is not intended to provide investment advice and does not account for individual investor circumstances. Investment decisions should always be made based on an investor's specific financial needs, objectives, goals, time horizon and risk tolerance. Asset classes described may not be appropriate for all investors. Past performance does not guarantee future results, and no forecast should be considered a guarantee either. Since economic and market conditions change frequently, there can be no assurance that the trends described here will continue or that the forecasts are accurate.

Columbia Management Investment Advisers, LLC is an investment adviser registered with the U.S. Securities and Exchange Commission.

Columbia Threadneedle Investments (Columbia Threadneedle) is the global brand name of the Columbia and Threadneedle group of companies.