MERRILL
A BANK OF AMERICA COMPANY

CHIEF INVESTMENT OFFICE

# Chart Book

# The Advancement Of The Asset-Light Era

January 2025
Q4 2024

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We see several positive trends gaining momentum this year, with long-term implications for the economy. Forces include:

- U.S. corporate earnings resilience
- More companies contributing to Equity returns
- Stable financial conditions
- Disruptive innovation driving productivity gains across industries

2025 may act as a launch pad into a new era of an "asset-light" economy – characterized by companies less-burdened by heavy fixed costs, such as labor and equipment, with greater flexibility to respond to opportunities and risks.

In our view, this market has significantly different core drivers, factors, and inputs than the ones of the past. The asset-light era may allow for higher normalized growth, above average valuations, and attractive returns moving forward.

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# The Advancement Of The Asset-Light Era

The Five For 2025 are all part of our next decade thesis of the Advancement of the Asset-Light Era. "Asset-light" companies tend to have less fixed costs for machinery, infrastructure, and labor which translates into greater flexibility and more efficient use of capital to invest. Lower fixed costs, less credit sensitivity, double digit growth in earnings per share (EPS), broader participation across the market, more flexible business models, and higher productivity will be used to drive the next bull market advance, in our view.

## Five for 2025

1. **The U.S. corporate profit cycle powers on with attractive growth again in 2025.**
2. **The equity markets head into phase two of rebalancing, which allows for broader participation as the fundamentals are likely to improve across the "rest of the best".**
3. **A stable interest rate environment provides some relief to small-capitalization shares and supports a merger and acquisition cycle in mid-capitalization stocks.**
4. **A steeper yield curve provides more normalcy in the Fixed Income markets.**
5. **Disruptive innovation led by the Artificial Intelligence (AI) revolution begins to unfold across a variety of industry groups, helping to sustain solid corporate profit margins, increase productivity measurably, and support the build out of the power generation and infrastructure themes.**

In 2025, asset allocation is fully back. Diversification across the asset and sub-asset class spectrum drives an attractive combination of risk and return, in our opinion. Large unknowns mixed with growth enthusiasm favor an Equity overweight as Fixed Income should provide some balance.

Source: Chief Investment Office as of December 31, 2024. CIO views are subject to change. **FOR INFORMATIONAL PURPOSES ONLY**.





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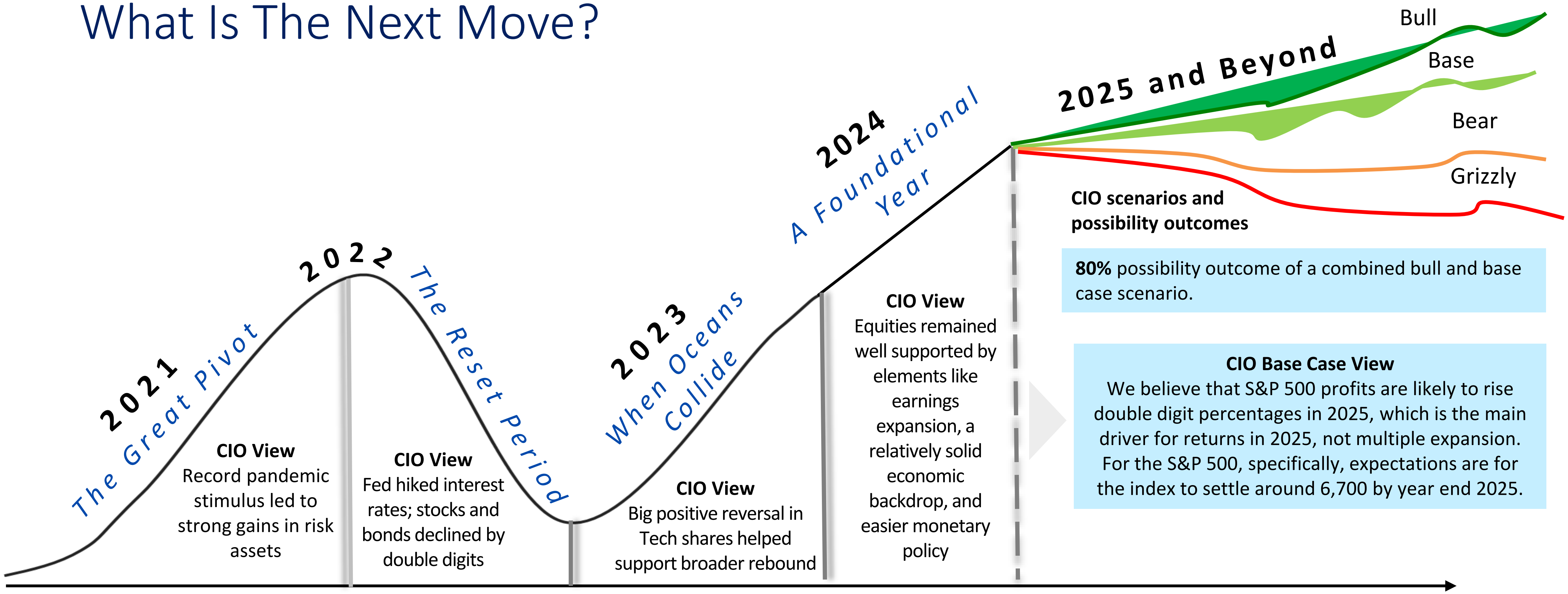
# What Is The Next Move?




**SCENARIO 1 BULL CASE (approximately 20% possibility outcome)**

- A new economic re-expansion builds, and growth is well above trend in 2025.
- Fed interest rate cuts normalize the curve.
- Financial conditions remain easy and inflation trends lower at the same time.
- Yield curve steepens as yields on the back-end rise as economic growth increases well above trend.
- Long-term bull market continues as earnings rise much higher-than-expected through 2025.
- Cyclical areas lead Equity markets.
- Growth stock momentum continues.

**SCENARIO 2 BASE CASE (approximately 60% possibility outcome)**

- Economic growth rises slightly above trend through 2025. U.S. leads the globe.
- Inflation is sticky but trends lower in second half of 2025.
- Fed funds rate of 4.25% - 4.50% by year end.
- Earnings growth for S&P 500 reaches double digits in 2025.
- U.S. dollar remains firm and 10-year Treasury hovers around 4.25%.
- Broader participation within the Equity markets and Small- and Mid-cap shares gather momentum.
- Sector dispersion remains wide as earnings momentum factors drive investment flows.

**SCENARIO 3 BEAR CASE (approximately 15% possibility outcome)**

- Stagflation worries build as growth slumps below trend and inflation remains above target.
- Expectations for easier monetary policy are recalibrated.
- Earnings decline more than 10% in 2025.
- Unemployment rate rises above 5% as recession risk increases.
- Tariff concerns adding to inflation and pressuring growth become reality.
- Defensive areas of the market outperform.
- Cyclical areas underperform and high-quality Growth outperforms low-quality Value.

**SCENARIO 4 GRIZZLY CASE (approximately 5% possibility outcome)**

- Sharp economic hard landing, not just deterioration, occurs through 2025.
- Fed policy requires new emergency measures.
- Contains the sharpest fall in earnings by some 20% or more into first half of 2025.
- Major widespread stress hits the office property and regional banking sectors.
- Fixed Income significantly outperforms Equities as risk aversion rises sharply.
- U.S. dollar rallies sharply.
- Defensive assets outperform sharply.

Black line represents the lifecycle of the CIO economic process and is not meant to represent any specific investment, index or performance of any kind. Source: CIO. Data as of December 31, 2024. CIO views are subject to change. **FOR INFORMATIONAL PURPOSES ONLY.** Economic or financial forecasts are inherently limited and should not be relied on as indicators of future investment performance. **Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**



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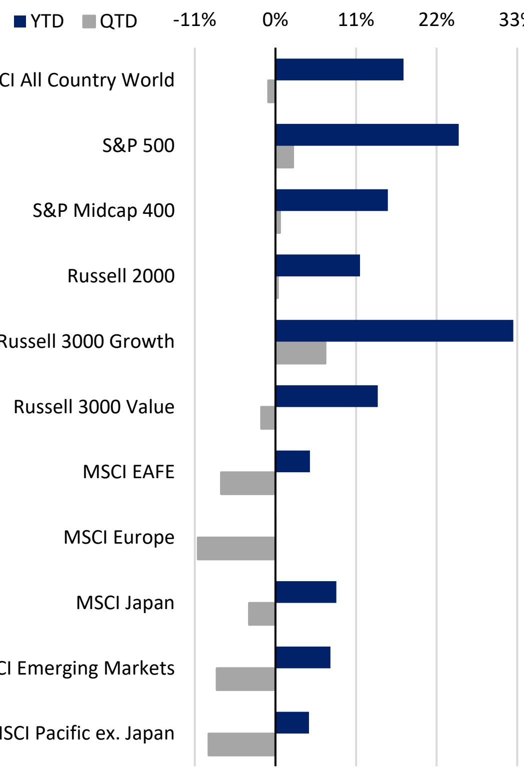
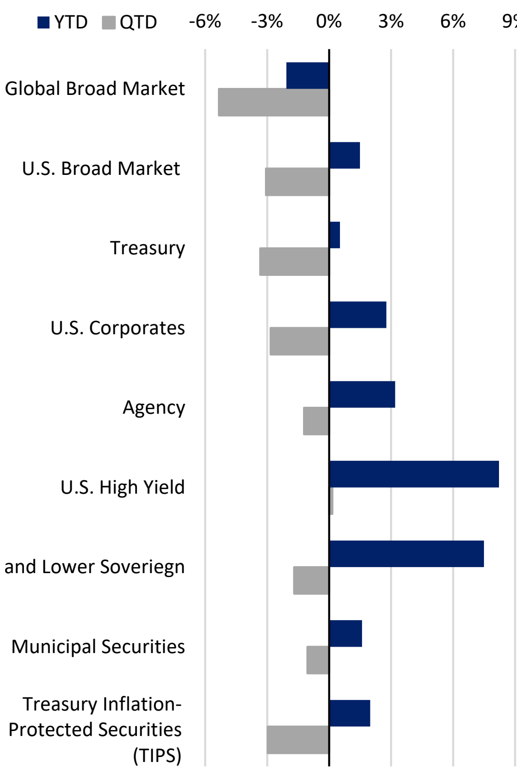
# 4th Quarter Recap & Major Index Total Returns

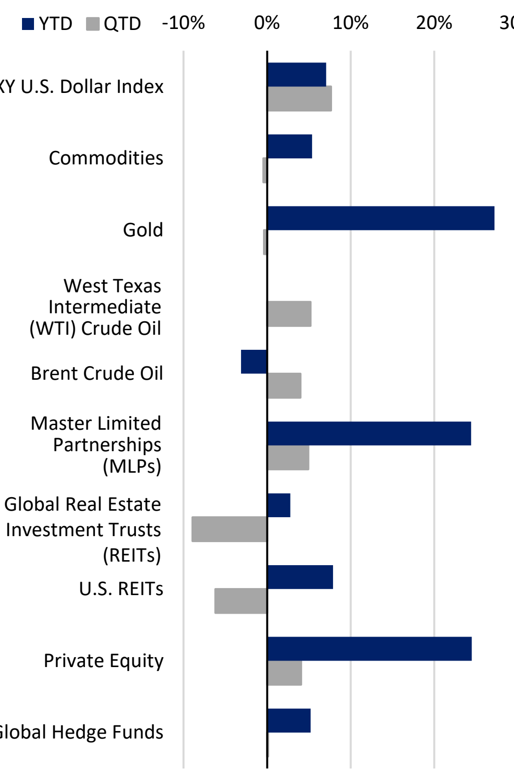
- For 2025, our base case is a balanced market outlook. The U.S. remains our preferred Equity region relative to the rest of the world given a gradual broadening out of corporate earnings growth, a resilient consumer, and a solid growth outlook. As inflation continues to slowly trend downward, we continue to emphasize diversification across asset and sub-asset classes. While BofA Global Research believes the Fed cutting cycle could already be over, investors are still pricing in a possibility of additional easing in 2025.
- BofA Global Research* expects stable global growth of 3.2% in 2025 and 3.3% in 2026, up from an estimated 3.1% in 2024. U.S. real gross domestic product (GDP) grew by an estimated 2.7% in 2024 but is projected to slow to 2.4% in 2025 and 2.1% in 2026, with China and the Euro area expected to grow 4.5% and 0.9% in 2025 and 4.5% and 1.0% in 2026, respectively.
- Global Equities markets saw positive performance in 2024, with Growth outperforming Value, and Large-caps maintaining their lead over Mid- and Small-caps. Positive annual returns were observed across most of the Fixed Income sub-asset classes as expectations surrounding the Fed easing cycle came into focus.
- On a total return basis, the broad Commodities market advanced in 2024. Gold ended higher due to ongoing geopolitical uncertainty increasing demand for “safe haven” assets. Oil (Brent) ended slightly lower for the year primarily due to concerns about weakening global demand combined with the potential for oversupply.




| | YTD | QTD |
|---|---|---|
| MSCI All Country World | 17.5% | -1.0% |
| S&P 500 | 25.0% | 2.4% |
| S&P Midcap 400 | 15.3% | 0.6% |
| Russell 2000 | 11.5% | 0.3% |
| Russell 3000 Growth | 32.5% | 6.8% |
| Russell 3000 Value | 14.0% | -1.9% |
| MSCI EAFE | 4.7% | -7.4% |
| MSCI Europe | 0.1% | -10.6% |
| MSCI Japan | 8.3% | -3.6% |
| MSCI Emerging Markets | 7.5% | -8.0% |
| MSCI Pacific ex. Japan | 4.6% | -9.1% |




| | YTD | QTD |
|---|---|---|
| Global Broad Market | -2.1% | -5.3% |
| U.S. Broad Market | 1.5% | -3.1% |
| Treasury | 0.5% | -3.3% |
| U.S. Corporates | 2.8% | -2.8% |
| Agency | 3.2% | -1.2% |
| U.S. High Yield | 8.2% | 0.2% |
| BBB and Lower Soveriegn | 7.5% | -1.7% |
| Municipal Securities | 1.6% | -1.0% |
| Treasury Inflation-Protected Securities (TIPS) | 2.0% | -3.0% |



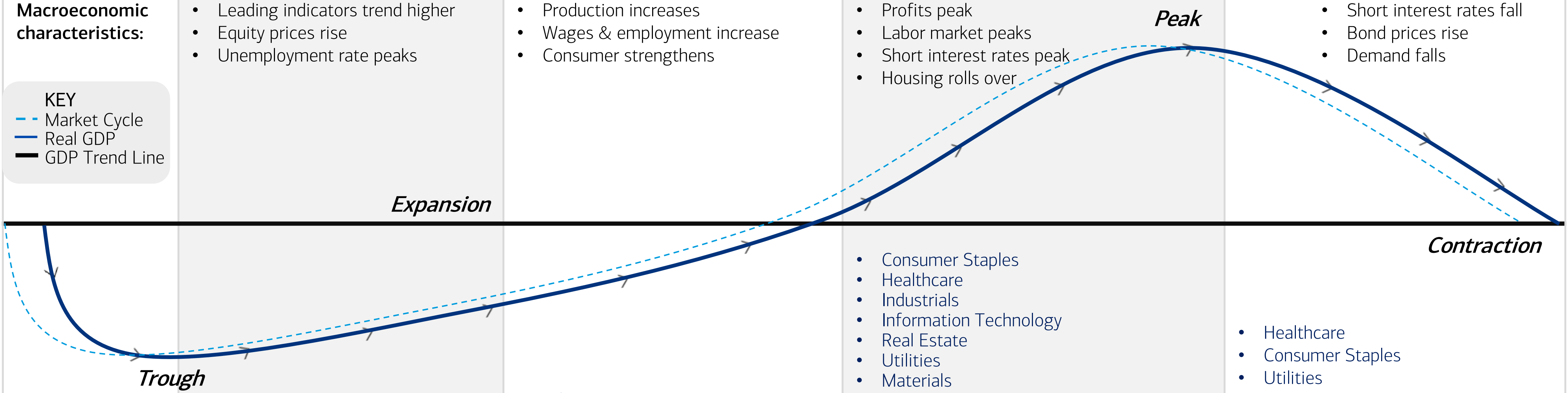

| | YTD | QTD |
|---|---|---|
| DXY U.S. Dollar Index | 7.1% | 7.6% |
| Commodities | 5.4% | -0.4% |
| Gold | 27.2% | -0.4% |
| West Texas Intermediate (WTI) Crude Oil | 0.1% | 5.2% |
| Brent Crude Oil | -3.1% | 4.0% |
| Master Limited Partnerships (MLPs) | 24.4% | 4.9% |
| Global Real Estate Investment Trusts (REITs) | 2.8% | -8.9% |
| U.S. REITs | 7.9% | -6.2% |
| Private Equity | 24.5% | 4.1% |
| Global Hedge Funds | 5.2% | 0.1% |

**Many products that pursue Alternative Investment strategies, specifically Private Equity and Hedge Funds, are available only to qualified investors.** Source: Bloomberg. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY.** Total returns referenced for all indexes. All Fixed Income categories are represented by ICE BofA indexes. Other asset classes represented by the following indexes: MLPs (Alerian MLP Total Return Index), Commodities (Bloomberg Commodity Total Return Index), Gold (Gold Spot Price), U.S. REITs (FTSE EPRA Nareit United States Total Return Index), Global REITs (FTSE EPRA Nareit Global Total Return Index), Private Equity (LPX 50 TR USD Index), and Global Hedge Funds (HFRX Global Hedge Fund Index). Brent Crude Oil Futures reflects a generic ICE Brent Crude futures contract, which is a deliverable contract based on EFP delivery with an option to cash settle. West Texas Intermediate (WTI) Crude Oil Futures is a principal international pricing benchmark in U.S. dollars per barrel that reflects the NYMEX Division light, sweet crude oil futures contract which is the world’s most liquid forum for crude oil trading and the world’s largest volume futures contract trading on a physical commodity. The contract trades in units of 1,000 barrels and the delivery point is Cushing, Oklahoma, which is also accessible to the international spot markets via pipelines. *BofA Global Research is research produced by BofA Securities, Inc. (“BofAS”) and/or one or more of its affiliates. BofAS is a registered broker-dealer, Member SIPC, and wholly owned subsidiary of Bank of America Corporation. **Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

# Macro Strategy – Global Themes & Trends

## Business Cycle Dashboard

| | Early | Mid | Late | Recession |
|---|---|---|---|---|
| **Macroeconomic characteristics:** | • Pent-up demand phase<br>• Leading indicators trend higher<br>• Equity prices rise<br>• Unemployment rate peaks | • Profits increase<br>• Production increases<br>• Wages & employment increase<br>• Consumer strengthens | • Leading indicators trend lower<br>• Profits peak<br>• Labor market peaks<br>• Short interest rates peak<br>• Housing rolls over | • Prices stabilize<br>• Short interest rates fall<br>• Bond prices rise<br>• Demand falls |
| **Historically relative outperformers:** | • Consumer Discretionary<br>• Financials<br>• Value<br>• Small-cap<br>• High Risk | • Information Technology<br>• Industrials<br>• Communication Services | • Consumer Staples<br>• Healthcare<br>• Industrials<br>• Information Technology<br>• Real Estate<br>• Utilities<br>• Materials<br>• Energy<br>• Communication Services<br>• High Quality<br>• Growth<br>• Low Risk<br>• Large-cap | • Healthcare<br>• Consumer Staples<br>• Utilities<br>• High Quality<br>• Low Risk<br>• Large-cap<br>• Value<br>• High Dividend Yield |




Source: Chief Investment Office. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**



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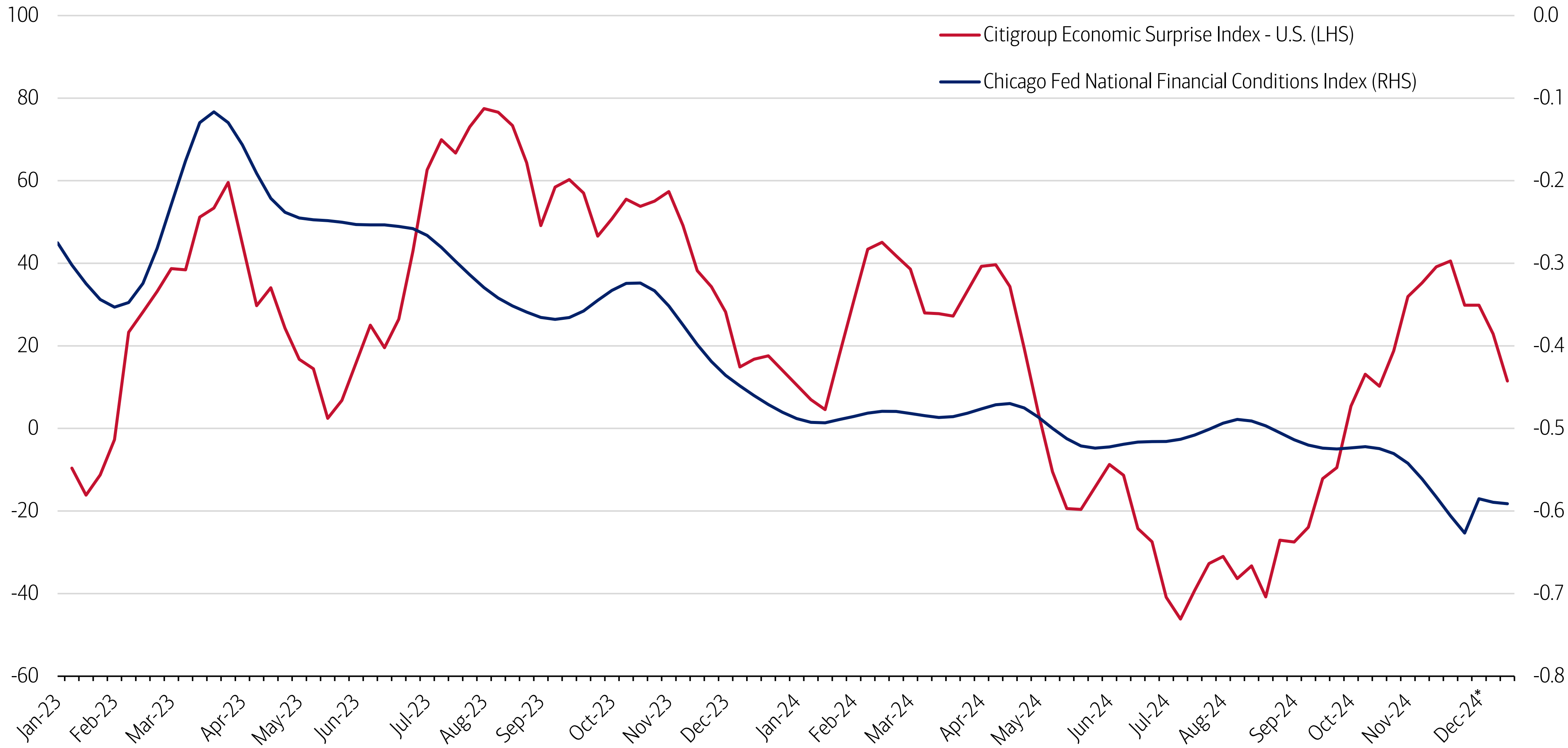
# Powerful Combination: Strong Growth and Easier Financial Conditions

The Fed has a bias to cut interest rates at the same time economic data continues to surprise to the upside and growth runs above trend. This is a positive backdrop for risk-assets as long as liquidity holds up.




Sources: Citigroup; Federal Reserve Bank of Chicago; Haver Analytics. *Data as of December 27, 2024. Latest data available. Weekly data referenced. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to the appendix for glossary, asset class proxies, index definitions, and important disclosures.**



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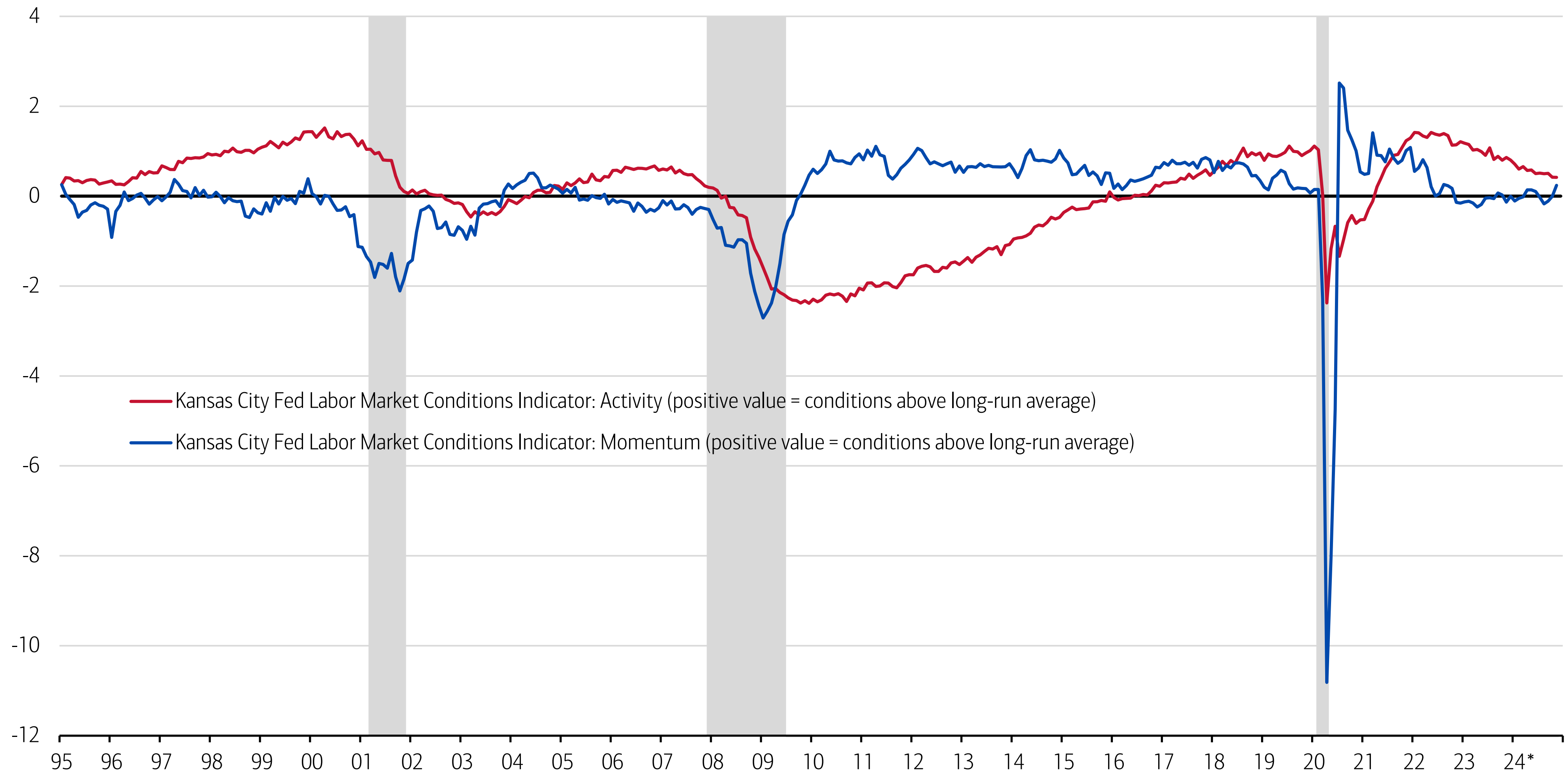
# Cooling Labor Market With Firm Wage Growth

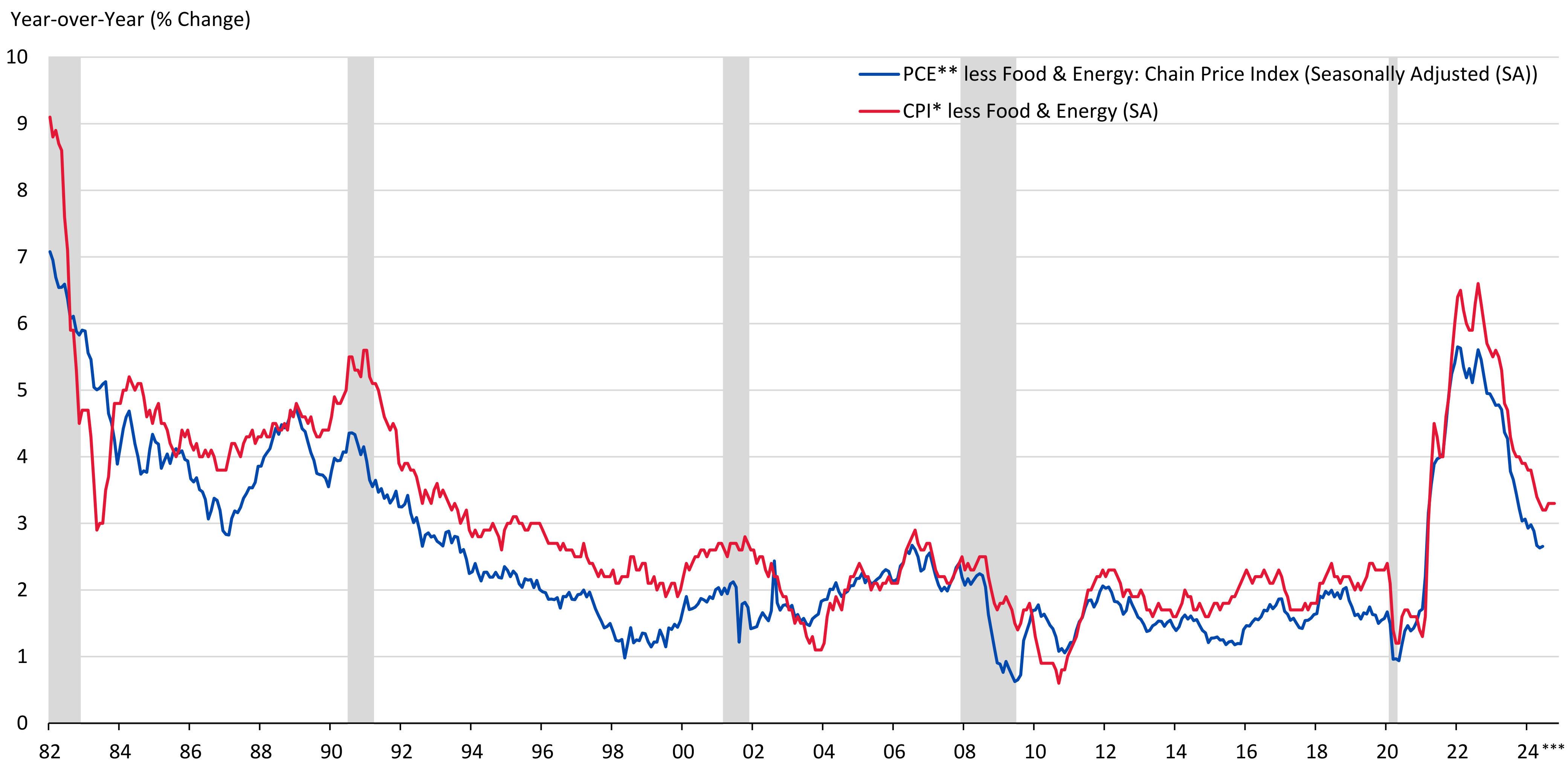
Leading employment indicators like job openings and job quits are weakening and job growth is slowing, but layoffs remain low. The Fed is posturing that any weakening in the labor market will be met with rate cuts, a positive dynamic for risk-assets.




Gray areas represent recessionary periods. Sources: Federal Reserve Bank of Kansas City/Haver Analytics. *Data as of December 10, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions, and important disclosures.**

# Fed Seems Content With Inflation Near 3%

On a year-over-year (YoY) basis inflation continues to move lower, but there is some stickiness in the services sector. Upside risks to inflation still exist from supply-side/geopolitical risk. The Fed seems content with inflation near 3% even if the target is 2%, a positive dynamic for earnings.




*Consumer Price Index. **Personal Consumption Expenditure. Gray areas represent recession periods. Monthly data referenced. Sources: Federal Reserve Bank of Cleveland; Bureau of Economic Analysis. ***Data as of December 11, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions, and important disclosures.**



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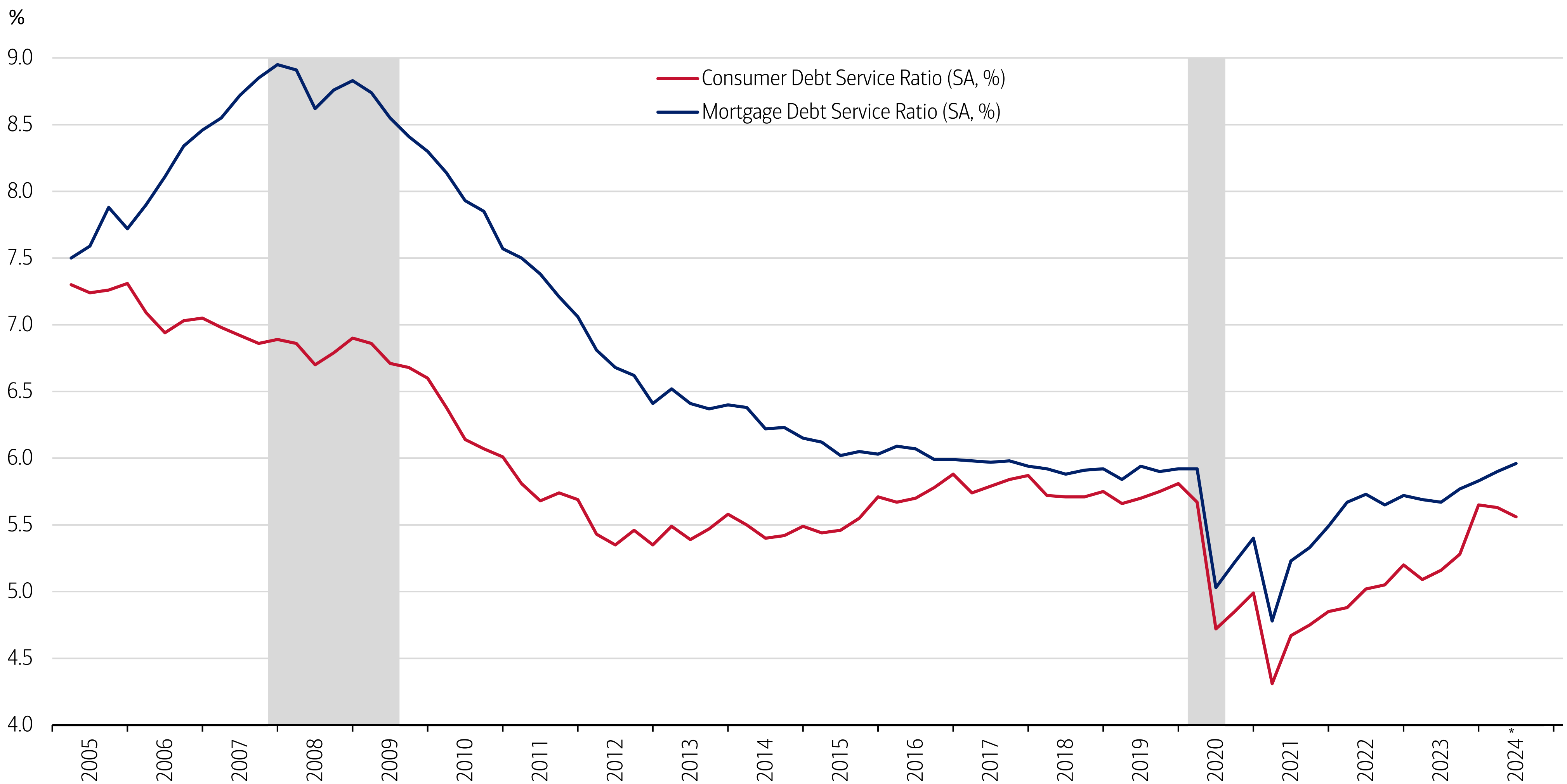
# Consumer Health: Higher Income Consumers In Good Shape

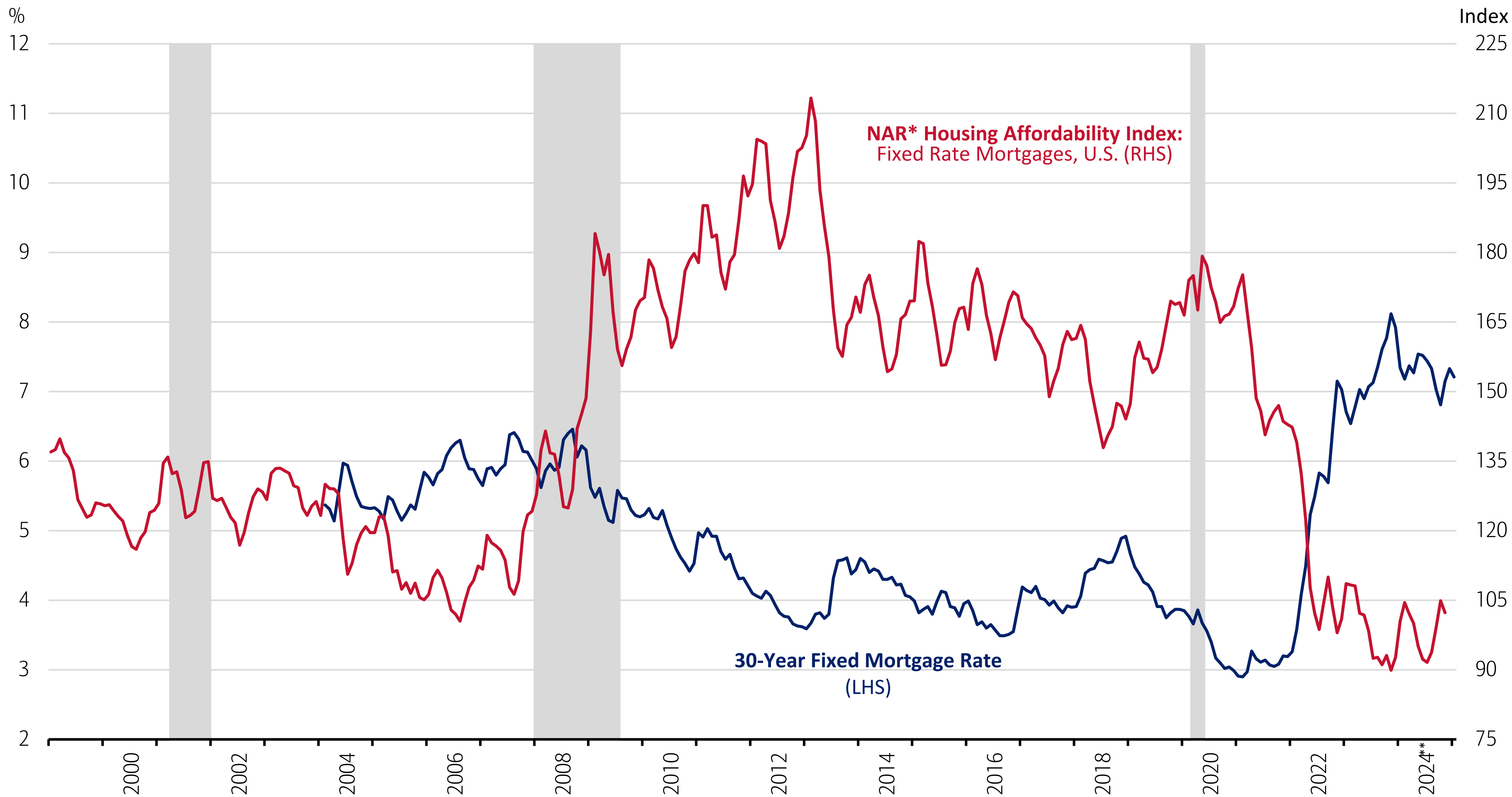
Rising household net worth continues to be a tailwind for higher income consumer spending which should keep overall consumer spending well anchored. Overall, debt service ratios remain low. But rising credit card delinquencies suggest lower income consumer spending could slow. With rising delinquencies, job losses will be important to watch, but the Fed seems attentive to this.




Gray areas represent recession periods. Quarterly data referenced. Source: Federal Reserve Board. *Data as of September 26, 2024. Latest data available. Note: Debt Service Ratio methodology was updated in September 2024 to reflect Credit Bureau data. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions, and important disclosures.**

# Affordability Remains A Challenge For Frozen Housing Market

Affordability is a significant headwind for many buyers leading to recessionary levels of total activity. While mortgage rates remain relatively high, Fed rate cuts could help bring borrowing costs down.




Gray areas represent recession periods. *NAR=National Association of Realtors. Sources: NAR; *Wall Street Journal*/Haver Analytics. **Data as of December 13, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions, and important disclosures.**





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# U.S. Economy Relative Strength Powers U.S. Dollar Higher

Relative growth still favors the U.S. economy and U.S. dollar over most developed market currencies, which may keep the U.S. dollar relatively firm. However, continued Fed interest rate cuts may help slow the U.S. dollar's ascent.

Real Federal Reserve Board (FRB) Broad Trade-Weighted Dollar Index (Z-Score)


Sources: FRB, Haver Analytics. *Data as of December 2, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions, and important disclosures.**




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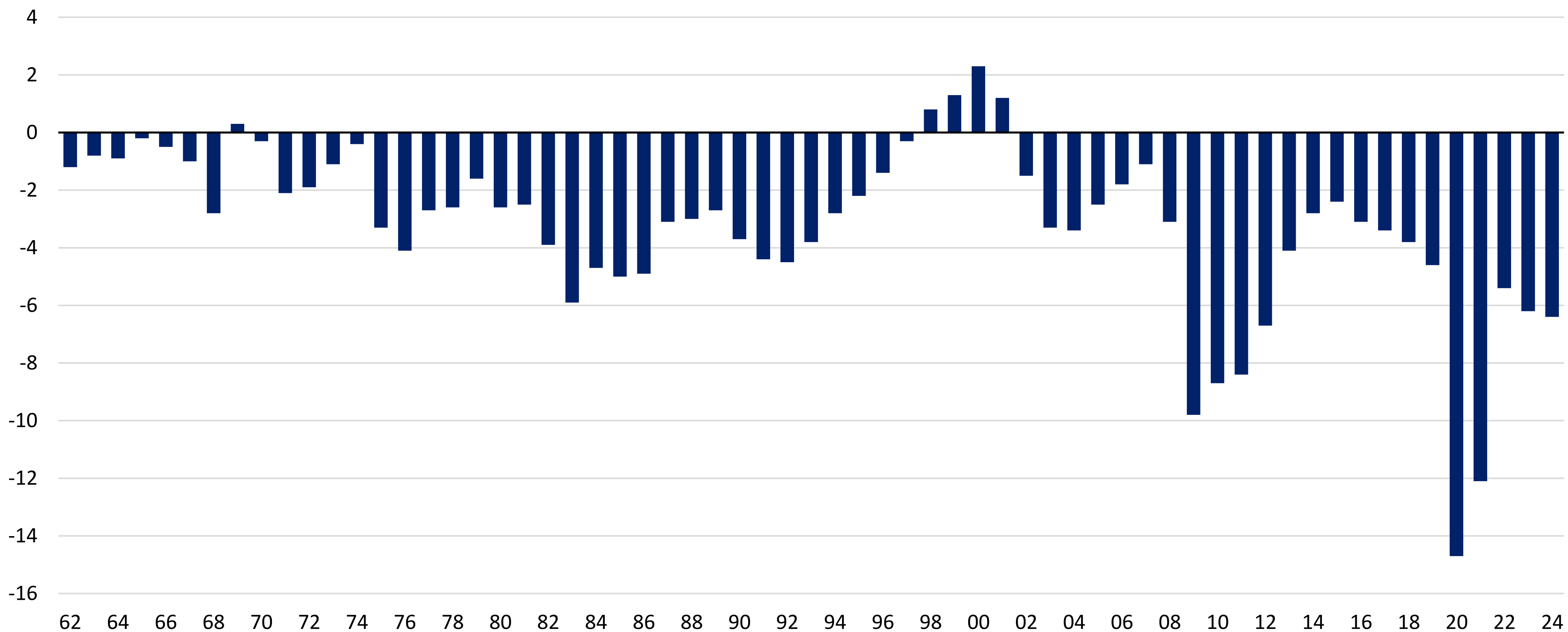
# Do Budget Deficits Matter?

The deficit ballooned during the pandemic but has remained historically high (as a percent of GDP) over the past few years, clocking in at 6.4% of GDP in FY 2024. With the incoming administration showing little inclination to rein in spending, investors remain acutely attuned to Uncle Sam's finances. The good news is that the U.S. enjoys more financial space than most other nations because Washington's finances are backstopped by the most dynamic, innovation-led private sector in the world. U.S. finances are also supported by the world's reserve currency, the dollar. Finally, the U.S. enjoys the benefit of issuing debt in its own currency, allowing for a higher debt-carrying capacity relative to other nations. In the end, deficits matter, but just not yet in the U.S.

U.S. Budget Deficit/Surplus FY 1962-2024

Percent of GDP (%)




Source: Congressional Budget Office. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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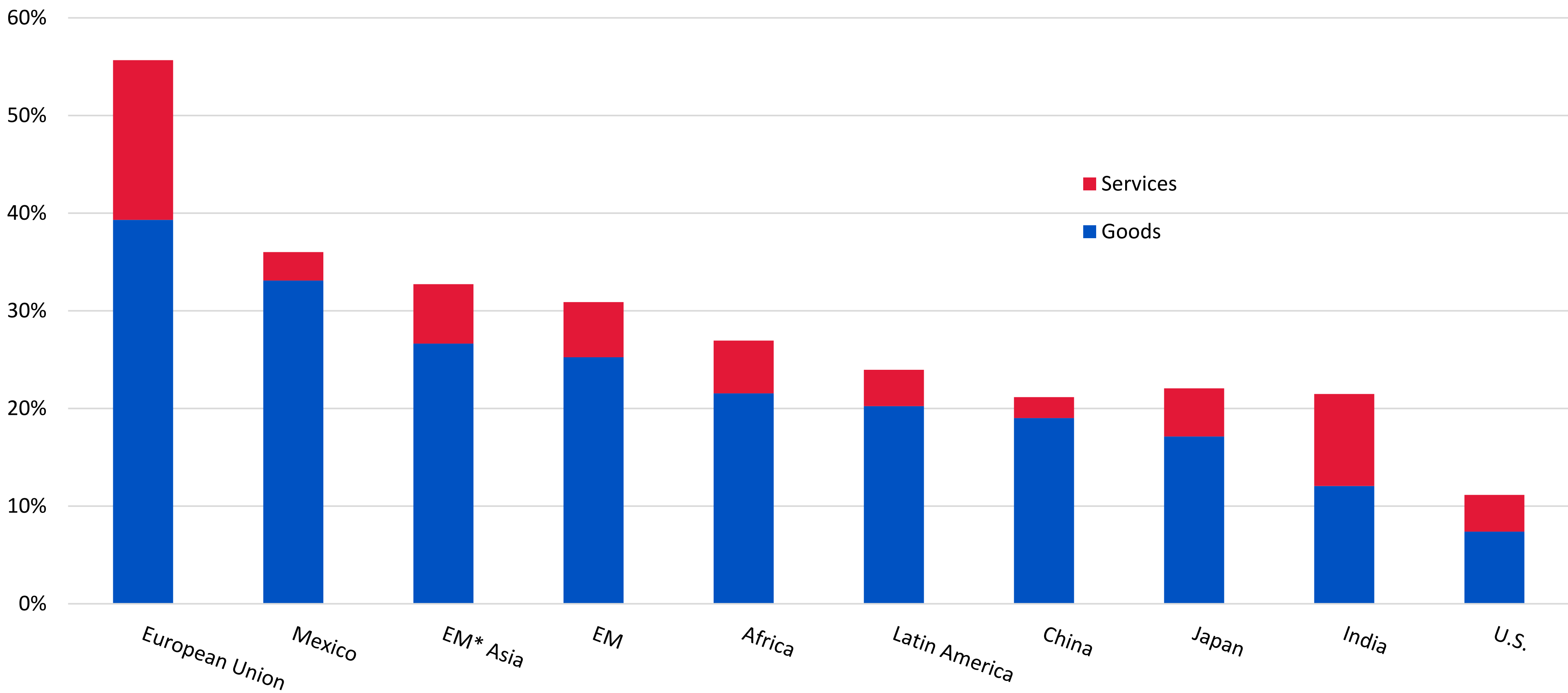
# International Economies More Vulnerable to Tariffs and Other Potential New Trade Restrictions than the U.S.

The prospect of new U.S. import tariffs on overseas trading partners would represent a relative headwind for international economies. The U.S. remains far less trade-exposed than other major economies around the world, particularly in goods exports where the tariffs would be levied. By contrast, key markets like Europe, Asia, and Mexico would be far more vulnerable to new export barriers.

Exports of goods and services as share of GDP




*Emerging Market. Source: United Nations Trade and Development. The data in the chart refers to 2023, as of October 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**





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# Global Equities Summary & Charts

## CIO Equities Asset Class View

| Asset Class | Underweight | Slightly Underweight | Neutral | Slightly Overweight | Overweight |
|---|---|---|---|---|---|
| Global Equities | | | | ● | |
| U.S. Large Cap Growth | | | ● | | |
| U.S. Large Cap Value | | | | ● | |
| U.S. Small Cap Growth | | | | ● | |
| U.S. Small Cap Value | | | | ● | |
| International Developed | | ● | | | |
| Emerging Markets | | | ● | | |

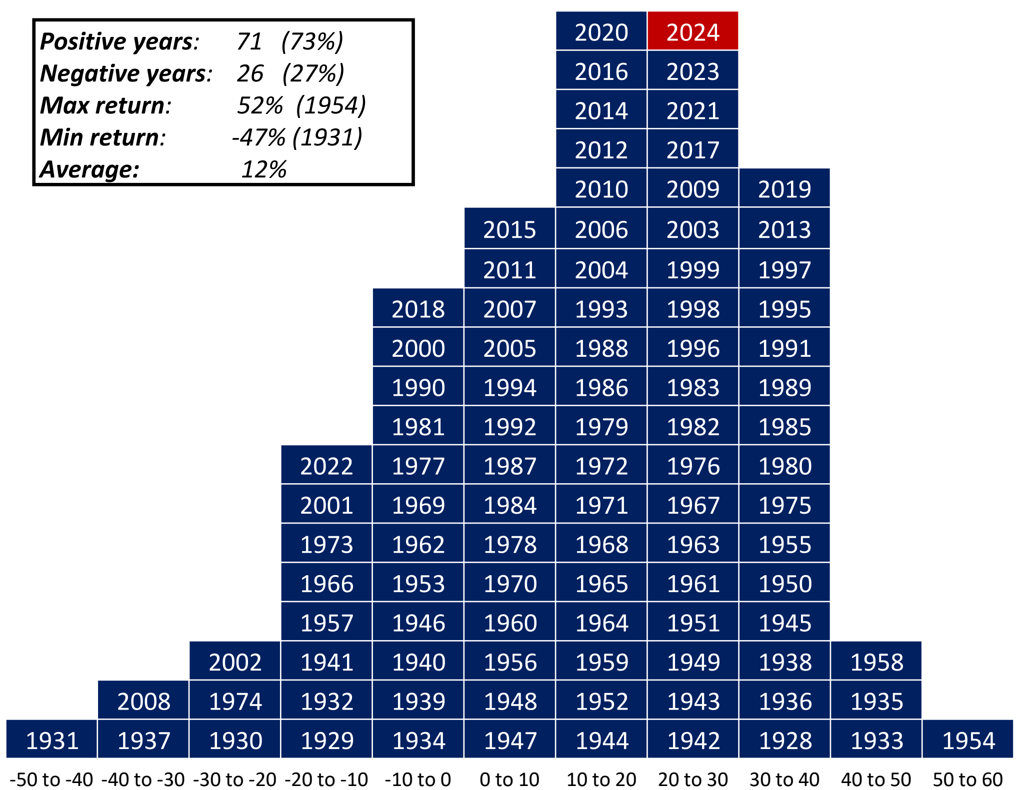
Source: GWIM Investment Strategy Committee (GWIM ISC) as of January 7, 2025. Please refer to the January 2025 Viewpoint for more detailed weightings information. The Chief Investment Office (CIO) views and opinions expressed are for informational purposes only, are made as of the date of this material, and are subject to change without notice. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for asset class proxies and index definitions.**

# U.S. Equities: This Bull Market Runs on Innovation

U.S. Equities posted robust gains in 2024 for a second straight year. Fading recession risk, a resilient consumer, a confirmed earnings recovery, the Fed in easing mode and enthusiasm over Artificial Intelligence (AI) propelled stocks. For 2025 and beyond, we expect disruptive innovation led by AI to drive more solid corporate profits and increased productivity. This also means more investment in infrastructure and power generation will likely be needed to realize this growth. This combination of dynamics keeps us positive on U.S. Equities as we begin the year.

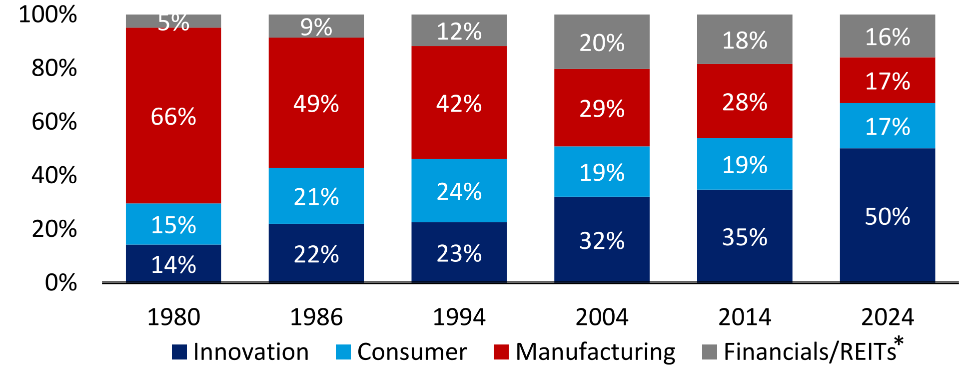
**The S&P 500 climbed more than 20% in back-to-back years for the first time since the late 1990s.**

**S&P 500 Performance 1928-2024**
**Annual Total Return (%)**

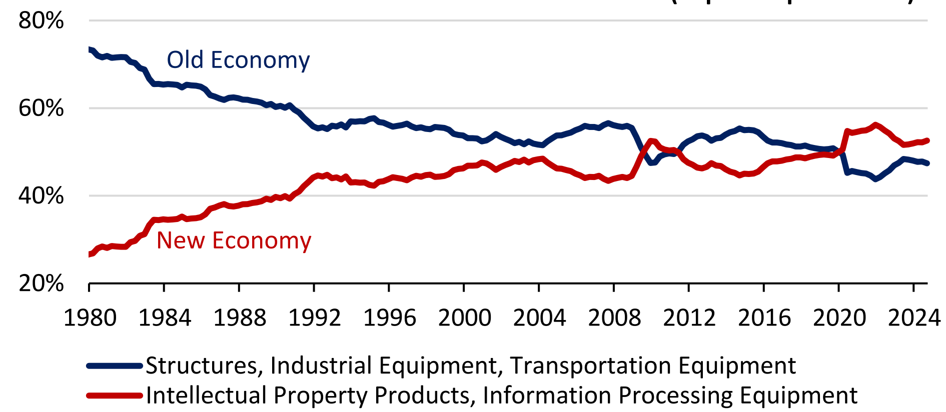



**We believe the Asset-Light Era (think companies with less fixed costs and greater flexibility to innovate) will likely be the overriding theme for the decade ahead.**

**Sector % Weight of S&P 500**




**Share of Total U.S. Private Nonresidential Fixed Investment (Capital Expenditures)**




(Left) Bloomberg. Data as of December 31, 2024. (Right Top) *REITs=real estate investment trusts. S&P 500 GICS sectors referenced. Innovation=Technology, Communication Services ex-Telecom, Health Care; Consumer=Staples, Discretionary; Manufacturing=Industrials, Materials, Energy, Utilities, Telecom. BofA Global Research. Data as of November 26, 2024. (Right Bottom) Haver Analytics, BEA. Data as of September 30, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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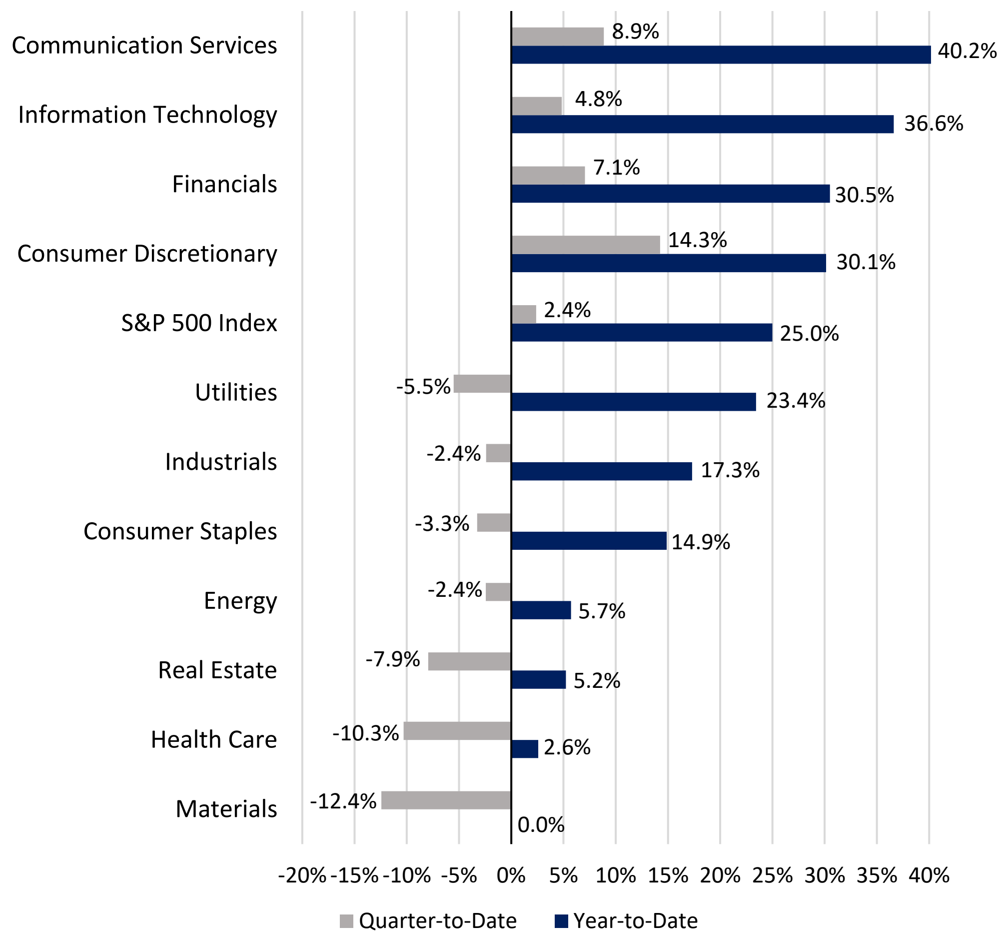
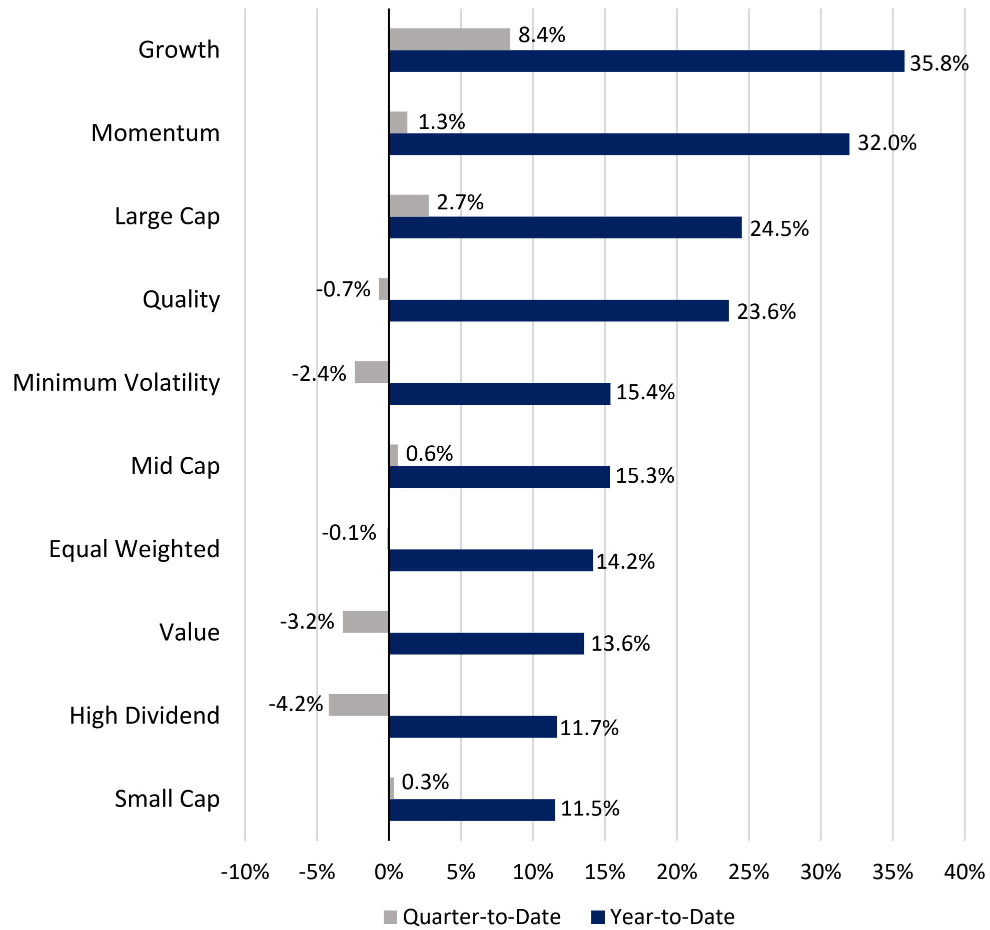
# Sector and Factor Performance Barometer

This year we anticipate Equity markets to enter the next phase of the current bull market. Here, continued, broader earnings growth should be a major component in wider sector participation. Given this backdrop, investors could consider adding exposure to areas that trade at a relative discount and may benefit from cyclical forces gaining traction, such as high-quality Small-caps, Value-oriented stocks, and dividend growers.

**Performance by S&P 500 Index Sector**




**Performance by Factor**




Source: Bloomberg. Data as of December 31, 2024. Total returns referenced. Large-cap, Mid-cap and Small-cap are represented by Russell Indexes. Equal Weighted, Value, Growth, Quality, High Dividend, Minimum Volatility and Momentum are represented by MSCI USA Indexes. **FOR INFORMATIONAL PURPOSES ONLY. Past performance is no guarantee of future results. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Please refer to appendix for glossary, asset class and sector proxies, index definitions and important disclosures.**

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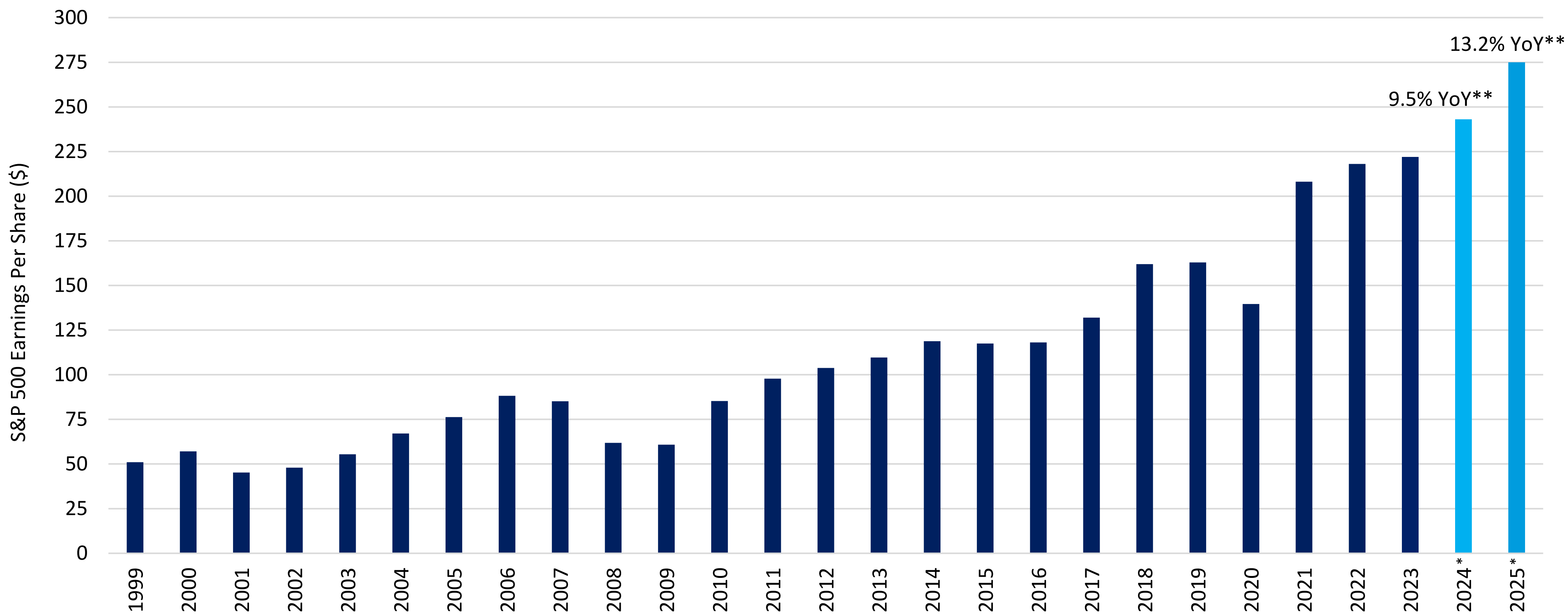
# U.S. Earnings Growth a Key Pillar for Our Outlook

An earnings recession characterized sluggish annual profits growth of just over 2% in 2022. The following year marked the start of a profits recovery, leading to an annual expansion of just over 5%. Growth accelerated last year, producing an earnings advance of just under 10%. This year, we anticipate a further quickening to double-digit growth. This improvement is also expected to be broader among companies and industries.

**BofA Global Research expects S&P 500 revenue growth of 6.1% YoY in 2025 from 5.1% YoY in 2024, helped by a pickup in operating leverage within cyclical sectors.**

**The adoption of new innovative technologies may spur capital investment and increased efficiencies, both boosting a fresh productivity cycle.**

**U.S. government policy towards trade, fiscal spending and immigration may produce crosscurrents, with positive effects offsetting negative ones.**




*Estimate. **YoY EPS growth estimate from BofA Global Research. Source: BofA Global Research. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for asset class and sector proxies, index definitions and important disclosures.**

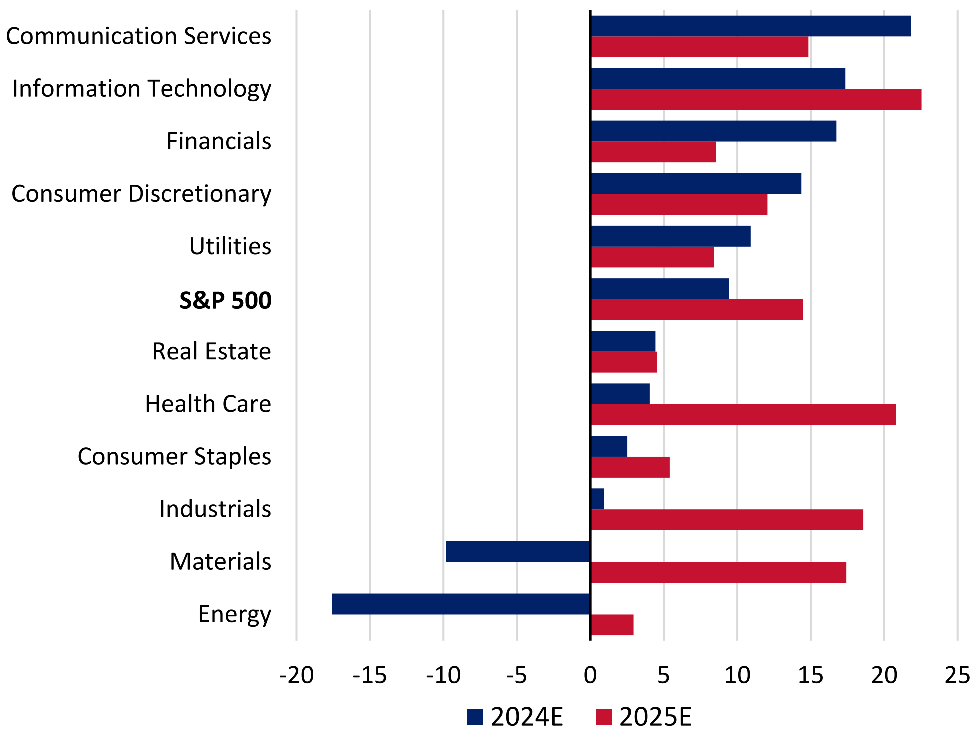
# Broader Participation and Earnings Growth Expected in 2025

While 2024 earnings growth was headlined by the heavyweight Technology and Communication Services sectors, strength extended to others like Financials, Consumer Discretionary, Utilities, and Healthcare. Indicative of this broadening, Consumer Discretionary, Financials, and Utilities emerged as top performing sectors in the second half of 2024. Despite the market-cap weighted S&P 500's outperformance over its equal weighted counterpart over the second half of the year, we believe that a further broadening in earnings and improving fundamental backdrop across the "rest of the best" should augur for more diversified market participation in 2025.

**Nine out of eleven sectors in the S&P 500 are on track for positive earnings growth in 2024. Breadth in earnings should improve further in 2025, with all eleven sectors expected to see positive earnings growth by mid-2025.**

**Annual Earnings per Share Growth by S&P 500 Sector**

Year-over-Year growth (%)




**The ratio between the S&P 500 Equal-Weighted Index and its market-cap weighted version troughed in July amid a cooler-than-expected June consumer price index (CPI) print. Despite the equal-weighted index's underperformance in December, we expect better breadth of performance in 2025.**

**S&P 500 Equal Weighted Index and S&P 500 Market Weighted Index Performance Differential**

Ratio of S&P 500 Equal Weight Index vs. S&P 500 Market Weight Index


E = estimate. Sources: (Left) FactSet. Data as of January 2, 2025. (Right) Bloomberg. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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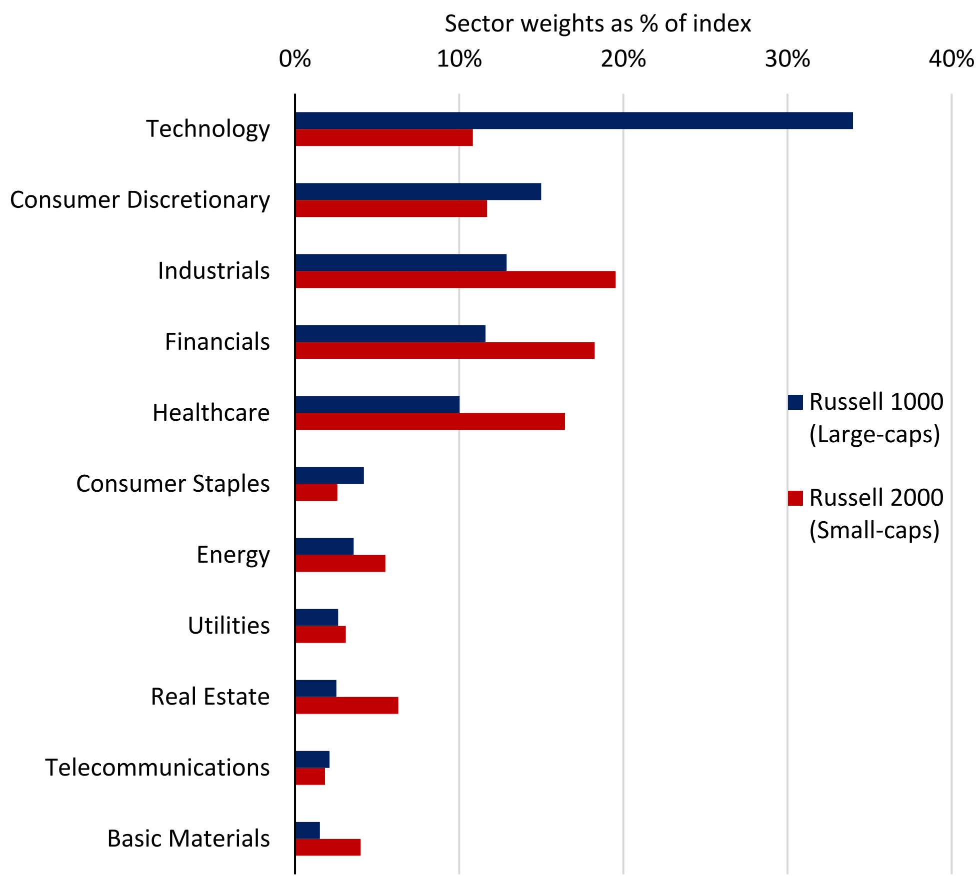
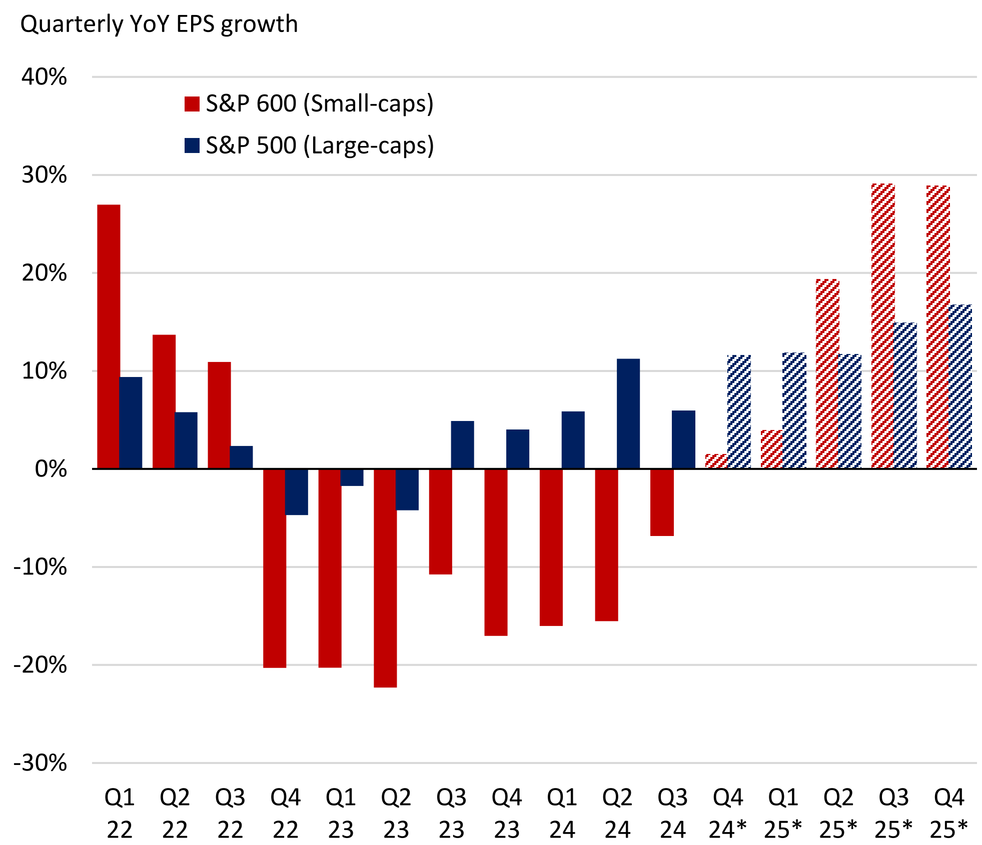
# Small-cap Snapshot

We maintain a favorable view on U.S. Small-caps amid relatively discounted valuations and expectations for solid economic growth, a broadening profits cycle, lower costs of capital, and cyclical forces to gain traction moving forward. A resilient economic backdrop may help Small-caps shake an earnings recession that's lasted several quarters.

**Easier financial conditions could be a tailwind for Small-caps this year, since they tend to have more exposure to cyclical, rate-sensitive areas of the stock market like Financials.**




**Profitability has been elusive for Small-caps, but the outlook for a potential earnings recovery has improved amid expectations for lower borrowing costs and solid economic growth.**

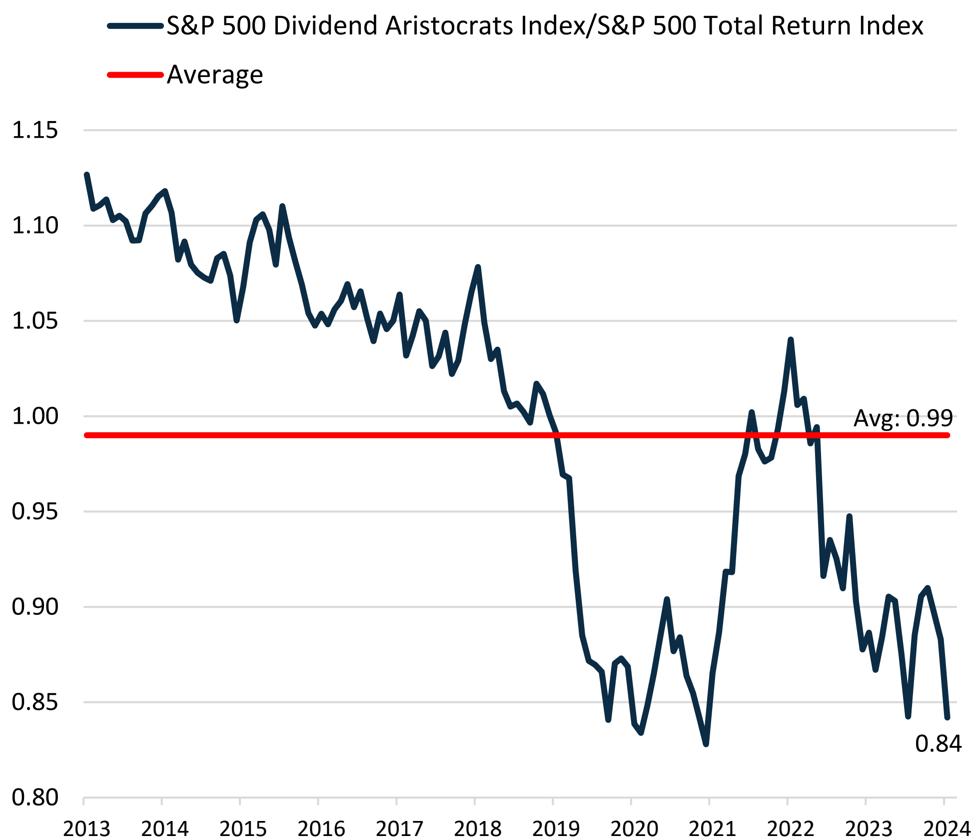



Sources: (Left) FTSE Russell. Data as of November 30, 2024. Latest data available. (Right) Source: FactSet Earnings Scorecard. Data as of January 2, 2025. *Estimates. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

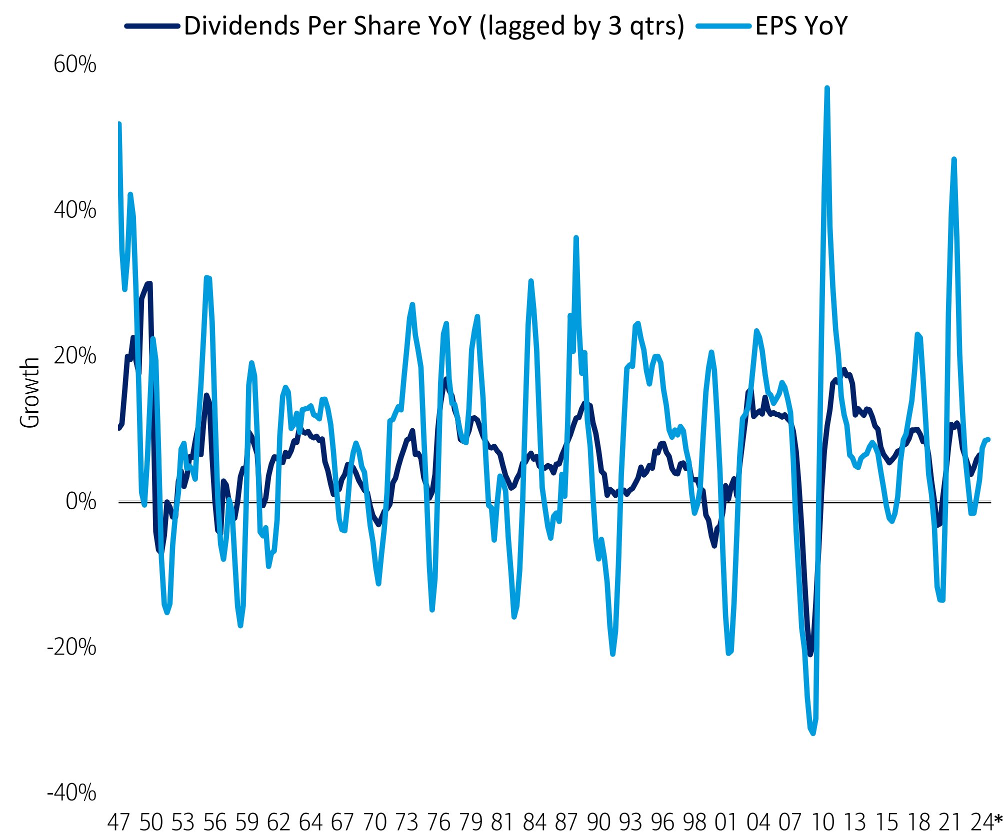
# Applying a Total Return Mindset To Portfolios

We see utility in dividend-oriented stocks for long term investors as relative valuations remain attractive. We also believe the current Fed easing cycle could be a tailwind. Moreover, if growth in EPS continues to accelerate this year, we could expect dividend growth may follow suit. In our view, dividend payers and dividend growers should remain an important consideration for portfolios this year.

**Dividend-oriented Equities have remained relatively cheap compared to the broader Equity market, below the 10-year average relative valuation.**




**Dividend growth has historically lagged EPS growth by about three quarters. With the potential for EPS growth to continue accelerating this year, that of dividends may follow.**




Sources: (Left) Bloomberg. Data as of December 31, 2024. (Right) BofA Global Research, Haver Analytics, FactSet. Data as of December 31, 2024. *EPS for 2024 is based on consensus estimates. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**



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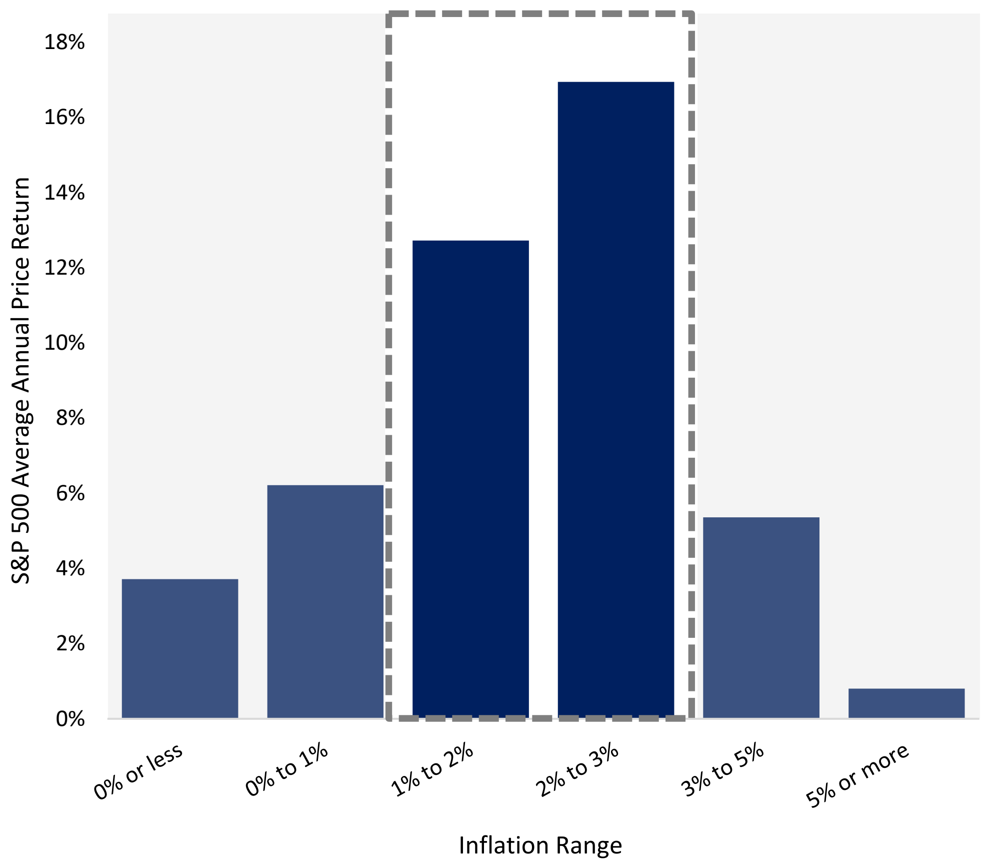
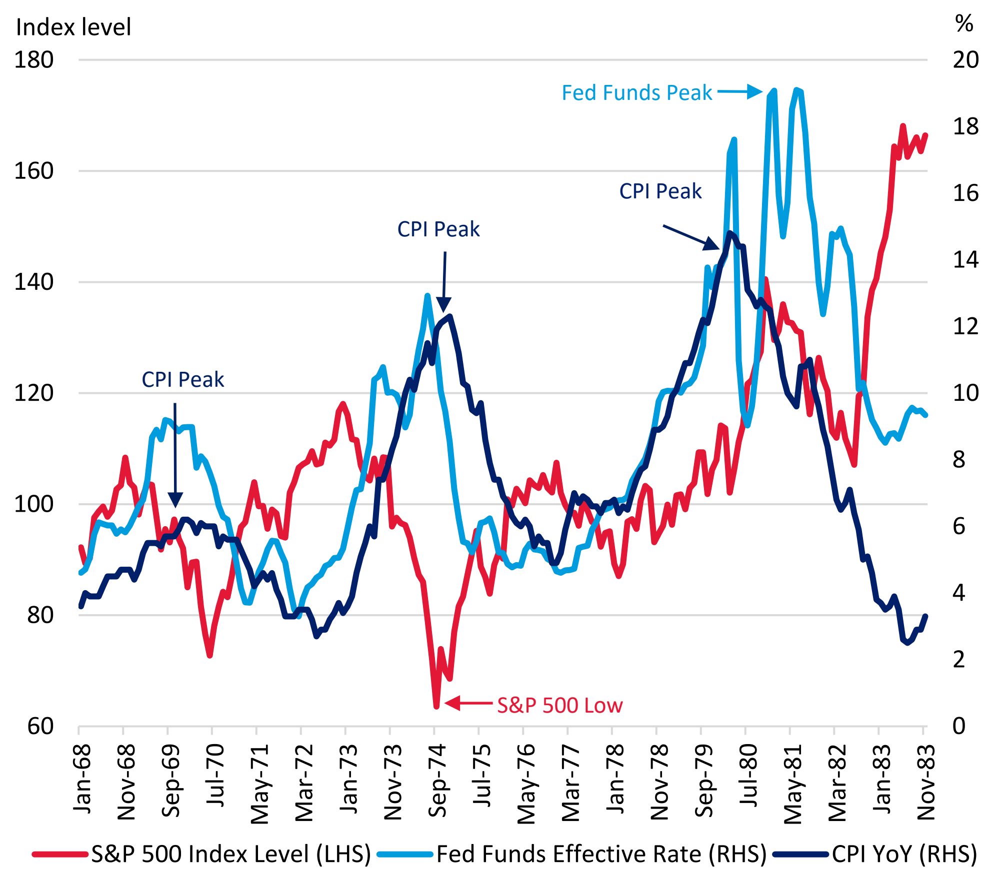
# Inflation and Equity Strategy

Inflation has moderated to the low single-digits, which has historically been a sweet spot for the performance of the S&P 500. Our view is that lower inflation could provide Equities with a tailwind in 2025. While not our base case, we are monitoring the risk that prices could reaccelerate from here, as they have in past episodes of inflation.

**On a YoY basis, the CPI has been hovering in the 2% to 3% range. Historically, the S&P 500 has seen strong average annual returns when inflation is in the low single digits.**




**The 1970s saw three surges in inflation. Notably, the S&P 500 bottomed in 1974, almost six years before the final peak in inflation and almost seven years before the peak in rates.**




Sources: (Left) Bloomberg. Annual data referenced from December 31, 1930 – December 31, 2024. Refers to annual S&P 500 Index price return data and annual average year-over-year consumer price index (CPI) data. (Right) Bloomberg. Data from January 1, 1968 - December 31, 1983. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**



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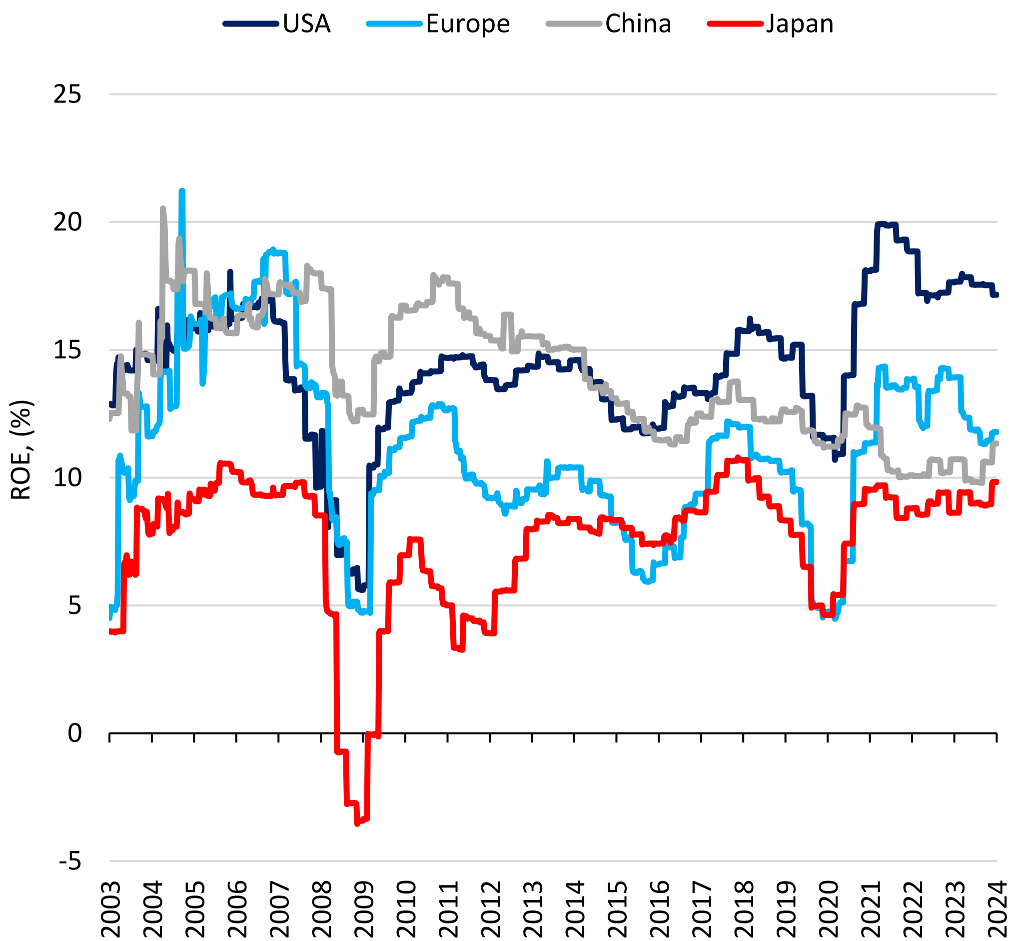
# A Dominance of Innovative Industries Returns More to U.S. Investors

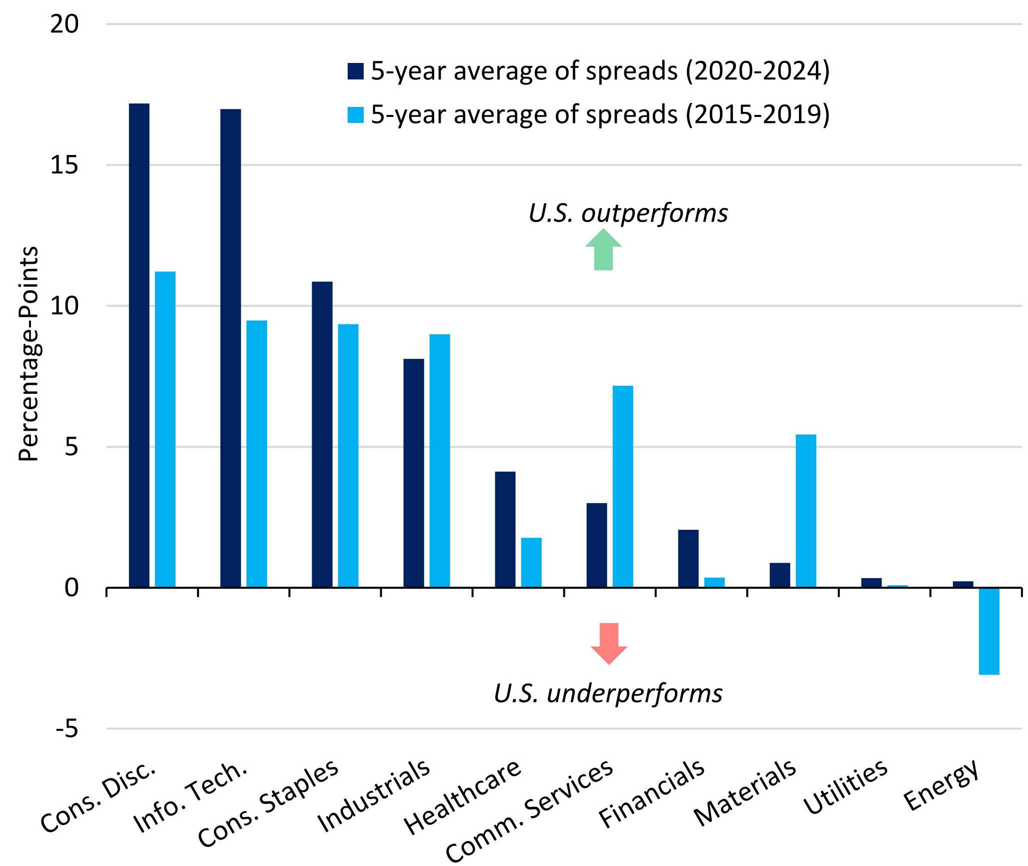
In the U.S., the leadership of dominant innovative, "asset-light" sectors creates a propitious environment for greater productivity growth. Greater profit-making ability may be supportive of higher Equity valuations compared to other regions.

**Since roughly 2016, investors have seen greater return on equity (ROE) from U.S.-based companies compared to those of other major economies.**




**In the past five years, on average, the degree of enhanced return to U.S. Equity investors has grown in sectors which comprise a dominant share of the index, such as Information Technology.**

MSCI USA Index (ROE) - MSCI All Country World ex. U.S. Index (ROE), by sector* (%)




Source: (Left) Chief Investment Office, Bloomberg. Data as of December 27, 2024. MSCI Indexes referenced. (Right): Chief Investment Office, Bloomberg.*The Real Estate sector is excluded from this analysis, due to limited historical data. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**





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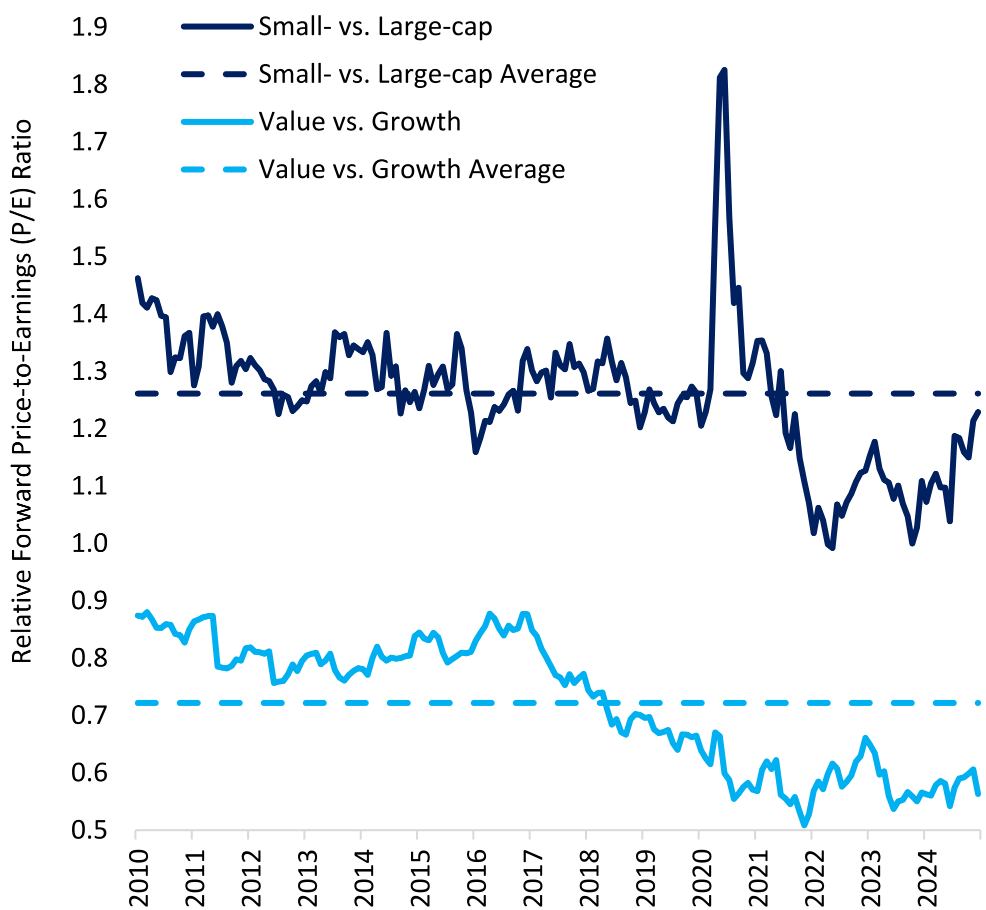
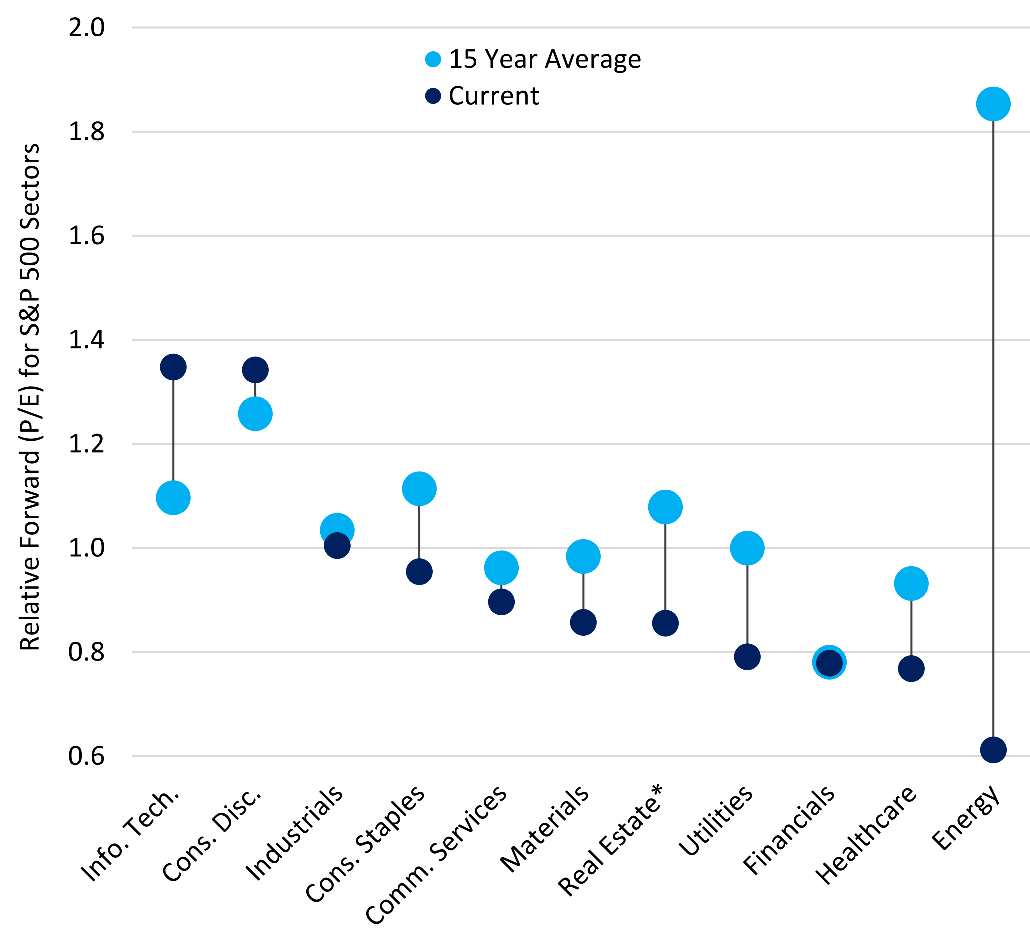
# Attractive Relative Valuations Suggest Diversification Opportunities

We emphasize the importance of a well-diversified portfolio amid expected crosscurrents in the macroeconomic environment this year. Balanced exposure to undervalued areas of the market, such as U.S. Small-caps and Value, may help mitigate against potential volatility. We continue to caution against overexposure to highly valued, concentrated areas of the Equity market.

**Relatively attractive valuations can be found in areas like Small-cap and Value, an element underpinning our slight overweight towards these areas.**




**Relative discounts in various sectors versus the S&P 500 Index argue for broader exposure in anticipation of a greater participation in the bull market.**




(Left) Source: Bloomberg. Data as of December 31, 2024. Monthly data displayed. Russell indexes referenced. (Right) Source: Bloomberg. Data as of December 31, 2024. *Average since September 2016 coinciding with sector's creation. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class disclosures and index definitions.**



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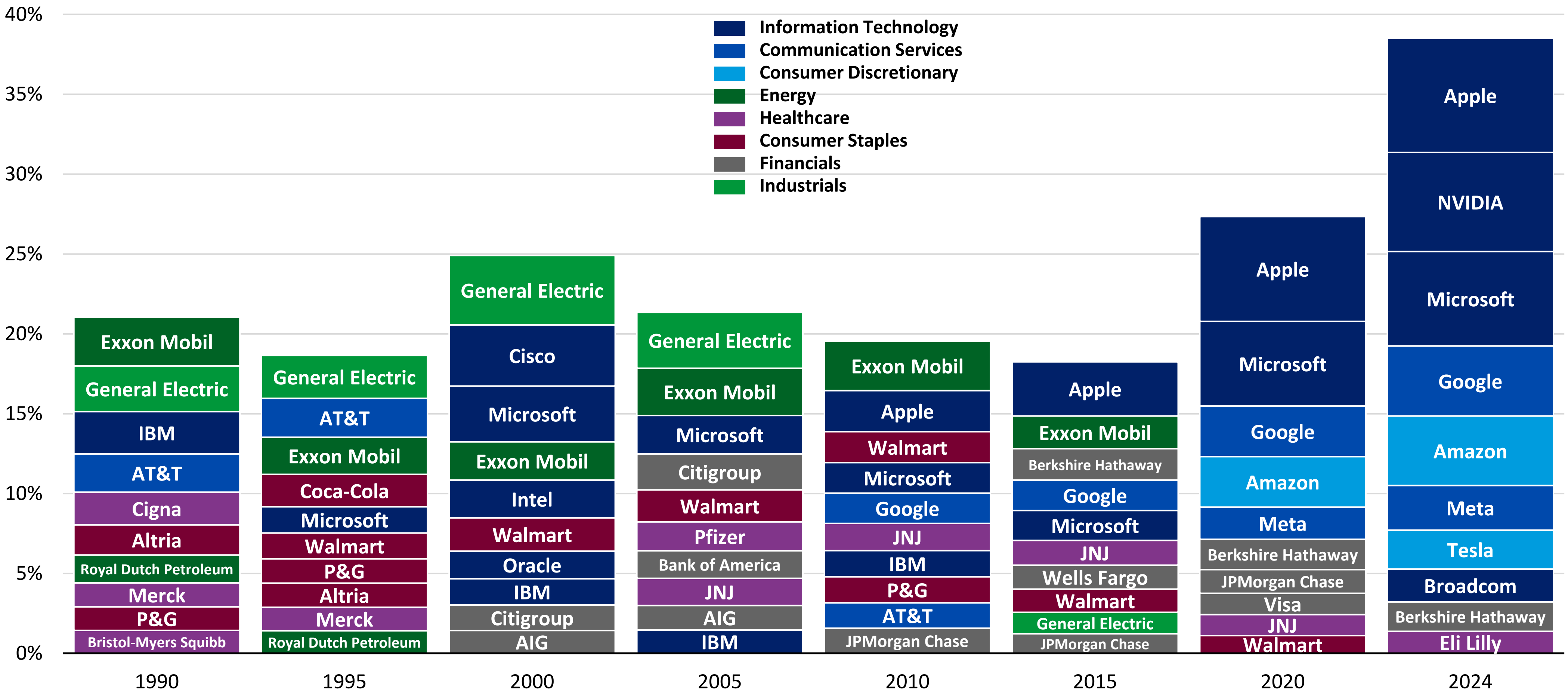
# Taking Stock of Historical Market Leadership

Today's leadership composition of the S&P 500 differs substantially from decades prior. In the 1990s, there was a more varied mix across the Energy, Industrials, and Healthcare sectors, and a few technology firms. Today, leadership is more concentrated in tech heavyweights, with the largest three companies alone making up around one-fifth of the index.* By year-end 2024, the Technology sector accounted for 32% of the S&P 500, nearing the weight of the Healthcare, Industrials, Consumer Staples, Energy, Utilities, Real Estate, and Materials sectors combined.

**Top 10 Companies as a Percent of Total S&P 500 Market Cap**

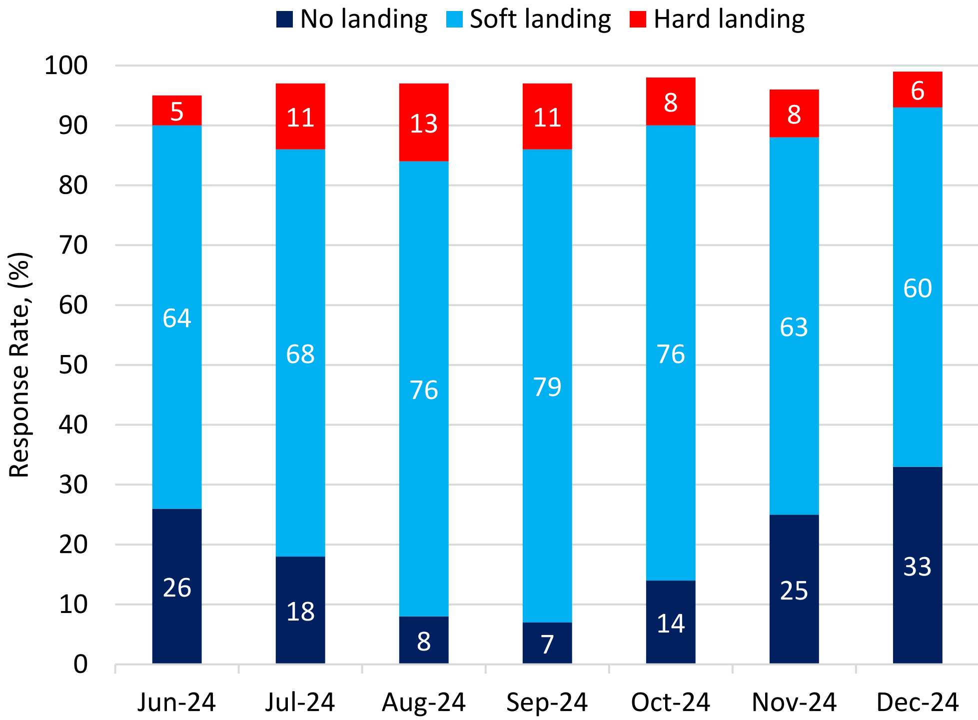



*As of December 31, 2024. Source: Bloomberg. Data as of December 31, 2024. **Any reference to a specific company or security does not constitute a recommendation to buy, sell, hold or directly invest in the company or its securities.** Note: Global Industry Classification Standard (GICS) classification as of 2024 adopted for sector grouping. Annual data reflects market capitalization by calendar year. 2020 data reflects upward revision in Visa's market cap. 2024 market cap as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

# Risk Monitor: The Persistence of U.S. Exceptionalism

Investors generally anticipate strength in the U.S. economy to continue. This outperformance is relative to Europe, where political risk may stunt economic growth further. Meanwhile, structural headwinds have dominated China's economy. Developments challenging these consensus views, such as economic resilience internationally, boosting global inflation, or an unforeseen U.S. and global slowdown, may affect sentiment.

**According to the BofA Global Research Global Fund Managers Survey* (FMS), the share of surveyed institutional investors anticipating a "Soft Landing" scenario peaked in September. A "No Landing" scenario is increasingly expected.**




**In December, institutional investors surveyed overall ranked major tail risks as:**

1. **Global trade war, leading to recessionary climate;**
2. **Inflation compels the Fed to hike and;**
3. **Geopolitical conflict.**

**We are monitoring the potential upside and downside risks to our outlook, which may alter the glidepath for economic growth.**

## Upside risk factors

- In the U.S., strengthening confidence boosts investment and manufacturing. The corporate earnings cycle broadens more quickly than expected.
- Broader, bigger stimulus in China sets the stage for a cyclical rebound, creating better equilibrium for global growth. The U.S. dollar gradually declines.
- Worry over U.S. trade policy subsides, while diplomatic breakthroughs in major conflicts lower geopolitical uncertainty.
- Europe's economy proves resilient, helped by growth in real wages and a better trade environment. Political developments unlock fiscal impulse.

## Downside risk factors

- In Europe, raised political, geopolitical, and trade uncertainty intensify recessionary pressures.
- Aggressive U.S. trade policy and heated geopolitics further underpin an appreciation of the U.S. dollar, a symptom of strengthening headwinds facing global growth.
- In the U.S., a sustained rise in long-term interest rates reflects growing concern over the inflation and fiscal policy outlook.
- Stimulus efforts in China disappoint. Consumption growth underwhelms, weighed down by a weak property market. Lackluster growth in India also undermines the outlook for Emerging Markets.

Sources: (Left) BofA Global Research *BofA Global Research December Global Fund Manager Survey, published on December 17, 2024. Latest data available. Figures may not add up to 100% due to non-responses. (Right) Chief Investment Office as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY.** Views and opinions expressed are for informational purposes only, are made as of the date of this material, and are subject to change without notice. **Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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# Fixed Income Summary & Charts

## CIO Fixed Income Asset Class View

| Asset Class | Underweight | Slightly Underweight | Neutral | Slightly Overweight | Overweight |
|---|---|---|---|---|---|
| Global Fixed Income | | ● | | | |
| U.S. Governments | | | | ● | |
| U.S. Mortgages | | | | ● | |
| U.S. Corporates | | ● | | | |
| International Fixed Income | | | ● | | |
| U.S. High Yield | | ● | | | |
| U.S. Investment-grade Tax Exempt | | | ● | | |
| U.S. High Yield Tax Exempt | | ● | | | |

Source: GWIM Investment Strategy Committee (GWIM ISC) as of January 7, 2025. Please refer to the January 2025 Viewpoint for more detailed weightings information. The Chief Investment Office (CIO) views and opinions expressed are for informational purposes only, are made as of the date of this material, and are subject to change without notice. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for asset class proxies and index definitions.**



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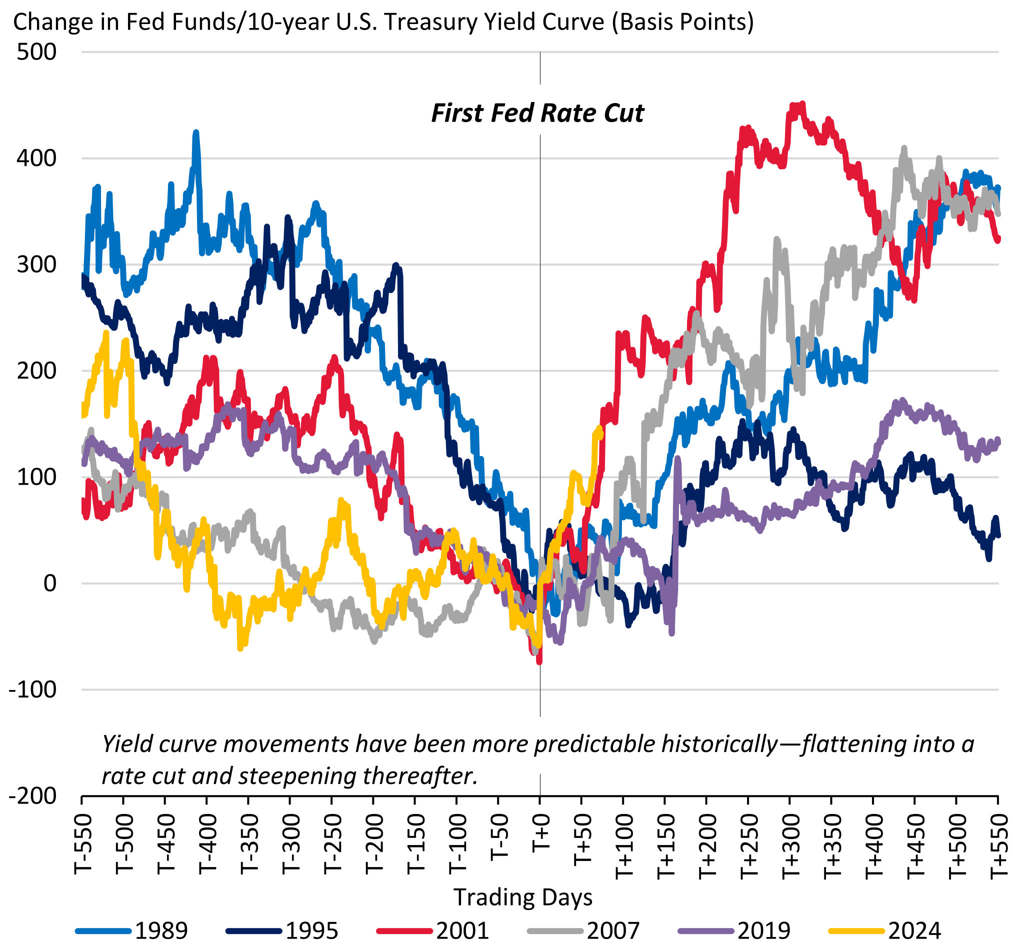
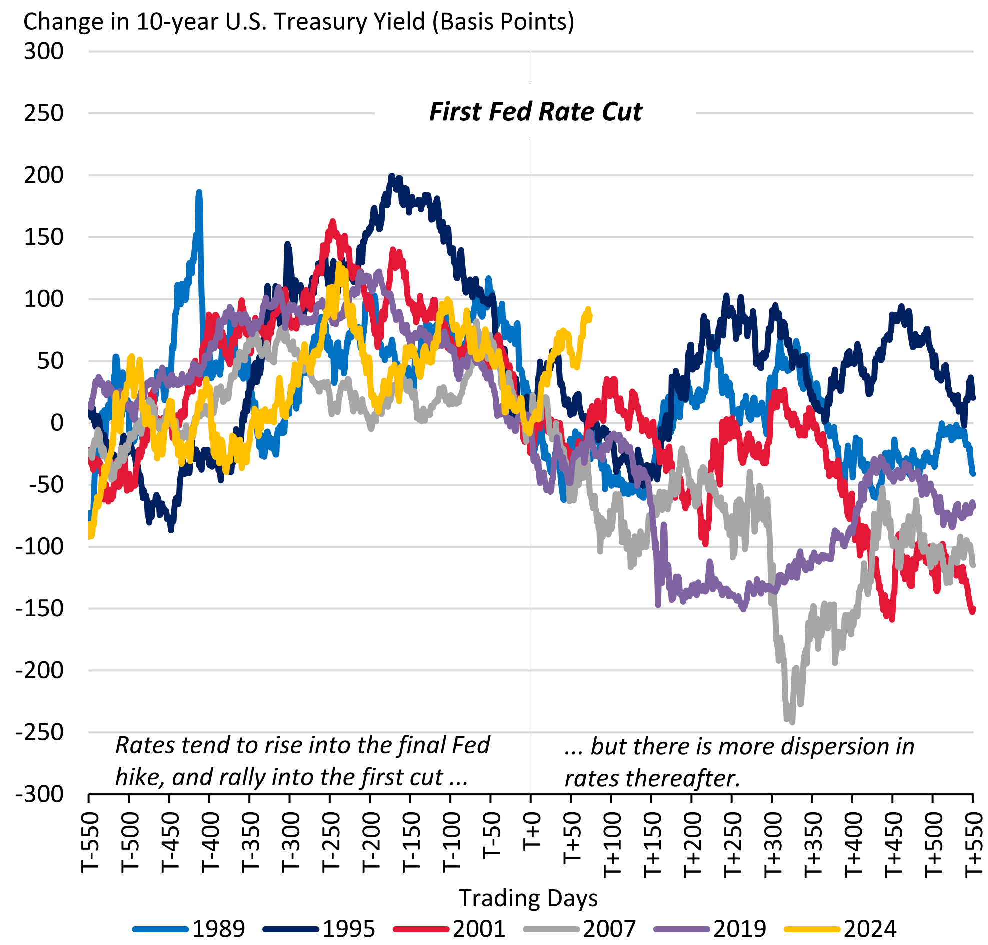
# The Yield Curve to Normalize as Short Rates Move Lower

Our highest conviction Fixed Income call remains that the yield curve will normalize as short rates move lower. With that in mind, investors should consider moving out investable cash in Fixed Income to their strategic duration target as cash yields are likely to decrease from here while the short-term backup in yields may be an opportunity.

**The fed funds to 10-year curve has tended to flatten before a rate cut cycle began and then steepened once that cycle was underway.**




**The path of long-term rates after the first Fed rate cut has varied.**




Sources: Bloomberg; Federal Reserve, Chief Investment Office. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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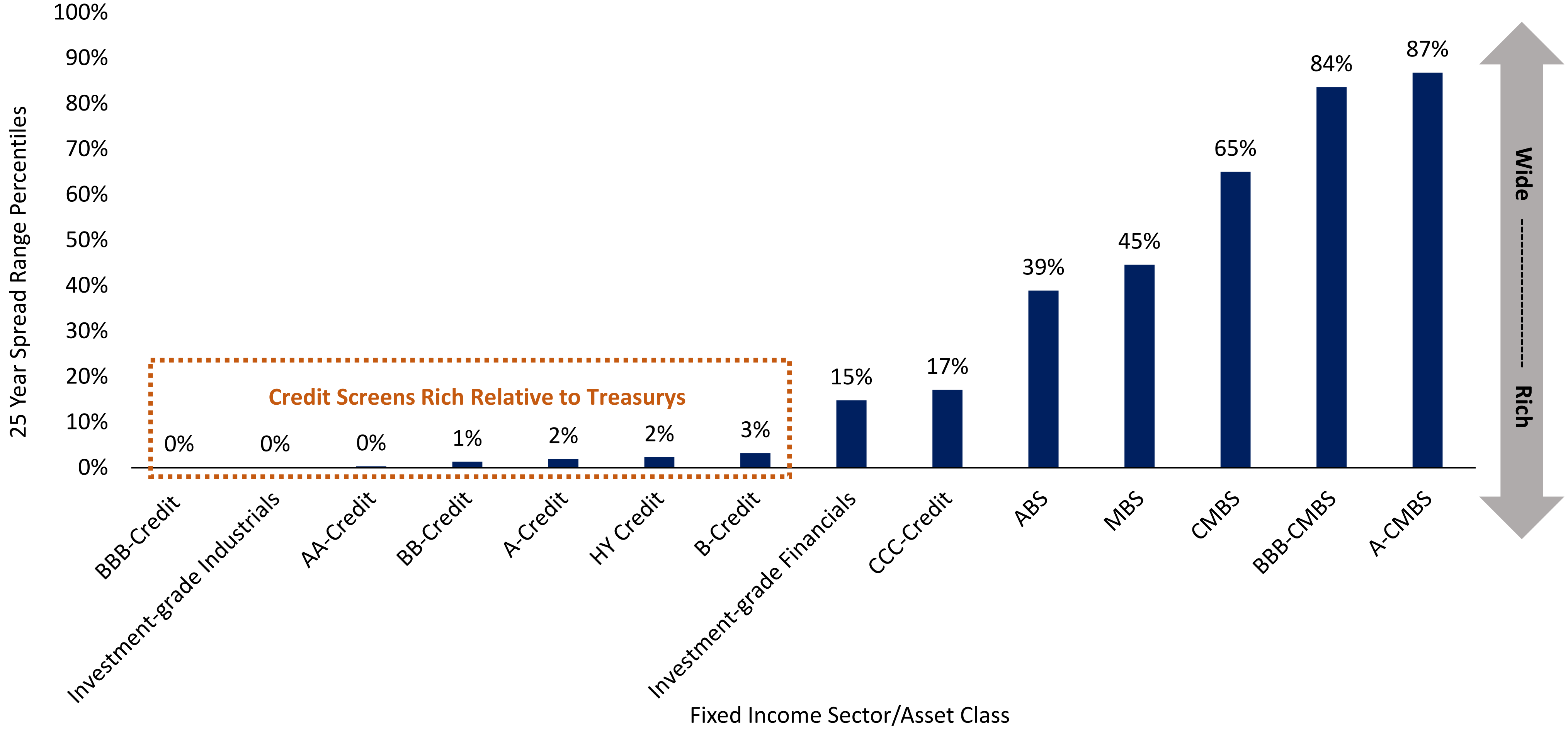
# Credit Valuations Continue to Screen Expensive

Aside from the riskier and more illiquid parts of the Fixed Income market (i.e., lower-quality Commercial Mortgage-Backed Securities (CMBS)), there are few pockets of value left with the majority of the credit market trading at or near 25-year tights. While several elements are in place that could keep spreads in a lower-for-longer range, similar to the late 1990s, tight spreads leave us favoring interest rate risk slightly over credit risk at this time until a better entry point emerges.




BBB-Credit= ICE BofA BBB U.S. Corporate Index; IG Industrials=ICE BofA U.S. Industrial Index; AA-Credit=ICE BofA AA U.S. Corporate Index; BB-Credit=ICE BofA BB U.S. High Yield Index; A-Credit=ICE BofA Single-A U.S. Corporate Index; HY Credit=ICE BofA U.S. High Yield Index; B-Credit=ICE BofA Single-B U.S. High Yield Index; IG Financials=ICE BofA U.S. Financial Index; CCC-Credit=ICE BofA CCC & Lower U.S. High Yield Index; ABS=ICE BofA U.S. Fixed Rate Asset Backed Securities Index; MBS=ICE U.S. Mortgage Backed Securities Index; CMBS=ICE BofA U.S. Fixed Rate CMBS Index; BBB-CMBS=ICE BofA BBB U.S. Fixed Rate CMBS Index; A-CMBS=ICE BofA Single-A U.S. Fixed Rate CMBS Index. Source: ICE BofA; Bloomberg. Data as of December 27, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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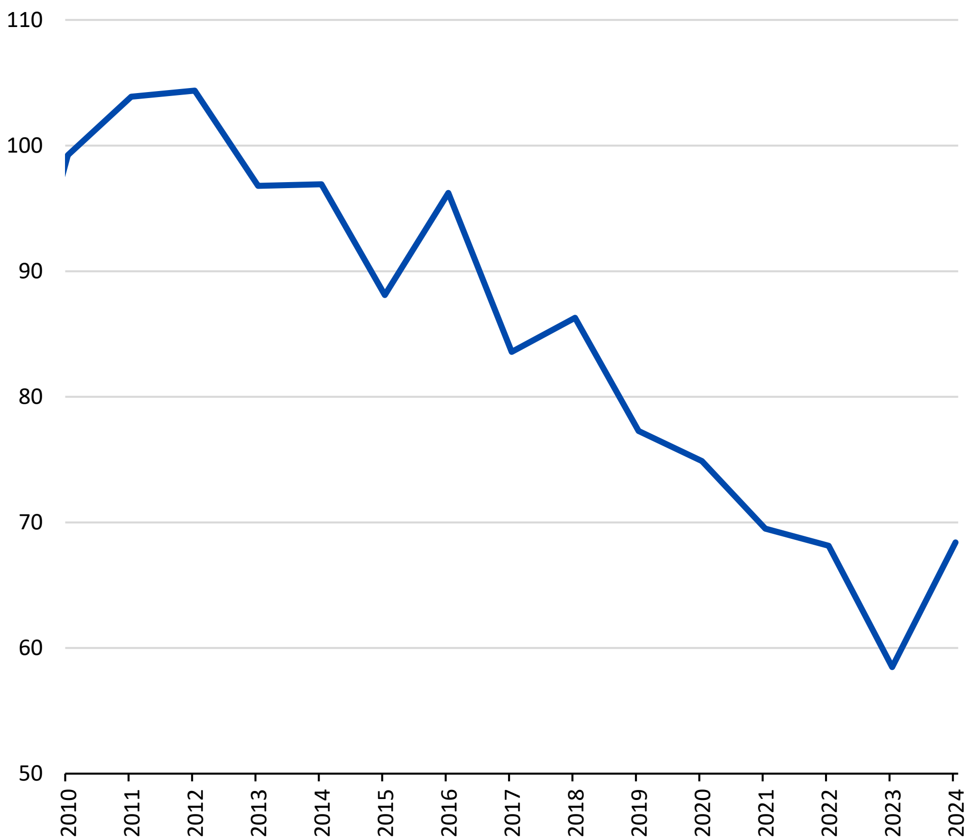
# Munis Q4 2024: Richer Valuations are the Long-Term Trend

Relative municipal (muni) valuations—as measured by muni-to-Treasury yield ratios—have been getting richer over the last 10 years. We attribute this to constrained supply growth and improved municipal credit quality; both are secular trends and unlikely to reverse in the near future. Outstanding muni bonds totaled $4.2 trillion as of Q3 2024, just 8% higher than in Q3 2014, according to the Federal Reserve. This is tiny compared to the $28 trillion in Treasury securities (125% higher than in Q3 2014) and $16 trillion in corporate and foreign bonds (46% higher than in Q3 2014). Regarding credit quality, muni issuers benefited from over $1 trillion in federal pandemic stimulus packages passed in 2020 and 2021. These allowed states to fill rainy day funds to record levels, and they remain elevated, projected to end fiscal 2025 at 12.7% of operating expenses.

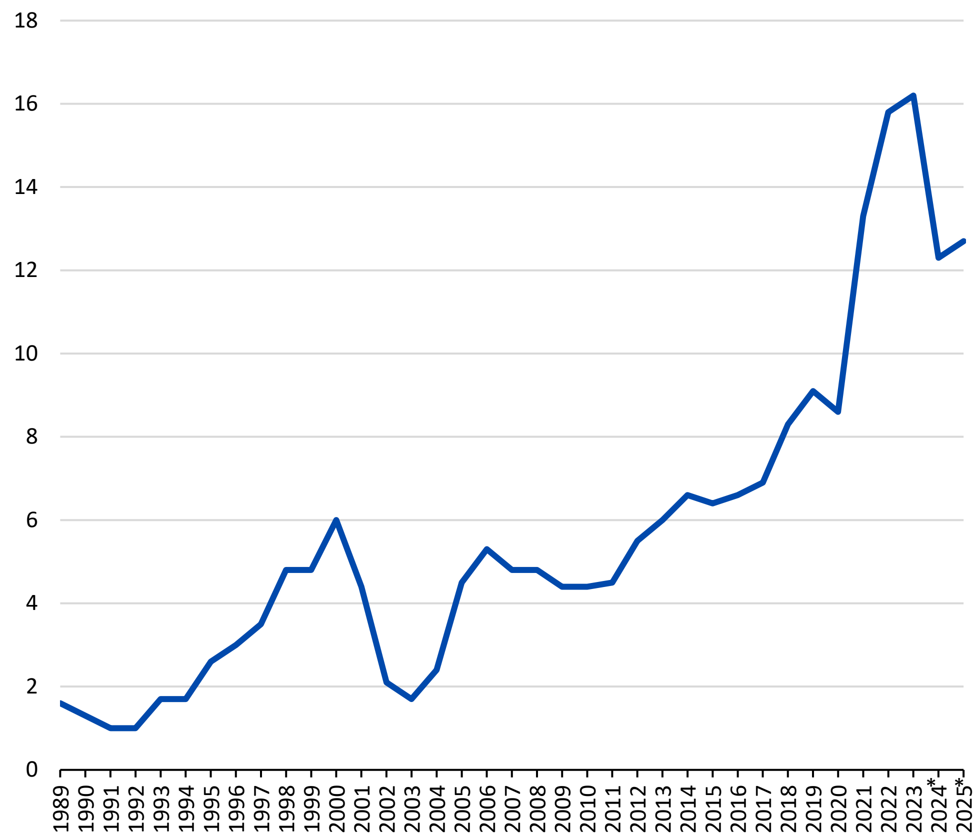
### Muni Relative Valuations Richen Over the Last 10 Years

AAA Muni-to-Treasury Yield Ratio (%), 10-year Maturity




### State Rainy Day Funds Remain Elevated, Boosting Credit Quality

Total State Rainy Day Funds, as % of Operating Expenditures




Sources: (Left) Bloomberg. Data as of December 31, 2024. (Right) National Association of State Budget Officers - The Fiscal Survey of States, Fall 2024. *Figures for fiscal 2024 are preliminary and fiscal 2025 are projected based on states' enacted budgets. Projections for fiscal 2025 exclude Georgia and Wisconsin. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**



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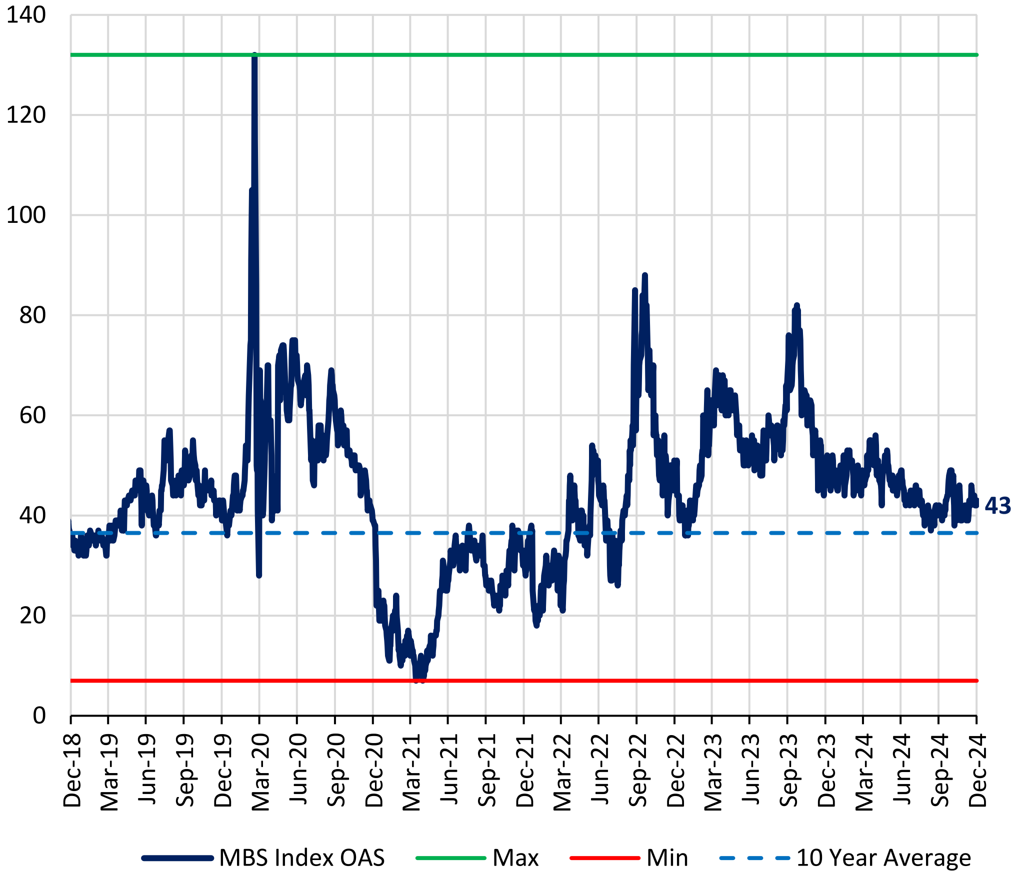
# Spreads Tightening in Agency Mortgage-backed Securities

We are slightly positive on Agency MBS as overall yields and nominal spreads still look attractive. Despite the 2024 rally in spreads, they remain elevated compared to the 10-year average. Additionally, further duration extension risk in MBS is limited, as durations have largely extended based on the history of the MBS Index.* We continue to closely watch market demand as the Fed's MBS portfolio continues to run off.

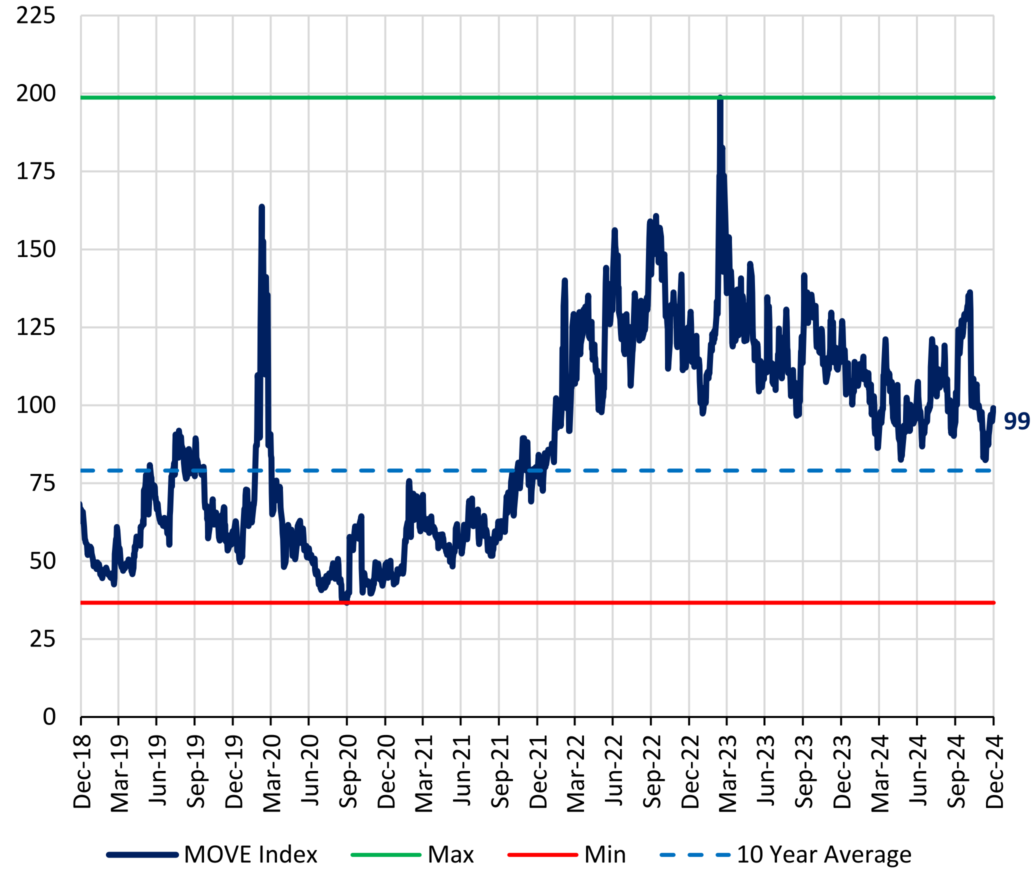
**MBS spreads have risen significantly from the single-digit lows recorded in 2021, as the Fed implements measures to curb persistently high inflation.**

MBS Option-Adjusted Spread (OAS) (Basis Points)




**Falling volatility is a positive for callable securities such as Agency MBS.**

ICE BofA MOVE (Interest Rate Volatility) Index




*Refers to Bloomberg U.S. Mortgage-backed Securities (MBS) Index. Source: Bloomberg. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**



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# Alternative Investments Summary & Charts

## CIO Alternative Investments* Asset Class View

We favor a strategic approach when allocating to Alternative Investments.

| Asset Class | Neutral |
|---|---|
| Alternative Investments* | |
| Hedge Strategies | |
| Private Equity & Credit | |
| Real Assets | |

ALTERNATIVE INVESTMENTS NOTE: Given the differences in liquidity characteristics between Alternative Investments and traditional investments, the Alternative Investments portfolio positioning and CIO asset class views have been neutral rated versus our strategic allocations. These types of investments, in our opinion, should not be viewed at the asset class level on a tactical basis, rather the tactical positioning should be expressed at the subasset level.

***Many products that pursue Alternative Investment strategies, specifically Private Equity & Credit and Hedge Strategies, are available only to qualified investors.** Source: GWIM Investment Strategy Committee (GWIM ISC) as of January 7, 2025. Please refer to the January 2025 Viewpoint for more detailed weightings information. **FOR INFORMATIONAL PURPOSES ONLY.** The Chief Investment Office (CIO) views and opinions expressed are for informational purposes only, are made as of the date of this material, and are subject to change without notice. **Please refer to appendix for asset class proxies and index definitions.**



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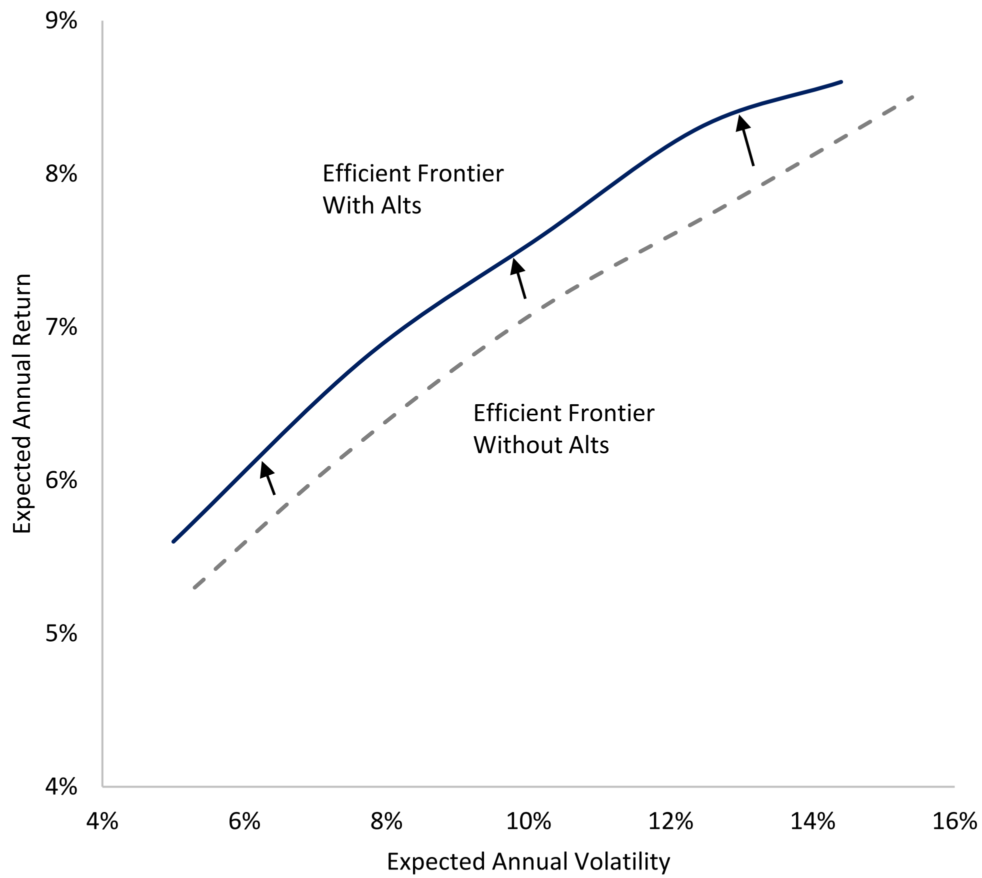
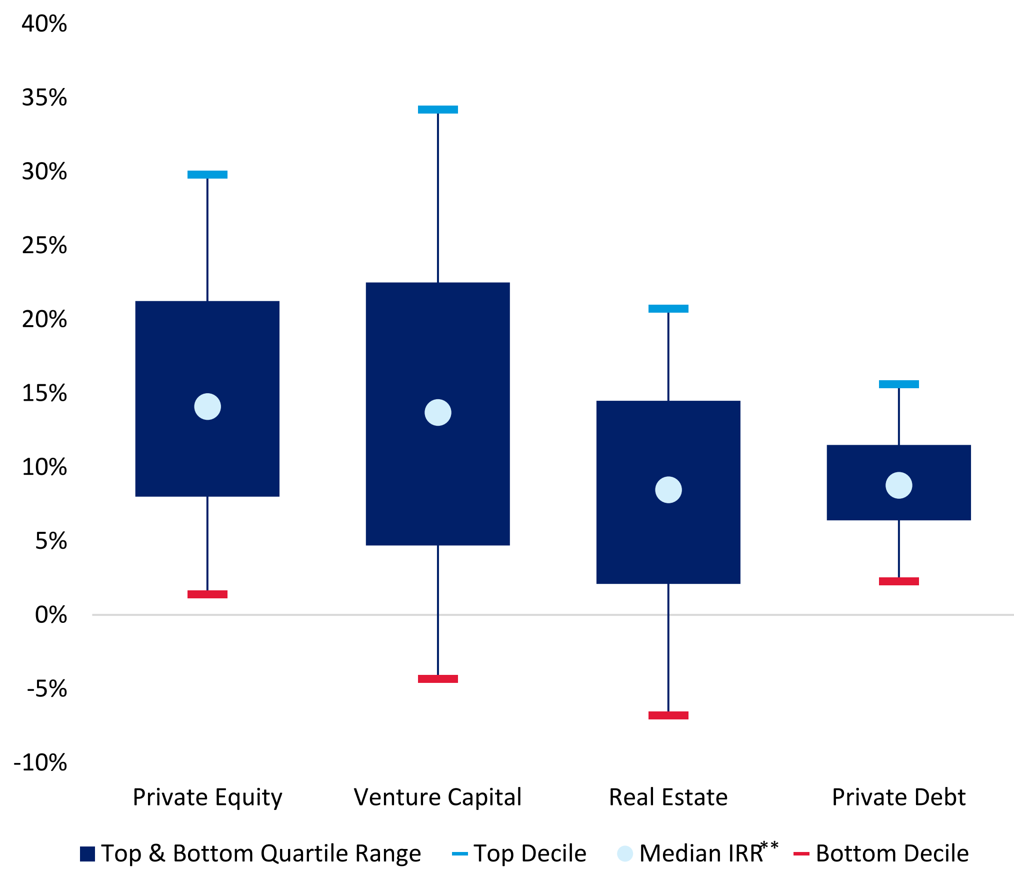
# Alternative Investments*

Within the Alternative Investments (Alts) asset classes, we see opportunities and challenges for qualified investors.

**Including Alts in balanced portfolios has the potential to improve the trade-off between risk and return, as depicted by an upward shift in the efficient frontier.**




**While average or median performance of Alts strategies are competitive over the long-term, there is wide dispersion between top and bottom performing funds, highlighting the value of diversification and the opportunity for manager selection.**



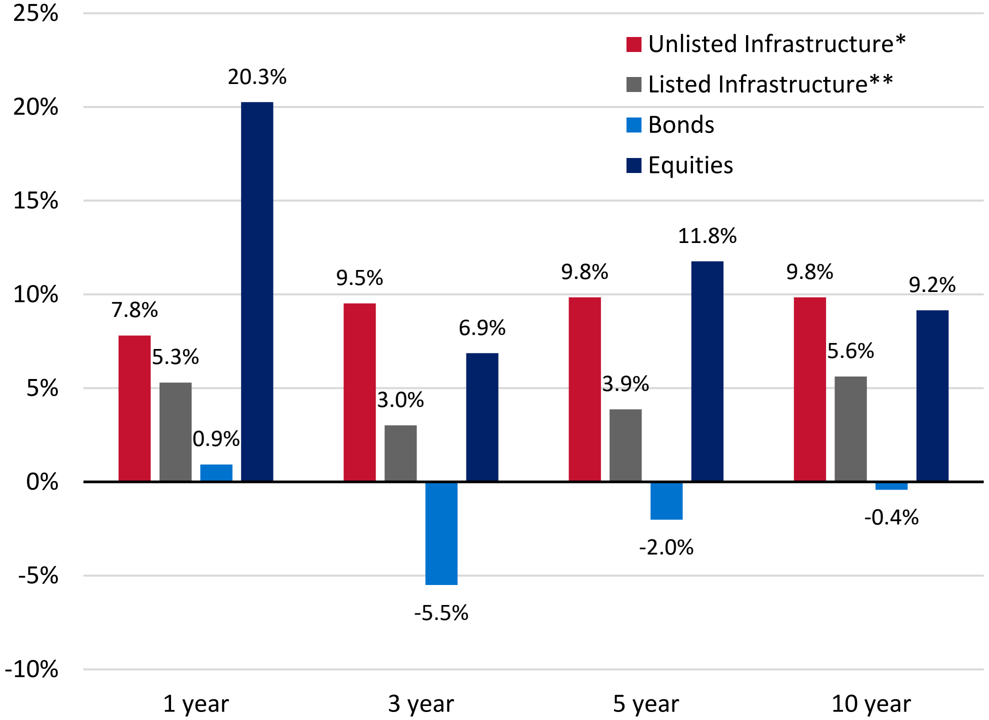

***Many products that pursue Alternative Investment strategies, specifically Private Equity & Credit and Hedge Strategies, are available only to qualified investors.** Sources: (Left) Chief Investment Office Capital Market Assumptions effective January 1, 2025. For illustrative purposes only. (Right) **Internal Rate of Return. Pitchbook. Refers to data from 2005 – 2019, as of March 31, 2024. Latest data available. Performance analysis does not include data beyond 2019 as these private fund vintages are not yet seasoned and investment results are not considered to be meaningful. Pitchbook benchmarks referenced. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. Past performance does not guarantee future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

# Infrastructure in Focus

Infrastructure remains a key long-term theme. The U.S. has a widely acknowledged ageing infrastructure base that will require significant public and private investment. Hundreds of billions of dollars have already been earmarked for infrastructure spend through several federal bills in recent years. Looking ahead, key supports of infrastructure investment include demand for more renewable sources of energy and the ongoing physical buildout associated with AI.

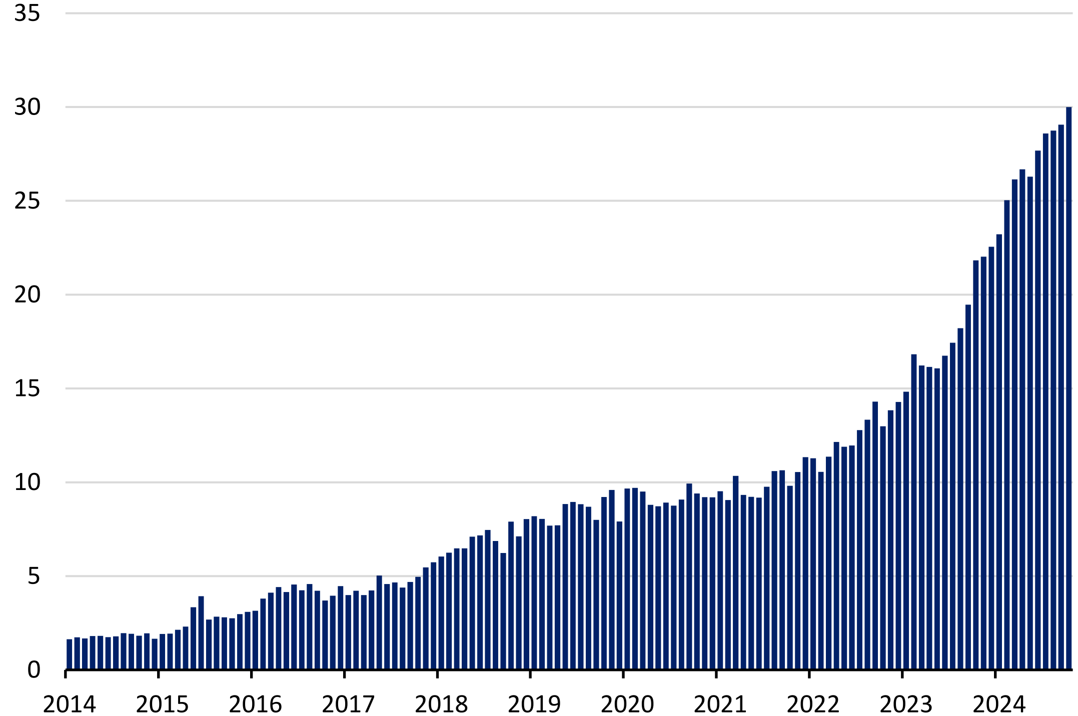
**Unlisted infrastructure continues to exhibit steady returns, outperforming listed infrastructure and yielding comparable returns on a 10-year basis to that of public Equities.**

Annualized Total Return




**The buildout of energy-intensive AI data centers–the physical infrastructure required to store and process vast volumes of data–is well underway. Private construction of data centers across the U.S. has more than doubled in less than two years.**

Data Center Private Construction, Seasonally Adjusted Annual Rate ($ Billions)




*Unlisted refers to infrastructure found in the private markets. **Listed refers to infrastructure found in the public markets. Sources: (Left) CBRE Investment Management, Refinitiv, FactSet. Unlisted infrastructure: Cambridge Associates Infrastructure Index in USD, net of fees as of Q2 2024. Listed infrastructure: FTSE Global Core Infrastructure 50/50 index in USD as of Q2 2024. Bonds: Bloomberg Global Aggregate index in USD as of Q2 2024. Equities: MSCI World index in USD as of Q2 2024. Latest data available. For illustrative purposes only. Current market conditions differ from prior market conditions; including during prior periods of stress and dislocation. There can be no assurance any prior trends will continue. (Right) U.S. Census Bureau. Data as of December 2, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**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# Portfolio Strategy Summary & Charts

## CIO Asset Classes and Sector Views

| Asset Class | Underweight | Slightly Underweight | Neutral | Slightly Overweight | Overweight |
|---|---|---|---|---|---|
| Global Equities | | | | ● | |
| U.S. Large Cap Growth | | | ● | | |
| U.S. Large Cap Value | | | | ● | |
| U.S. Small Cap Growth | | | | ● | |
| U.S. Small Cap Value | | | | ● | |
| International Developed | | ● | | | |
| Emerging Markets | | | ● | | |
| Global Fixed Income | | ● | | | |
| U.S. Governments | | | | ● | |
| U.S. Mortgages | | | | ● | |
| U.S. Corporates | | ● | | | |
| International Fixed Income | | | ● | | |
| U.S. High Yield | | ● | | | |
| U.S. Investment-grade Tax Exempt | | | ● | | |
| U.S. High Yield Tax Exempt | | ● | | | |
| Alternative Investments* | | | | | |
| Hedge Strategies | | | ● | | |
| Private Equity & Credit | | | ● | | |
| Real Assets | | | ● | | |

| Sector | Underweight | Slightly Underweight | Neutral | Slightly Overweight | Overweight |
|---|---|---|---|---|---|
| Utilities | | | | ● | |
| Financials | | | | ● | |
| Consumer Discretionary | | | | ● | |
| Healthcare | | | ● | ◀ | |
| Information Technology | | | ● | | |
| Communication Services | | | ● | | |
| Industrials | | | ● | | |
| Real Estate | | | ● | | |
| Energy | | ● | | | |
| Materials | | ● | | | |
| Consumer Staples | ▶ | ● | | | |

ALTERNATIVE INVESTMENTS NOTE: Given the differences in liquidity characteristics between Alternative Investments and traditional investments, the Alternative Investments portfolio positioning and CIO asset class views have been neutral rated versus our strategic allocations. These types of investments, in our opinion, should not be viewed at the asset class level on a tactical basis, rather the tactical positioning should be expressed at the subasset level.

***Many products that pursue Alternative Investment strategies, specifically Private Equity & Credit and Hedge Strategies, are available only to qualified investors.** Source: GWIM Investment Strategy Committee (GWIM ISC) as of January 7, 2025. **FOR INFORMATIONAL PURPOSES ONLY.** Please refer to the January 2025 Viewpoint for more detailed weightings information. The Chief Investment Office (CIO) views and opinions expressed are for informational purposes only, are made as of the date of this material, and are subject to change without notice. All sector and asset allocation recommendations must be considered in the context of an individual investor's goals, time horizon, liquidity needs and risk tolerance. **Please refer to appendix for asset class and sector proxies and index definitions.**

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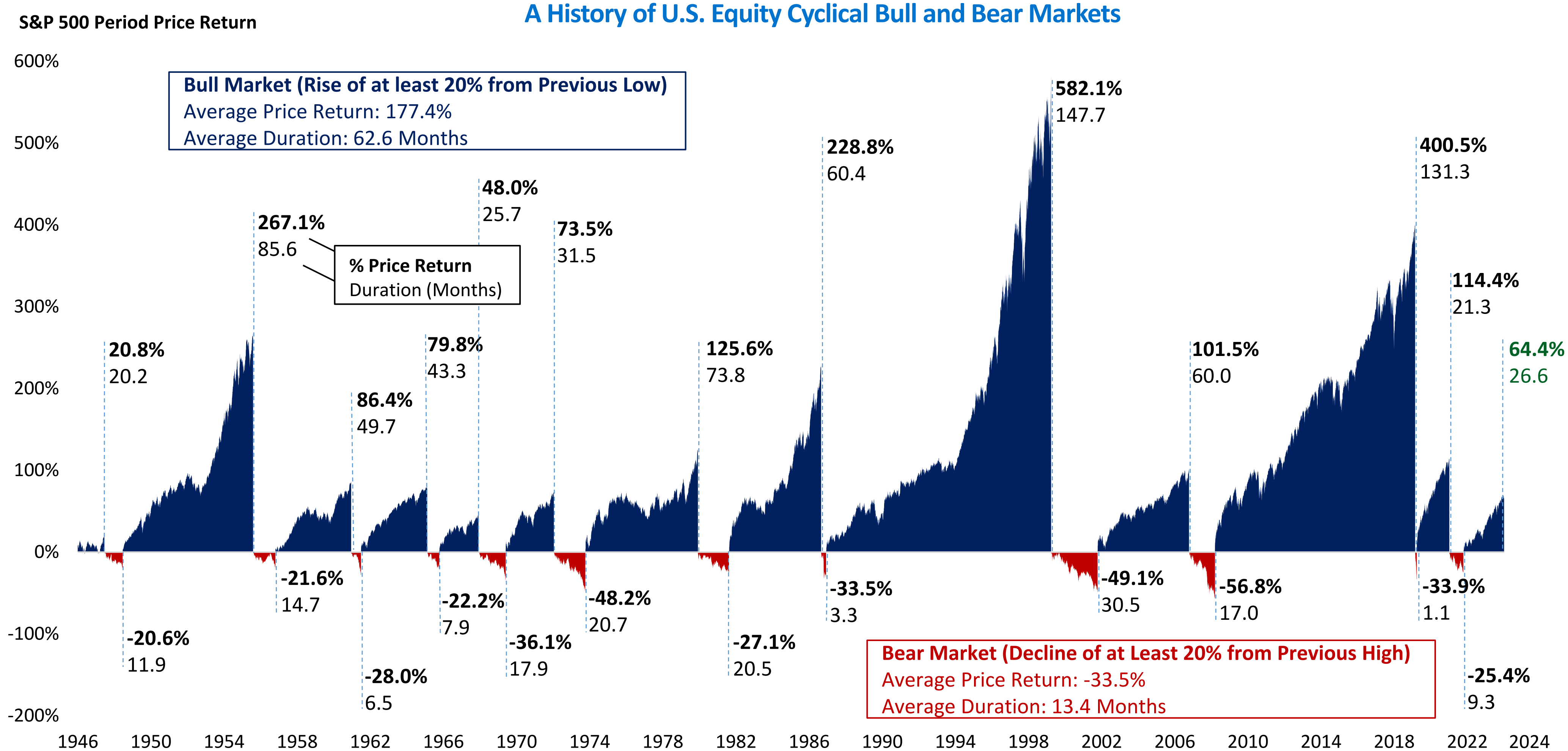
# Recoveries Follow Downturns: We Continue To Emphasize Diversification

While every cyclical bear market is different in terms of duration, declines and recoveries, every major market downturn in the past has been followed by a recovery. We continue to emphasize diversification across and within asset classes as an evergreen principle of long-term investing.

## A History of U.S. Equity Cyclical Bull and Bear Markets




Asset allocation and diversification do not ensure a profit or protect against loss in declining markets. Sources: Bloomberg; Yardeni Research. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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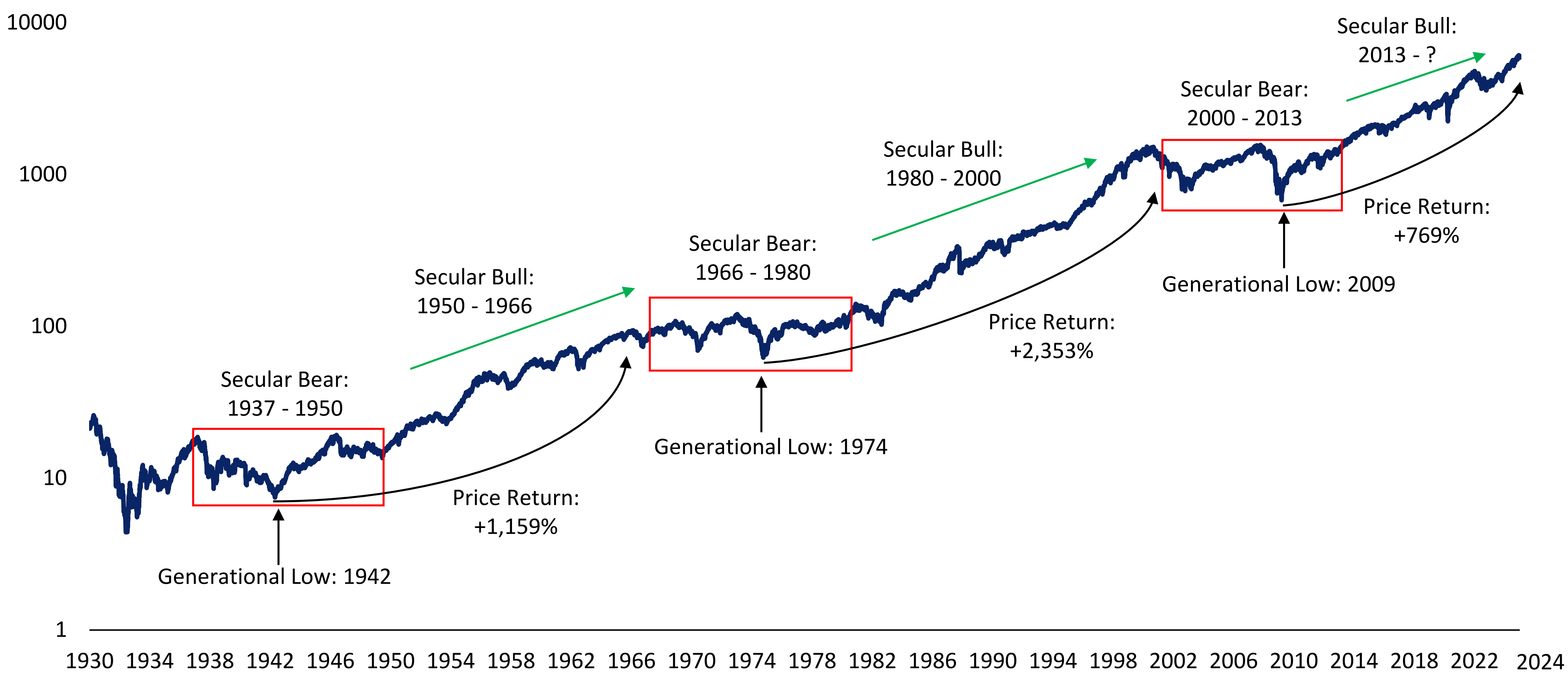
# The Secular Bull Should Be Set to March On...

Secular bull markets are long-term uptrends in Equities that generally undergo multiple business and market cycles. It is our view that the ongoing secular bull cycle should continue forward powered by an acceleration in innovation, the build out of domestic supply chains and high-technology manufacturing, investment toward the energy transition, and expectations for the great wealth transfer.

S&P 500 Index (Log Scale)

**A History of U.S. Equity Secular Bull and Bear Markets**

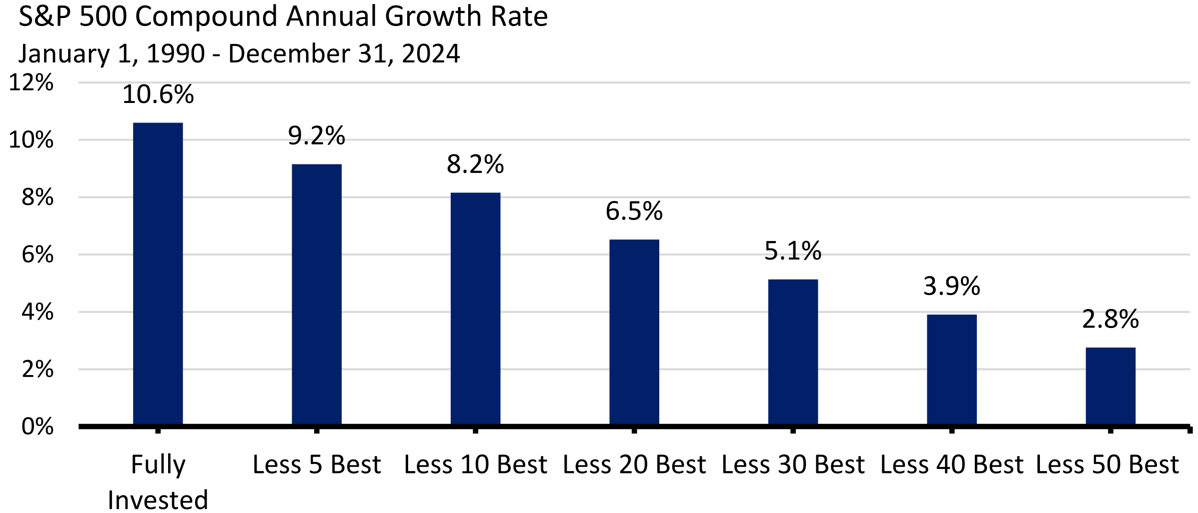



Sources: Chief Investment Office, BofA Global Research; Bloomberg. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY.** Asset allocation and diversification do not ensure a profit or protect against loss in declining markets. **Past performance is no guarantee of future results. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

# Time in the Market Matters

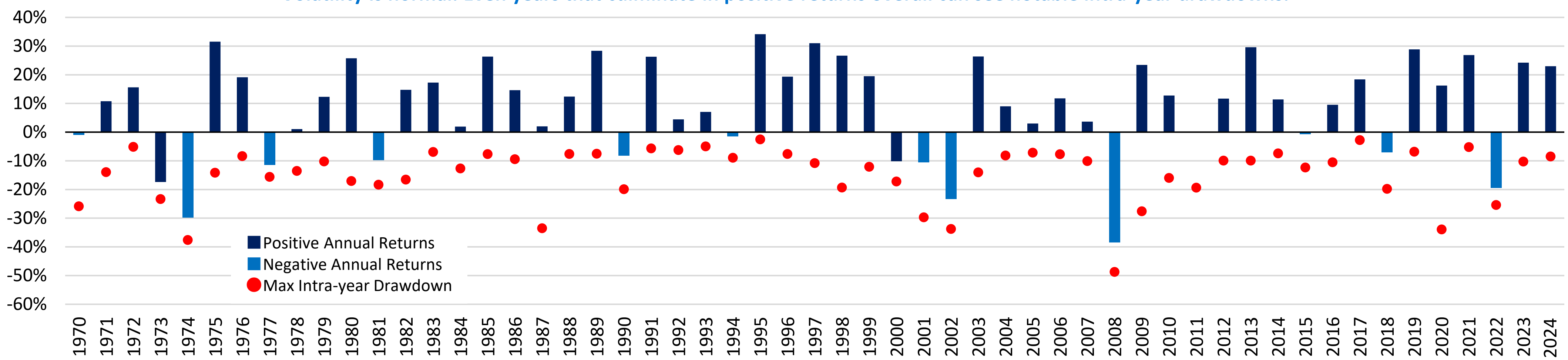
*Time in the market* is a necessary ingredient for a successful investment strategy, as opposed to *timing the market*. In an attempt to invest at the "perfect time", investors are likely to impair their returns. By our estimates, a longer investment horizon can be associated with an increased probability of generating positive returns.

**Stay the course. Excluding the best days of performance for the S&P 500 drastically cuts down returns.**




| Decade | S&P 500 Price Return | S&P 500 Price Return Excluding Best 10 Days Per Decade |
|---|---|---|
| 1930 | -42% | -79% |
| 1940 | 35% | -14% |
| 1950 | 257% | 167% |
| 1960 | 54% | 14% |
| 1970 | 17% | -20% |
| 1980 | 227% | 108% |
| 1990 | 316% | 186% |
| 2000 | -24% | -62% |
| 2010 | 190% | 95% |
| 2020* | 82% | 1% |
| **Since 1930** | **27,320%** | **93%** |

**Volatility is normal. Even years that culminate in positive returns overall can see notable intra-year drawdowns.**

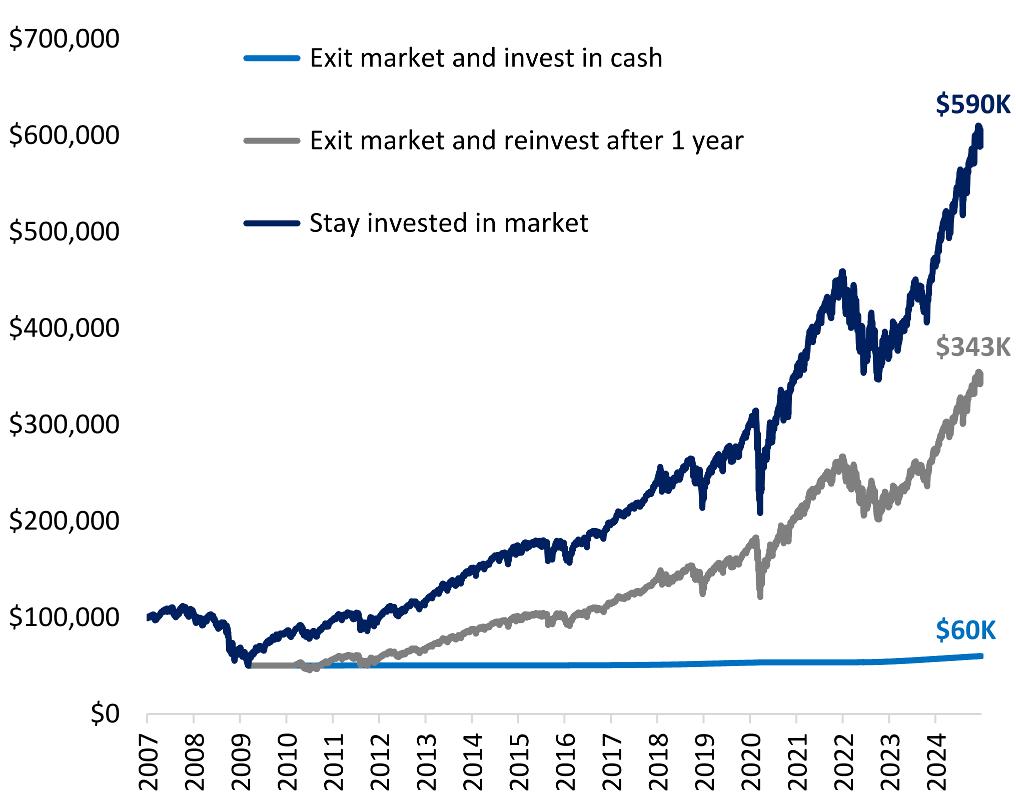



*Includes data from 2020 – 2024. Source: (Upper Left) Bloomberg, Chief Investment Office. Data as of December 31, 2024. Data reflects S&P 500 Total Return Index performance going back to 1990 incrementally omitting top performing days. (Upper Right) BofA Global Research. Data as of December 31, 2024. (Lower) Bloomberg. Data as of December 31, 2024. Latest data available. Price returns referenced. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

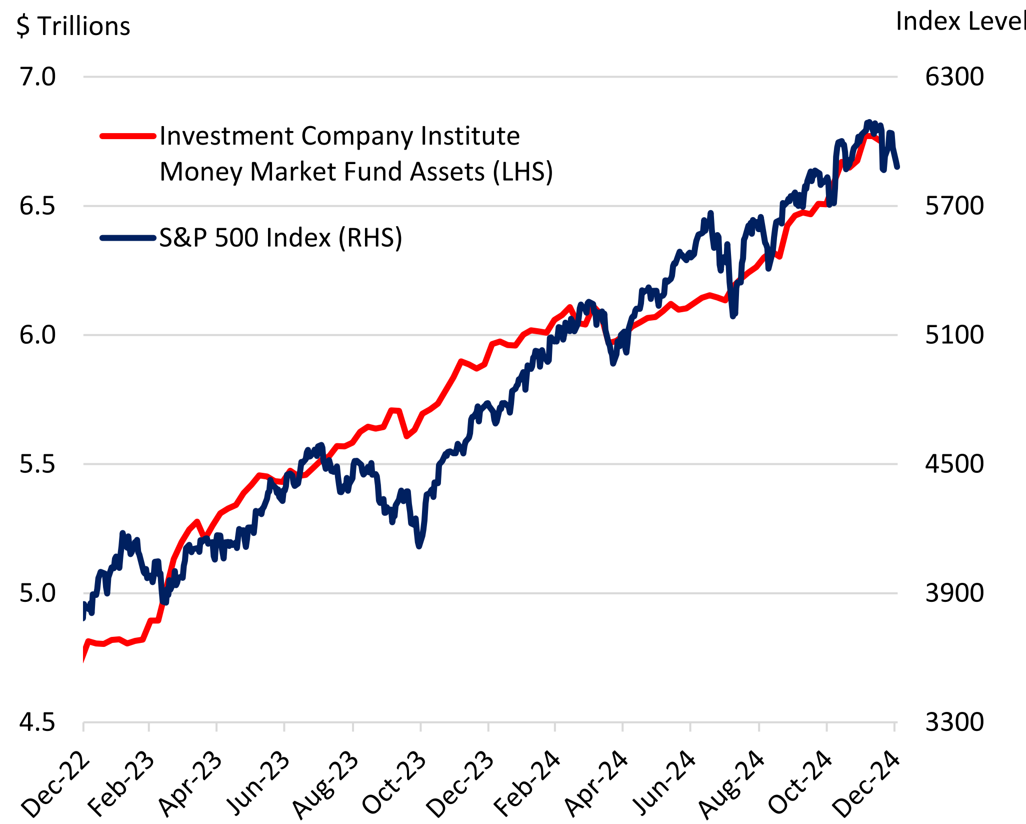
# The Risk of Avoiding Risk

While it's essential that investors maintain appropriate levels of cash in portfolios, it shouldn't be viewed as a long-term investment. History suggests that sitting in cash for too long could be a costly strategy. We continue to emphasize the importance of maintaining a fully invested portfolio with a high level of diversification.

**Staying invested throughout periods of uncertainty may help achieve better long-term outcomes. A $100,000 portfolio that remained invested in the S&P 500 throughout all the ups and downs since 2007 would be worth ~$590,000 today.**




**A record amount of dry powder accumulated on the sidelines as Equities churned higher in 2024, potentially leading to missed opportunities for returns. Cash may become less attractive as the Fed's gradual easing cycle is expected to continue.**




Sources: (Left) Bloomberg. Data as of December 31, 2024. The market is represented by the S&P 500 Index. Cash is represented by the ICE BofA U.S. 3-Month Treasury Bill Index. For illustrative purposes only and not indicative of any investment. The data assumes reinvestment of income and does not account for taxes or transaction costs. (Right) Bloomberg. Data as of December 31, 2024. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

# CIO Thematic Investing: Key Ingredient to Portfolios

| Transformative Innovation | | |
|---|---|---|
| **Generative AI** | **Robotics/Automation** | **Digitization** |
| Power demand/ generation, productivity wave | Industrial/service robotics | Cloud computing, data analytics, digital payments, internet of things, augmented reality, virtual reality, electrified transportation |
| **Resilient Infrastructure** | | |
| **Energy Addition** | **Utility Infrastructure** | **Supply Chain Reconfiguration** |
| Nuclear renaissance, solar, natural gas generation, hydrogen, battery storage | Data centers, grid (transmission/distribution), thermal management, water management, power generation | Onshoring/ nearshoring buildout |
| **Future Security** | | |
| **Aerospace & Defense** | **Cybersecurity** | **Resource Protectionism** |
| Remilitarization, space, drones | Network security, cloud evolution/ Security, endpoint security | Food/agriculture/ commodity scarcity (water), natural resources, metals/mining |
| **Changing Demographics** | | |
| **Healthcare Innovation** | **Great Wealth Transfer** | **Global Labor Force Distribution** |
| Ageing, longevity, drug discovery, biotechnology (gene therapy, personalized medicine) | Wealth creation, NextGen consumer/investor base | Immigration/ migration, global fertility bust, automation "cobots" |

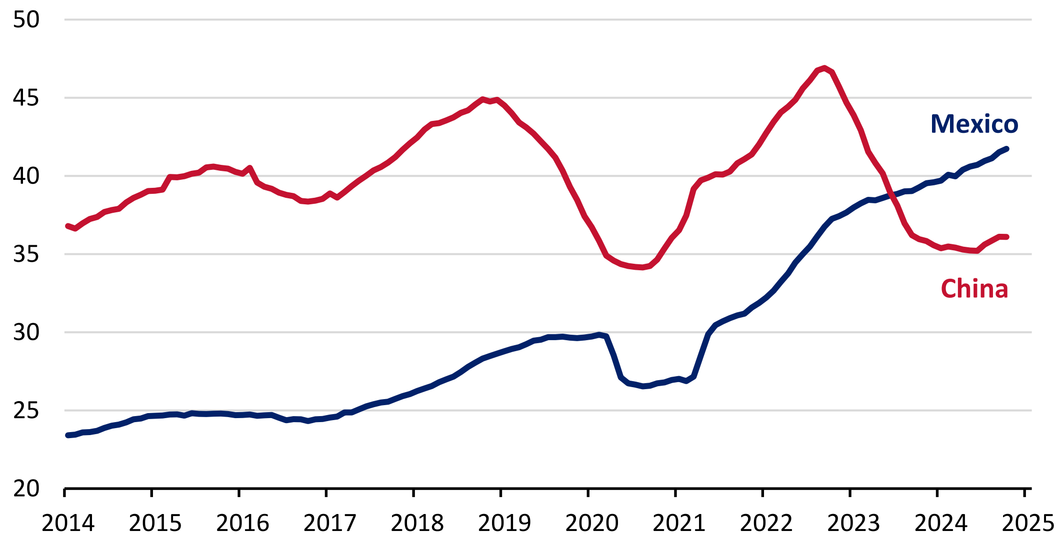
These themes and subthemes encapsulate the CIO's thinking on some of the most convincing undercurrents of future areas of growth around: **Transformative Innovation**, **Resilient Infrastructure**, **Future Security** and **Changing Demographics**. These themes carry long-term implications for economic growth, the cost of capital, and global earnings.

## Supply Chain Reconfiguration

Rising nationalism, geopolitical tensions, and security of supply have all influenced shifting supply chains. By mid-2023, Mexico surpassed China as America's top source of imports as a result of increased trade barriers and protectionist policies toward China. As onshoring beneficiaries, various industries may benefit from the reshoring of supply like infrastructure plays or automation leaders.

**Shifting U.S.-China Relations: Mexico on the rise as America's #1 importer**

Goods Imports in Billions ($), 12-Month Moving Average




(Right) Source: U.S. Census Bureau, Haver Analytics. Data as of December 5, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.** The Chief Investment Office (CIO) views and opinions expressed are for informational purposes only, are made as of the date of this material, and are subject to change without notice.

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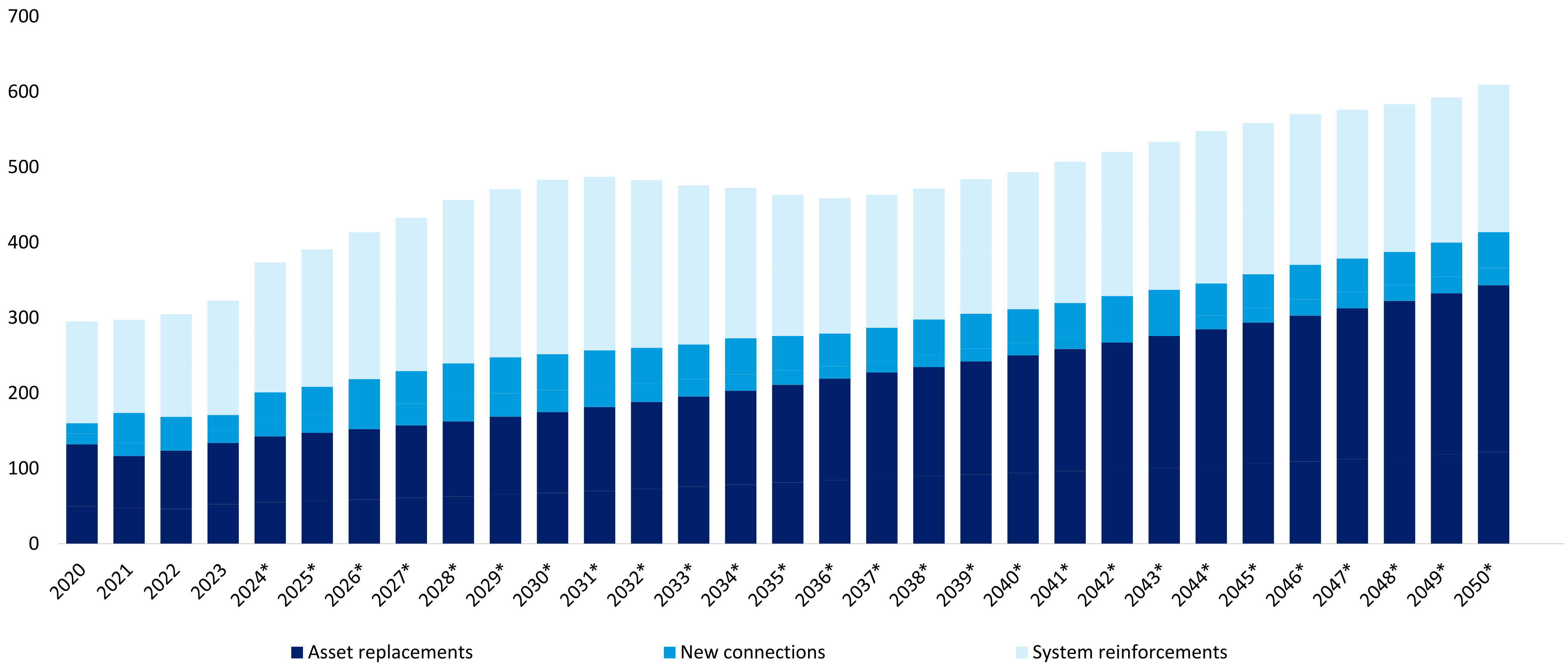
# Opportunities in an Electrified Future

We find ourselves amidst a fundamental reshaping of global infrastructure, a key component of which is the electric grid. Maintaining a resilient and efficient grid while meeting burgeoning electricity demand requires a mix of replacing old grid assets, reinforcing existing infrastructure, and connecting new sources or consumers. In our view, there are a variety of potential opportunities for investors to consider in the transformation across public and private markets.

Global Power Grid Investment ($ billion)

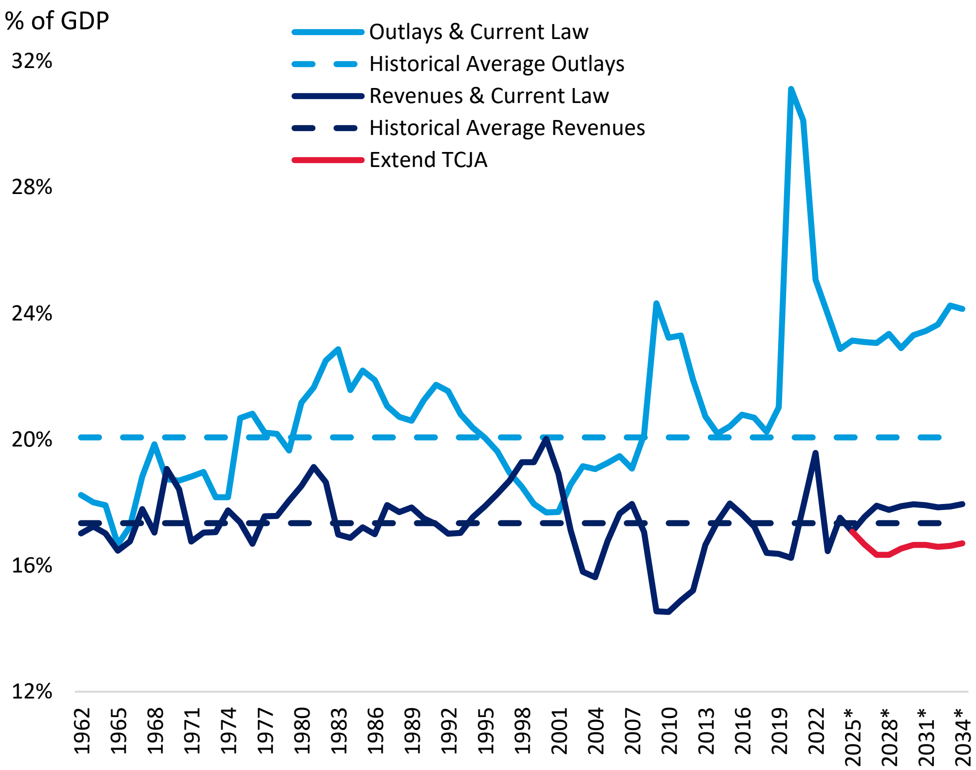



*Estimate. Source: BNEF New Energy Outlook 2024, May 21, 2024. 2024-2050 projected. Latest data available. Assumes Bloomberg's Economic Transition Scenario which shows how the energy transition could unfold solely based on economic forces and technology tipping points that push the balance in favor of low-carbon technologies, without further policy action. "New connections" refers to extensions of the power grid to integrate new generators or consumers. "System reinforcements" refers to upgrades to the utility power system to accommodate higher transfers and maintain reliability. Asset replacements refers to the costs to replace end-of-life power grid assets. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

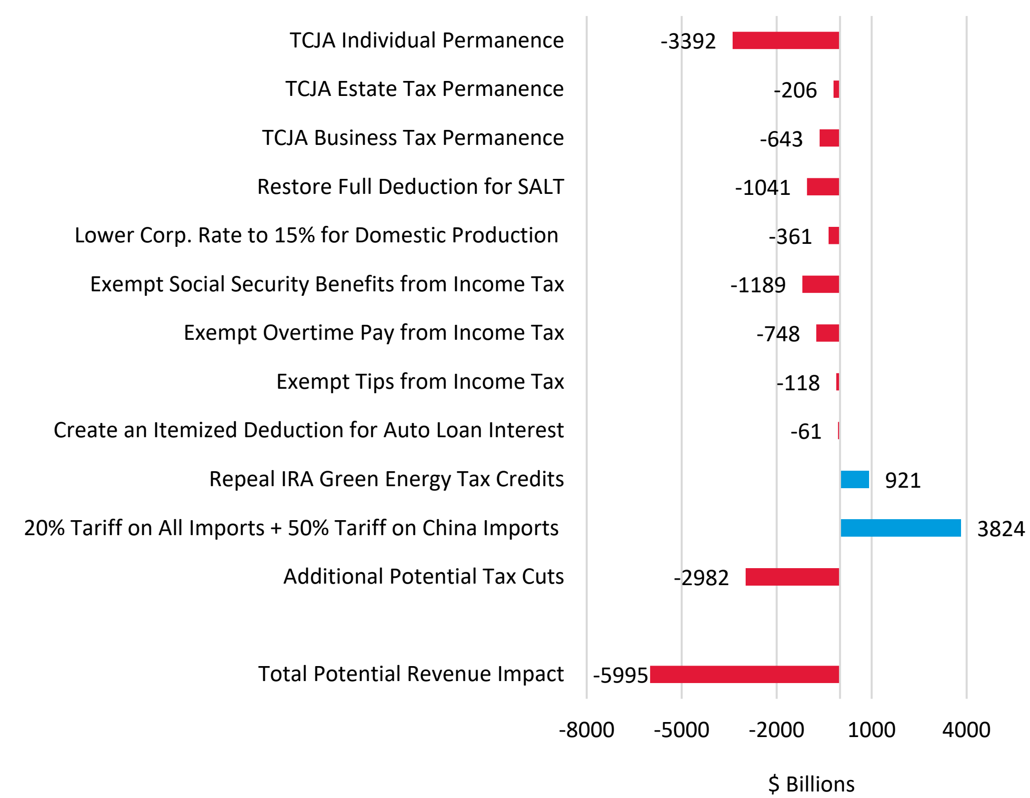
# Tax Policy Pulse

With Republicans in the White House and controlling both chambers of Congress, the new administration appears poised to pursue many of their campaign tax proposals, but to what extent and at what cost? The lost revenue associated with these tax proposals, along with federal deficits that exceed historical averages and a narrow House majority, may temper expectations. Within their party, Republicans will have to address the competing interests of fiscal conservatives, wary of increasing the deficit, and members of the State and Local Tax (SALT) Caucus, who are seeking relief from the cap on the state and local tax deduction in exchange for supporting any tax bill. A combination of tariffs, rolling back Inflation Reduction Act (IRA) energy credits, and a shorter-term tax cut could be pursued to soften the effect these proposals would have on the federal budget.

**Budget effect of extending the Tax Cuts and Jobs Act (TCJA) as a percent of GDP**




**Estimated revenue effects of the new administration's tax proposals (2025 – 2034)**




*Estimate. Sources: (Left) Piper Sandler Macro. Data as of November 24, 2024. Latest data available. (Right) The Tax Foundation. Data as of October 14, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

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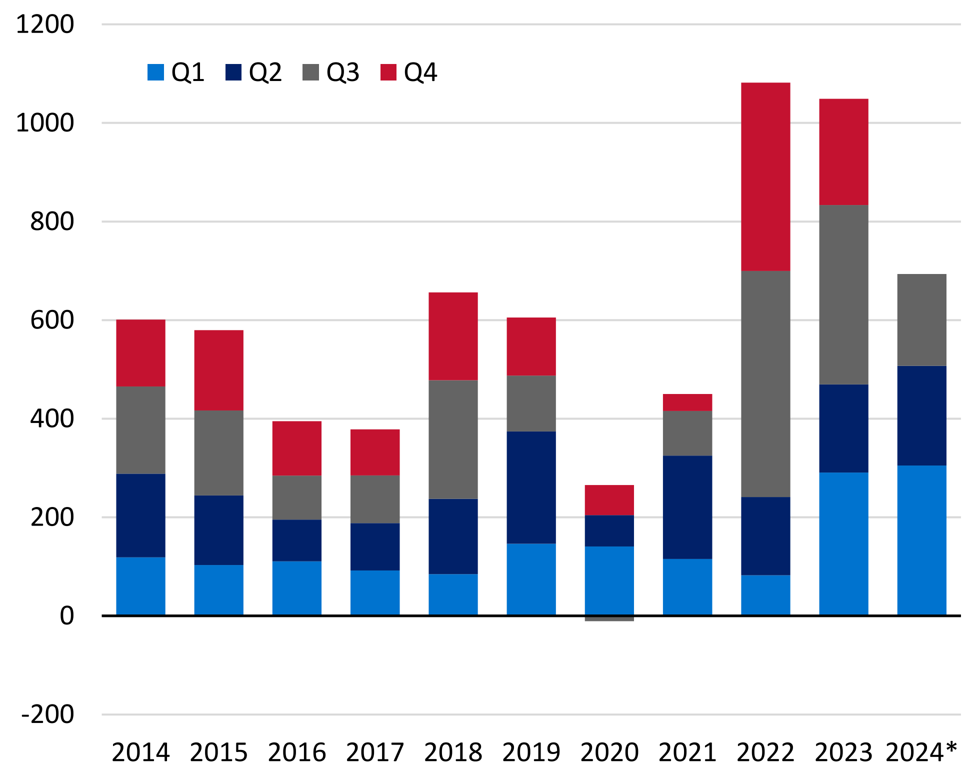
# Diversification as a Hard Truth: Hard Assets, Hard Power, Hard Hats

| | |
|---|---|
| **Hard Assets** | On a secular basis, updating physical infrastructure in the U.S. and moving towards a more renewable future augurs for greater underlying demand for **strategic metals and minerals** like lithium, copper, rare earths, and other key resources. |
| | **Gold** prices managed 41 record highs in 2024 and are expected to remain elevated given geopolitical uncertainty and gold's "safe haven" status. |
| **Hard Power** | There's a bull market in **global defense spending**—considering the protracted war in Europe, conflict in the Middle East, and tensions in the South China Sea. World military expenditures hit a record high of $2.4T in 2023.[1] |
| | Defense contractors' order books have surged in the wake of the necessary restock of depleted munition stockpiles. Per the Center for Strategic and International Studies, at surge production rates, an average of 8.4 years would be required to replace Major Defense Acquisition Program inventories. |
| **Hard Hats** | **U.S. industrial policy** is in play with the Inflation Reduction Act, CHIPS Act, and Bipartisan Infrastructure Law catalyzing billions in incentives across renewables, electric vehicles (EVs), semiconductors, and related infrastructure upgrades. Manufacturing construction spending registered at a seasonally adjusted annual rate of $236 billion in November 2024.[2] |
| | With investment driving growth in the manufacturing sector (plus expectant retirements), the U.S. manufacturing industry could need an estimated 3.8 million new workers between 2024 and 2033 according to Deloitte and the Manufacturing Institute. |

**Gold prices soared 27% in 2024, underscoring concerns over inflation, geopolitical conflict, and political uncertainty. Central bank demand for gold remained another key support, though more subdued in Q3 2024 compared to the equivalent period in 2022 and 2023. Given its low correlation to the S&P 500, gold can provide diversification through bouts of market volatility and economic weakness or uncertainty.**

**Central Bank Gold Demand Remained Healthy in 2024**

Annual Central Bank Net Purchases, tonnes




*Data for 2024 through Q3, as of September 30, 2024. Latest data available. Sources: (Left) CIO, [1] Stockholm International Peace Research Institute, April 22, 2024. Latest data available. [2] Census Bureau, January 2, 2025. (Right) Metals Focus, World Gold Council. Data as of December 11, 2024. Latest data available. **FOR INFORMATIONAL PURPOSES ONLY. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**



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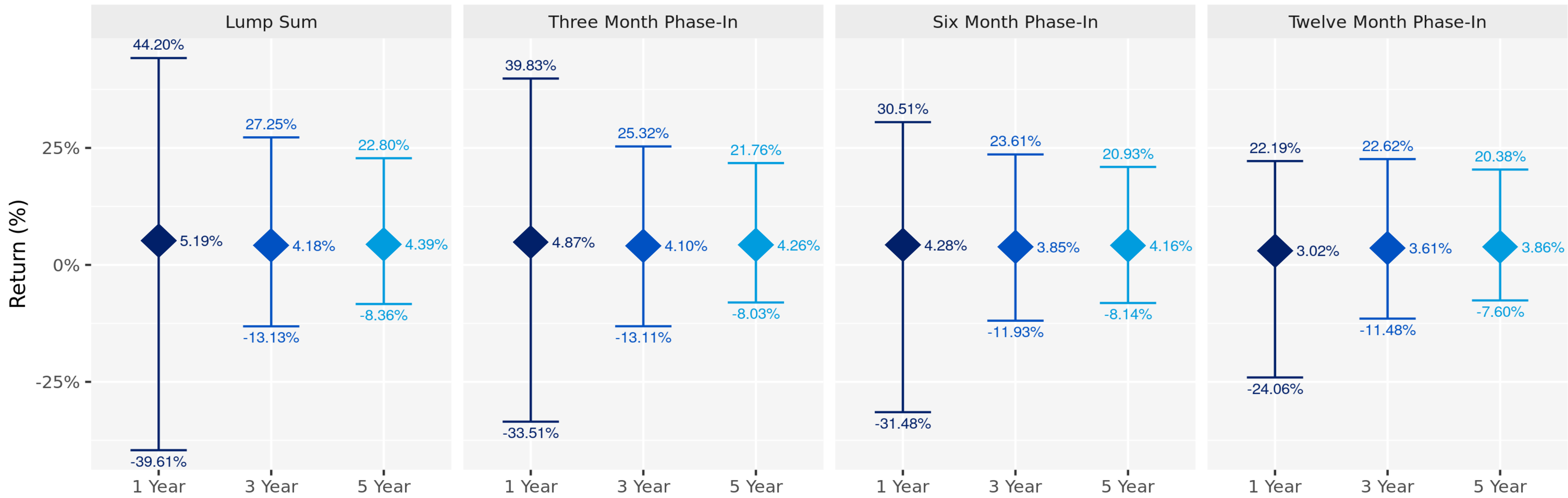
# Dollar Cost Averaging vs. Lump Sum Investing

Our study indicates that investing in the markets in a lump sum tends to have a higher likelihood of outperforming dollar cost averaging and that relationship tends to be stronger over longer time horizons. However, we recognize a dollar cost averaging strategy may be more comfortable for investors to mitigate fears of lump sum investing during periods of heightened uncertainty and volatility.

60% Equity (MSCI All Country World Index) and 40% Fixed Income (Bloomberg Global Aggregate) Benchmark




| Percent of Simulations where Lump Sum Outperforms | vs. Three Month Phase-In | vs. Six Month Phase-In | vs. Twelve Month Phase-In |
|---|---|---|---|
| 1 Year | 62.30% | 63.80% | 66.70% |
| 3 Year | 60.70% | 62.00% | 65.30% |
| 5 Year | 62.20% | 62.70% | 67.00% |

Source: FactSet. Data as of December 31, 2024. Latest data available. Performance is calculated using a traditional 60/40 benchmark with the 60% equity allocation using the MSCI All Country World Index and the 40% fixed income allocation using the Bloomberg Global Aggregate Index. Results are based on 1000 historical simulations. Each phase-in invests a fraction of the money each month. For example, in the 3-month phase-in, 1/3 of the money is invested the first month, another third the second month, so that all of the money is invested after 3 months. The time periods used were 1 year, 3 years, and 5 years. Each simulation would randomly pick 12, 36, or 60 months of returns from each benchmark and then calculate the returns over that time period using a 60%/40% equity/fixed income split that was rebalanced monthly. For each strategy and time period, the top and bottom bars show the maximum and minimum returns achieved across all simulations, while the middle box shows the median return. These performance results are not based on actual performance and are hypothetical simulations of a historical benchmark return. The returns shown are just one of the potential outcomes and using a different benchmark or time period will lead to different returns and results. These returns are purely for educational purposes and should not be viewed as realized returns or forecasts of portfolio performance. Cash returns for any uninvested cash are assumed to be 0%. **FOR INFORMATIONAL PURPOSES ONLY. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**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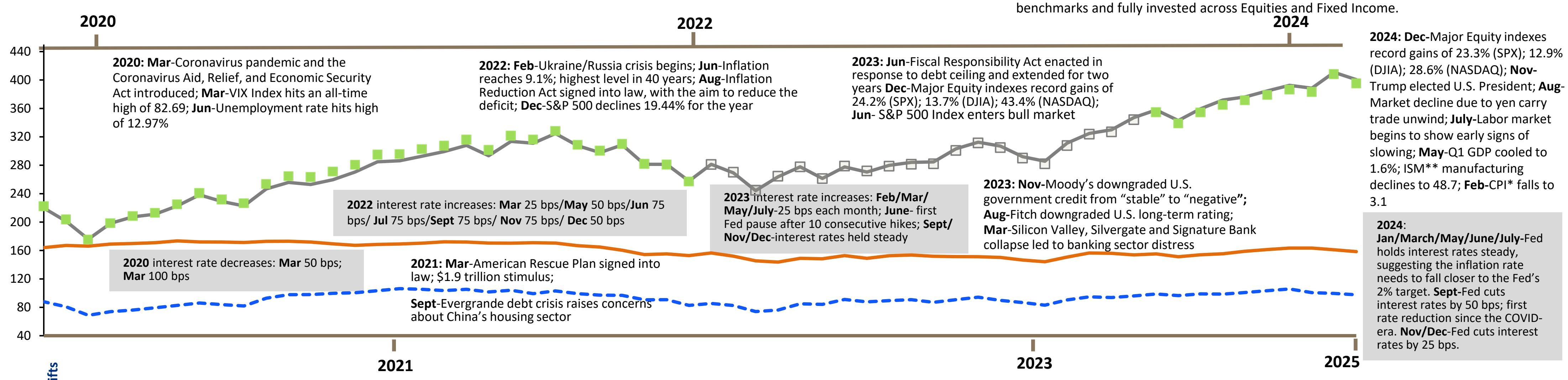
# Investment Strategy Committee Tactical Strategy Timeline

GWIM ISC Tactical Shifts

**2020**: Upgraded Int'l Dev. Market Equities, specifically Europe, to neutral; reduced the magnitude of the over weight (OW) for U.S. Large-cap Equities; lowered EMs allocation to under weight (UW); U.S. Mortgages to slightly UW; increased corporate investment-grade (IG) to a slight OW; raised emerging market (EM) Equities to neutral; reduced large UW to Int'l Dev. Markets Equities in half, but remained slightly UW relative to long-term, strategic allocations.

**2022:** Raised Fixed Income allocation to a slight OW and funded it from Cash; raised U.S. Investment-grade Taxable to a slight OW and International bonds to neutral. Lowered Equities to neutral from slight OW by lowering U.S. Small-cap stocks; increased U.S. IG Taxable to neutral within Fixed Income; decreased Materials to slight UW; increased Consumer Staples to neutral and Utilities to slight OW; lowered Consumer Discretionary to UW. Lowered Equity (European) to OW and Int. Dev. To slightly UW. Proceeds added to cash and Fixed Income. Increased RE and Healthcare to slight OW; increased Utilities to neutral; Decreased Consumer Discretionary to slight UW; Technology and Industrials down to neutral; Communication Services down to UW. Reduced our allocation to MBS from neutral to slightly UW, with the proceeds moved to IG corporate bonds.

**2024: Oct-** Adjusted our U.S. Equity sector allocations by upgrading Utilities to slight OW and downgrading Energy to slight UW, upgraded our view on Japan to slight OW and Pac Rim to slight UW, upgraded our view on munis to slight OW, and moved to neutral duration. **Sept-** Adjusted our U.S. Equity sector allocations by upgrading Financials to slight OW, and downgrading Industrials to neutral. **Feb-** Raised Equities to slight overweight; funded the increase in Equities from exposure to areas of richness in Fixed Income; Increased Small-cap shares to slight overweight with a tilt toward value in this asset class; increased our exposure to cyclical Equity sectors; **Jan-** We are balanced versus our strategic benchmarks and fully invested across Equities and Fixed Income.




GWIM ISC Tactical Shifts

**2021:** Rebalanced from Equities into bonds in line with our tactical weights following market drifts. Upgraded Materials to a slight OW and RE to a slight UW. Raised Energy to a slight OW; lowered Technology to a slight OW; lowered Consumer Staples to full UW. Raised Equities slightly, and lowered Cash allocation; upgraded U.S. Small-cap Value to slight OW, and EMs to neutral; lowered U.S. Large-caps to slight overweight; raised Mortgage-backed Securities (MBS) to neutral; further lowered U.S. Treasuries. Upgraded Financials and Industrials to slight OW; upgraded Materials to Neutral; lowered Consumer Staples to slight UW.

**2023: Oct-** Increased our exposure to Agency MBS and IG Tax-Exempt; decreased exposure to IG Corporates. For sectors, we increased Energy to OW and decreased Utilities to neutral. **Jul-** given the level of portfolio drift in certain areas, we are actively rebalancing portfolios, and where appropriate, we are lengthening duration in Fixed Income. **Apr-** lowered Equity sector Financials to neutral; Real Estate to slight underweight; raising Communication Services to neutral. **Mar-** lowered Investment-grade Tax Exempt bonds to slight underweight and added to our Investment-grade Taxable position which was already a slight overweight. **Jan-** shifted to neutral tactical positioning overall and adjusted our Fixed Income allocation to neutral. Within U.S. Equities sectors, upgraded Healthcare to overweight, and lowered Real Estate to Neutral.

**2025: Jan-** We maintain our slight OW to Equities and slight UW to Fixed Income. Upgraded Consumer Staples to slight UW; downgraded Healthcare to Neutral.

**Legend**
- S&P 500 Price Index
- MSCI All-Country World Price Index (ex U.S.)
- Bloomberg U.S. Aggregate Bond Index

**Tactical Weight in All U.S. Equities**
- Overweight
- Slightly Overweight
- Neutral
- Slightly Underweight
- Underweight

*Consumer Price Index. **Institute for Supply Management. Global Wealth & Investment Management Investment Strategy Committee (GWIM ISC). S&P 500, MSCI All-Country World Price Index (ex-U.S.) and Bloomberg U.S. Aggregate Bond Index are all normalized at a level of 100 as of 1/31/2020. Sources: GWIM ISC as of January 7, 2025. Data: FactSet as of December 31, 2024. Past performance is no guarantee of future results. **Please refer asset class proxies, asset class disclosures and index definitions at the end of this presentation. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Please refer to appendix for glossary, asset class proxies, index definitions and important disclosures.**

# Economic Forecasts & Asset Class Performance

| 01/03/2025 | Q4 2024E | 2024E | Q1 2025E | Q2 2025E | Q3 2025E | Q4 2025E | 2025E |
|---|---|---|---|---|---|---|---|
| Real global GDP (% y/y annualized) | - | 3.1 | - | - | - | - | 3.2 |
| Real U.S. GDP (% q/q annualized) | 2.0 | 2.7 | 2.5 | 2.3 | 2.2 | 2.2 | 2.4 |
| CPI inflation (% y/y) | 2.7 | 2.9 | 2.3 | 2.3 | 2.7 | 2.5 | 2.5 |
| Core CPI inflation (% y/y) | 3.3 | 3.4 | 3.0 | 2.9 | 3.2 | 3.1 | 3.0 |
| Unemployment rate (%) | 4.2 | 4.0 | 4.3 | 4.3 | 4.4 | 4.4 | 4.3 |
| Fed funds rate, end period (%) | 4.33 | 4.33 | 4.38 | 4.38 | 4.38 | 4.38 | 4.38 |

The forecasts in the table above are the base line view from BofA Global Research team. The Global Wealth & Investment Management (GWIM) Investment Strategy Committee (ISC) may make adjustments to this view over the course of the year and can express upside/downside to these forecasts.
A=Actual. E/*=Estimate. Data as of January 3, 2025. Sources: BofA Global Research; GWIM ISC as of January 7, 2025. **FOR INFORMATIONAL PURPOSES ONLY.** BofA Global Research is research produced by BofA Securities, Inc. ("BofAS") and/or one or more of its affiliates. BofAS is a registered broker-dealer, Member SIPC, and wholly owned subsidiary of Bank of America Corporation. There can be no assurance that the forecasts will be achieved. There is no guarantee that this trend will continue. **Please refer to appendix for glossary and important disclosures.**



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## Historical Asset Class Performance Key Market Index Returns, 2015 –2024, Highest to Lowest

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|
| US Large cap Growth 5.67% | US Small cap Value 31.74% | Emerging Markets 37.28% | International Fixed Income 3.17% | US Large cap Growth 36.39% | US Large cap Growth 38.49% | US Small cap Value 28.27% | Inflation 6.45% | US Large cap Growth 42.68% | US Large cap Growth 33.36% |
| US Mortgage Backed 1.46% | High Yield Fixed Income 17.34% | US Large cap Growth 30.21% | Cash 1.87% | US Small cap Growth 28.48% | US Small cap Growth 34.63% | US Large cap Growth 27.60% | Cash 1.46% | US Small cap Growth 18.66% | US Small cap Growth 15.15% |
| International Fixed Income 1.35% | US Large cap Value 17.34% | International Equity 24.21% | Inflation 1.68% | US Large cap Value 26.54% | Emerging Markets 18.31% | US Large cap Value 25.16% | US Large cap Value -7.54% | International Equity 17.94% | US Large cap Value 14.37% |
| U.S. Government & Quasi 0.84% | US Small cap Growth 11.32% | US Small cap Growth 22.17% | US Mortgage Backed 1.00% | International Equity 22.49% | 60/40% Allocations 12.76% | International Equity 12.62% | High Yield Fixed Income -11.10% | 60/40% Allocations 15.53% | 60/40% Allocations 10.85% |
| Inflation 0.73% | Emerging Markets 11.19% | 60/40% Allocations 15.80% | U.S. Government & Quasi 0.83% | US Small cap Value 22.39% | US Corporates 9.81% | 60/40% Allocations 10.51% | US Mortgage Backed -11.88% | US Small cap Value 14.65% | US Small cap Value 8.05% |
| Cash 0.05% | US Large cap Growth 7.08% | US Large cap Value 13.66% | US Large cap Growth -1.51% | 60/40% Allocations 19.45% | U.S. Government & Quasi 8.16% | Inflation 7.04% | International Fixed Income -11.89% | High Yield Fixed Income 13.40% | High Yield Fixed Income 8.04% |
| US Corporates -0.63% | US Corporates 5.96% | US Small cap Value 7.84% | US Corporates -2.25% | Emerging Markets 18.42% | International Equity 7.59% | High Yield Fixed Income 5.29% | U.S. Government & Quasi -12.74% | US Large cap Value 11.46% | Emerging Markets 7.50% |
| 60/40% Allocations -1.20% | 60/40% Allocations 5.78% | High Yield Fixed Income 7.48% | High Yield Fixed Income -2.26% | High Yield Fixed Income 14.40% | High Yield Fixed Income 6.20% | US Small cap Growth 2.83% | International Equity -14.29% | Emerging Markets 9.83% | Cash 5.24% |
| US Small cap Growth -1.38% | International Fixed Income 5.19% | US Corporates 6.48% | 60/40% Allocations -5.64% | US Corporates 14.23% | US Small cap Value 4.63% | Cash 0.05% | US Small cap Value -14.48% | US Corporates 8.40% | International Equity 4.70% |
| International Equity -3.04% | International Equity 2.75% | International Fixed Income 2.51% | US Large cap Value -8.27% | International Fixed Income 7.57% | International Fixed Income 4.20% | US Corporates -0.95% | US Corporates -15.44% | International Fixed Income 8.16% | International Fixed Income 3.43% |
| US Large cap Value -3.83% | Inflation 2.07% | US Mortgage Backed 2.45% | US Small cap Growth -9.31% | U.S. Government & Quasi 6.95% | US Mortgage Backed 4.09% | US Mortgage Backed -1.21% | 60/40% Allocations -16.22% | US Mortgage Backed 4.98% | Inflation 2.88% |
| High Yield Fixed Income -4.55% | US Mortgage Backed 1.67% | U.S. Government & Quasi 2.42% | US Small cap Value -12.86% | US Mortgage Backed 6.51% | US Large cap Value 2.80% | International Fixed Income -1.67% | Emerging Markets -20.09% | Cash 4.95% | US Corporates 2.76% |
| US Small cap Value -7.47% | U.S. Government & Quasi 1.15% | Inflation 2.24% | International Equity -14.09% | Inflation 2.29% | Inflation 1.30% | U.S. Government & Quasi -2.33% | US Small cap Growth -26.36% | U.S. Government & Quasi 3.89% | US Mortgage Backed 1.33% |
| Emerging Markets -14.92% | Cash 0.33% | Cash 0.86% | Emerging Markets -14.58% | Cash 2.28% | Cash 0.67% | Emerging Markets -2.54% | US Large cap Growth -29.14% | Inflation 3.35% | U.S. Government & Quasi 0.55% |

Indexes referenced: Inflation = IA SBBI US Inflation, Cash = ICE BofA US 1 Month Treasury Bill TR, Emerging Markets = MSCI Daily TR Net Emerging Markets, 60/40% Allocations = 60/40% Allocations is a blend of 60% MSCI ACWI and 40% Bloomberg US Aggregate Bond TR, US Large Cap Growth = Russell 1000 Growth TR, US Large Cap Value = Russell 1000 Value TR, US Small Cap Growth = Russell 2000 Growth TR, US Small Cap Value = Russell 2000 Value TR, International Equity - MSCI Daily TR Net World Ex US, U.S. Government & Quasi Government = ICE BofA U.S. Treasury/Agency Index; U.S. Mortgage Backed = ICE BofA Mortgage Index, U.S. Corporates = ICE BofA U.S. Corporates Index, High Yield = ICE BofA U.S. High Yield Index, International Fixed Income = ICE BofA Global Broad Market Index ex USD. Source: Morningstar Direct & CIA System. Income and dividends are included in all returns figures. Excludes alternative investments. Performance of 60/40% Allocations is intended to illustrate the effect of asset allocation and diversification. It is not an advertisement or representation of any investment advisory products or services offered by Merrill. **FOR INFORMATIONAL PURPOSES ONLY.** Data as of December 31, 2024. **Results shown are based on an index and are illustrative; they assume reinvestment of income and no transaction costs or taxes. Indexes are unmanaged. Direct investment cannot be made in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class and sector proxies, methodology and important disclosures.**

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## Historical Asset Class Volatility Annualized Standard Deviations of Key Asset Classes 2015 –2024, Highest to Lowest

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|
| Emerging Markets 16.91% | US Small cap Growth 18.40% | US Small cap Value 9.27% | US Small cap Growth 20.17% | US Small cap Growth 17.57% | US Small cap Value 37.31% | US Large cap Growth 13.16% | US Small cap Growth 25.56% | US Small cap Value 24.02% | US Small cap Growth 20.95% |
| US Small cap Growth 15.81% | US Small cap Value 17.05% | Emerging Markets 6.26% | US Small cap Value 17.23% | US Small cap Value 17.49% | US Small cap Growth 32.98% | US Small cap Value 12.96% | US Large cap Growth 24.81% | US Small cap Growth 22.85% | US Small cap Value 20.61% |
| International Equity 14.47% | Emerging Markets 17.02% | US Small cap Growth 5.71% | US Large cap Growth 16.69% | Emerging Markets 15.75% | US Large cap Value 27.59% | US Small cap Growth 12.46% | US Small cap Value 24.65% | Emerging Markets 17.32% | US Large cap Value 13.21% |
| US Large cap Growth 13.45% | International Equity 12.57% | US Large cap Value 5.20% | Emerging Markets 14.79% | US Large cap Value 12.94% | International Equity 25.77% | US Large cap Value 12.00% | Emerging Markets 20.70% | International Equity 16.53% | Emerging Markets 11.88% |
| US Small cap Value 12.40% | US Large cap Value 10.65% | US Large cap Growth 4.38% | US Large cap Value 13.50% | US Large cap Growth 12.84% | US Large cap Growth 25.44% | Emerging Markets 10.61% | International Equity 20.43% | US Large cap Growth 15.89% | US Large cap Growth 11.80% |
| US Large cap Value 12.38% | US Large cap Growth 10.55% | International Equity 3.72% | International Equity 11.84% | International Equity 11.14% | Emerging Markets 24.95% | International Equity 9.60% | US Large cap Value 20.35% | US Large cap Value 14.95% | International Equity 9.60% |
| 60/40% Allocations 7.71% | 60/40% Allocations 6.44% | High Yield Fixed Income 2.11% | 60/40% Allocations 7.57% | 60/40% Allocations 7.06% | High Yield Fixed Income 14.70% | 60/40% Allocations 5.91% | 60/40% Allocations 14.47% | 60/40% Allocations 12.01% | 60/40% Allocations 7.10% |
| High Yield Fixed Income 6.16% | High Yield Fixed Income 5.76% | International Fixed Income 2.07% | U.S. Government & Quasi 3.52% | High Yield Fixed Income 4.90% | 60/40% Allocations 14.65% | US Corporates 3.82% | High Yield Fixed Income 11.38% | US Corporates 9.21% | US Mortgage Backed 6.43% |
| U.S. Government & Quasi 3.78% | US Corporates 4.72% | 60/40% Allocations 1.77% | High Yield Fixed Income 3.49% | U.S. Government & Quasi 4.55% | US Corporates 10.42% | U.S. Government & Quasi 3.62% | US Corporates 9.98% | US Mortgage Backed 8.82% | US Corporates 5.70% |
| US Corporates 3.69% | U.S. Government & Quasi 4.42% | U.S. Government & Quasi 1.71% | US Corporates 3.00% | US Corporates 3.72% | U.S. Government & Quasi 4.79% | International Fixed Income 2.94% | US Mortgage Backed 9.01% | U.S. Government & Quasi 7.33% | U.S. Government & Quasi 5.34% |
| International Fixed Income 2.96% | International Fixed Income 3.19% | US Corporates 1.67% | US Mortgage Backed 2.87% | International Fixed Income 3.17% | International Fixed Income 3.46% | High Yield Fixed Income 2.52% | U.S. Government & Quasi 6.50% | High Yield Fixed Income 6.94% | High Yield Fixed Income 3.21% |
| US Mortgage Backed 1.43% | US Mortgage Backed 2.33% | US Mortgage Backed 1.28% | International Fixed Income 1.56% | US Mortgage Backed 1.82% | US Mortgage Backed 1.42% | US Mortgage Backed 1.32% | International Fixed Income 6.32% | International Fixed Income 4.80% | International Fixed Income 3.17% |
| Inflation 1.16% | Inflation 0.70% | Inflation 0.72% | Inflation 0.96% | Inflation 0.73% | Inflation 1.12% | Inflation 0.81% | Inflation 1.94% | Inflation 0.96% | Inflation 0.82% |
| Cash 0.03% | Cash 0.05% | Cash 0.09% | Cash 0.10% | Cash 0.10% | Cash 0.30% | Cash 0.01% | Cash 0.43% | Cash 0.17% | Cash 0.13% |

Indexes referenced: Inflation = IA SBBI US Inflation, Cash = ICE BofA US 1 Month Treasury Bill TR, Emerging Markets = MSCI Daily TR Net Emerging Markets, 60/40% Allocations = 60/40% Allocations is a blend of 60% MSCI ACWI and 40% Bloomberg US Aggregate Bond TR, US Large Cap Growth = Russell 1000 Growth TR, US Large Cap Value = Russell 1000 Value TR, US Small Cap Growth = Russell 2000 Growth TR, US Small Cap Value = Russell 2000 Value TR, International Equity - MSCI Daily TR Net World Ex US, U.S. Government & Quasi Government = ICE BofA U.S. Treasury/Agency Index; U.S. Mortgage Backed = ICE BofA Mortgage Index, U.S. Corporates = ICE BofA U.S. Corporates Index, High Yield = ICE BofA U.S. High Yield Index, International Fixed Income = ICE BofA Global Broad Market Index ex USD. Source: Morningstar Direct & CIA System. Performance of 60/40% Allocations is intended to illustrate the effect of asset allocation and diversification. It is not an advertisement or representation of any investment advisory products or services offered by Merrill. Standard deviation is a statistical measurement of the range of an asset class's total returns over the respective calendar years. In general, a higher standard deviation means greater volatility. All volatility figures are based on monthly returns. **FOR INFORMATIONAL PURPOSES ONLY.** Data as of December 31, 2024. **Results shown are based on an index and are illustrative. Indexes are unmanaged. Direct investment cannot be made in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class and sector proxies, methodology and important disclosures.**

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# U.S. Equities

## Historical Sector Performance

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Energy 31.37% | Real Estate 41.48% | Energy 34.40% | Cons Staples -15.43% | Technology 61.72% | Real Estate 32.32% | Utilities 19.91% | Financials 28.81% | Cons Disc 43.08% | Real Estate 30.19% | Cons Disc 10.11% | Energy 27.36% | Technology 38.83% | Health Care 6.47% | Technology 50.29% | Technology 43.89% | Energy 54.64% | Energy 65.72% | Technology 57.84% | Comm Svcs 40.23% |
| Utilities 16.84% | Comm Svcs 36.80% | Materials 22.53% | Health Care -22.81% | Materials 48.59% | Cons Disc 27.66% | Cons Staples 13.99% | Cons Disc 23.92% | Health Care 41.46% | Utilities 28.98% | Health Care 6.89% | Comm Svcs 23.48% | Materials 23.84% | Utilities 4.11% | Comm Svcs 32.69% | Cons Disc 33.30% | Real Estate 46.19% | Utilities 1.57% | Comm Svcs 55.80% | Technology 36.61% |
| Real Estate 12.56% | Energy 24.21% | Utilities 19.38% | Utilities -28.98% | Cons Disc 41.31% | Industrials 26.73% | Health Care 12.73% | Real Estate 19.74% | Industrials 40.68% | Health Care 25.34% | Cons Staples 6.60% | Financials 22.80% | Cons Disc 22.98% | Cons Disc 0.83% | Financials 32.13% | Comm Svcs 23.61% | Financials 35.04% | Cons Staples -0.62% | Cons Disc 42.41% | Financials 30.56% |
| Financials 6.48% | Utilities 20.99% | Technology 16.31% | Comm Svcs -30.49% | Real Estate 27.10% | Materials 22.20% | Real Estate 11.39% | Comm Svcs 18.31% | Financials 35.63% | Technology 20.12% | Technology 5.92% | Industrials 18.86% | Financials 22.18% | Technology -0.29% | Industrials 29.37% | Materials 20.73% | Technology 34.53% | Health Care -1.95% | Industrials 18.13% | Cons Disc 30.14% |
| Health Care 6.46% | Financials 19.19% | Cons Staples 14.18% | Cons Disc -33.49% | Industrials 20.93% | Energy 20.46% | Comm Svcs 6.26% | Health Care 17.89% | Technology 28.43% | Cons Staples 15.98% | Real Estate 4.68% | Materials 16.69% | Health Care 22.08% | Real Estate -2.22% | Real Estate 29.01% | Health Care 13.45% | Materials 27.28% | Industrials -5.48% | Materials 12.55% | Utilities 23.43% |
| Materials 4.42% | Cons Disc 18.64% | Industrials 12.03% | Energy -34.87% | Health Care 19.70% | Comm Svcs 18.97% | Cons Disc 6.13% | Industrials 15.35% | Cons Staples 26.14% | Financials 15.20% | Comm Svcs 3.40% | Utilities 16.28% | Industrials 21.03% | Cons Staples -8.38% | Cons Disc 27.94% | Industrials 11.06% | Health Care 26.13% | Financials -10.53% | Real Estate 12.36% | Industrials 17.47% |
| Cons Staples 3.58% | Materials 18.63% | Comm Svcs 11.95% | Industrials -39.92% | Financials 17.22% | Cons Staples 14.11% | Energy 4.72% | Materials 14.97% | Materials 25.60% | Industrials 9.83% | Financials -1.53% | Technology 13.85% | Cons Staples 13.49% | Comm Svcs -12.53% | Cons Staples 27.61% | Cons Staples 10.75% | Cons Disc 24.43% | Materials -12.27% | Financials 12.15% | Cons Staples 14.87% |
| Industrials 2.32% | Cons Staples 14.36% | Health Care 7.15% | Real Estate -42.31% | Cons Staples 14.89% | Financials 12.13% | Technology 2.41% | Technology 14.82% | Energy 25.07% | Cons Disc 9.68% | Industrials -2.53% | Cons Disc 6.03% | Utilities 12.11% | Financials -13.03% | Utilities 26.35% | Utilities 0.48% | Comm Svcs 21.57% | Real Estate -26.13% | Health Care 2.06% | Energy 5.72% |
| Technology 0.99% | Industrials 13.29% | Cons Disc -13.21% | Technology -43.14% | Energy 13.82% | Technology 10.19% | Industrials -0.59% | Cons Staples 10.76% | Utilities 13.21% | Materials 6.91% | Utilities -4.84% | Cons Staples 5.38% | Real Estate 10.85% | Industrials -13.29% | Materials 24.58% | Financials -1.69% | Industrials 21.12% | Technology -28.19% | Cons Staples 0.52% | Real Estate 5.23% |
| Comm Svcs -5.63% | Technology 8.42% | Real Estate -17.85% | Materials -45.66% | Utilities 11.91% | Utilities 5.46% | Materials -9.75% | Energy 4.61% | Comm Svcs 11.47% | Comm Svcs 2.99% | Materials -8.38% | Real Estate 3.39% | Energy -1.01% | Materials -14.70% | Health Care 20.82% | Real Estate -2.17% | Cons Staples 18.63% | Cons Disc -37.03% | Energy -1.33% | Health Care 2.58% |
| Cons Disc -6.36% | Health Care 7.53% | Financials -18.63% | Financials -55.32% | Comm Svcs 8.93% | Health Care 2.90% | Financials -17.06% | Utilities 1.29% | Real Estate 1.60% | Energy -7.78% | Energy -21.12% | Health Care -2.69% | Comm Svcs -1.25% | Energy -18.10% | Energy 11.81% | Energy -33.68% | Utilities 17.67% | Comm Svcs -39.89% | Utilities -7.08% | Materials -0.04% |

Source: Morningstar Direct. U.S. equities represented by the S&P 500 Index GICS sectors. Returns calculated are total returns. **FOR INFORMATIONAL PURPOSES ONLY.** Data as of December 31, 2024. Results shown are based on an index and are illustrative; they assume reinvestment of income and no transaction costs or taxes. Indexes are unmanaged. **Direct investment cannot be made in an index. Past performance is no guarantee of future results. Please refer to appendix for asset class and sector proxies and important disclosures.**



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## Historical Asset Class Performance Key Market Index Returns, 2015 –2024, Highest to Lowest

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|
| Japan 9.57% | Global HY / EM 14.74% | Emerging Markets 37.28% | Global Governments 2.56% | North America 30.70% | North America 19.94% | North America 26.44% | Inflation 6.45% | North America 25.96% | North America 24.03% |
| Global Mortgage 1.34% | North America 11.57% | Developed Europe ex-UK 26.82% | Cash 1.87% | Developed Europe ex-UK 24.81% | Emerging Markets 18.31% | United Kingdom 18.50% | Cash 1.46% | Developed Europe ex-UK 21.69% | 60/40% Allocations 10.85% |
| Global Governments 1.26% | Emerging Markets 11.19% | Developed Asia Pacific ex-Japan 25.88% | Inflation 1.68% | United Kingdom 21.05% | Japan 14.48% | Developed Europe ex-UK 15.66% | United Kingdom -4.84% | Japan 20.32% | Global HY / EM 8.82% |
| Inflation 0.73% | Developed Asia Pacific ex-Japan 7.85% | Japan 23.99% | Global Mortgage 1.35% | Japan 19.61% | 60/40% Allocations 12.76% | 60/40% Allocations 10.51% | Developed Asia Pacific ex-Japan -5.94% | 60/40% Allocations 15.53% | Japan 8.31% |
| Cash 0.05% | Global Corporates 6.08% | United Kingdom 22.30% | Global Corporates -0.87% | 60/40% Allocations 19.45% | Developed Europe ex-UK 10.91% | Inflation 7.04% | Global Mortgage -11.36% | United Kingdom 14.09% | United Kingdom 7.54% |
| Global Corporates -0.24% | 60/40% Allocations 5.78% | North America 20.89% | Global HY / EM -3.83% | Emerging Markets 18.42% | Global Corporates 8.15% | Developed Asia Pacific ex-Japan 4.68% | Global Governments -12.37% | Global HY / EM 13.66% | Emerging Markets 7.50% |
| Developed Europe ex-UK -0.65% | Global Governments 3.70% | 60/40% Allocations 15.80% | 60/40% Allocations -5.64% | Developed Asia Pacific ex-Japan 18.36% | Global HY / EM 7.02% | Japan 1.71% | Global HY / EM -12.79% | Emerging Markets 9.83% | Cash 5.24% |
| North America -0.90% | Japan 2.38% | Global HY / EM 10.49% | North America -5.73% | Global HY / EM 13.10% | Developed Asia Pacific ex-Japan 6.55% | Global HY / EM 0.80% | Global Corporates -14.06% | Global Corporates 8.98% | Developed Asia Pacific ex-Japan 4.59% |
| 60/40% Allocations -1.20% | Global Mortgage 2.21% | Global Corporates 5.77% | Developed Asia Pacific ex-Japan -10.30% | Global Corporates 12.51% | Global Governments 5.62% | Cash 0.05% | 60/40% Allocations -16.22% | Developed Asia Pacific ex-Japan 6.44% | Global Corporates 3.98% |
| Global HY / EM -2.49% | Inflation 2.07% | Global Mortgage 2.56% | Japan -12.88% | Global Governments 7.34% | Global Mortgage 4.15% | Global Corporates -0.76% | Japan -16.65% | Global Governments 6.15% | Inflation 2.88% |
| United Kingdom -7.56% | Cash 0.33% | Global Governments 2.35% | United Kingdom -14.15% | Global Mortgage 6.48% | Cash 1.61% | Global Mortgage -1.06% | Developed Europe ex-UK -17.96% | Global Mortgage 5.47% | Global Mortgage 2.38% |
| Developed Asia Pacific ex-Japan -8.47% | United Kingdom -0.10% | Inflation 2.24% | Emerging Markets -14.58% | Inflation 2.29% | Inflation 1.30% | Global Governments -2.01% | North America -19.53% | Cash 4.95% | Global Governments 1.83% |
| Emerging Markets -14.92% | Developed Europe ex-UK -0.56% | Cash 0.86% | Developed Europe ex-UK -15.14% | Cash 2.28% | United Kingdom -10.47% | Emerging Markets -2.54% | Emerging Markets -20.09% | Inflation 3.35% | Developed Europe ex-UK 0.15% |

Indexes referenced: Inflation = IA SBBI US Inflation, Cash = ICE BofA US 1 Month Treasury Bill TR, Emerging Markets = MSCI Daily TR Net Emerging Markets, 60/40% Allocations = 60/40% Allocations is a blend of 60% MSCI ACWI and 40% Bloomberg US Aggregate Bond TR, North America = MSCI Daily TR Net North America Index; Developed Europe ex-UK = MSCI Daily TR Net Europe ex UK Index; UK = MSCI Daily TR Net UK, Japan = MSCI Daily TR Net Japan Index, Developed Asia Pacific ex-Japan = MSCI Daily TR Net Asia Pacific Ex Japan Index, Global Governments = ICE BofA Global Govt Bond + Large Cap Quasi Govt Index (Hedged), Global Corporates = ICE BofA Global Broad Market Corporate Index Hedged, Global Mortgages = ICE BofA Global Collateralized Index Hedged, Global HY / EM = ICE BofA Global HY Country External Corp & Govt + ICE BofA Global HY (Unhedged) Source: Morningstar Direct & CIA System. 60/40% Allocations is a blend of 60% MSCI ACWI NR USD and 40% Bloomberg US Aggregate Bond TR USD. Performance of 60/40% Allocations is intended to illustrate the effect of asset allocation and diversification. It is not an advertisement or representation of any investment advisory products or services offered by Merrill. Standard deviation is a statistical measurement of the range of an asset class's total returns over the respective calendar years. In general, a higher standard deviation means greater volatility. All volatility figures are based on monthly returns. **FOR INFORMATIONAL PURPOSES ONLY.** Data as of December 31, 2024. Results shown are based on an index and are illustrative. Indexes are unmanaged. **Direct investment cannot be made in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class and sector proxies, methodology and important disclosures.**





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## Historical Asset Class Volatility Annualized Standard Deviations of Key Asset Classes 2015 –2024, Highest to Lowest

| 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|---|---|---|---|---|---|---|---|---|---|
| Emerging Markets 16.91% | Emerging Markets 17.02% | Developed Asia Pacific ex-Japan 6.80% | Emerging Markets 14.79% | Emerging Markets 15.75% | Developed Asia Pacific ex-Japan 31.34% | Developed Europe ex-UK 12.83% | Developed Asia Pacific ex-Japan 23.17% | Developed Asia Pacific ex-Japan 19.41% | Developed Asia Pacific ex-Japan 13.57% |
| United Kingdom 16.84% | Developed Asia Pacific ex-Japan 16.77% | United Kingdom 6.78% | North America 14.49% | United Kingdom 13.23% | United Kingdom 28.53% | United Kingdom 11.79% | Developed Europe ex-UK 22.63% | Developed Europe ex-UK 18.38% | Emerging Markets 11.88% |
| Developed Asia Pacific ex-Japan 16.23% | Developed Europe ex-UK 14.12% | Developed Europe ex-UK 6.72% | Developed Europe ex-UK 13.75% | North America 12.50% | Developed Europe ex-UK 27.18% | Emerging Markets 10.61% | North America 21.94% | Emerging Markets 17.32% | Developed Europe ex-UK 11.24% |
| Japan 15.36% | Japan 13.37% | Emerging Markets 6.26% | Japan 12.13% | Developed Europe ex-UK 11.99% | North America 25.79% | North America 10.48% | Emerging Markets 20.70% | United Kingdom 14.93% | Japan 10.45% |
| Developed Europe ex-UK 14.26% | United Kingdom 11.75% | Japan 5.05% | Developed Asia Pacific ex-Japan 11.97% | Developed Asia Pacific ex-Japan 11.92% | Emerging Markets 24.95% | Developed Asia Pacific ex-Japan 10.45% | Japan 19.93% | North America 14.57% | North America 10.30% |
| North America 12.99% | North America 10.00% | North America 3.47% | United Kingdom 11.92% | Japan 9.29% | Japan 20.43% | Japan 6.96% | United Kingdom 19.17% | Japan 13.76% | United Kingdom 10.23% |
| 60/40% Allocations 7.71% | Global HY / EM 6.45% | Global HY / EM 2.24% | 60/40% Allocations 7.57% | 60/40% Allocations 7.06% | Global HY / EM 17.33% | 60/40% Allocations 5.91% | 60/40% Allocations 14.47% | 60/40% Allocations 12.01% | 60/40% Allocations 7.10% |
| Global HY / EM 6.31% | 60/40% Allocations 6.44% | Global Governments 1.78% | Global HY / EM 3.98% | Global HY / EM 5.49% | 60/40% Allocations 14.65% | Global HY / EM 3.77% | Global HY / EM 12.00% | Global HY / EM 7.86% | Global Mortgage 5.43% |
| Global Corporates 3.31% | Global Corporates 3.97% | 60/40% Allocations 1.77% | Global Mortgage 2.46% | Global Governments 3.68% | Global Corporates 9.29% | Global Governments 3.17% | Global Corporates 8.93% | Global Mortgage 7.54% | Global Corporates 4.61% |
| Global Governments 3.13% | Global Governments 3.74% | Global Corporates 1.64% | Global Governments 2.19% | Global Corporates 3.06% | Global Governments 2.71% | Global Corporates 2.95% | Global Mortgage 8.06% | Global Corporates 7.41% | Global Governments 4.03% |
| Global Mortgage 1.52% | Global Mortgage 2.22% | Global Mortgage 1.23% | Global Corporates 2.13% | Global Mortgage 1.83% | Global Mortgage 1.21% | Global Mortgage 1.30% | Global Governments 5.94% | Global Governments 5.97% | Global HY / EM 3.59% |
| Inflation 1.16% | Inflation 0.70% | Inflation 0.72% | Inflation 0.96% | Inflation 0.73% | Inflation 1.12% | Inflation 0.81% | Inflation 1.94% | Inflation 0.96% | Inflation 0.82% |
| Cash 0.03% | Cash 0.05% | Cash 0.09% | Cash 0.10% | Cash 0.10% | Cash 0.30% | Cash 0.01% | Cash 0.43% | Cash 0.17% | Cash 0.13% |

Indexes referenced: Inflation = IA SBBI US Inflation, Cash = ICE BofA US 1 Month Treasury Bill TR, Emerging Markets = MSCI Daily TR Net Emerging Markets, 60/40% Allocations = 60/40% Allocations is a blend of 60% MSCI ACWI and 40% Bloomberg US Aggregate Bond TR, North America = MSCI Daily TR Net North America Index; Developed Europe ex-UK = MSCI Daily TR Net Europe ex UK Index; UK = MSCI Daily TR Net UK, Japan = MSCI Daily TR Net Japan Index, Developed Asia Pacific ex-Japan = MSCI Daily TR Net Asia Pacific Ex Japan Index, Global Governments = ICE BofA Global Govt Bond + Large Cap Quasi Govt Index (Hedged), Global Corporates = ICE BofA Global Broad Market Corporate Index Hedged, Global Mortgages = ICE BofA Global Collateralized Index Hedged, Global HY / EM = ICE BofA Global HY Country External Corp & Govt + ICE BofA Global HY (Unhedged) Source: Morningstar Direct & CIA System. 60/40% Allocations is a blend of 60% MSCI ACWI NR USD and 40% Bloomberg US Aggregate Bond TR USD. Performance of 60/40% Allocations is intended to illustrate the effect of asset allocation and diversification. It is not an advertisement or representation of any investment advisory products or services offered by Merrill. Standard deviation is a statistical measurement of the range of an asset class's total returns over the respective calendar years. In general, a higher standard deviation means greater volatility. All volatility figures are based on monthly returns. **FOR INFORMATIONAL PURPOSES ONLY.** Data as of December 31, 2024. Results shown are based on an index and are illustrative. Indexes are unmanaged. **Direct investment cannot be made in an index. Past performance is no guarantee of future results. Please refer to appendix for glossary, asset class and sector proxies, methodology and important disclosures.**



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# APPENDIX

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# Glossary

**Alpha** is a measure of the active return on an investment, the performance of that investment compared with a suitable market index.

**Capital Expenditures (CapEx)** is money spent by a business or organization on acquiring or maintaining fixed assets, such as land, buildings, and equipment.

**Dividend** is the distribution of some of a company's earnings to a class of its shareholders, as determined by the company's board of directors.

**Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA)** is a measure of a company's overall financial performance and is used as an alternative to net income in some circumstances.

**Earnings Per Share (EPS) Growth** is an illustration of the growth of earnings per share over time, this profitability metric is often depicted in a year-over-year fashion.

**Emerging Market** is a country that is progressing toward becoming advanced, as shown by some liquidity in local debt and Equity markets and the existence of some form of market exchange and regulatory body.

**Equity Risk Premium** is an equal to the difference between the rate of return received from riskier Equity investments (e.g. S&P 500) and the return of risk-free securities.

**Equal Weighted** is a proportional measure that gives the same importance to each stock in a portfolio or index fund, regardless of a company's size.

**Factor Investing** is an investment strategy that tends to target specific drivers of asset class returns (such as earnings growth, for example) while also often enhancing diversification and reducing volatility.

**GDP - Nominal: Gross Domestic Product (GDP)** equals the total income of everyone in the economy or the total expenditure on the economy's good and services. GDP includes only the value of final goods and services. Nominal GDP measures the value of goods and services at current dollar prices.

**Growth** is a style of investment strategy focused on capital appreciation. Those who follow this style, known as growth investors, invest in companies that exhibit signs of above-average growth, even if the share price appears expensive

**High Yield Leverage Debt** is a bank loan to a company that has a large amount of debt.

**Inflation** refers to a general progressive increase in prices of goods and services in an economy.

**Internal rate of return (IRR)** represents the rate at which a historical series of cash flows are discounted so that the net present value of the cash flows equals zero. For pooled calculations, any remaining unrealized value in the fund is treated as a distribution in the most recent reporting period.

**Momentum Investing** is a system of buying stocks or other securities that have had high returns over the past three to twelve months, and selling those that have had poor returns over the same period.

**Net Buyback** is the repurchase of outstanding shares over the existing market cap of a company.

**Net Total Return (NTR)** reflects the price performance, plus the net amount of all special and regular dividends after applying an assumed foreign tax withholding rate.

**Option-adjusted spread (OAS)** is the measurement of the spread of a fixed-income security rate and the risk-free rate of return, which is then adjusted to take into account an embedded option.

**Price/Earnings (P/E) Ratio** is the ratio of the price of a stock and the company's earnings per share, this valuation metric is often quoted on a forward twelve month or trailing twelve month basis.

**Price-to-Book Ratio** compares a company's market value to its book value.

**Price–to-sales (P/S) Ratio** is a valuation metric for stocks. It is calculated by dividing the company's market capitalization by the revenue in the most recent year; or, equivalently, divide the per-share stock price by the per-share revenue.

**Price Return (PR)** reflects the price performance of the index but excludes the value of regular dividends.

**Quality Investing** is an investment strategy based on a set of clearly defined fundamental criteria that seeks to identify companies with outstanding quality.

**Real GDP** is an inflation-adjusted measure of the value of all goods and services produced in an economy.

**Redemption** is the return of an investor's principal on a fixed income security such as a bond, mutual fund or preferred stock

**Standard Deviation** is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution.

**Spread** is the difference between the bid and ask price or between the high and low price. For securities, it refers to the difference in yield on different securities.

**Total Return (TR)** reflects the price performance, plus the full value of all dividends, both special and regular.

**Valuation** is a financial assessment of the worth of an item.

**Value** is an investment strategy that involves picking stocks that appear to be trading for less than their intrinsic or book value.

**World Trade Volume** measures the difference between the movement of merchandise trade leaving a country (exports) and entering a country (imports).

**Yield Curve** is a curve on a graph in which the yield of fixed-interest securities is plotted against the length of time they have to run to maturity.

**Z-score** is a statistical measure that quantifies the distance (measured in standard deviations) a data point is from the mean of a data set.

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# Asset Class and Sector Proxies

**Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Indexes are all based in U.S. dollars.**

**Inflation/IA SBBI U.S. Inflation Index** measures the performance of U.S. inflation (not seasonally adjusted) which is the rate of change of consumer goods prices. The data is from Bureau of Labor Statistics. The value of the current month CPI is estimated by the average value of the previous two months CPI.
**Inflation/Consumer Price Index (CPI)** is a measure of the average change overtime in the prices paid by urban consumers for a market basket of consumer goods and services.
**Core Inflation/Core Consumer Price Index** includes CPI for all items less food and energy.
**Inflation/Personal Consumption Expenditures (PCE) Price Index** reflects changes in the prices of goods and services purchased by consumers in the United States.
**Core Inflation/Core PCE Price Index** includes PCE Price Index for all items less food and energy.
**Cash/ICE BofA U.S. 3-month Treasury Bill Index** is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not beyond, three months from the rebalancing date. In order to qualify for inclusion, securities must be auctioned on or before the third business day before the last business day of the month and settle before the following calendar month end.
**Cash/ICE US 1-Month Treasury Bill Index** is comprised of a single issue purchased at the beginning of the month and held for a full month. At the end of the month that issue is sold and rolled into a newly selected issue. The issue selected at each month-end rebalancing is the outstanding Treasury Bill that matures closest to, but not less than, one month from the rebalancing date. To qualify for selection, an issue must have settled on or before the month-end rebalancing date.

**EQUITY**

**Developed Asia Pacific ex-Japan/MSCI AC Asia Pacific Ex Japan Index** captures large and mid cap representation across 4 of 5 Developed Markets countries (excluding Japan) and 9 Emerging Markets countries in the Asia Pacific region. With 1,133 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
**Developed Europe ex-UK/ MSCI Europe Ex UK Index** captures large and mid cap representation across 14 Developed Markets (DM) countries in Europe. With 338 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across European Developed Markets excluding the UK.
**Emerging Markets/MSCI Emerging Markets Index** captures large and mid cap representation across 24 Emerging Markets countries. With 1,277 constituents, the index covers approximately 85% of the free float adjusted market capitalization in each country.
**Europe/MSCI Europe Index** captures large and mid cap representation across 15 Developed Markets (DM) countries in Europe. With 415 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.
**Global Equities/MSCI AWCI Index** captures large and mid cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries. With 2,687 constituents, the index is comprehensive, covering approximately 99% of the global equity investment opportunity set.
**International Equity/MSCI World Ex USA Index** captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries, excluding the United States. With 817 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
**Japan/MSCI Japan Index** is designed to measure the performance of the large and mid cap segments of the Japanese market. With 198 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.
**North America/MSCI North America Index** is designed to measure the performance of the large and mid cap segments of the U.S. and Canada markets. With 678 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the U.S. and Canada.
**U.S. Large-cap Growth/Russell 1000 Growth Index** measures the performance of the large-cap growth segment of the U.S. Equity universe. It includes those Russell 1000 companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years).
**U.S. Large-cap Value/Russell 1000 Value Index** measures the performance of the large-cap value segment of the U.S. Equity universe. It includes those Russell 1000 companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years).
**U.S. Mid Cap/Russell Midcap Index** measures the performance of the mid-cap segment of the U.S. Equity universe. The Russell Midcap Index is a subset of the Russell 1000® Index. It includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership.
**U.S. Small cap Growth/Russell 2000 Growth Index** measures the performance of the small-cap growth segment of the U.S. Equity universe. It includes those Russell 2000 companies with higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years).
**U.S. Small-cap Value/Russell 2000 Value Index** measures the performance of the small-cap value segment of the U.S. Equity universe. It includes those Russell 2000 companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years).
**United Kingdom (UK)/MSCI United Kingdom Index** is designed to measure the performance of the large and mid cap segments of the UK market. With 77 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the UK.

*Note: Price return, total return, or net total return may be referenced when citing index performance. Please see glossary for return definitions.*

**SECTORS**

**S&P 500 sub-sectors and industry groups refer to Global Industry Classification Standard (GICS®)** is an industry analysis framework that helps investors understand the key business activities for companies around the world, developed by MSCI and S&P Dow Jones Indices. The GICS structure consists of 11 Sectors, 24 Industry groups, 68 Industries and 157 sub-industries.

**FIXED INCOME**

**Global Fixed Income/Bloomberg Global Aggregate Index** is a flagship measure of global investment grade debt from a multitude local currency markets.
**Global Fixed Income/ICE BofA Global Broad Market Index** tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities.
**Global Corporates/ICE BofA Global Broad Market Corp Index (Hedged)** tracks the performance of investment grade corporate debt publicly issued in the major domestic and euro-bond markets. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one year remaining term to final maturity, at least 18 months to final maturity at point of issuance and a fixed coupon schedule.
**Global Governments/ICE BofA Global Govt Bond Index + ICE BofA Global Large Cap Quasi-Govt Index (Hedged):** (i) The ICE BofA Global Government Index tracks the performance of publicly issued investment grade sovereign debt denominated in the issuer's own domestic currency. (ii) The ICE BofA Global Large Cap Quasi-Government Index tracks the performance of large capitalization investment grade quasi-government debt publicly issued in the major domestic and euro-bond markets, including agency, foreign government, local government, supranational and government guaranteed securities. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch).
**Global High Yield/Emerging Market/ICE BofA Global HY Country External Corp & Govt + ICE BofA Global High Yield Index (Unhedged):** (i) The ICE BofA Global High Yield Country External Corporate & Government Index tracks the performance of USD and EUR denominated emerging market debt, including sovereign, quasi-government and corporate securities. (ii) The ICE BofA Global High Yield Index tracks the performance of USD, CAD, GBP, and EUR denominated below investment grade corporate debt publicly issued in the major domestic or euro-bond markets.
**Global Mortgages/ICE BofA Global Broad Market Collateralized Index (Hedged)** tracks the performance of investment grade securitized and collateralized debt, including mortgage backed, asset backed, commercial mortgage backed, covered bond, and U.S. mortgage pass-through securities publicly issued in the major domestic and euro-bond markets. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch).
**International Fixed Income/ICE BofA Global Broad Market ex USD Index (Hedged)** is a subset of ICE BofA Global Broad Market Index excluding all securities denominated in U.S. dollars.
**Treasury Inflation-Protected Securities (TIPS) /ICE BofA U.S. Inflation-Linked Treasury Index** tracks the performance of U.S. dollar-denominated inflation linked sovereign debt publicly issued by the U.S. government in its domestic market.
**U.S. Broad Market/ICE BofA U.S. Broad Market Index** tracks the performance of U.S. dollar denominated investment grade debt publicly issued in the U.S. domestic market, including U.S. Treasury, quasi-government, corporate, securitized and collateralized securities.
**U.S. Corporates/BBB/Sovereign/ICE BofA U.S. Corporate Index** tracks the performance of large capitalization U.S. dollar denominated investment grade corporate debt publicly issued in the U.S. domestic market.
**U.S. Government & Quasi Government/ICE BofA U.S. Treasury/Agency Index** tracks the performance of U.S. dollar denominated U.S. Treasury and non-subordinated U.S. agency debt issued in the U.S. domestic market. Qualifying securities must have an investment grade rating (based on an average of Moody's, S&P and Fitch). In addition, qualifying securities must have at least one year remaining term to final maturity, at least 18 months to maturity at time of issuance, a fixed coupon schedule and a minimum amount outstanding of $1 billion for sovereigns and $250 million for agencies.
**U.S. High Yield/ICE BofA U.S. High Yield Index** tracks the performance of U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. domestic market.
**U.S. Mortgage-backed Securities/ICE BofA Mortgage-Backed Securities Index** tracks the performance of U.S. dollar denominated fixed rate residential mortgage pass-through securities publicly issued by U.S. agencies Fannie Mae, Freddie Mac and Ginnie Mae in the U.S. domestic market. 30-year, 20-year, and 15-year fixed rate mortgage pools are included in the Index provided they have at least one year remaining term to final maturity and a minimum amount outstanding of at least $5 billion per generic coupon and $250 million per production year within each generic coupon.
**U.S. Municipals/Bloomberg U.S. Municipal Index** is a benchmark that covers the U.S. dollar-denominated long-term tax exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and pre-refunded bonds.
**U.S. Municipals/ICE BofA U.S. Municipal Securities Index** tracks the performance of U.S. dollar-denominated investment grade tax-exempt debt publicly issued by U.S. states and territories, and their political subdivisions, in the U.S. domestic market.

**ALTERNATIVE INVESTMENTS/COMMODITIES/REAL ESTATE**

**Hedge Funds/Hedge Strategies/HFRX Global Hedge Fund Index** is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage, and relative value arbitrage.
**Leveraged Loans/Morningstar LSTA U.S. Leveraged Loan Index** is a market-value weighted index designed to measure the performance of the U.S. leveraged loan market.
**Private Credit/Cliffwater Direct Lending Index** seeks to measure the unlevered, gross of fee performance of U.S. middle market corporate loans, as represented by the asset-weighted performance of the underlying assets of Business Development Companies (BDCs), including both exchange-traded and unlisted BDCs, subject to certain eligibility requirements.
**Private Equity/Cambridge Associates LLC U.S. Private Equity Index®** is a horizon calculation based on data compiled from 1,953 U.S. private equity funds (buyout, growth equity, private equity energy and subordinated capital funds), including fully liquidated partnerships, formed between 1986 and 2023. Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest.
**Public Real Estate/Commercial/REITS/FTSE NAREIT All Equity REITs Index** is a free-float adjusted, market capitalization-weighted index of U.S. equity REITs. Constituents of the index include all tax-qualified REITs with more than 50 percent of total assets in qualifying real estate assets other than mortgages secured by real property that also meet minimum size and liquidity criteria.

# Index Definitions

**Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Indexes are all based in U.S. dollars.**

*Note: Price return, total return, or net total return may be referenced when citing index performance. Please see glossary for return definitions.*

**Alerian MLP Index** is the leading gauge of energy infrastructure Master Limited Partnerships (MLPs). The capped, float-adjusted, capitalization-weighted index, whose constituents earn the majority of their cash flow from midstream activities involving energy commodities, is disseminated real-time on a price-return basis and on a total-return basis.
**Bloomberg Commodity Index** are financial benchmarks designed to provide liquid and diversified exposure to commodities via futures contracts. Is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector, and group level for diversification. Roll period typically occurs from 6th-10th business day based on the roll schedule.
**Bloomberg U.S. Aggregate Bond Index** is a broad-based flagship benchmark that measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes Treasuries, government-related and corporate securities, fixed rate agency MBS, ABS and CMBS (agency and non-agency).
**Bloomberg U.S. Dollar Index** tracks the performance of a basket of 10 leading global currencies versus the U.S. Dollar. Each currency in the basket and their weight is determined annually based on their share of international trade and FX liquidity.
**Bloomberg U.S. Mortgage Backed Securities (MBS) Index** tracks fixed-rate agency mortgage backed pass-through securities guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).
**BofA Global Financial Stress Index** is a cross market measure of risk, hedging demand, and investor flows in the global financial system. Levels greater/less than 0 indicate more/less financial market stress than normal.
**Brent Crude Oil Futures** reflects a generic ICE Brent Crude futures contract, which is a deliverable contract based on EFP delivery with an option to cash settle.
**Cambridge Associates Infrastructure Index** is a horizon calculation based on data compiled from 93 infrastructure funds, including fully liquidated partnerships, formed between 1993 and 2015. Private indexes are pooled horizon internal rate of return (IRR) calculations, net of fees, expenses, and carried interest.
**Chicago Board Options Exchange Volatility Index (VIX)** is a calculation designed to produce a measure of constant, 30-day expected volatility of the U.S. stock market, derived from real-time, mid-quote prices of S&P 500 Index call and put options, and is one of the most recognized measures of volatility globally.
**Chicago Fed National Financial Conditions Index** provides a comprehensive weekly update on U.S. financial conditions in money markets, debt and equity markets, and the traditional and "shadow" banking systems. The National Financial Conditions Index (NFCI) is constructed to have an average value of zero and a standard deviation of one over a sample period extending back to 1971. Positive values of the NFCI indicate financial conditions that are tighter than on average, while negative values indicate financial conditions that are looser than on average.
**Citigroup Economic Surprise Index – U.S.** measures data surprises relative to market expectations. A positive reading means that data releases have been stronger than expected and a negative reading means that data releases have been worse than expected.
**Dow Jones Industrial Average (DJIA)** is a price-weighted measure of 30 U.S. blue-chip companies. The index covers all industries except transportation and utilities. It has been a widely followed indicator of the stock market since October 1, 1928.
**FTSE EPRA Nareit Global Index** is designed to track the performance of listed real estate companies and REITS in both developed and emerging markets.in eligible real estate equities worldwide. Relevant activities are defined as the ownership, trading and development of income-producing real estate. By making the index constituents free-float adjusted, liquidity, size and revenue screened, the series is suitable for use as the basis for investment products, such as derivatives and Exchange Traded Funds (ETFs).
**FTSE EPRA Nareit United States Index** is designed to track the performance of listed real estate companies and REITs in the United States. By making the index constituents free-float adjusted, liquidity, size and revenue screened, the series is suitable for use as the basis for investment products, such as derivatives and Exchange Traded Funds (ETFs).
**FTSE Global Core Infrastructure 50/50 Index** gives participants an industry-defined interpretation of infrastructure and adjusts the exposure to certain infrastructure sub-sectors.
**Home Builders: Housing Market Index** is based on a monthly survey of NAHB members designed to take the pulse of the single-family housing market. The survey asks respondents to rate market conditions for the sale of new homes at the present time and in the next six months as well as the traffic of prospective buyers of new homes.
**HFRI Fund Weighted Composite Index** is a global, equal-weighted index of single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in U.S. Dollar and have a minimum of $50 Million under management or $10 Million under management and a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.
**ICE BofA BBB & Lower Sovereign External Debt Index** tracks the performance of U.S. dollar denominated emerging market and cross-over sovereign debt publicly issued in the eurobond or U.S. domestic market.
**ICE BofA BBB U.S. Corporate Index** is a subset of ICE BofA US Corporate Index including all securities rated BBB1 through BBB3, inclusive.
**ICE BofA BBB U.S. Fixed Rate CMBS Index** is a subset of ICE BofA U.S. Fixed Rate CMBS Index including all securities rated BBB1 through BBB3, inclusive.
**ICE BofA BB U.S. High Yield Index** is a subset of ICE BofA US High Yield Index including all securities rated BB1 through BB3, inclusive.
**ICE BofA CCC & Lower U.S. High Yield Index** is a subset of ICE BofA US High Yield Index including all securities rated CCC1 or lower.
**ICE BofA Global Broad Market Index** tracks the performance of investment grade debt publicly issued in the major domestic and eurobond markets, including sovereign, quasi-government, corporate, securitized and collateralized securities.
**ICE BofA MOVE Index** is a market-implied measure of bond market volatility.
**ICE BofA Single-A U.S. Corporate Index** is a subset of ICE BofA US Corporate Index including all securities rated A1 through A3, inclusive.
**ICE BofA Single-A U.S. Fixed Rate CMBS Index** is a subset of ICE BofA U.S. Fixed Rate CMBS Index including all securities rated A1 through A3, inclusive.
**ICE BofA Single-B US High Yield Index** is a subset of ICE BofA US High Yield Index including all securities rated B1 through B3, inclusive.
**ICE BofA U.S. Broad Market Index** tracks the performance of U.S. dollar denominated investment grade debt publicly issued in the U.S. domestic market, including U.S. Treasury, quasi-government, corporate, securitized and collateralized securities.
**ICE BofA U.S. Composite Agency Index** tracks the performance of U.S. dollar denominated investment grade U.S. agency debt issued in the U.S. domestic market.
**ICE BofA U.S. Corporate Index** tracks the performance of U.S. dollar denominated investment grade corporate debt publicly issued in the U.S. domestic market.
**ICE BofA U.S. Financial Index** is a subset of ICE BofA US Corporate Index including all securities of Financial issuers.
**ICE BofA U.S. Fixed Rate Asset Backed Securities Index** tracks the performance of U.S. dollar denominated investment grade fixed rate asset backed securities publicly issued in the US domestic market.
**ICE BofA U.S. Fixed Rate CMBS Index** tracks the performance of U.S. dollar denominated investment grade fixed rate commercial mortgage backed securities publicly issued in the US domestic market.
**ICE BofA U.S. High Yield Index** tracks the performance of U.S. dollar denominated below investment grade corporate debt publicly issued in the U.S. corporate market.
**ICE BofA U.S. Industrial Index** is a subset of ICE BofA US Corporate Index including all securities of Industrial issuers.
**ICE BofA U.S. Inflation-Linked Treasury Index** tracks the performance of U.S. dollar denominated inflation-linked sovereign debt publicly issued by the U.S. government in its domestic market.
**ICE BofA U.S. Mortgage Backed Securities Index** tracks the performance of U.S. dollar-denominated fixed rate residential mortgage pass-through securities publicly issued by U.S. agencies Fannie Mae, Freddie Mac, and Ginnie Mae in the U.S. domestic market. 30-year, 20-year, and 15-year fixed rate mortgage pools are included in the Index provided they have at least one-year remaining term to final maturity and a minimum amount outstanding of at least $5 billion per generic coupon and $250 million per production year within each generic coupon.
**ICE BofA U.S. Municipal Securities Index** tracks the performance of U.S. dollar denominated investment grade tax-exempt debt publicly issued by U.S. states and territories, and their political subdivisions, in the U.S. domestic market.
**ICE BofA U.S. Treasury Index** tracks the performance of U.S. dollar denominated sovereign debt publicly issued by the U.S. government in its domestic market.
**LPX50 Listed Private Equity USD Index** is designed to represent the global performance of the 50 most highly capitalised and liquid Listed Private Equity companies.
**MSCI All Country World Index (ACWI)** captures large and mid cap representation across 23 Developed Markets (DM) and 24 Emerging Markets (EM) countries. With 2,687 constituents, the index covers approximately 85% of the global investable equity opportunity set.
**MSCI ACWI ex USA Index** captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries (excluding the U.S.) and 24 Emerging Markets (EM) countries. With 2,094 constituents, the index covers approximately 85% of the global equity opportunity set outside the U.S.
**MSCI China Index** captures large and mid cap representation across China A shares, H shares, B shares, Red chips, P chips and foreign listings (e.g. ADRs). With 581 constituents, the index covers about 85% of this China equity universe. Currently, the index includes Large Cap A and Mid Cap A shares represented at 20% of their free float adjusted market capitalization.
**MSCI EAFE (Europe, Australasia, and Far East) Index** is an equity index which captures large and mid cap representation across 21 Developed Markets around the world, excluding the U.S. and Canada. With 732 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
**MSCI Europe Index** captures large and mid cap representation across 15 Developed Markets (DM) countries in Europe. With 415 constituents, the index covers approximately 85% of the free float-adjusted market capitalization across the European Developed Markets equity universe.
**MSCI Emerging Markets Index** captures large and mid cap representation across 24 Emerging Markets countries. With 1,277 constituents, the index covers approximately 85% of the free float adjusted market capitalization in each country.
**MSCI Japan Index** is designed to measure the performance of the large and mid cap segments of the Japanese market. With 198 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in Japan.
**MSCI Pacific ex Japan Index** captures large and mid cap representation across 4 of 5 Developed Markets (DM) countries in the Pacific region (excluding Japan). With 105 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
**MSCI USA Equal Weighted Index** represents an alternative weighting scheme to its market cap weighted parent index, the MSCI USA Index. At each quarterly rebalance date, all index constituents are weighted equally, effectively removing the influence of each constituent's current price.
**MSCI USA Index is** designed to measure the performance of the large and mid cap segments of the U.S. market. With 593 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in the U.S.
**MSCI USA Growth Index** captures large and mid cap securities exhibiting overall growth style characteristics.
**MSCI USA High Dividend Yield Index** is designed to reflect the performance of equities in the MSCI USA Index (excluding REITs) with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent.
**MSCI USA Minimum Volatility Index** aims to reflect the performance characteristics of a minimum variance strategy applied to the large and mid-cap USA equity universe.
**MSCI USA Momentum Index** is based on MSCI USA Index, its parent index, which captures large and mid cap stocks of the US market. It is designed to reflect the performance of an equity momentum strategy by emphasizing stocks with high price momentum, while maintaining reasonably high trading liquidity, investment capacity and moderate index turnover.

# Index Definitions cont'd

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**Securities indexes assume reinvestment of all distributions and interest payments. Indexes are unmanaged and do not take into account fees or expenses. It is not possible to invest directly in an index. Indexes are all based in U.S. dollars.**

**MSCI USA Quality Index** is based on the MSCI USA Index, its parent index, which includes large and mid-cap stocks in the U.S. equity market. The index aims to capture the performance of quality growth stocks by identifying stocks with high quality scores based on three main fundamental variables: high return on equity (ROE), stable year-over-year earnings growth and low financial leverage.
**MSCI USA Value Index** captures large and mid cap U.S. securities exhibiting overall value style characteristics.
**MSCI U.S. REIT Index** is a free float-adjusted market capitalization weighted index that is comprised of equity Real Estate Investment Trusts (REITs).
**MSCI World Index** captures large and mid-cap representation across 23 Developed Markets (DM) countries. With 1,410 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
**MSCI World ex USA Index** captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries, excluding the United States. With 817 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
**Nasdaq Composite Index** is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market. The index was developed with a base level of 100 as of February 5, 1971.
**NAR Housing Affordability Index** measures whether or not a typical family earns enough income to qualify for a mortgage loan on a typical home at the national and regional levels based on the most recent price and income data.
**Personal Consumption Expenditure (PCE) Price Index** reflects changes in the prices of goods and services purchased by consumers in the United States.
**Pitchbook Private Equity Benchmark** includes Buyout (Private equity funds that primarily focus on purchasing at least a controlling percentage of a company's stock to take over its assets and operations), Growth/Expansion (Private equity funds that make minority (non-control) equity investments), and Mezzanine (Private equity funds that provide subordinated debt financing for private equity transactions. These debt facilities usually include warrants).
**Pitchbook Private Debt Benchmark** includes funds that provide various types of debt on private equity transactions.
**Pitchbook Real Estate Benchmark** includes funds investing with renovation needs, high vacancy rates, or relative strength of the market. New property development would fall in this category, and the expected returns on these investments are in the 15%+ range.
**Pitchbook Venture Capital (VC) Benchmark** includes early stage (venture capital funds that focus specifically on earlier rounds (Seed, First, Second)), and late stage (venture capital funds that focus specifically on later rounds (Third and beyond)).
**Real Federal Reserve Board (FRB) Broad Trade-Weighted Dollar Index** is a weighted average of the foreign exchange value of the U.S. dollar against the currencies of a broad group of major U.S. trading partners.
**Russell Large-cap Index/Russell 1000 Index** measures the performance of the large-cap segment of the U.S. Equity universe. The Russell 1000 Index is a subset of the Russell 3000® Index which is designed to represent approximately 98% of the investable U.S. equity market. It includes approximately 1,000 of the largest securities based on a combination of their market cap and current index membership.
**Russell Small-cap Index/Russell 2000 Index** measures the performance of the small-cap segment of the U.S. Equity universe. The Russell 2000 Index is a subset of the Russell 3000® Index which is designed to represent approximately 98% of the investable U.S. equity market. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership.
**Russell 3000 Growth Index** measures the performance of the broad growth segment of the U.S. Equity universe. It includes those Russell 3000 companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years).
**Russell 3000 Index** measures the performance of the largest 3,000 U.S. companies representing approximately 98% of the investable U.S. Equity market, as of the most recent reconstitution.
**Russell 3000 Value Index** measures the performance of the broad value segment of the U.S. Equity value universe. It includes those Russell 3000 companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years).
**Russell Midcap Index** measures the performance of the mid-cap segment of the U.S. Equity universe. The index is a subset of the Russell 1000® Index. It includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership.
**S&P 500 Dividend Aristocrats Index** measures the performance of S&P 500 companies that have increased dividends every year for the last 25 consecutive years. The Index treats each constituent as a distinct investment opportunity without regard to its size by equally weighting each company.
**S&P 500 Equal Weighted Index** is the equal-weight version of the widely-used S&P 500.
**S&P 500 Index (SPX)** is a market-capitalization-weighted index that is widely regarded as the best single gauge of large-cap U.S. Equities. The index includes 500 leading companies and covers approximately 80% of available market capitalization.
**S&P MidCap 400 Index** is a market-capitalization-weighted index that provides investors with a benchmark for mid-sized companies. The index, which is distinct from the large-cap S&P 500, is designed to measure the performance of 400 mid-sized companies, reflecting the distinctive risk and return characteristics of this market segment.

*Note: Price return, total return, or net total return may be referenced when citing index performance. Please see glossary for return definitions.*

**S&P SmallCap 600** seeks to measure the small-cap segment of the U.S. equity market. The index is designed to track companies that meet specific inclusion criteria to ensure that they are liquid and financially viable.
**U.S. Dollar Index (DXY)** indicates the general international value of the U.S. dollar. The index does this by averaging the exchange rates between the U.S. dollar and major world currencies.
**West Texas Intermediate (WTI) Crude Oil Futures** is a principal international pricing benchmark in U.S. dollars per barrel that reflects the NYMEX Division light, sweet crude oil futures contract which is the world's most liquid forum for crude oil trading and the world's largest volume future contract trading on a physical commodity. The contract trades in units of 1,000 barrels and the delivery point is Cushing, Oklahoma, which is also accessible to the international spot markets via pipelines.

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Asset allocation, diversification, rebalancing and dollar cost averaging do not ensure a profit or protect against loss in declining markets.

Keep in mind that dollar cost averaging cannot guarantee a profit or prevent a loss. Since such an investment plan involves continual investment in securities regardless of fluctuating price levels, you should consider your willingness to continue purchasing during periods of high or low price levels.

Dividend payments are not guaranteed, and are paid only when declared by an issuer's board of directors. The amount of a dividend payment, if any, can vary over time. Companies may reduce or eliminate dividend payment to shareholders. Historically, dividends make up a large percentage of stocks' total return.

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Reference to indices, or other measures of relative market performance over a specified period of time (each, an "index") are provided for illustrative purposes only, do not represent a benchmark or proxy for the return or volatility of any particular product, portfolio, or security holding. Indices are unmanaged. The figures for the index reflect the reinvestment of dividends but do not reflect the deduction of any fees or expenses which would reduce returns. We strongly recommend that these factors be taken into consideration before an investment decision is made. Neither the Chief Investment Office nor the index sponsor can verify the validity or accuracy of the self reported returns of the managers used to calculate the index returns. The Chief Investment Office does not guarantee the accuracy of the index returns and does not recommend any investment or other decision based on the results presented. The indices referred in the presentation do not reflect the performance of any account or fund managed by Bank of America, Merrill, or their affiliates, or of any other specific fund or account, and do not reflect the deduction of any management or performance fees or expenses. Indices are unmanaged and results shown are not reduced by taxes or transaction costs such as fees. It is not possible to invest directly in an Index.

Investments discussed have varying degrees of risk. Some of the risks involved with equities include the possibility that the value of the stocks may fluctuate in response to events specific to the companies or markets, as well as economic, political or social events in the U.S. or abroad. Stocks of small- and mid-cap companies pose special risks, including possible illiquidity and greater price volatility than stocks of larger, more established companies. Bonds are subject to interest rate, inflation and credit risks. Investments in high-yield bonds ("junk bonds") may be subject to greater market fluctuations and risk of loss of income and principal than securities in higher rated categories. Mortgage-backed securities are subject to credit risk and the risk that the mortgages will be prepaid, so that portfolio management may be faced with replenishing the portfolio in a possibly disadvantageous interest rate environment. Generally, when interest rates decline, prepayments accelerate beyond the initial pricing assumptions, which could cause the average life and expected maturity of the securities to shorten. Conversely, when interest rates rise, prepayments slow down beyond the initial pricing assumptions and could cause the average life and expected maturity of the securities to extend and the market value to decline. Investments in foreign securities involve special risks, including foreign currency risk and the possibility of substantial volatility due to adverse political, economic or other developments. These risk are magnified for investments made in emerging market. Investments in a certain industry or sector may pose additional risk due to lack of diversification and sector concentration. Investments in real estate securities can be subject to fluctuations in the value of the underlying properties, the effect of economic conditions on real estate values, changes in interest rates, and risk related to renting properties, such as rental defaults. There are special risks associated with an investment in commodities, including market price fluctuations, regulatory change, interest rate change, credit risk, economic changes and the impact of adverse political or financial factors.

Bond ladder portfolios are subject to market risk and are not guaranteed. They do not offer downside protection. A prolonged decline in the bond market can result in a decline in price.

Investments in Infrastructure Assets will be subject to risks incidental to owning and operating infrastructure projects, including risks associated with the general economic climate, geographic or market concentration, government regulations and fluctuations in interest rates. The industries targeted for investment may be highly regulated by governmental agencies. Such regulations may impact an investor's ability to acquire, dispose of and/or manage investments.

**Alternative investments are speculative and involve a high degree of risk.**

There may be conflicts of interest relating to the alternative investment and its service providers, including Bank of America Corporation, and its affiliates, who are engaged in businesses and have clear interests other than that of managing, distributing and otherwise providing services to the alternative investment. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may purchase or sell such securities and instruments. These are considerations of which investors in the alternative investments should be aware. Additional information relating to these conflicts is set forth in the offering materials for the alternative investment.

Alternative investments are intended for qualified investors only. Alternative Investments such as derivatives, hedge funds, private equity funds, and funds of funds can result in higher return potential but also higher loss potential. Changes in economic conditions or other circumstances may adversely affect your investments. Before you invest in alternative investments, you should consider your overall financial situation, how much money you have to invest, your need for liquidity, and your tolerance for risk.

Nonfinancial assets, such as closely-held businesses, real estate, fine art, oil, gas and mineral properties, and timber, farm and ranch land, are complex in nature and involve risks including total loss of value. Special risk considerations include natural events (for example, earthquakes or fires), complex tax considerations, and lack of liquidity. Nonfinancial assets are not in the best interest of all investors. Clients should always consult with your independent attorney, tax advisor, investment manager, and insurance agent for final recommendations and before changing or implementing any financial, tax, or estate planning strategy.

Investors should bear in mind that the global financial markets are subject to periods of extraordinary disruption and distress. During the financial crisis of 2008-2009, many private investment funds incurred significant or even total losses, suspended redemptions or otherwise severely restricted investor liquidity, including increasing the notice period required for redemptions, instituting gates on the percentage of fund interests that could be redeemed in any given period and creating side-pockets and special purpose vehicles to hold illiquid securities as they are liquidated. Other funds may take similar steps in the future to prevent forced liquidation of their portfolios into a distressed market. In addition, investment funds implementing alternative investment strategies are subject to the risk of ruin and may become illiquid under a variety of circumstances, irrespective of general market conditions.

Sustainable and Impact Investing and/or Environmental, Social and Governance (ESG) managers may take into consideration factors beyond traditional financial information to select securities, which could result in relative investment performance deviating from other strategies or broad market benchmarks, depending on whether such sectors or investments are in or out of favor in the market. Further, ESG strategies may rely on certain values based criteria to eliminate exposures found in similar strategies or broad market benchmarks, which could also result in relative investment performance deviating.