ASSET CLASS RESEARCH | MARCH 2025

Equity Market Review: United States

Broad US markets are increasingly expensive, likely offering more moderated returns compared with recent history.

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Executive Summary

Our overall assessment of the US equity market combining top-down and bottom-up valuation perspectives, as well as market sentiment.

US Equities Look Overpriced From a Top-Down Perspective. Proceed With Caution

Overall

Significantly Unattractive	**Moderately Unattractive**	Neutral	Moderately Attractive	Significantly Attractive

With US equities trading at price/earnings levels that are significantly higher than their history combined with our equity analysts' seeing little room for aggregate upside, we are fairly cautious on market-cap weighted expectations for broad US stocks. We expect a more constrained prospective reward-for-risk compared with the recent high returns that investors have experienced in this space. That being said, there are pockets of value in areas like small-cap companies that have been left behind mega-caps.

Asset Class Valuation[1]

Weight: 45%

Significantly Unattractive	Moderately Unattractive	Neutral	Moderately Attractive	Significantly Attractive

US equities look very expensive from a top-down perspective, with a current P/E of 28 times versus a long-term expected P/E of 19 times. While our model expects a positive return, the extreme nature of valuations leaves investors susceptible to a market correction. Market fundamentals (profit margins, return on equity) are not far above historical norms. Our model assumes a negative valuation reversion moving forward. (see Slide 32 for details).

Stock Level Valuation[2]

Weight: 45%

Significantly Unattractive	Moderately Unattractive	**Neutral**	Moderately Attractive	Significantly Attractive

Rolling up our valuation work on individual stocks, the US market overall trades slightly above our aggregated fair value. That said, certain portions of the market look more appealing than others. For example, Value looks much more attractive than Growth. (see Slide 41 for details).

Market Sentiment

Weight: 10%

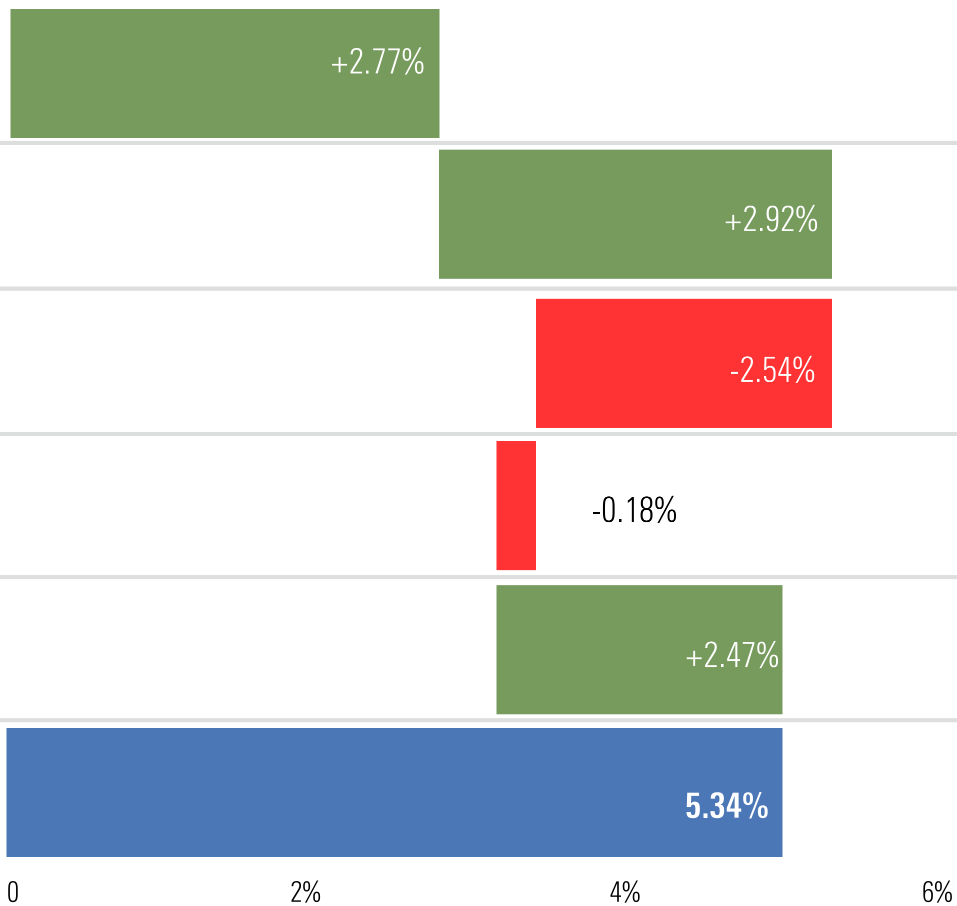
Very Popular	**Popular**	Neutral	Unpopular	Very Unpopular

Overall, the US equity market sits at a Market Sentiment Rating of Popular. Our contrarian methodology is hurt by strong momentum, robust asset class inflows, and elevated consensus earnings estimates. While not an overly exuberant trade, there is certainly some concern around market herding. (see Slide 55 for details).

[1] Asset Class Valuation is based on a top-down adjusted base rate methodology that looks at spread-to-fair and uncertainty for a given asset class
[2] Stock Level Valuation is based on a bottom-up Morningstar Equity Research-analyst driven roll up, adjusted for uncertainty

Unappealing Asset Class Valuation Weighs Heavily on Our 10-Year Return Forecast

Ten-Year Nominal Annualized Expected Returns by Source: US Equity Market



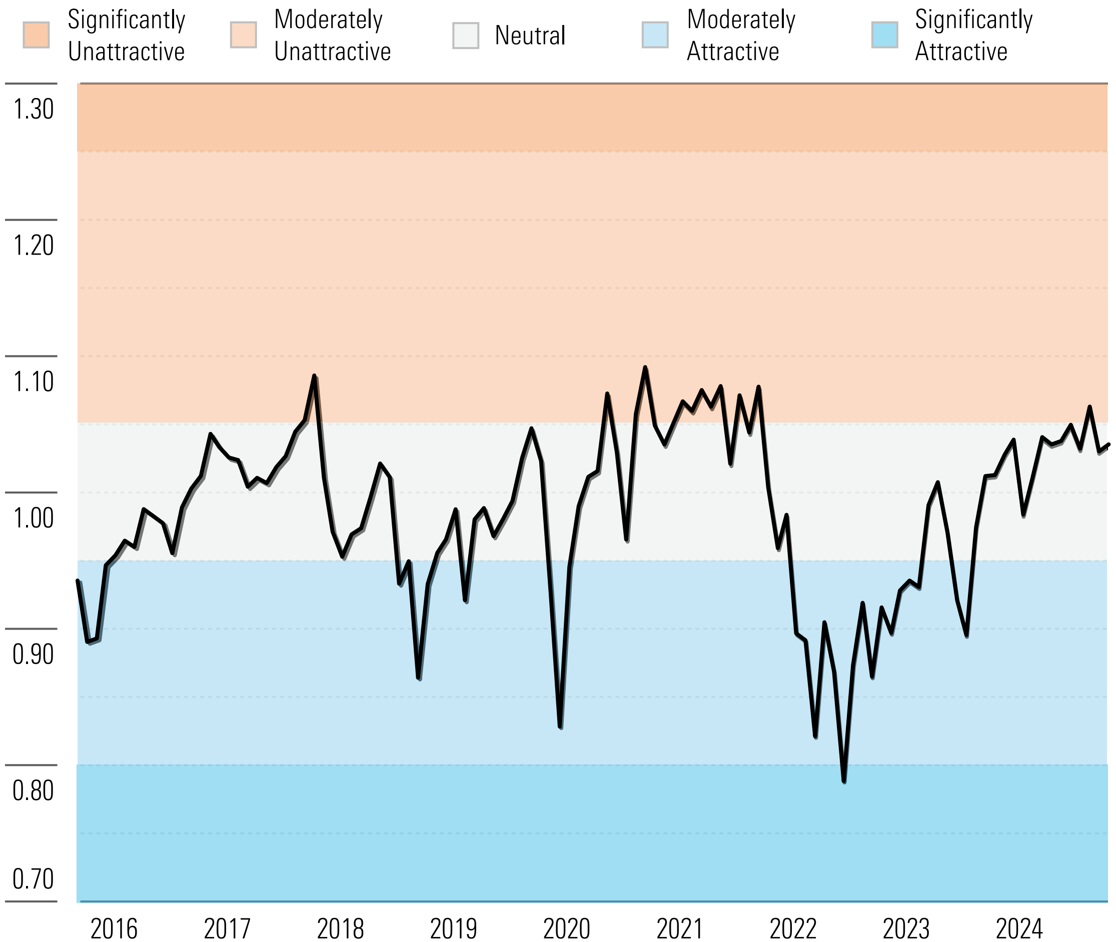
Source	Description of Return Sources
Total Yield	Expected total yield (dividends and buybacks) we expect an investor to receive over the next 10 years.
Growth	Expected growth is an estimate of the long-term cash flow growth that we expect the sector to achieve.
Asset Class Valuation Adjustment	Blended impact from reversion of price-to-earnings, return on equity, margin, and earnings from current levels to expected long-term levels*
Stock Level Valuation Adjustment	Blended impact of Morningstar's individual company valuations
Inflation	Ten-year annual expected inflation
10-Year Nominal Return	**Ten-year expected annual return in US equities from current valuation**

Source: Morningstar Investment Management LLC. Data as of Jan. 31, 2025.
Val Adj: Valuation Adjustment; Nominal Return is the output from geometrically linking the return components. They will not perfectly add up as a result.
Deviations in stock level valuation adjustment due to inclusions of QER. *Based on 10-year historical averages.

Stock Level Valuation: Market No Longer Looks Attractive Overall; Good Value Is Scarce Across Sectors

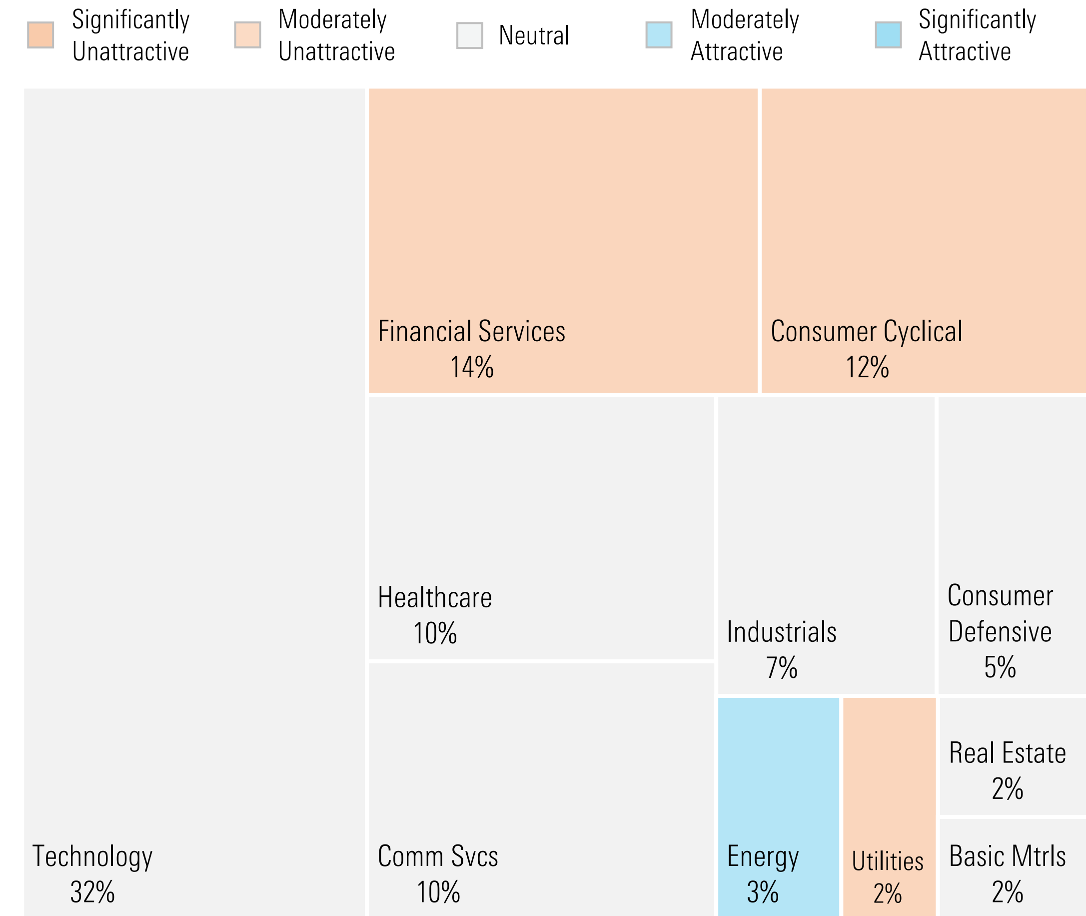
US Market Now Less Attractive From Bottom-Up Perspective Than in 2022-23

Market capitalization-weighted price/fair value.



Very Few Sectors Appear Attractive

Market capitalization-weighted price/fair value.

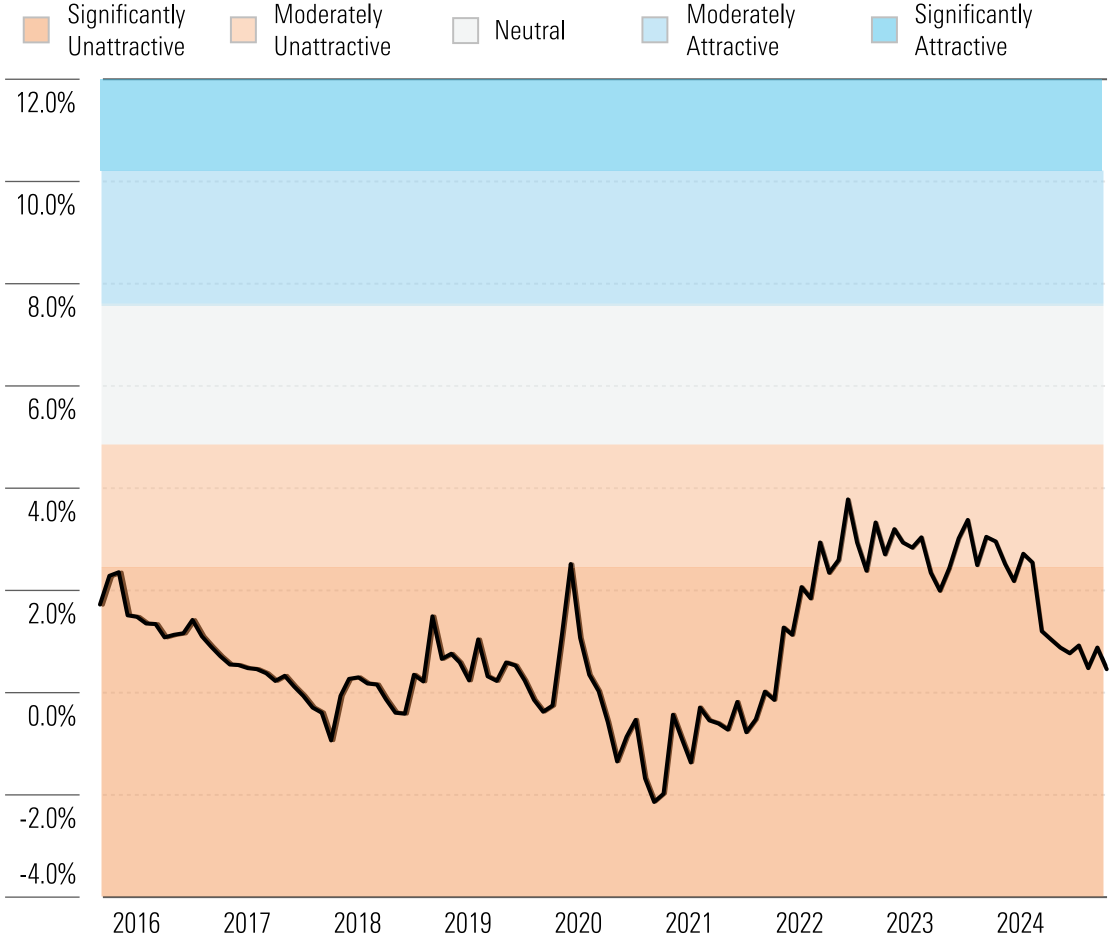


Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025. Price/fair value for the US market is calculated by applying stock-level fair value estimates to constituents of the Morningstar US TME Index, with results weighted according to index value.

Asset Class Level Valuation: Return Prospects Appear Poor for the Market Overall and for Most Sectors

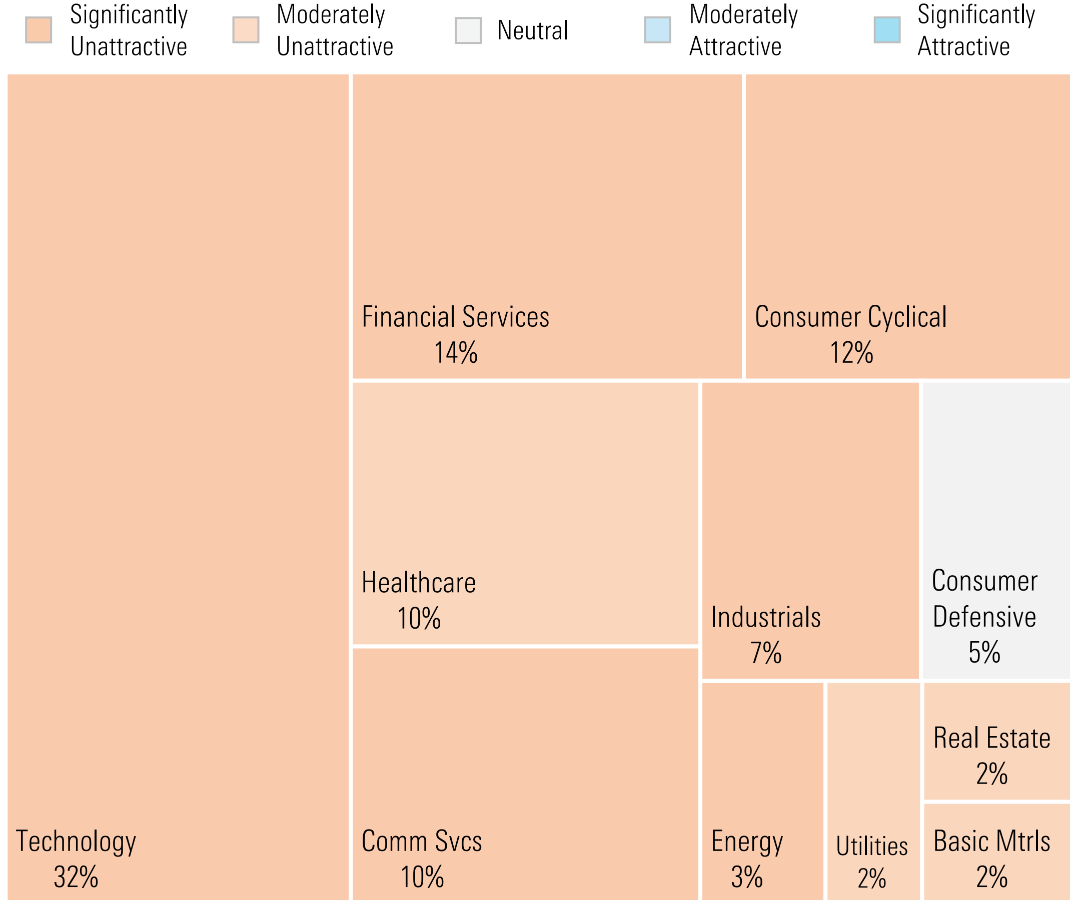
US Market Overvalued Based on Top-Down Model

Expected 10-year real return based on asset class model; see Slide 33 for details.



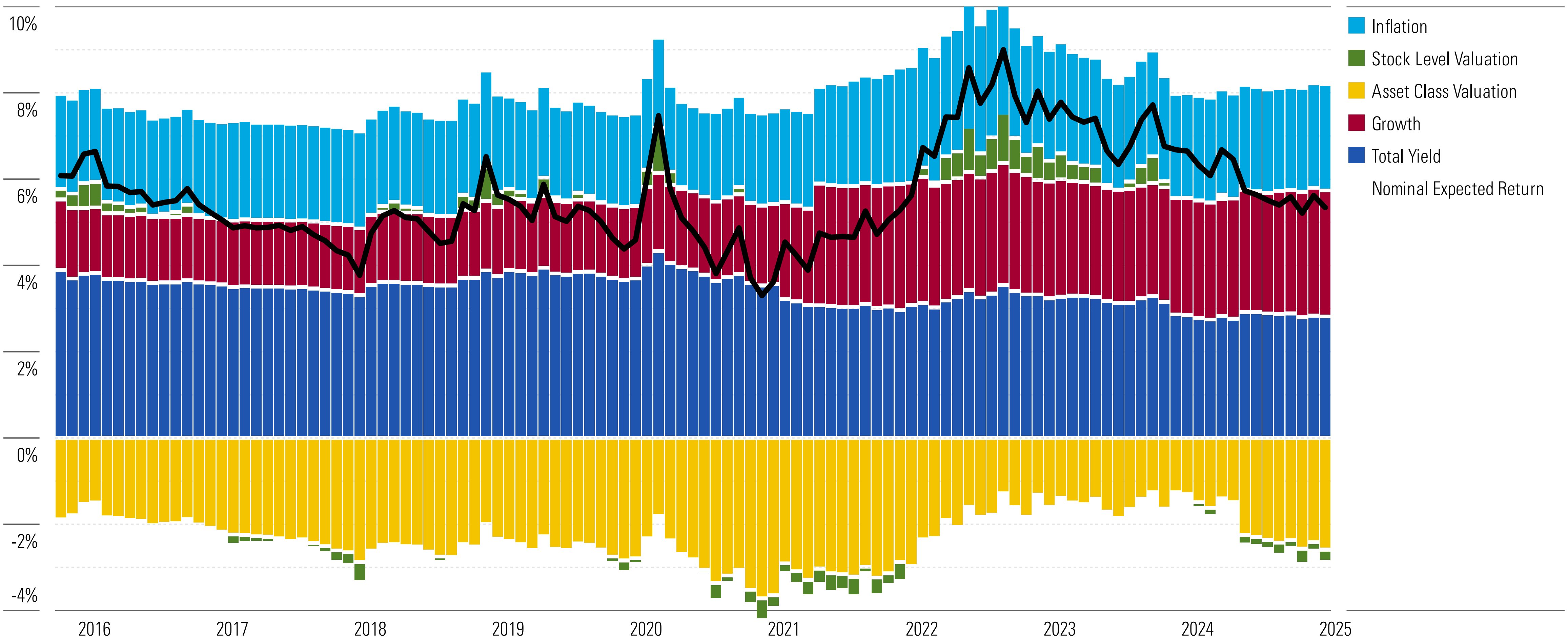
Most Sectors Appear Very Unattractive

Expected 10-year real return based on asset class model.



US-Equity-Expected 10-Year Nominal Returns Declined Following Postpandemic Outperformance

October 2015–January 2025 Expected 10-Year Nominal Return Declined Due to US Equity Market Outperformance in Recent Years



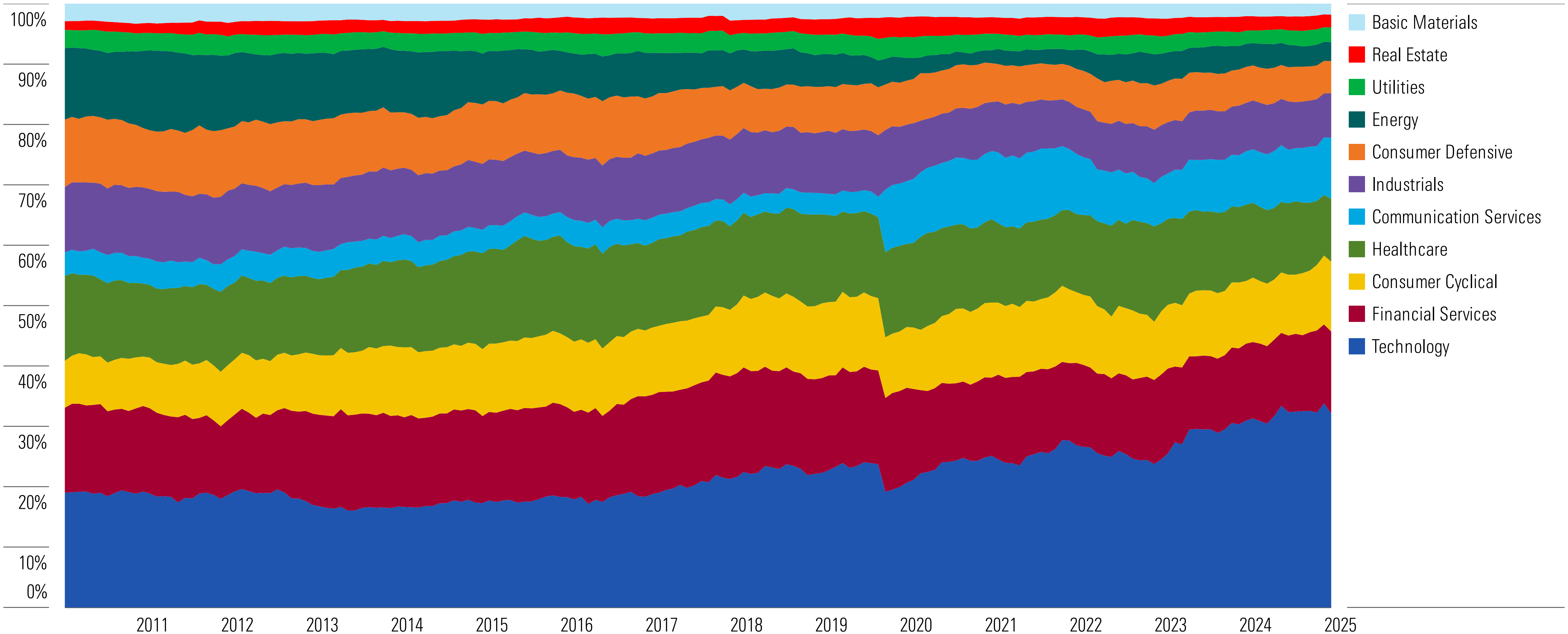
Source: Morningstar. Model assumptions based on time-dependent long-term averages and point-in-time equity analyst forecasts.

Market Overview: Composition

Breakdown of US equity market composition through the Morningstar lens.

Collectively, Tech and Communications Services Have Expanded to Over 42% of the US Total Market Index

US Sector Market Capitalization Weights Over the Past 15 Years (2010–25)

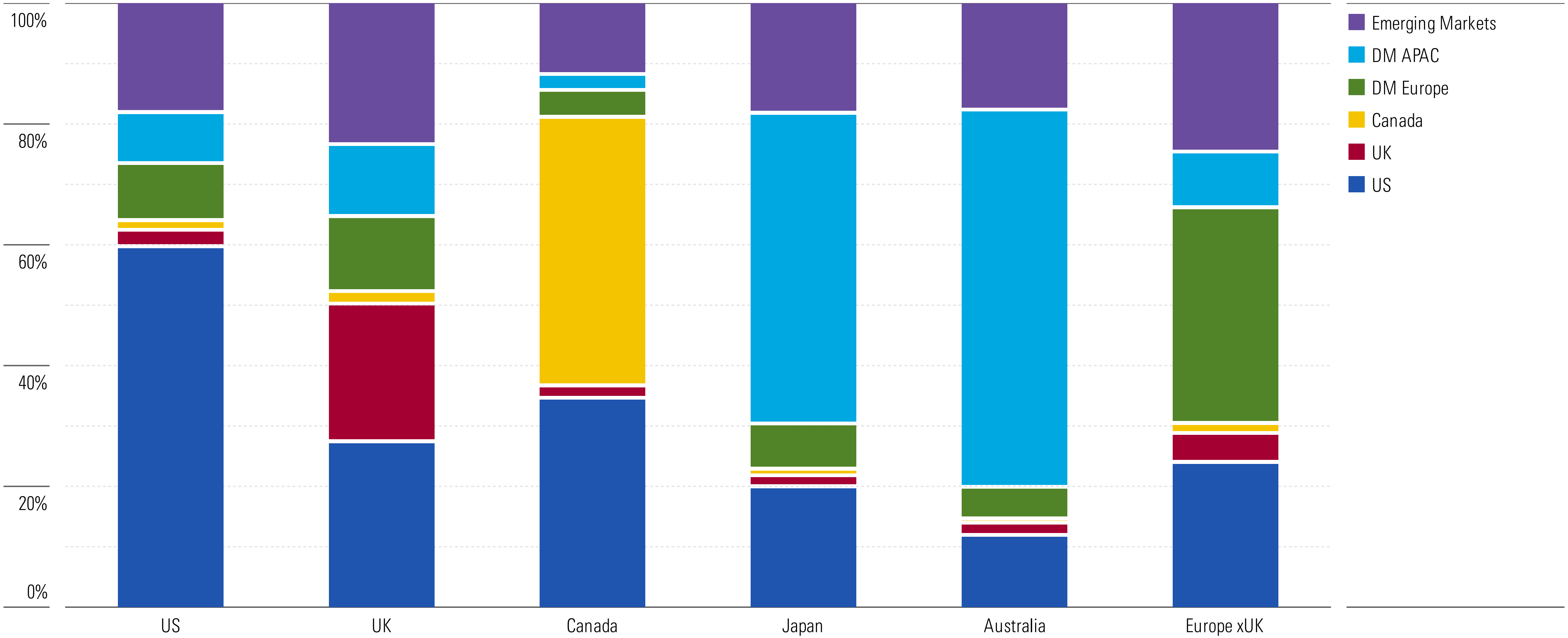


Source: Morningstar Direct as of Jan. 31. 2025.
The communication services sector market cap share increased significantly in 2020 because of the inclusion of Meta and Google in the sector, which were previously classified as being in the technology sector.

Majority of US Market Revenue Derived From Domestic Market, With Lower Emerging-Market Exposure

Revenue Exposure by Region—US Versus Developed Peers

The United States is disproportionately underweight emerging markets on a revenue basis.

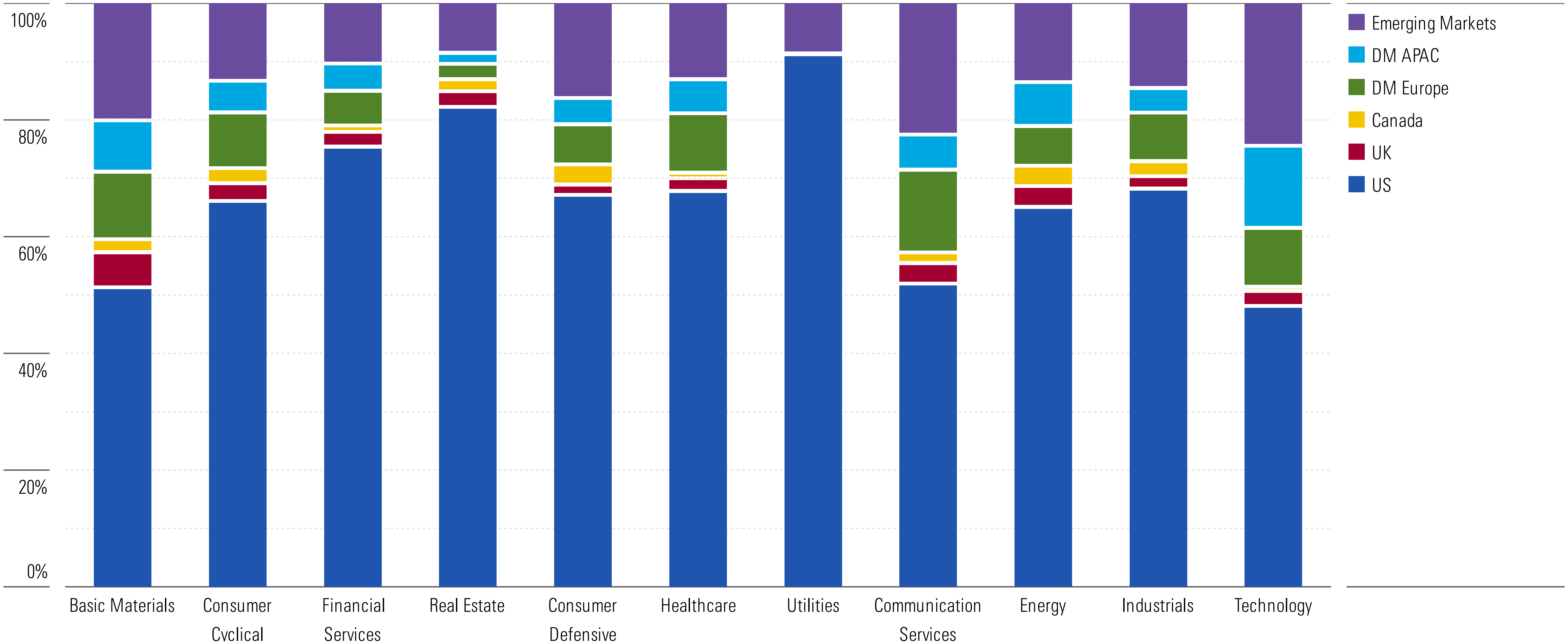


Source: Morningstar Direct as of Jan. 31, 2025.
DM APAC = Developed Markets Asia-Pacific, DM Europe = Developed Markets Europe, Dev Eur = Developed Europe, DM xNA = Developed Markets Excluding North America, EM = Emerging Markets

US Sector Revenue Exposure: Domestic Revenue Sources Dominate Utilities, Real Estate, and Financial Services

Revenue Exposure by Sectors: US

Technology, basic materials, and communications services have the highest international revenue exposure. Utilities and real estate have the lowest.

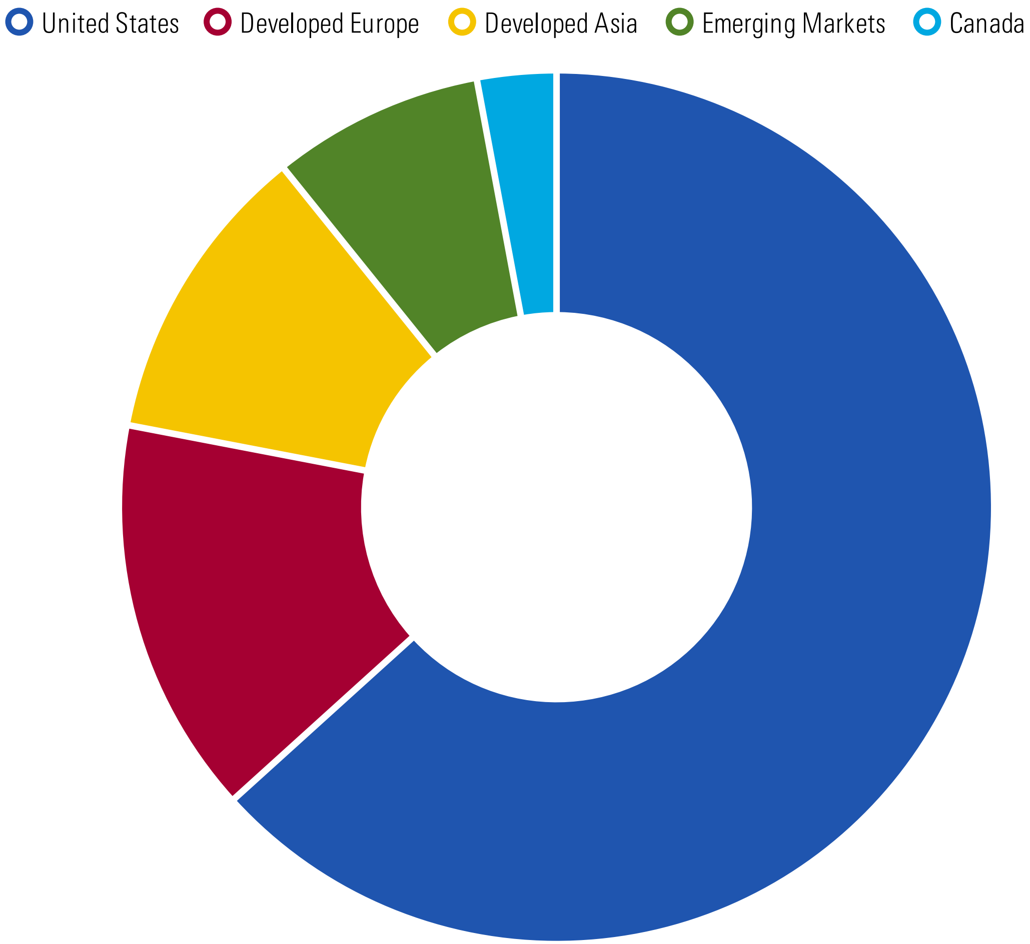


Source: Morningstar Direct as of Jan. 31, 2025.
DM APAC = Developed Markets Asia-Pacific, DM Europe = Developed Markets Europe

US Share of Global Market Has Been Consistently Dominant and Increasing

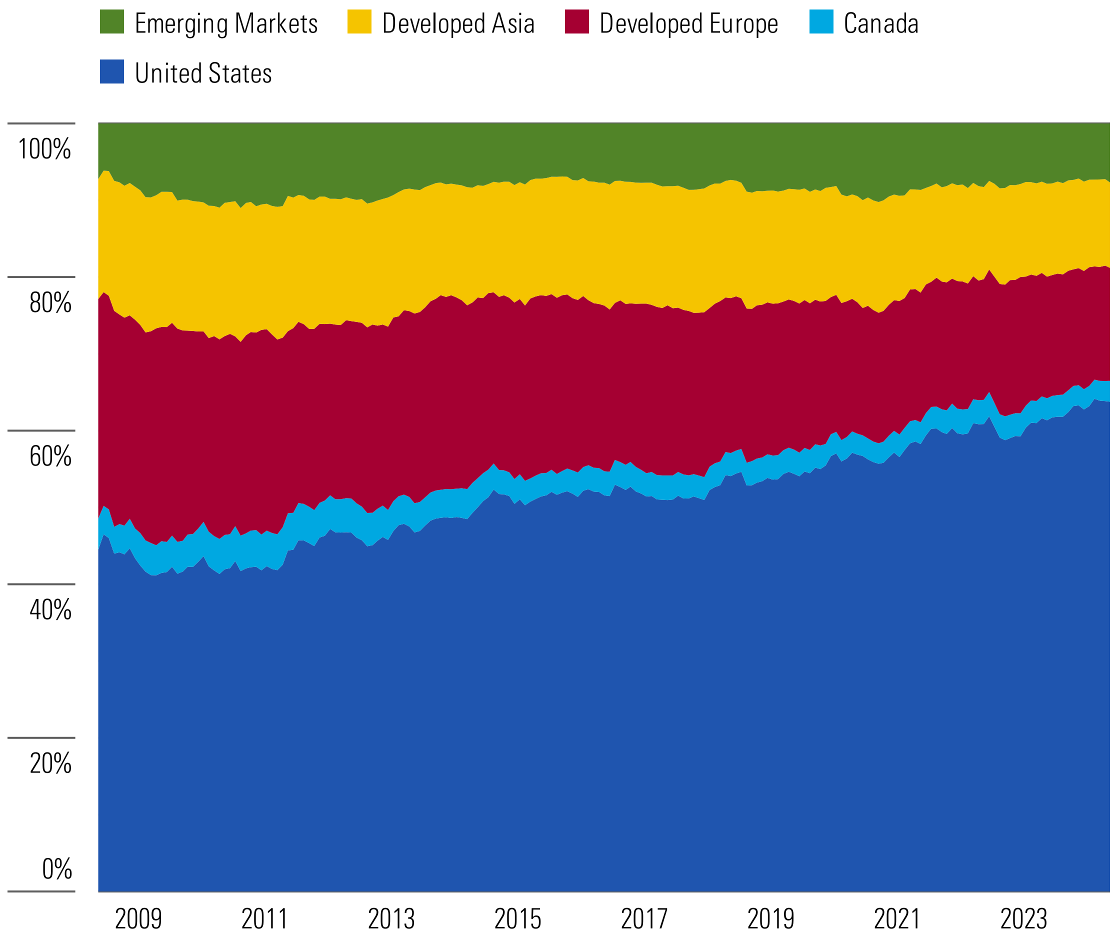
Morningstar Global Markets TME Index by Market Capitalization

US equity market is more than half of the investible global equity universe.



Region Exposure Over Time

The US constitutes 64% of the Global Markets Index, up from 44%.

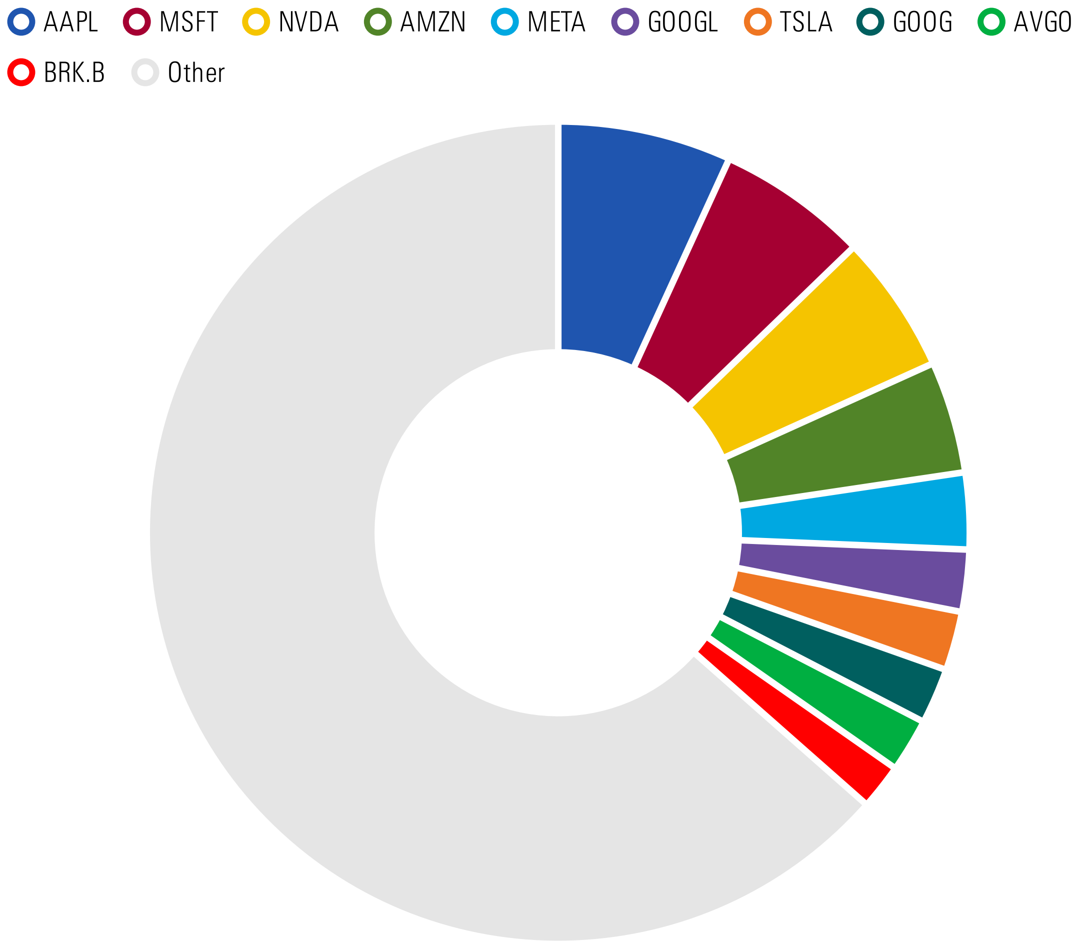


Source: Morningstar Direct as of Jan. 31, 2025.

The Largest Stocks Account for 35% of the US Market, Which Is Lower Than the UK Market

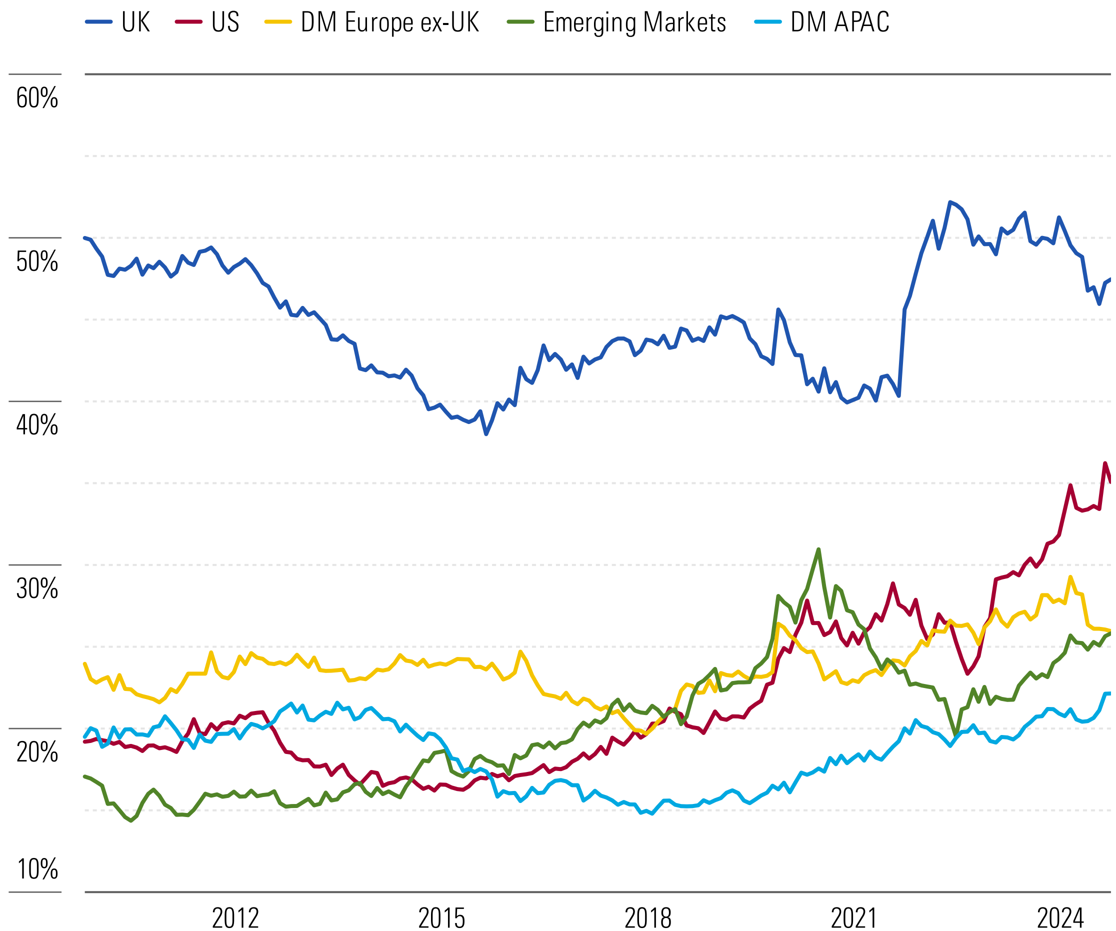
Morningstar US Total Market Index Portfolio Breakdown

The top 10 companies by market cap comprise roughly 35% of the index.



Top 10 Holdings as a Percentage of Market Cap

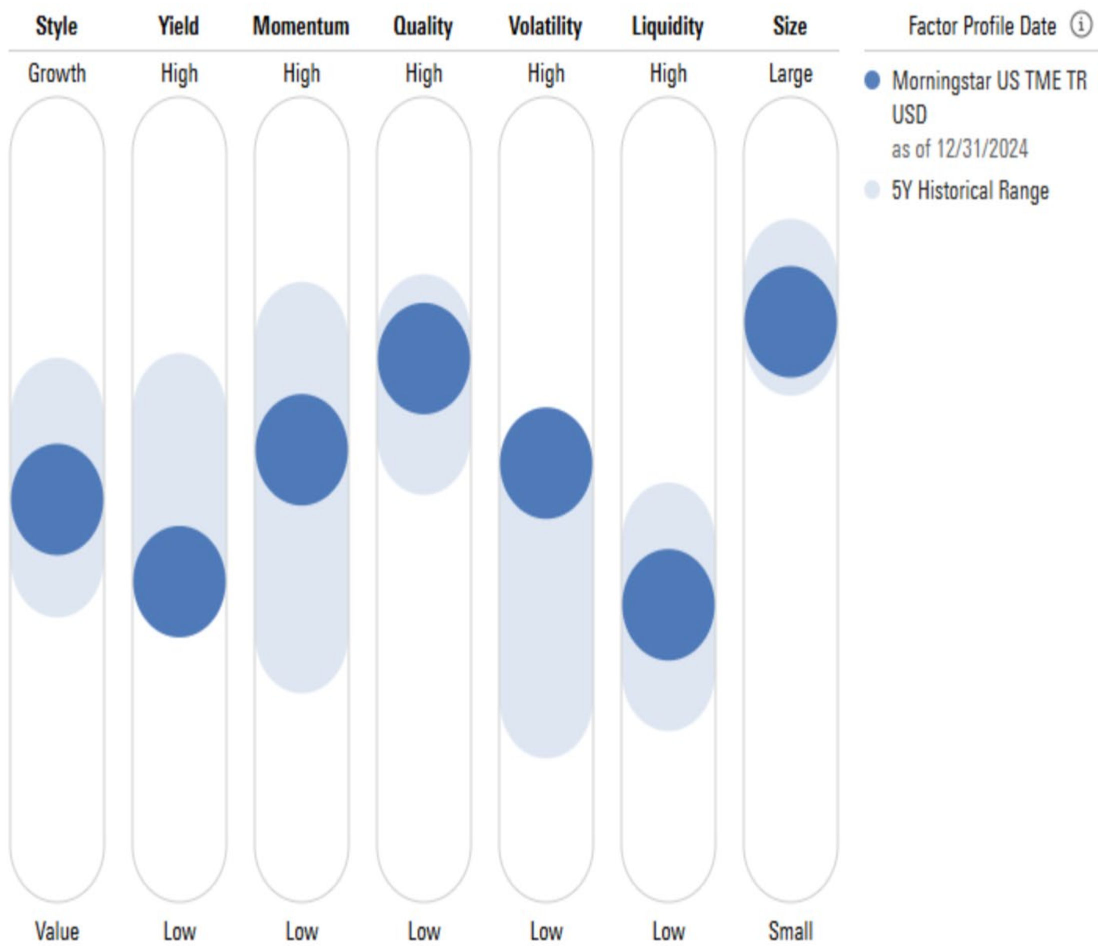
The US market is more concentrated than most broad markets except for the UK.



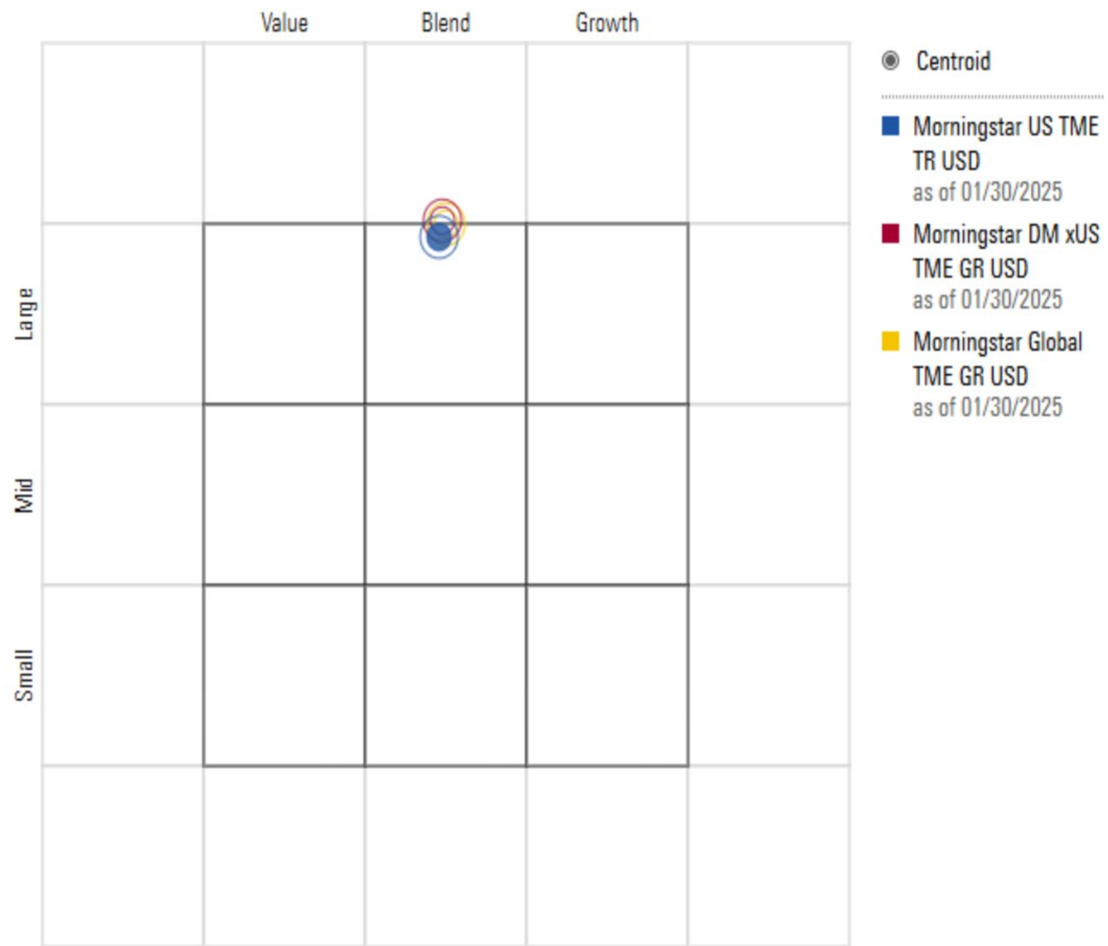
Source: Morningstar Direct as of Jan. 31, 2025.
AAPL = Apple, MSFT = Microsoft, NVDA = NVIDIA, AMZN = Amazon.com, META = Meta Platforms, GOOGL = Alphabet, TSLA = Tesla, GOOG = Alphabet, AVGO = Broadcom, BRK.B = Berkshire Hathaway, DM = Developed Markets, APAC = Asia-Pacific.

US Market Factor/Style Exposure: Large Blend Concentration With High-Quality Factor Exposure

US Equity Market Shows Higher Volatility Factor Exposure Compared With History



Style Box Exposure Is Centered in Large Blend



Source: Morningstar Direct as of Jan. 31, 2025.

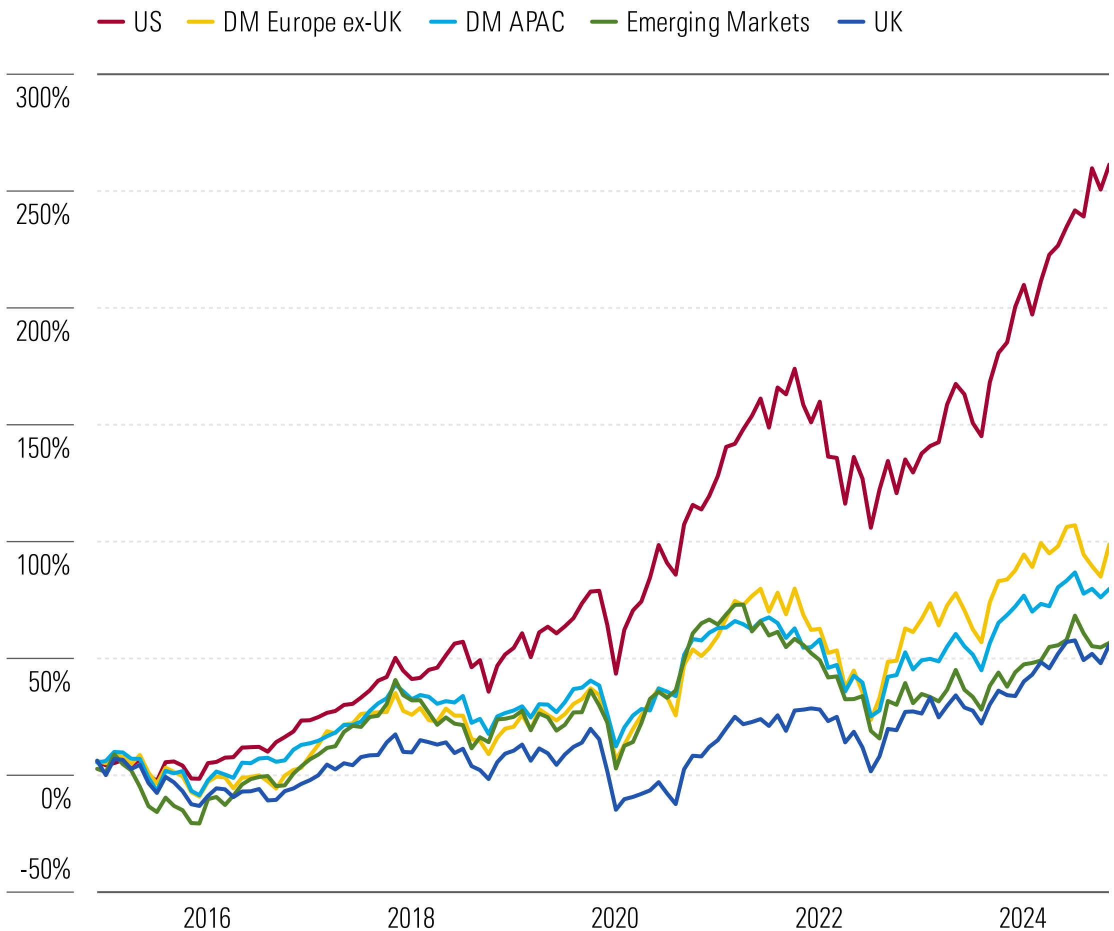
Market Overview: Past Performance

Historical returns of the US equity market in regional and global contexts.

The US Market Has Significantly Outperformed Other Key Markets Over the Past 10 Years

Cumulative 10-Year Performance

Relative US market outperformance accelerated after the onset of the pandemic.



Total Return Annualized

Region	1 Year (%)	3 Year (%)	5 Year (%)	10 Year (%)
US	**26.67**	**11.81**	**15.09**	**13.71**
UK	16.04	6.76	6.19	4.54
Emerging Markets	13.60	0.18	3.82	4.59
DM Europe ex-UK	8.16	5.63	8.15	7.11
DM APAC	6.61	5.15	5.36	6.04

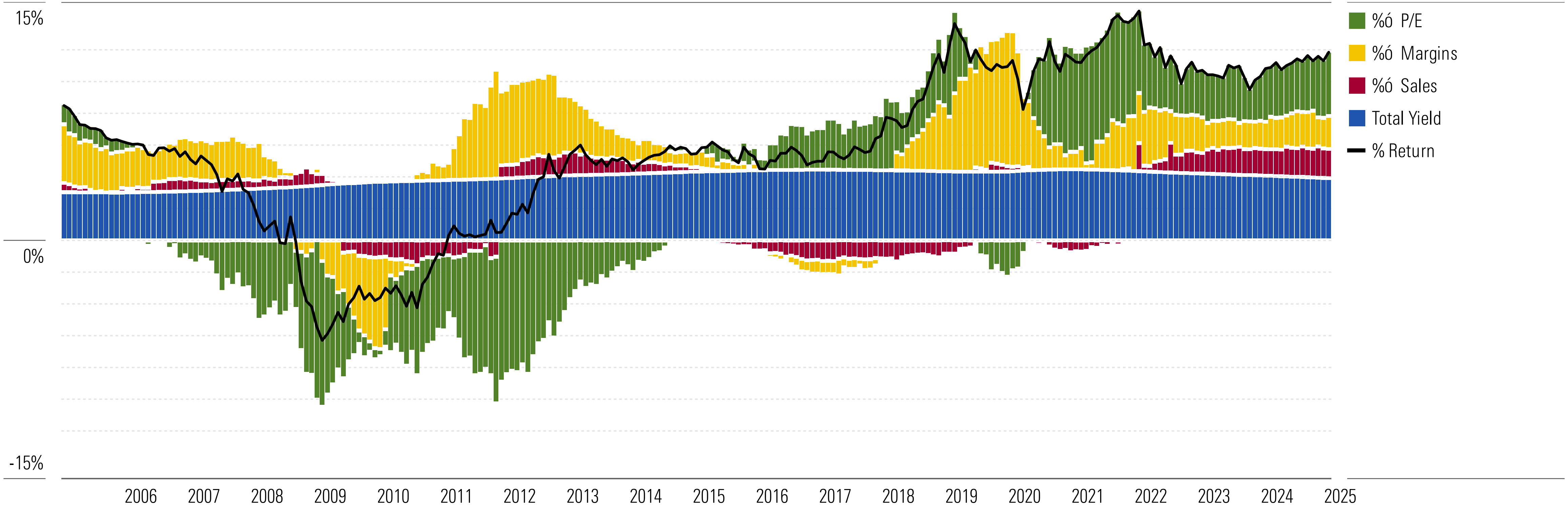
Source: Morningstar Direct as of Jan. 31, 2025.
DM = Developed Markets, APAC = Asia-Pacific

Recent US Market Returns Have Been Driven by Changes in Valuation and Profitability

In this slide, we break up the return for US Healthcare into its different sub-components on a 10-year annualized basis. Total Yield is the 10-year annualized trailing return from dividends and share repurchases. %Δ Sales is the 10-year annualized change in real sales per share after the per share figure has been adjusted for the impact of share repurchases. %Δ Margins is the 10-year annualized change in profit margins after taxes. Finally, %Δ P/E is the 10-year annualized change in the price to earnings ratio.

US Market Rolling 10-Year Real Total Return Decomposition

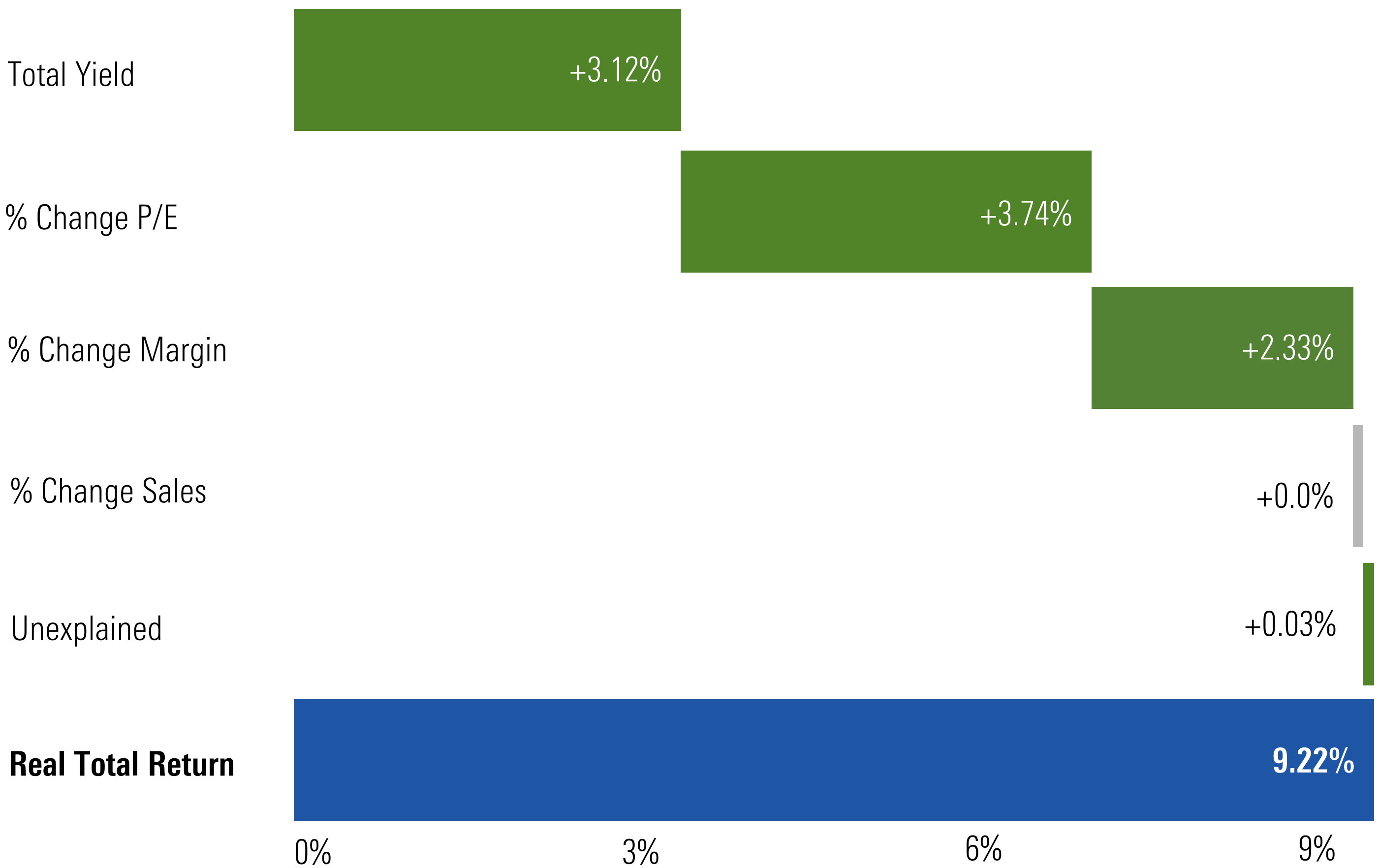
While long-term real returns are driven by distributions, multiples and margin changes drive returns in the short run.



Source: Morningstar Investment Management LLC as of Jan. 31, 2025. Fundamentals sourced from MSCI, Bloomberg, FactSet, and the International Monetary Fund.

Over the Past Five Years, Most of the Real Total Return Is From Dividends, Buybacks, and Multiples Expansion

Trailing Five-Year Return Decomposition



Description of Return Sources

Total yield is the sum of the dividend and buyback yields

The percentage change in the price to earnings multiple (i.e., multiple expansion/contraction)

The percentage change in the net profit margin (net profit divided by total revenue)

The percentage change in real sales per share adjusted for share repurchases

The component of real total return that cannot be attributed to the above factors

The annualized trailing five-year real total return of US equities

Source: Morningstar Investment Management LLC. Fundamentals sourced from FactSet, Bloomberg, the International Monetary Fund. Data as of Dec. 31, 2024. All return components are annualized log returns over the trailing five-year period. Difference between the real total return on this slide and the nominal five-year return on Slides 19 and 20 is due to inflation of 4% over the period, and the interaction between model subcomponents.

Economic Outlook: Metrics, Drivers, and Risks

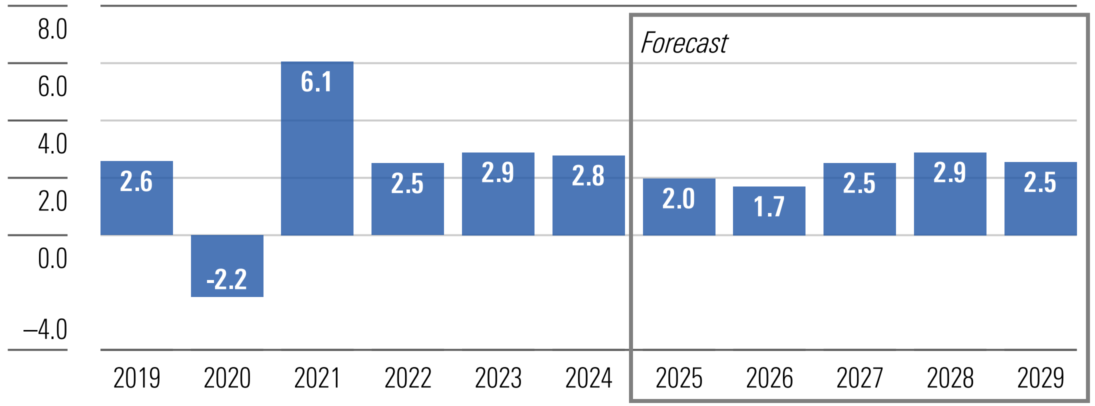
Assessment of current economic conditions for the US, including GDP, inflation, and downside risks.

GDP Growth: Expected to Remain Higher Than Other Advanced Economies

GDP Growth to Trough in 2026

US real GDP has posted solid growth in 2023 and 2024 despite facing the largest federal-funds rate hikes in four decades. Several factors have propped up growth, including excess savings, asset price appreciation, strong government spending growth, and a factory building boom. But these factors will likely fade in impact, and the stress of high interest rates will accumulate, leading to slowing GDP growth over the next year. We expect growth to trough in 2026 in terms of the annual averages. After that, we expect aggressive Fed rate cuts to drive a growth rebound over 2027-29.

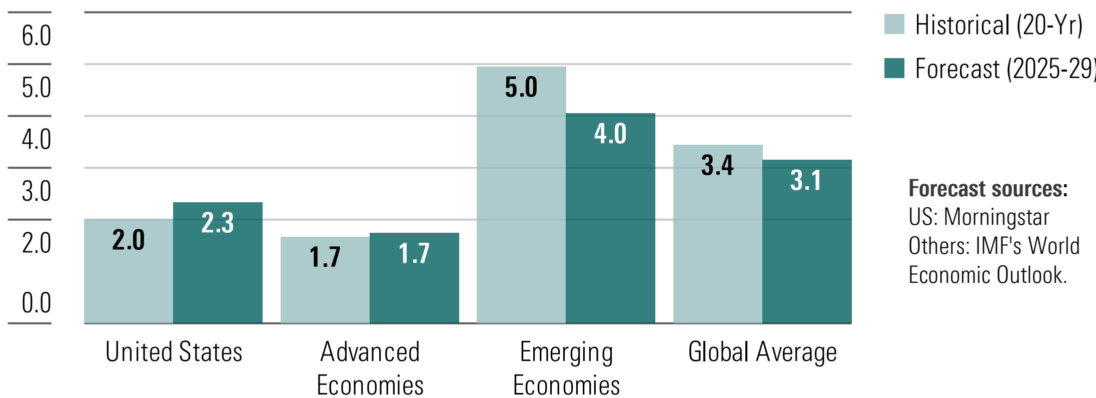
US Real GDP Growth (%) *Annual Averages*



US to Outperform Recent History And Peers

Our forecast for 2.3% average real GDP growth for the US over the next five years exceeds the forecast by the IMF for the average advanced economy (1.7%), as well as the US' own 20-year historical average growth (2.0%). The outperformance against both peers and historical average is owing principally to an uptick in US productivity growth. Also, the gap between the US and the average emerging economy in terms of economic growth should be narrower compared with the past 20 years.

GDP Growth: Comparison[1]



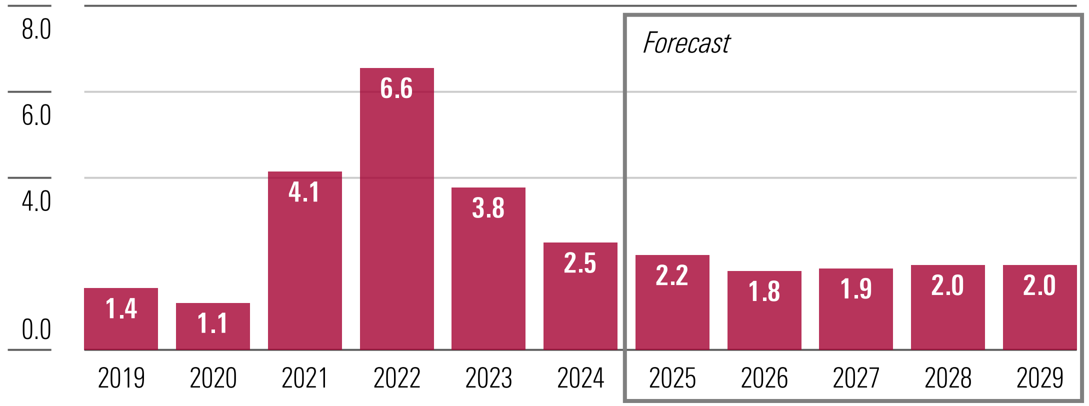
Forecast sources:
US: Morningstar
Others: IMF's World Economic Outlook.

Inflation: Continuing the Slow March Down Toward Its Long-Term Average

Inflation Should Return to Normal in 2025

Inflation in 2022 reached its highest level in forty years, as supply constraints combined with excess demand to drive up prices. But supply constraints have alleviated, and so the spiking of prices in energy, durables, and other is now unwinding. That's driven inflation down greatly over the past several years. We essentially project a return to normal for inflation in 2025, with inflation averaging 2.0% over 2025-29. Slowing economic growth, along with the running off of the lagged inflationary effects in housing, should push inflation lower in coming years. But we're currently still marking a relatively low probability of the worst case for tariff hikes, so if we're wrong then it could take longer to return inflation to the Fed's 2% target.

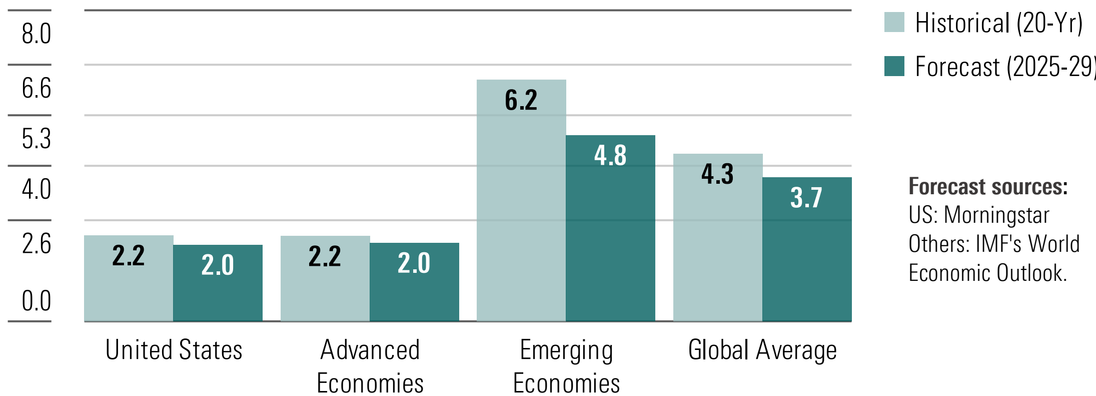
US Inflation Rate (%), PCE Price Index *Annual Averages*



Inflation in US to Remain Close to Historical Average

We expect inflation in the US in line with the Fed's 2% target, similar to other advanced economies. Over the past 20-years, the US inflation has averaged 2.2%, not far from the Fed's 2% target. While the Fed substantially overshot its inflation target over 2021-23, this is offset by an undershooting of the target which occurred over the 2010s.

Inflation: Comparison[1]



Forecast sources:
US: Morningstar
Others: IMF's World Economic Outlook.

Source: Bureau of Economic Analysis, International Monetary Fund.

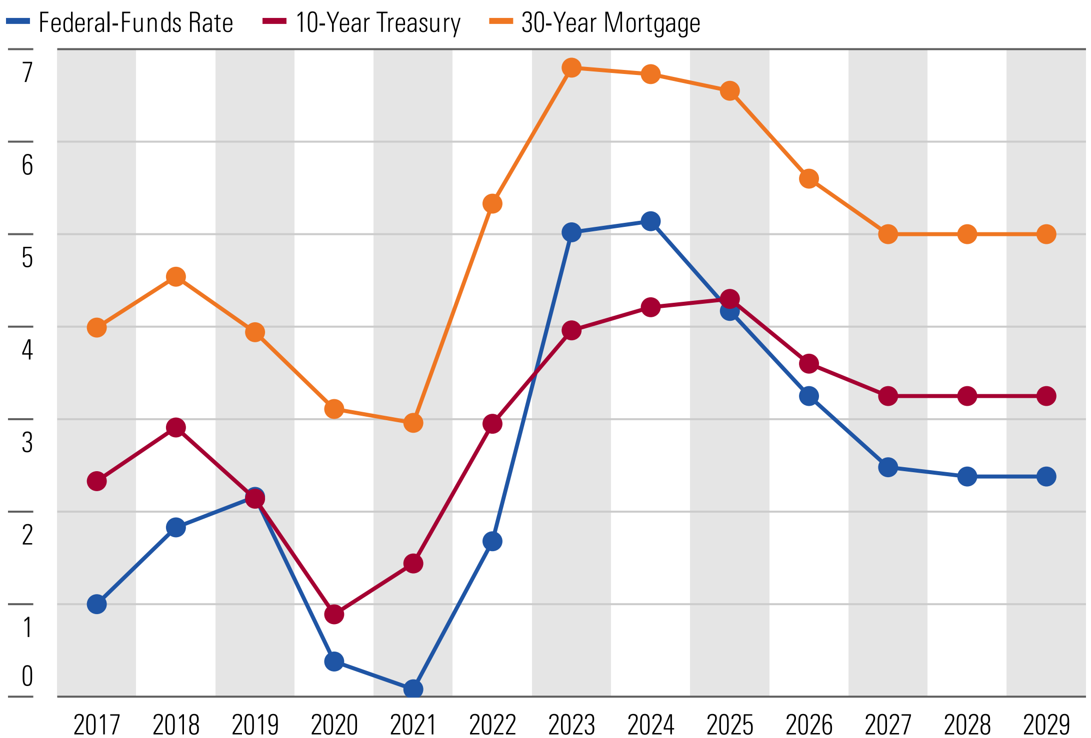
Interest Rates: Yields to Remain Elevated in Near Term as the Fed Pauses Rate Cuts Post-Trump Inauguration

We Project a 10-year Treasury Yield of 3.25% in 2027 and Later Years

The federal-funds rate has been cut by 100 basis points since September 2024, but owing to diminished market expectations about future rate cuts, longer-term bond yields have actually increased since then. We now expect the 10-year Treasury yield to average 4.3% in 2025, slightly above the 4.2% in 2024. The Fed will have to cut much further to drive longer-term yields lower – we expect another 200 basis points of cuts through early 2027. This should drive the 10-year yield to an average 3.25% by 2027, which is our long-run expectation. In turn, this should drive the 30-year mortgage rate down from an average 6.7% in 2024 and 6.6% in 2025 to 5.00% by 2027.

While the path of interest rates over the next couple of years is mainly contingent upon the cyclical status of the economy, our long-term interest-rate projections are driven by secular trends. Factors such as aging demographics, slowing productivity growth, and increasing inequality have acted to push down real interest rates for decades, and these forces haven't gone away. The low-interest-rate regime will resume once the dust settles from the pandemic economic volatility. Our long-term views and monetary policy framework are detailed in our US Outlook for Interest Rates, Inflation, and Monetary Policy.

Interest-Rate Forecasts (Annual Average)



(%)	2024	2025	2026	2027	2028	2029
Fed Funds Rate	5.14	4.17	3.25	2.48	2.38	2.38
10-Year Treasury	4.21	4.30	3.60	3.25	3.25	3.25
30-Year Mortgage	6.73	6.55	5.60	5.00	5.00	5.00

Source: Federal Reserve, Morningstar.

Monetary Policy: Market Expects Persistently Higher Rates Compared With Our Forecast

Market Thinks Fed Nearly Done Cutting, but We Expect Much More

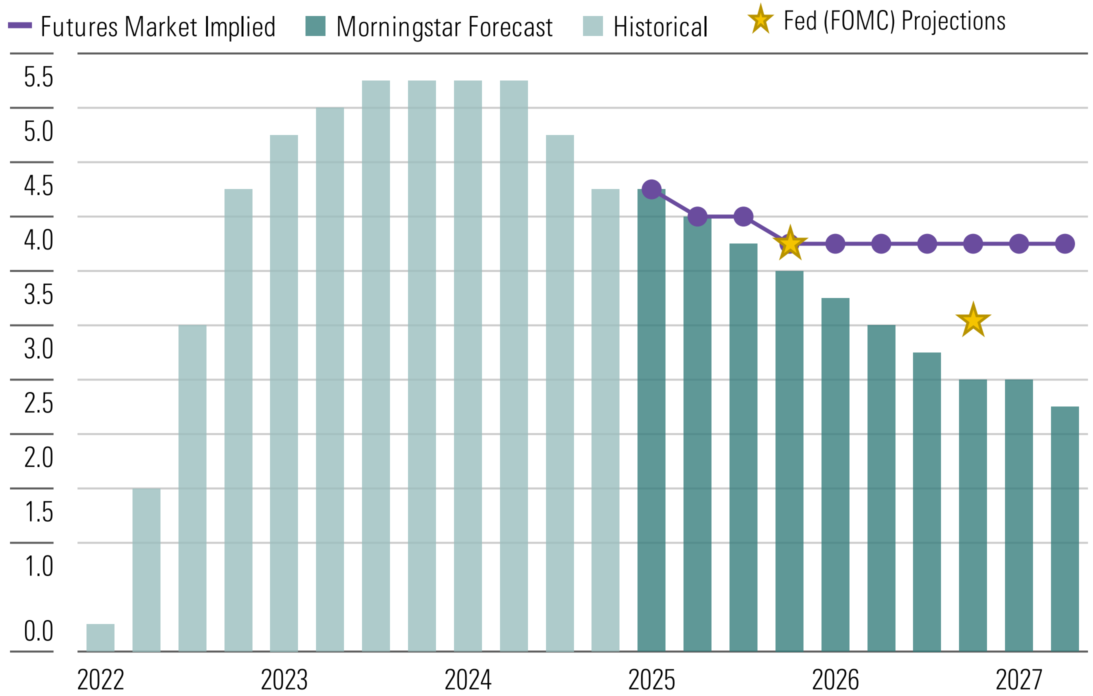
The federal-funds rate had been maintained at a lofty plateau of 5.25-5.50% from July 2023 through September 2024. From September to December 2024, the Fed cut by 100 basis points, bringing the federal-funds rate down to a target range of 4.25-4.50%. That's still well above the pre-pandemic 2017-19 average of 1.7%.

The Fed refrained from cutting rates in its January 2025 meeting. Slightly sticky inflation along with policy uncertainty is likely to postpone the next rate cut until May. We expect three more rate cuts in 2025, bringing the year-end federal-funds rate to 3.50-3.75%. We expect it to fall further to 2.25-2.50% by the first half of 2027. Falling inflation along with slowing economic and job growth should induce much more cutting from the Fed.

Market expectations for the federal-funds rate path have shifted significantly since late September, with expectations for the year-end 2025 federal-funds rate moving up by around 100 basis points. We think the market is projecting a terminal rate that's too high, reflecting an overestimate of the natural rate of interest. We wrote about the dangers of keeping rates too high for too long in our US Financial Health Report 2024.

Federal-Funds Rate Expectations, %

Bottom of Target Range



Federal-Funds Rate (%) Year End, Bottom of Target Range	**2025**	**2026**	**2027**
Morningstar	**3.50**	**2.50**	**2.25**
Market-Implied	**3.75**	**3.75**	**3.75**
Fed (FOMC)	**3.75**	**3.25**	**3.00**

Source: Chicago Mercantile Exchange, Morningstar.

Long-Term Growth: Supply Side Framework Underpins Our Forecasts

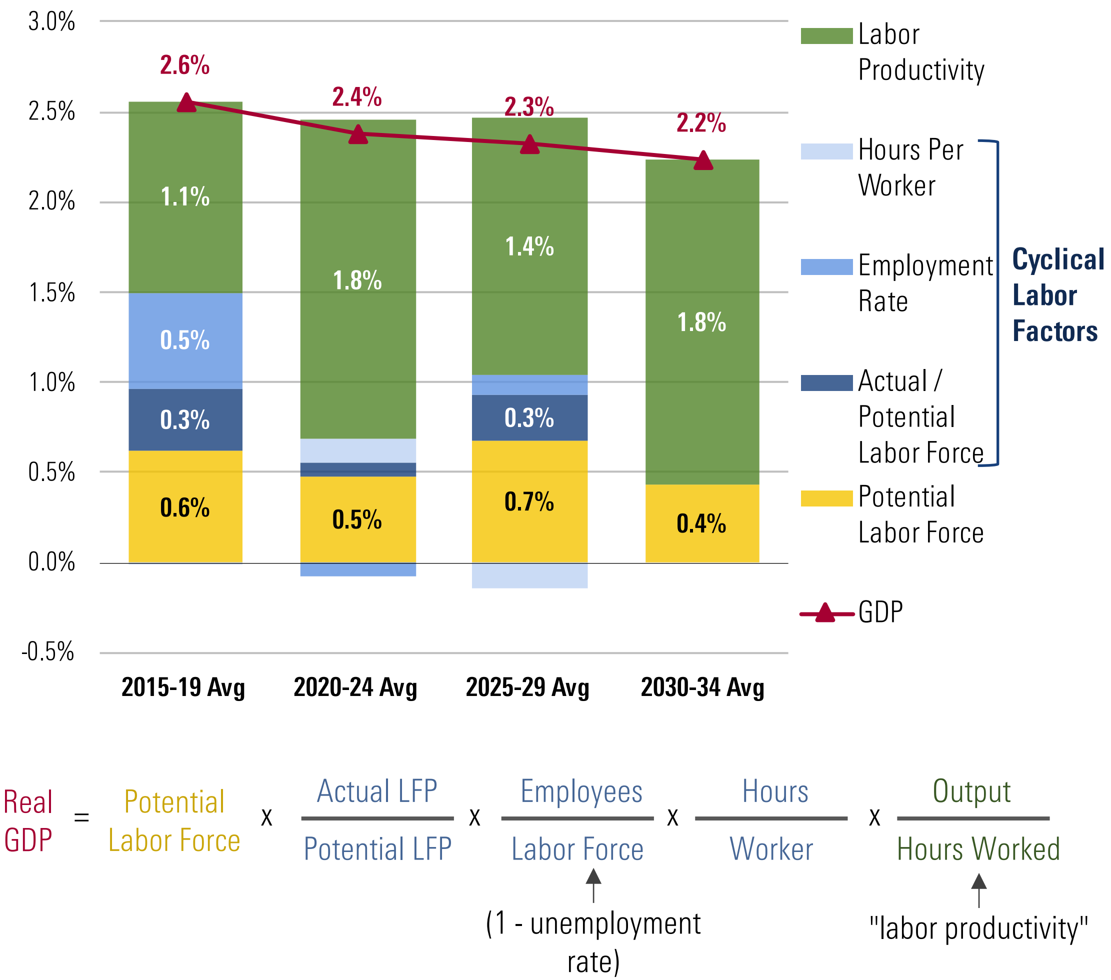
We Expect More Labor Force Expansion Than Consensus

Our longer-run GDP forecast is determined solely by our projections for the supply side of the economy, as we expect the Fed to calibrate aggregate demand so that the economy is operating at full capacity. GDP growth in the prepandemic years was fueled heavily by cyclical labor market expansion (the long recovery from the Great Recession). Therefore, we can't take for granted that pre-pandemic growth rates represent a good benchmark for long-term growth.

Compared with consensus, our bullish view on GDP through 2029 is driven by our expectations for labor supply. We expect labor force participation (adjusted for demographics) to recover ahead of pre-pandemic rates as widespread job availability pulls in formerly discouraged workers. Consensus expects labor force participation to struggle to reach pre-pandemic rates.

Since the start of the pandemic, productivity growth has averaged about 1.8%, and we expect about 1.4% growth over 2024-28. This should accelerate further over 2030-24 as the impact of AI starts to play out in the broader economy.

US Real GDP Growth: Supply-Side Decomposition

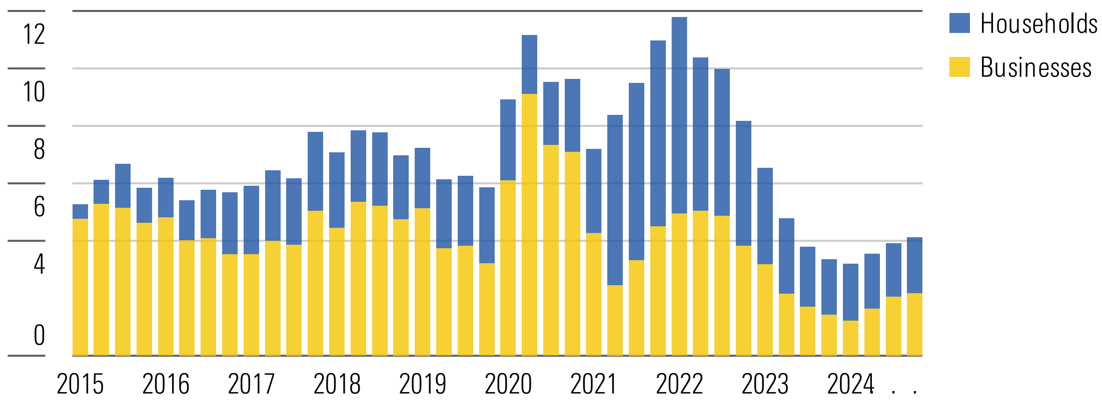


Recession Risks: No Impending Expectation of Recession; Keep an Eye on Rising Credit Delinquency Rates

Credit Contraction Has Bottomed Out for Now

Credit issuance to the private nonfinancial sector decelerated sharply from a peak of 11.8% in the first quarter 2022 to a low of 3.2% in the first quarter 2024. Historically, we've never seen a credit contraction that large occur without a recession. This credit contraction is still somewhat worrying, but we have seen credit issuance rebound to around 4% as of the fourth quarter 2024 (based on our estimates of preliminary data). Credit issuance has typically been a lagging indicator, so this may mean the economy has gotten off scot-free. Still, tightened availability of credit is a cause of pain in certain areas of the economy (like commercial real estate), which will likely drag on growth over 2025-26.

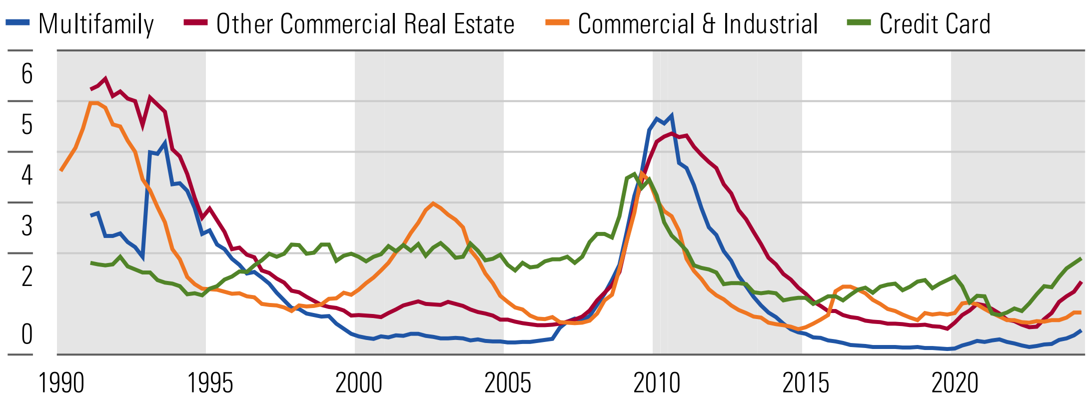
Change in Nonfinancial Debt by Borrowing Sector, % GDP Trailing 12-Month



Delinquency Rates Still Ticking Up

The noncurrent rate on banks' commercial real estate loans has continued to rise quickly, reaching 1.4% in the third quarter of 2024. That's well above the pre-pandemic (2019) average of 0.6%, though minor compared with major commercial real estate crashes like the early 1990s and 2008. The multifamily delinquency rate has increased to 0.7% from 0.1% in 2019. Further pain is likely in the office sector. Property prices are still declining, leading to a rise in defaults and foreclosures. The interest burden on new loans is still very high compared to pre-pandemic interest rates.

Noncurrent Rate (%) on Bank Loans *90+ Days Past Due*



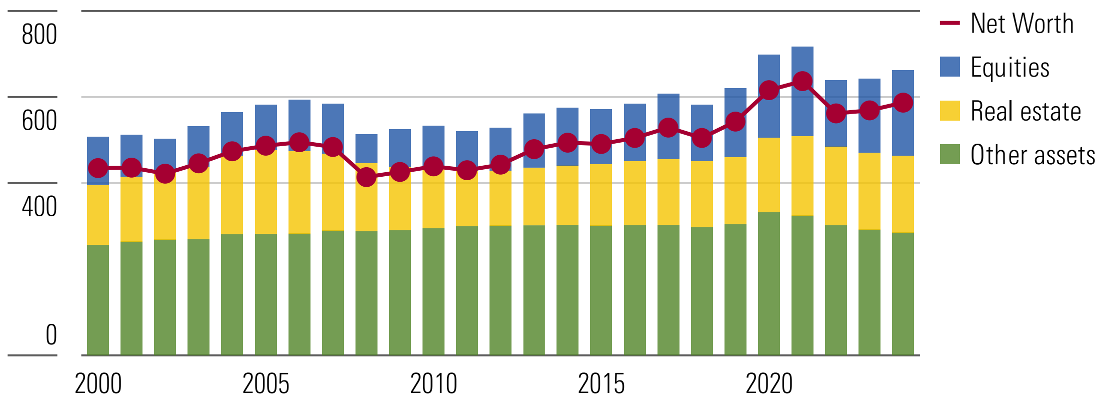
Recession Risks (Continued)

High Assets Prices Have Offset Restrictive Monetary Policy

With equity prices soaring by 24% in 2024 and home prices up a decent 4%, household net worth climbed higher in 2024. We estimate household net worth stood at 595% of GDP at the end of 2024, up from 569% at the end of 2023 and up markedly from 543% as of the end of 2019 before the pandemic.

While it's not evident that high equity prices are doing much to bolster corporate investment, the wealth effect for households is likely supporting consumption. Thus, if asset prices were to abruptly fall, it could necessitate the Fed to ease monetary policy much more quickly than it's currently planning, in order to avert a drop in consumption.

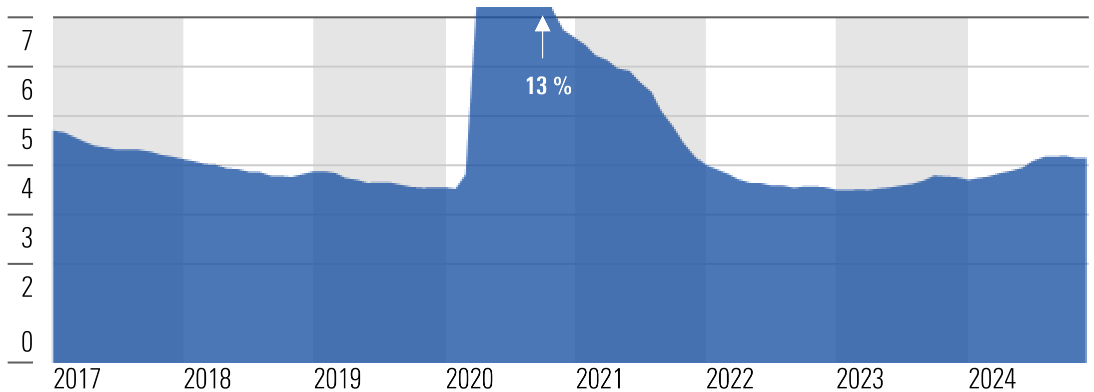
Household Assets and Net Worth (% GDP)



Unemployment Rate No Longer Rising

Commensurate with steady employment growth in recent months, the three-month average unemployment rate stood at 4.1% as of January, about the level it's maintained since August 2024. This follows a 0.5 point increase from August 2023 to August 2024, which sparked some recessionary fears. This rise had triggered the "Sahm Rule", which says that any 0.5 point increase in the unemployment rate (three-month average) within a twelve month period always leads to a recession in the US historically. We had been skeptical about the efficacy of this signal, especially given the recent rise in unemployment was likely driven by expanding labor supply.

Unemployment Rate, % Three-Month Moving Average



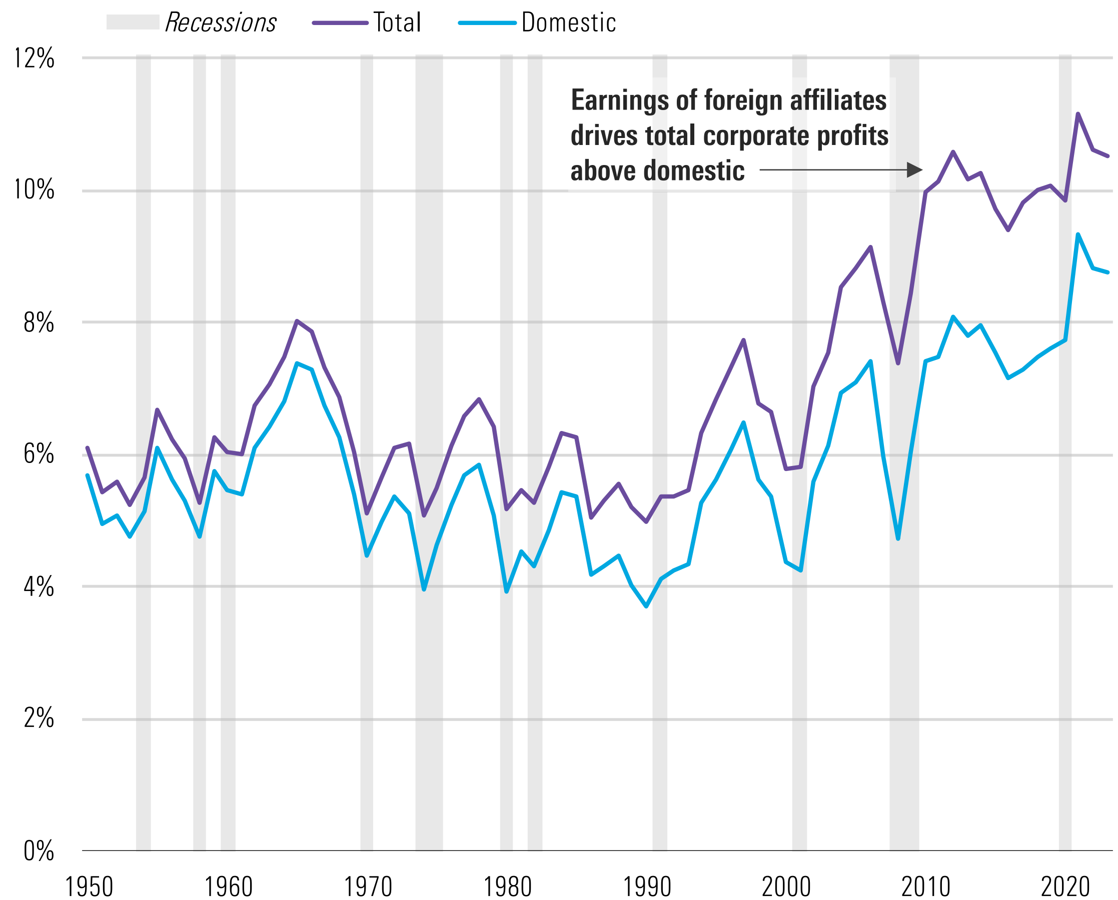
Source: Bureau of Economic Analysis, Federal Reserve, Morningstar

Corporate Profits Remain at Elevated Levels Compared With History; Reversion Could Have Material Impact

Corporate profits are highly cyclical (and their decline is often a leading indicator, as seen in the 2001 and 2008 recessions, among others). But corporate profits hardly fell during the pandemic recession. They currently stand a touch above pre-pandemic levels. Since the pandemic, profits on domestic business have surged, although this has been somewhat offset by a decrease in profits on foreign operations.

Corporate profits have trended up for 30 years, with total corporate profits in national income rising from an average 5.5% of GDP in the 1980s to 10.5% of GDP in 2023. The increase is somewhat smaller (4.3 percentage points) if we just consider profits from domestic business. Even if the US maintains solid GDP growth, a reversion in the profits share to historical levels would severely impact corporate earnings.

Corporate Profits, % GDP



Source: Bureau of Economic Analysis, Morningstar.

Corporate Profits (Continued)

In the short term, corporate profit growth is extremely volatile[1] as profit margins are very procyclical. But these downswings in profit are generally not permanent. Over the very long run, total corporate profits tend to grow in line with GDP. Despite frequent recessions, GDP itself deviates little from its long-run trend (since the Great Depression, at least).

Earnings per share for public corporations does slightly lag total corporate profits in the long run, growing about 1% more slowly over 1929-2019. In the short run, the two measures diverge because of differences in accounting (NIPA versus GAAP). The long-run divergence in corporate profits and EPS is driven mainly by the issuance of new shares, including initial public offerings. This stems from the fact that a large portion of the rewards of economic growth accrues to new businesses rather than owners of existing capital.[2]

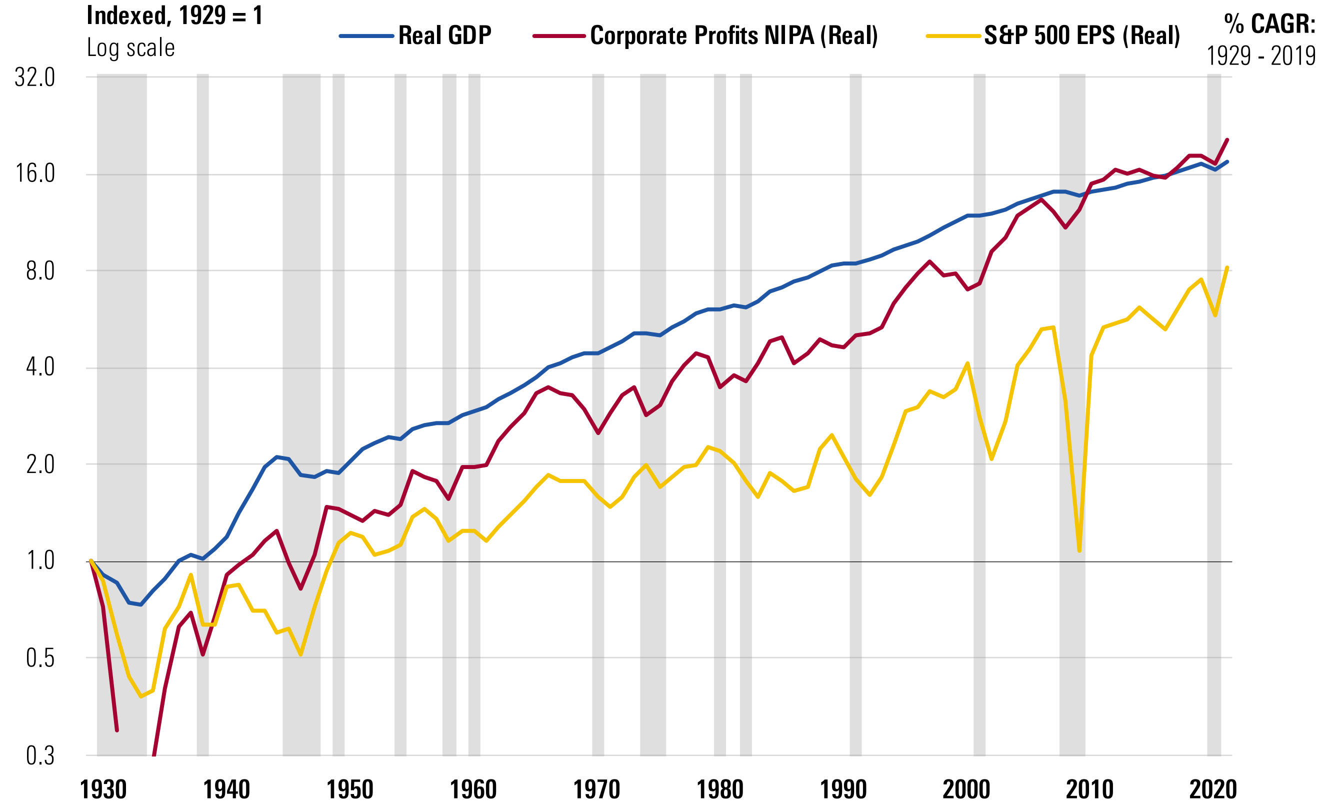


Chart Guide

- Corporate profits are after tax and are part of the National Income and Product Accounts issued by the Bureau of Economic Analysis. The scope includes all US corporations, public or private. This measure uses accounting rules that harmonize with GDP data, which differs from GAAP.
- Corporate profits and S&P 500 earnings per share are transformed to real terms by dividing by the GDP deflator.

1 The standard deviation in corporate profit growth was 10% over 1980-2019, compared with 2% for real GDP growth.
2 As pointed out in Arnott and Bernstein (2003), "Earnings Growth: The Two Percent Dilution."

Source: Bureau of Economic Analysis, Robert Shiller, Morningstar. Data as of Aug. 25, 2022.

Spotlight: Tariffs Constitute Main Policy-Related Risk to US Economy

Trump's Proposed Tariff Hikes Could Cause GDP to Fall by a Combined 1.6%

We project a decrease to the level of US real GDP of 1.1% in the case of a 10% uniform tariff hike and 0.5% in the case of 60% tariffs on imports from China. Our impact estimates derive from several studies using diverse. However, we think the probability that these tariffs are implemented and maintained for a multiyear period is low. Markets mostly seem to be pricing in the same. Still, we've shaved 0.32% off our forecasts for cumulative real GDP growth through 2028 to account for the probability-weighted impact. The quick and easy negotiations which alleviated tariffs on Colombia, Mexico, and Canada supports our low probability assessment.

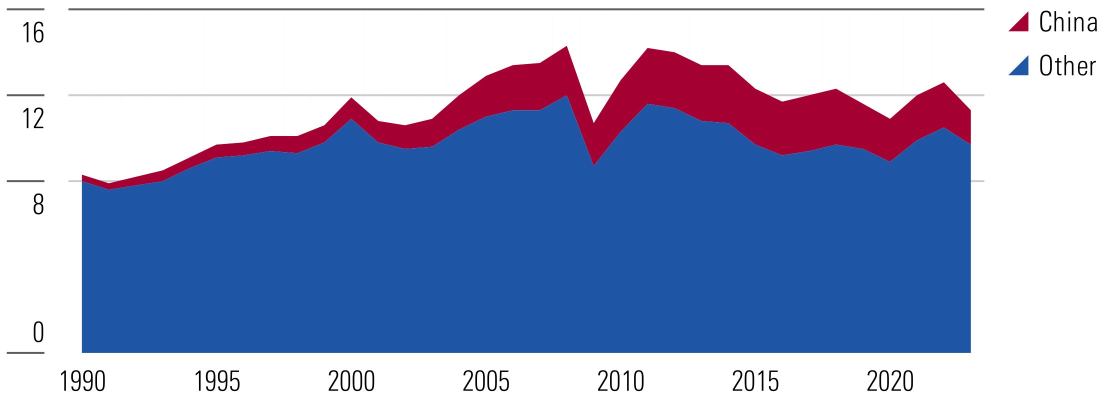
The potential impact of China tariff hikes is somewhat mitigated by the ability of companies to dodge tariffs by rerouting through third countries. Following the 2018-19 tariff surge, goods imports from China fell from an average 2.5% of US GDP over 2016-18 to 1.9% over 2021-23. But total US imports have remained about flat as a share of GDP.

Higher tariffs would unambiguously reduce real GDP. The degree to which they also impact inflation and other macroeconomic variables is contingent on the fiscal and monetary policy response. For example, if the proceeds from tariffs are used for tax cuts, the tariffs would be more inflationary, or they would lead to higher interest rates owing the Fed's response to inflationary pressures. On the flip side, exchange rate appreciation would dent the inflationary impact of tariffs, at the cost of harming US exporters.

US GDP Impact of Tariff Hike Scenarios

Scenario	Impact (% GDP)	Probability (Implemented and maintained)	Probability-Weighted Impact (% GDP)
10% Uniform Hike	1.1%	15%	0.17%
60% on China	0.5%	30%	0.15%
Total	1.6%		0.32%

US Goods Imports % of GDP



Source: Bureau of Economic Analysis (bottom), Various authors (top), Morningstar

Uncertainty: Key Macro-Level Risks Including Geopolitical and Regulatory/Legislative

Geopolitical Risks:

- We discussed the risk and macroeconomic impact of rising tariff levels on Slide 30. It's possible that rising protectionism could have even greater consequences than we contemplate in our scenarios. The 10% uniform tariff could spiral into a full-blown trade war with other major economies like Europe. The 60% China tariff is already tantamount to a trade war, but that scenario could bleed into non-tariff impact such as retaliation against US companies operating in China.

- Increasing US-China tension, and especially a potential conflict over Taiwan, could lead to adverse impact for the macroeconomy and specific industries. As China's military capabilities increase, the odds of conflict rise.

- Conflict with Iran could lead to a disruption in global oil supply, causing a spike in prices and risking a US and global recession. So far, despite ongoing war between Israel and various Iranian proxies (Hamas, Hezbollah), direct military action between Israel and Iran has been limited to small-scale action. Neither side appears eager to escalate.

Regulatory/Legislative Risks:

- The risk that corporate earnings are hit by higher tax rates is essentially nil with the election of Trump (although odds had never been very high, given it probably would've required firm Democratic majorities in Congress).

- Antitrust policy will most likely shift in a more accommodating direction under the new administration, given the turnover of antitrust hawks like FTC Chair Lina Khan and other personnel. That said, recent years have seen more Republican rhetoric voicing suspicion of large corporations, so it remains to be seen how policy will shift.

Valuation: Asset Class Level Perspective

Our top-down view of the US equity market is predicated on a reversion to historical norms for key ratios.

The US Equity Market Is Significantly Unattractive When Viewed Through an Asset Class Level Valuation Lens

Significantly Unattractive	Moderately Unattractive	Neutral	Moderately Attractive	Significantly Attractive

The US equity market is significantly unattractive in absolute terms because it has more than doubled the performance of its international peers over the past five years. With the majority of this return coming from multiple and profitability expansion, the US equity market is priced for perfection.

Negatives:

- Our negative outlook for the US equity market is primarily driven by the current price to earnings multiple (28.2) exceeding our long-term assumption estimate (19.3) by roughly 46%. We expect reversion to our estimate to impinge forward returns.
- We expect return on equity to decrease from its current value of 18.7% to our long-term assumption of 15.7% which will also adversely impact expected returns.

Positives:

- Conversely, we expect that total yield will increase to our long-term assumption of 3.3% from the current level of 2.6%, which should slightly enhance expected return.
- Additionally, we expect long run growth of 2.9% driven by fast growing Technology and Communication Services sectors, which should have a positive impact on returns.

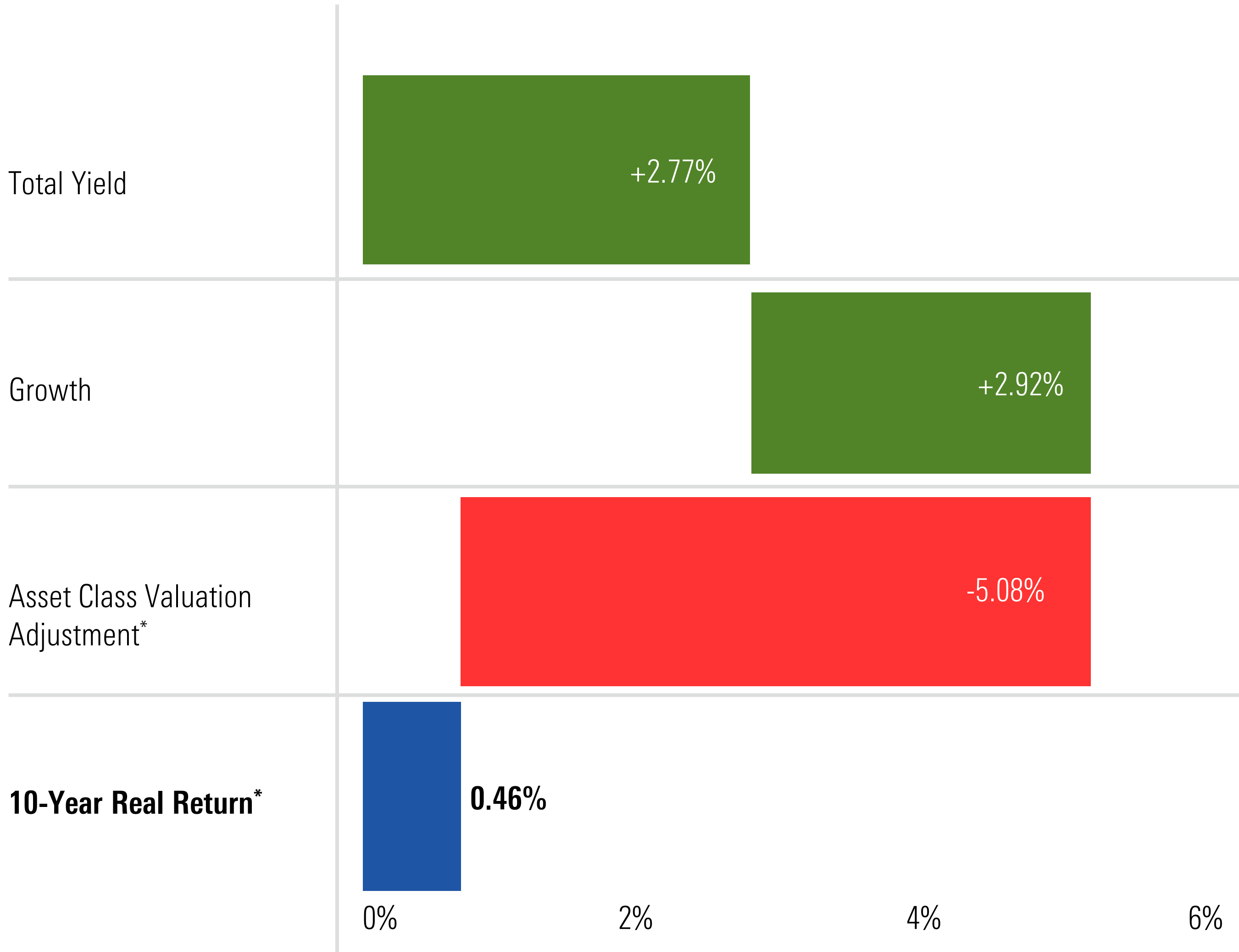
US Equity Sector Multi-Asset Research Assumptions

Name	Current Value	Long Term Assumption
Price to Earnings	28.17	19.31
Total Payout Ratio (%)	73.91	64.11
Total Yield (%)	2.62	3.32
Long Run Growth (%)	1.59	2.92
Net Profit Margin (%)	11.60	9.88
Return on Equity (%)	18.70	15.70

Source: Morningstar Investment Management LLC. Data as of Jan. 31, 2025.

Our Top-Down Model Suggests US Equity Market Will Face Valuation Headwinds Over the Following 10 Years

Annualized 10-Year Real Expected Returns for the US Equity Market Based Solely on Top-Down Model



Description of Return Sources

The average yield we expect an investor to receive from dividends and buybacks over 10 years.

The long-run real organic growth rate in fundamentals we expect an asset class to generate.

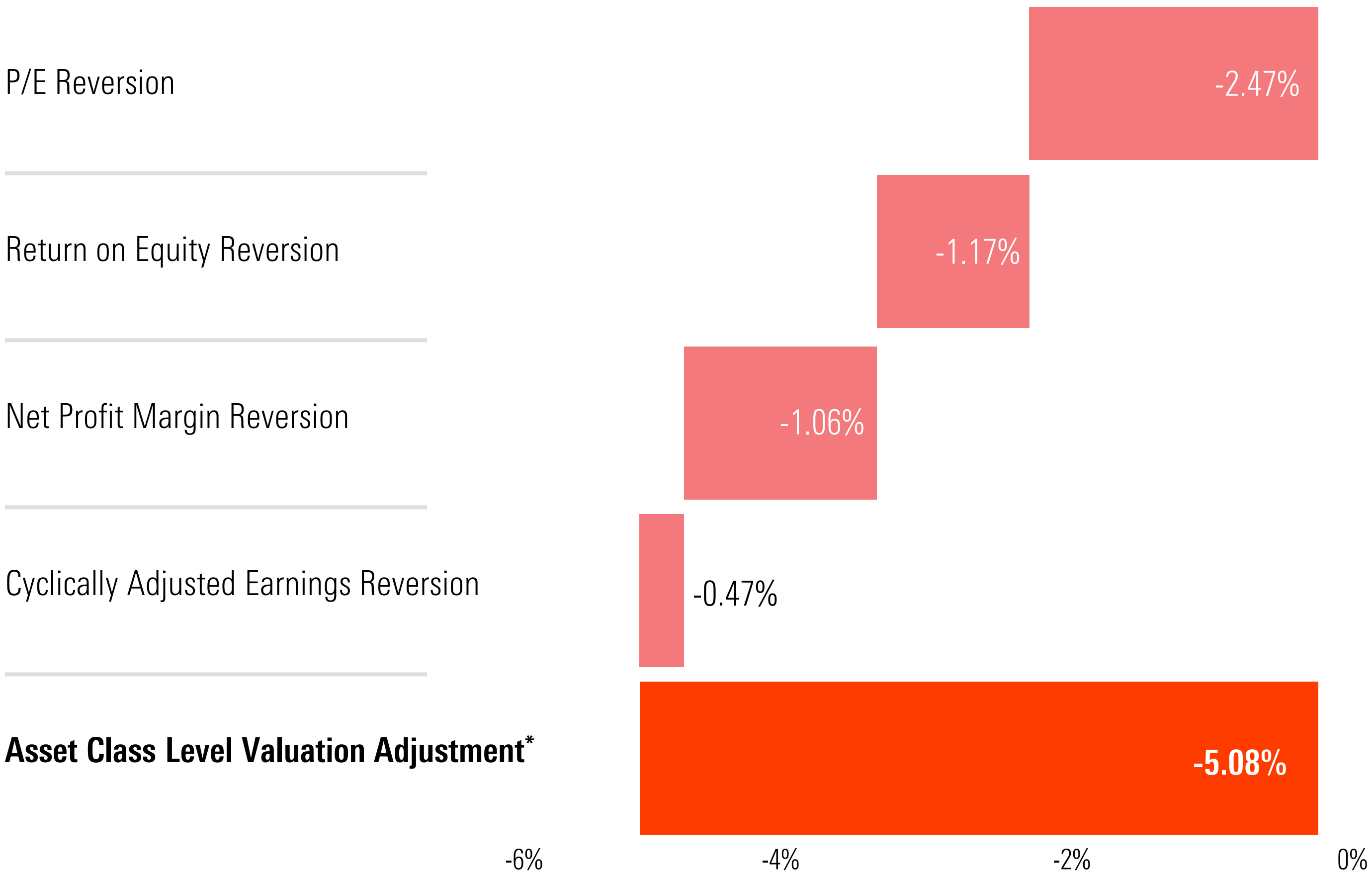
The annualized impact on price return we expect an investor to experience from an asset class being over- or undervalued

The real annualized 10-year return forecast that comes out of our top-down asset class valuation model.

Source: Morningstar Investment Management LLC. Data as of Jan. 31, 2025.
*This does NOT include the incorporation of any signal from our bottom-up stock analyst valuation model.

Ten-Year Real Annualized Asset Class Valuation Adjustment: Long Run Returns Reduced by 5.08%

Ten-Year Real Annualized Asset Class Valuation Adjustment

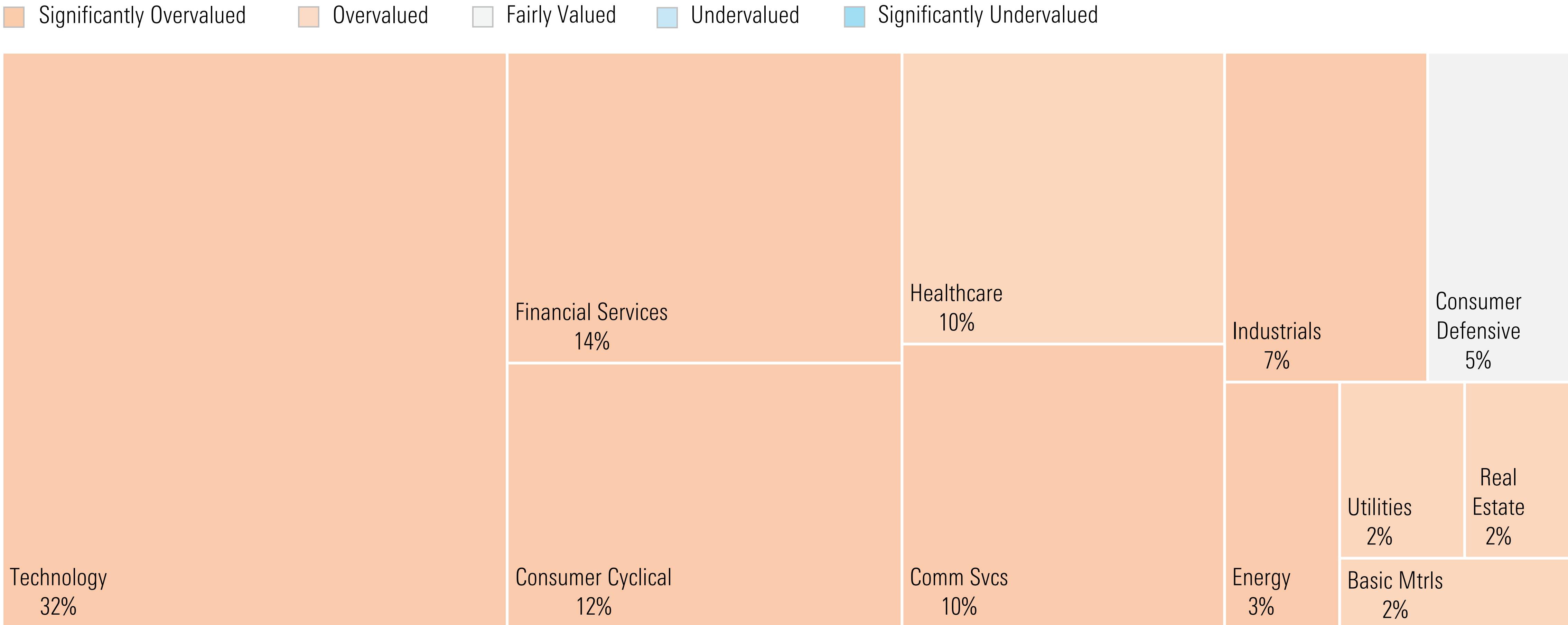


	Current Value	Long-Term Forecast	Long-Term Mean	Comments
P/E Reversion	28.2x	19.3x	20.9x	We expect the P/E to fall to our long-term assumption of 19.3x, which is around the long-term average for the US equity market.
Return on Equity Reversion	18.7%	15.7%	15.1%	We expect Returns on Equity to fall slightly from 18.7% to 15.7%
Net Profit Margin Reversion	11.6%	9.9%	8.8%	We expect Net Profit Margin to fall slightly from 11.6% to 9.9%
Cyclically Adjusted Earnings Reversion				Current net income is above the 10-year average trend.
Asset Class Level Valuation Adjustment*				**We expect an investor to experience 5.08% less return than the long run due to current valuations.**

Source: Morningstar Investment Management LLC. Data as of Jan. 31, 2025.
*This does NOT include the incorporation of any signal from our bottom-up stock analyst valuation model.

Most US Sectors Appear Richly Valued From an Asset Class Level Perspective

US Sectors Look Rich in Valuation Through the Multi-Asset Research Only Model



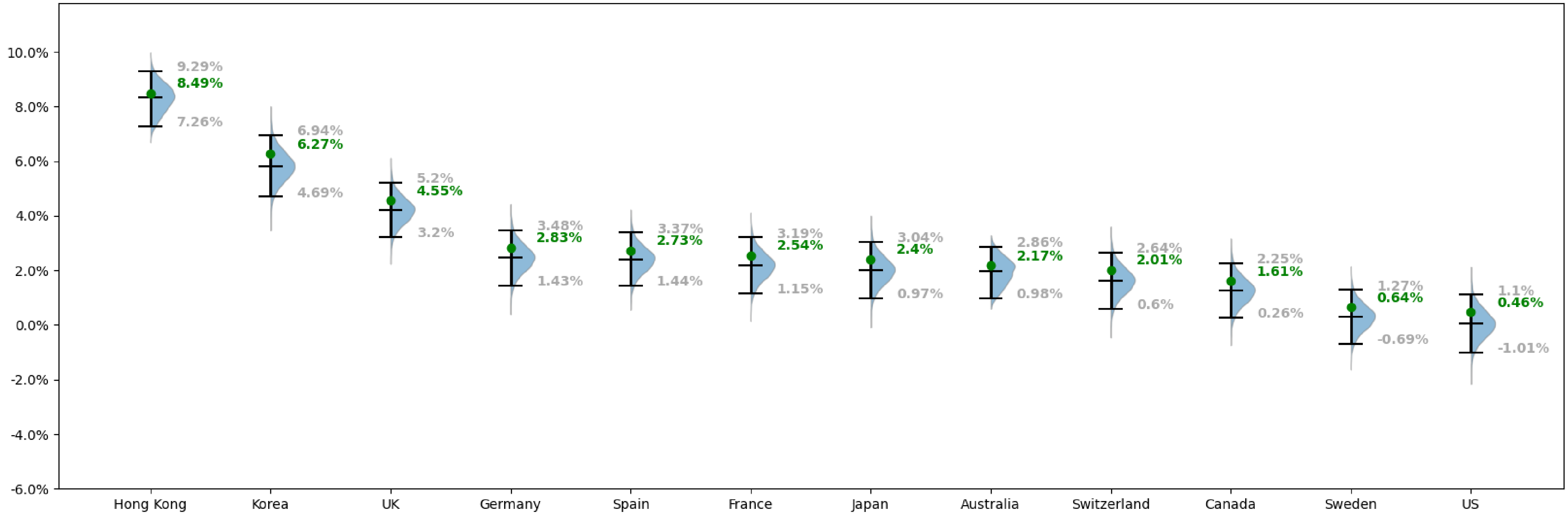
Source: Morningstar Index data as of Jan. 31, 2025.

US Equities Rank as Least Attractive Among Developed Countries, With Narrow Expected Return Distribution

The blue mass captures the expected return probabilities, based on our top-down asset class valuation model. Chart bars represent 2.5, 50, 97.5 percentiles of expected returns, green dots represent current asset class valuation model expected return. All developed countries have a similar narrow range of outcomes. In general, we currently believe that APAC and Europe offer a better return-for-risk than cyclicals.

Developed Market Asset Class Model Expected Returns

US equity market is expected to deliver 0.46%* real annualized return over the next 10 years using only the asset class level model, this is the least attractive among all developed. countries



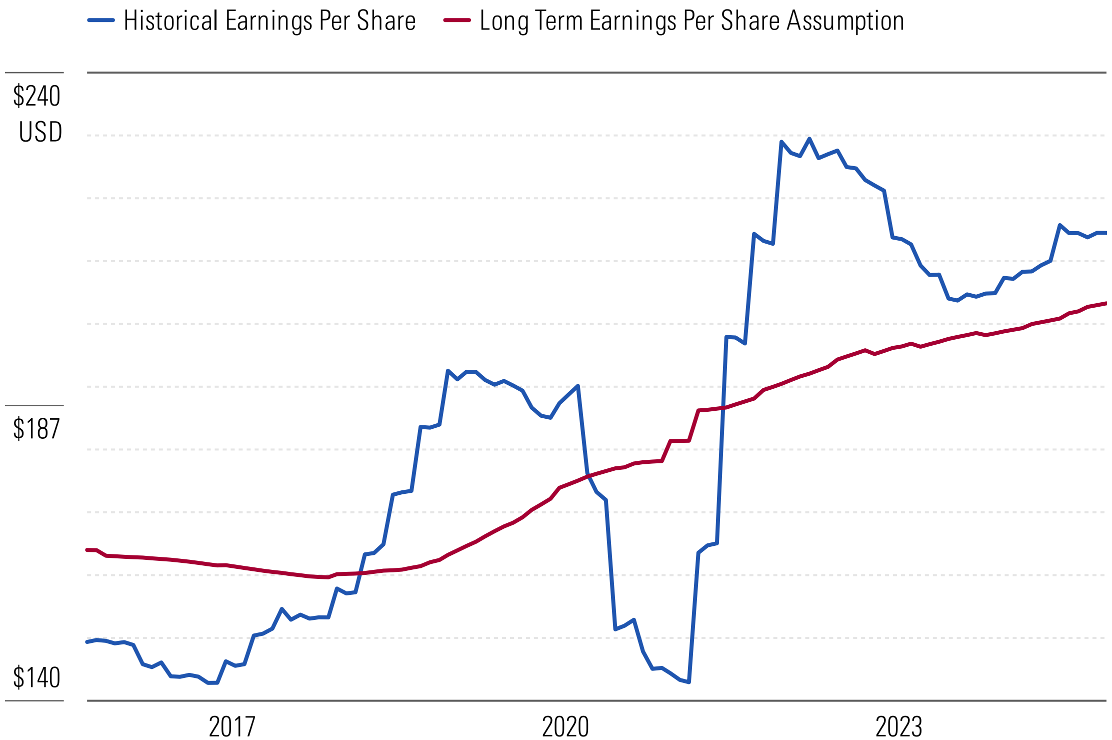
Source: Morningstar Investment Management LLC. Data as of Jan. 31, 2025.

*This does NOT include the incorporation of any signal from our bottom-up stock analyst valuation model.

Price/Earnings and Earnings per Share Suggest That Valuations Are Elevated

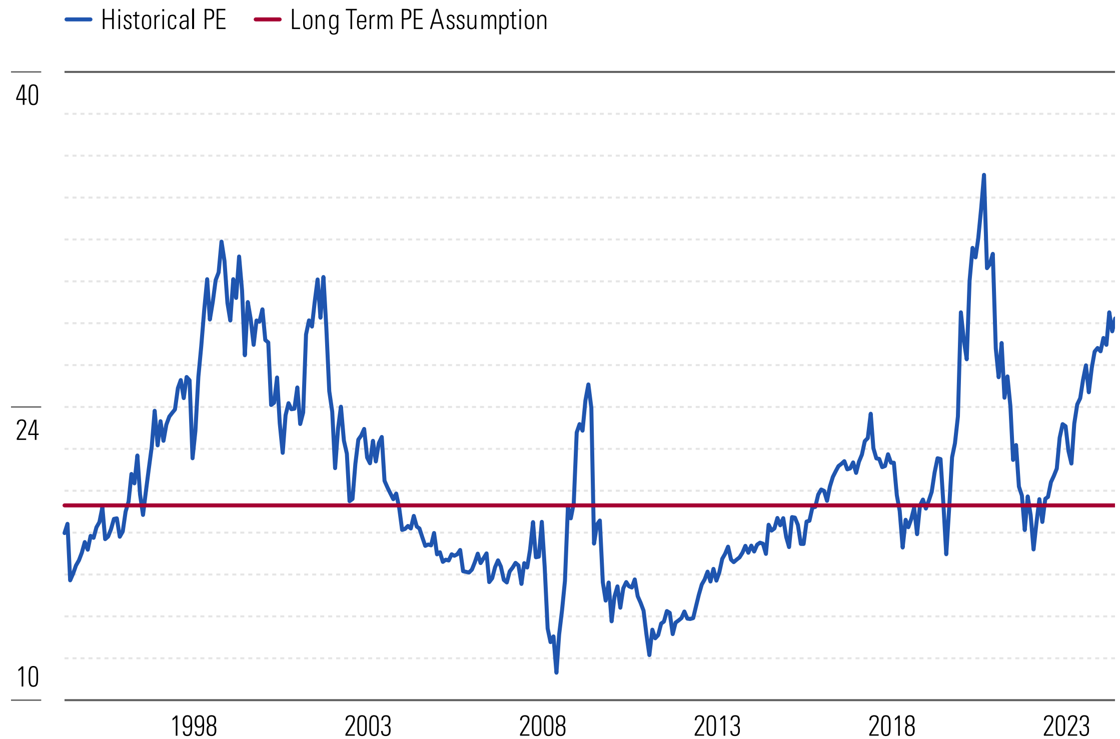
Current Earnings Per Share (EPS) is above the value implied by the 10-year average of real EPS. Our model assumes EPS will revert to our long-term assumption in 10 years.

Current Earnings Per Share Is Above Our Long-Term Assumption



We expect price to earnings to contract by 46% to a forecast P/E of 19. US Equity continues to be richly valued vs. history.

Current Price/Earnings Is Significantly Higher Than Our Long-Term Assumption



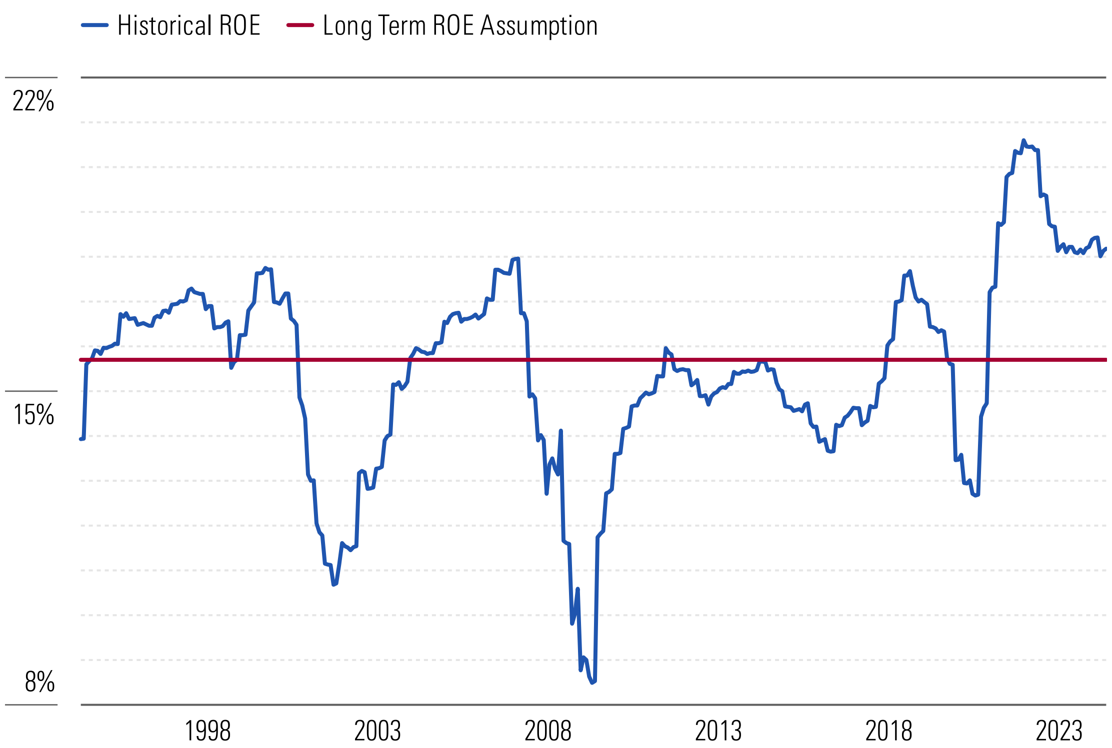
Source: P/E Multiples from S&P. Historical EPS from Morningstar Investment Management LLC. Historical EPS derived from fundamental data sourced from S&P and FactSet. Data as of Jan. 31, 2025.

Return on Equity and Net Profit Margin Are Above Our Long-Term Assumption

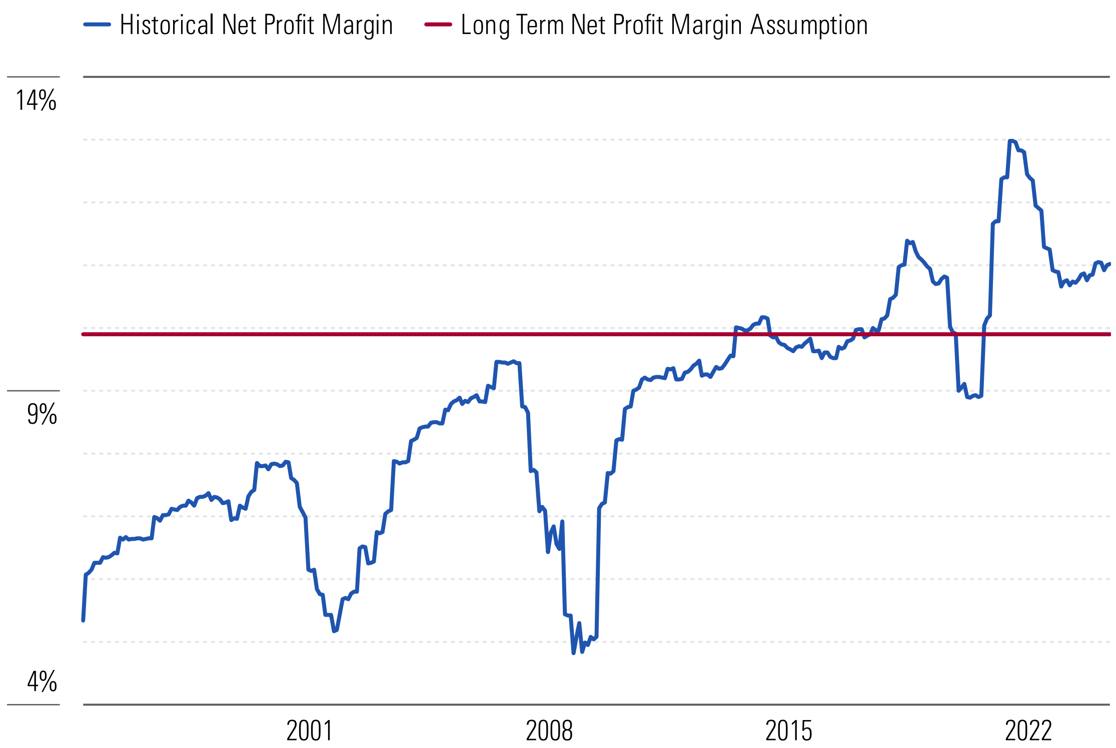
Return on equity is normalizing from its postpandemic high. We expect return on equity for US equities to fall back our long-term assumption.

We expect net profit margin expansion in recent years to decline to our long-term forecast level.

Return on Equity Is Above Our Long-Term Assumption



We Expect Net Profit Margin to Decline to Our Long-Term Assumption



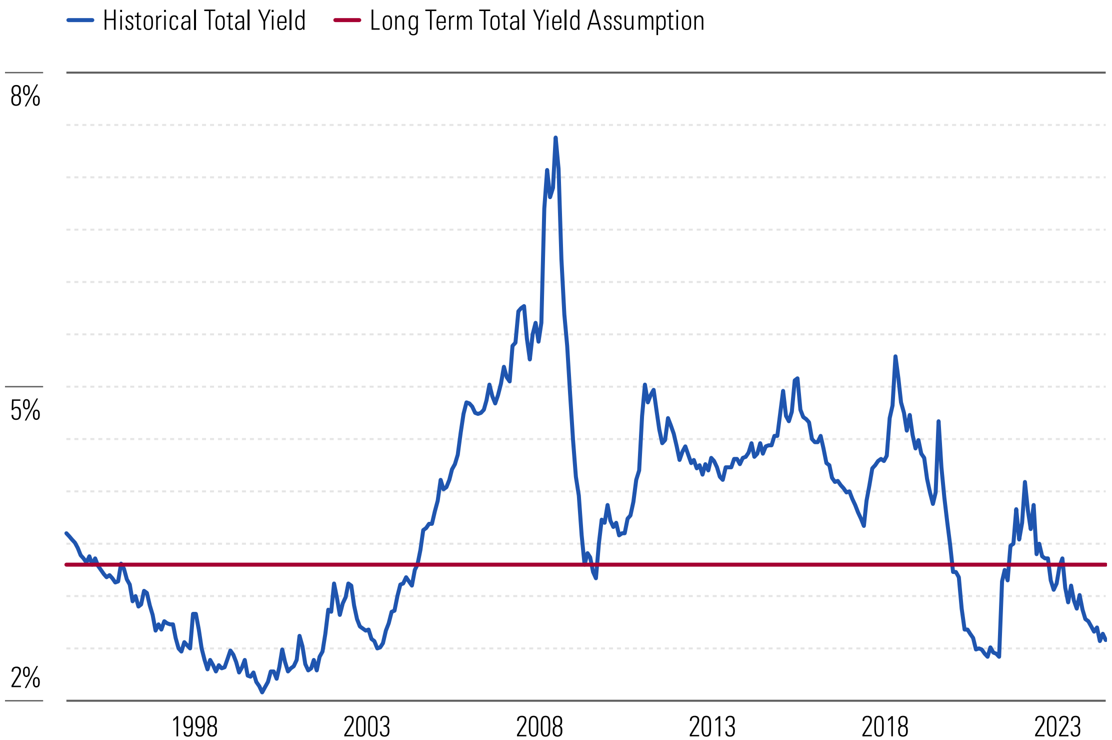
Source: Morningstar Investment Management LLC. P/E and P/B Fundamentals sourced from S&P. P/S data from Bloomberg. Data as of Jan. 31, 2025.

Total Yield Is Below Our Long-Term Assumption, While Total Payouts Remain Elevated

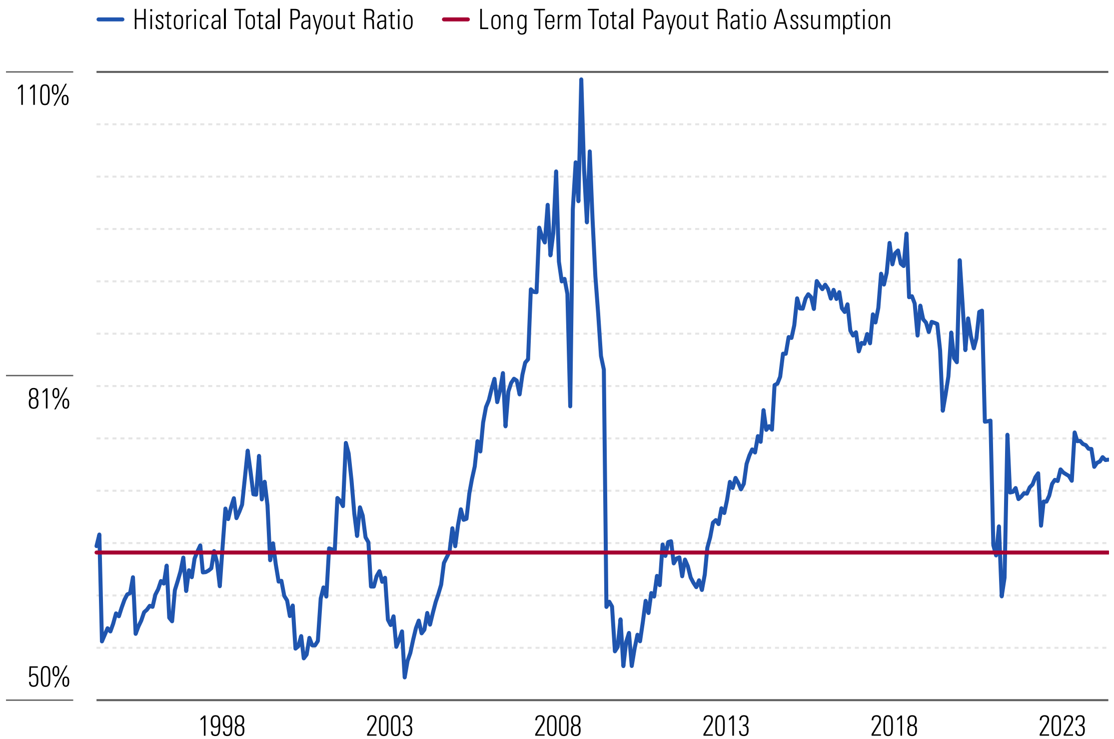
Total yield was only this low during the dotcom and the post-covid rallies. We expect that total yield (dividends plus share repurchases) will increase to our long-term assumption, driven by increasing share repurchases and valuation normalization.

We expect the current level of payouts as a percentage of earnings to fall toward our long-term assumption.

Total Yield Is at Recent Lows and Below Our Long-Term Assumption



Total Payout Levels Are Above Our Long-Term Forecast



Source: Morningstar Investment Management LLC. Dividend Yield and P/E from S&P. Repurchase Yield derived using company level fundamentals from FactSet. Data as of Jan. 31, 2025.

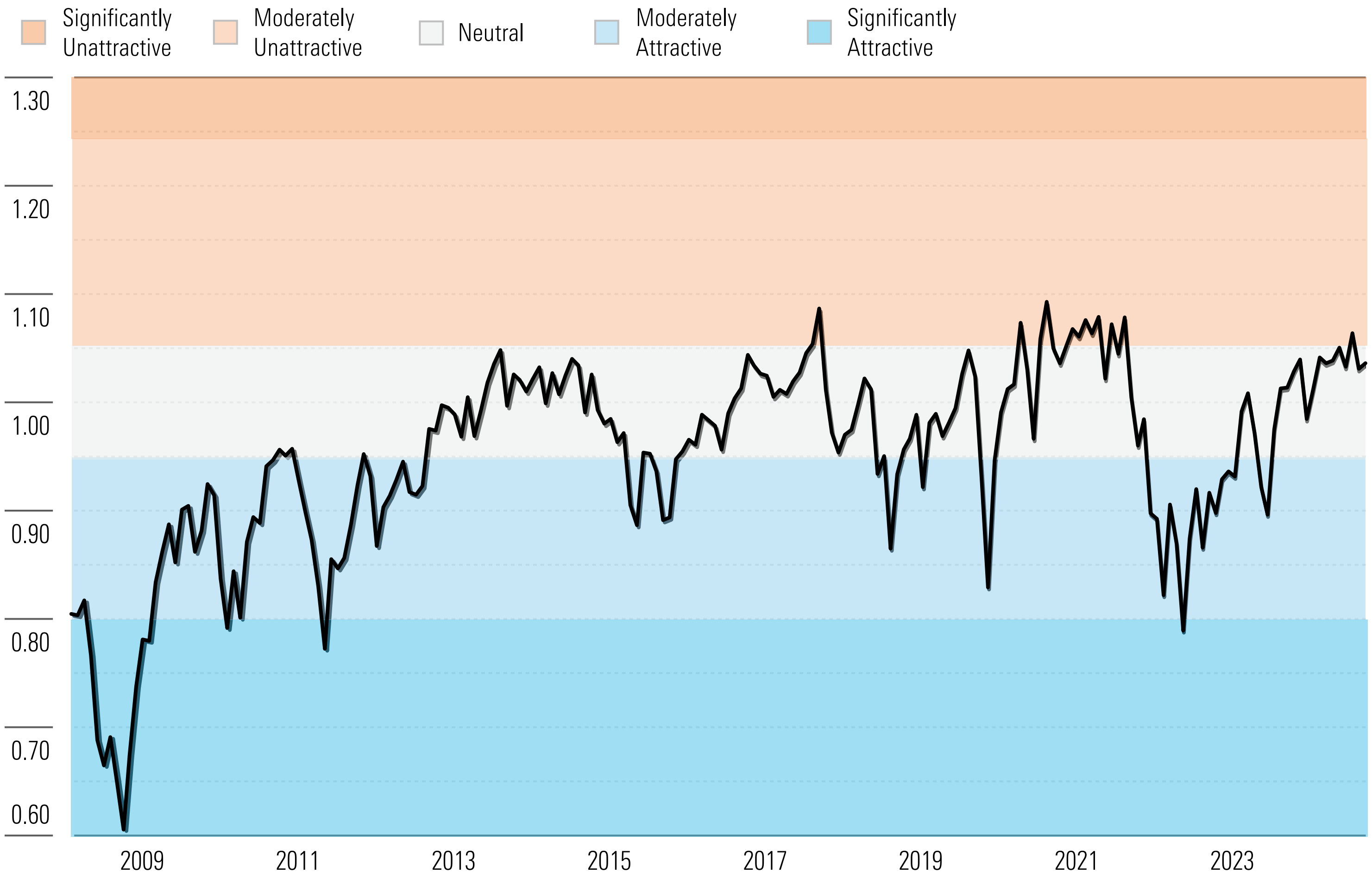
Valuation: Stock Level Perspective

Our bottom-up view of the US equity market is based on a roll-up of analyst research on individual stocks.

Overview: US Equity Market Trades at a Slight Premium to Our Aggregated Stock Level Fair Values

US Market Now Less Attractive From Bottom-Up Perspective Than in 2022-23

Market Capitalization-Weighted Price-to-Fair Value



- Based on a composite of our intrinsic valuations as determined by our equity analysts, as of Jan. 31, 2025, we calculated that the Morningstar US Target Market Index was trading at a price/fair value estimate of 1.03.
- The combination of increasingly higher valuations on AI stocks, an economy that has held up better than expected, moderating inflation, and easing monetary policy has led to exceptionally strong equity market returns over the past two years.
- However, looking forward with the market now at a premium and those same tailwinds fading, looking forward, we advocate that investors should temper their expectations .
- Considering the market appears to be priced to perfection, we think positioning has become ever more important. We continue to see undervalued opportunities by style, capitalization, and sector. On an individual stock basis, 30% of our coverage is rated 4- or 5-stars, providing opportunities for investors to put money to work in undervalued stocks.

Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025. Price/fair value for the US Market is calculated by applying stock-level fair value estimates to constituents of the Morningstar US TME Index, with results weighted according to index value. The Uncertainty level for the US market is Low.

Size and Style: US Small Cap and Value Stocks Remain Attractive

- Based on a composite of our intrinsic valuations as determined by our equity analysts, as of Jan. 31, 2025, we calculated that the Morningstar US Target Market Index was trading at a price/fair value estimate of 1.03. This represents a 3% premium to our fair value estimates. While this might not sound like much of a premium, since the end of 2010 the market has traded at this much of premium or more <15% of the time.
- In our 2025 outlook, we noted that many of those large-cap stocks most correlated with artificial intelligence, especially those hardware providers tied to the build out of AI platforms, had risen to the point where they were generally overvalued & overextended.
- Looking forward, we expect 2025 will be the year AI evolves away from the hardware providers to those companies that can utilize AI to improve their products and services to drive revenue growth as well as increase efficiency and productivity to expand operating margins.
- By capitalization, our coverage of small-cap stocks trade at significant discount to fair value. By style, growth and core stocks trade at premiums to our valuations whereas value stocks remain more attractively priced.

US Stock Market Trading Above Fair Value

Valuations of Morningstar's equity research coverage by equity style box.

Size \ Style	All	Value	Core	Growth
All	**1.03**	0.98	1.05	1.06
Large	1.04	1.00	1.10	1.10
Mid	1.01	0.91	0.98	1.15
Small	0.91	0.83	0.94	1.02

Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025. Price/fair value metrics are calculated using the intrinsic valuations as determined by the Morningstar equity research team and weighted in proportion to their portfolio weight within the relevant Morningstar equity index. The Uncertainty levels for all small and growth styles are Medium with the remainder Low.

Size and Style: Value Category and Small-Cap Stocks Remain Relatively Attractive

Over the past 12 months the Morningstar equity research team has increased its fair value estimates on 64% of the stocks under our coverage that trade on US exchanges. In fact, 369 firms under our coverage increased by 10% or more and 17% of coverage increased by over 25%. Many of the largest fair value increases occurred within large-market-cap companies. Notable mega-cap increases include Nvidia, up 171%; Meta, up 139%; Oracle, up 132%; Broadcom, up 96%; Taiwan Semiconductor, up 81%; IBM, up 80%; and Netflix, up 65%.

Change in Morningstar Equity Research Coverage Price/Fair Value Estimates Over the Course of the Year

Value stocks remain the most attractive style category, whereas growth remains overvalued.

January 31, 2024 → **January 31, 2025**

January 31, 2024

Size	All	Style: Value	Core	Growth
All	**1.01**	0.93	1.02	1.05
Large	1.03	0.95	1.05	1.15
Mid	0.93	0.85	0.91	1.04
Small	0.83	0.76	0.81	1.00

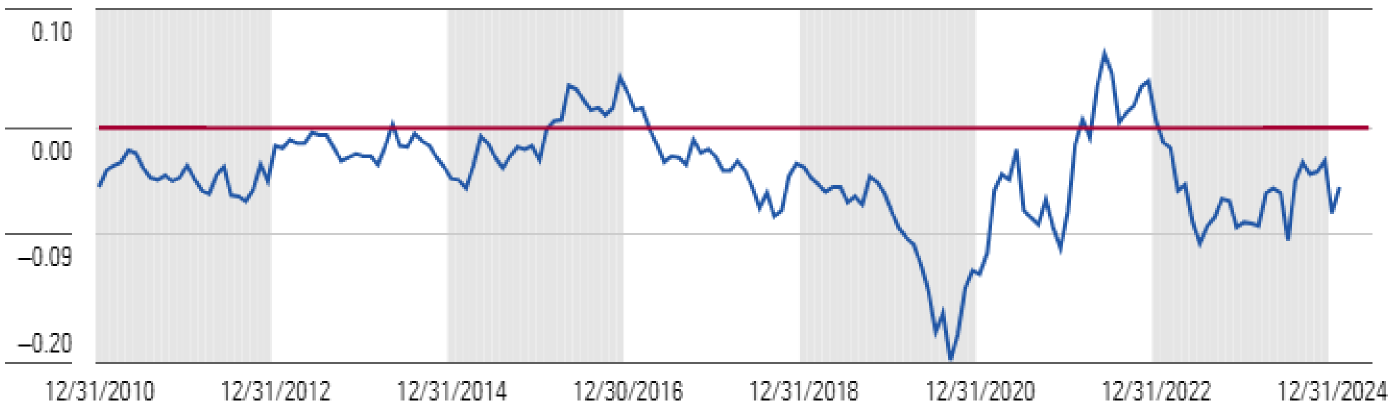
January 31, 2025

Size	All	Style: Value	Core	Growth
All	**1.03**	0.98	1.05	1.06
Large	1.04	1.00	1.10	1.10
Mid	1.01	0.91	0.98	1.15
Small	0.91	0.83	0.94	1.02

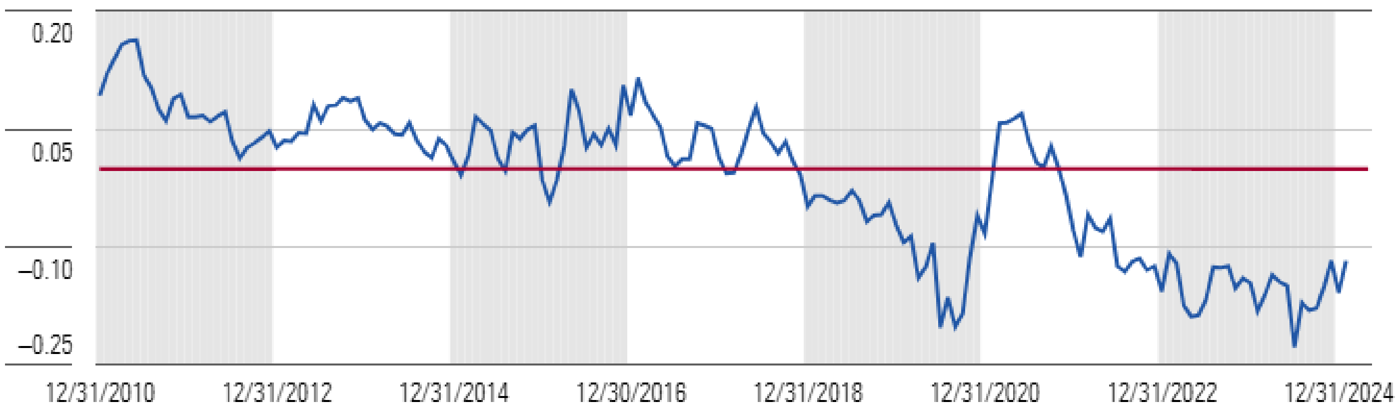
Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025. Price/fair value metrics equity research team are calculated using the intrinsic valuations as determined by the Morningstar equity research team and weighted in proportion to their portfolio weight within the relevant Morningstar equity index. The uncertainty levels for all small and growth styles are medium with the remainder low.

Size and Style: US Valuations by Style and Size Relative to Broad Market Valuation

Value Stocks Trade at Relatively Low Valuations as Compared With the Broad Market Valuation



Small-Cap Stocks Trade Near Lowest Valuations Relative to the Broad Market Valuation



- Considering the broad market is trading at a premium to fair value and market macro-dynamic tailwinds are slowing, we think positioning has become increasingly important.
- According to our valuations, we think the rotation into small-cap and value stocks has further room to run.
- While no longer at their lows, valuation for value stocks remain near some of their lowest levels relative to the broad market valuation since 2010.
- Valuations for small cap stocks rebounding toward market valuations yet remain near very low levels relative to the broad market.

Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025. Price/fair value metrics are calculated using the intrinsic valuations as determined by the Morningstar equity research team and weighted in proportion to their portfolio weight within the relevant Morningstar equity index.

Sectors: Overvalued Sectors Become More Expensive, Yet Opportunities Remain

Even after incorporating our bearish long-term forecast for oil prices, energy is the most undervalued and provides a natural hedge against inflation or geopolitical conflict.

Real estate was most hated sector for past two years but therein lies opportunity as the second most undervalued. Tenets with defensive characteristics especially attractive.

Communications was by far the most undervalued sector at end of 2022, yet after rising 54% in 2023 and another 39% in 2024, its now only 7% undervalued.

The healthcare sector is more attractive than it appears as its valuation is skewed higher by 2-star-rated Eli Lilly.

Financials have soared on expectations for easing monetary policy to boost net interest margins, however, we think the rally has run too far. With economic growth forecasted to slow until mid-2025, we are especially wary of elevated valuations in industrials. Utilities started 2024 as one of the most undervalued, but following its 30% surge, it's now overvalued. From a sector perspective, consumer defensive is overvalued, yet excluding 1-star rated Costco and Walmart and 2-star Procter & Gamble, the remaining sector trades at an attractive discount.

Morningstar Price/Fair Value Estimate Metric by Sector Weighted by Intrinsic Value

Figures below 1 are undervalued, while those above 1 are overvalued.

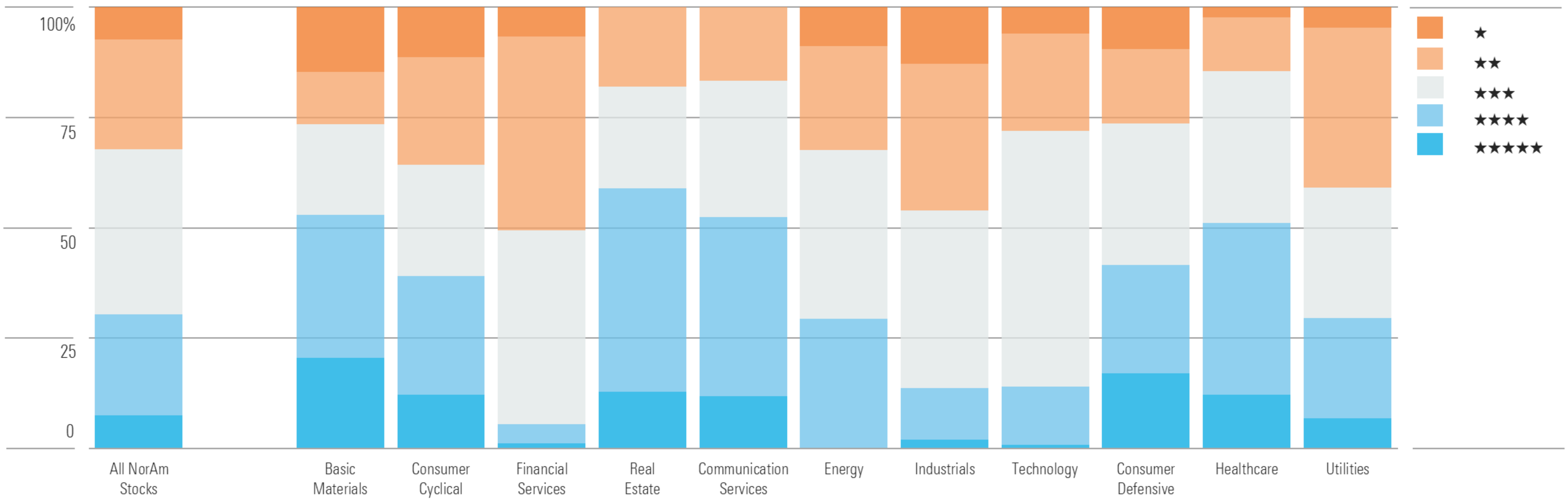
Cyclical Sectors	All	Sensitive Sectors	All	Defensive Sectors	All
Basic Materials	**1.00**	Comm. Services	**0.93**	Consumer Defensive	**1.05**
Consumer Cyclical	**1.19**	Energy	**0.90**	Healthcare	**0.96**
Financial Services	**1.16**	Industrials	**1.07**	Utilities	**1.08**
Real Estate	**0.92**	Tech	**1.00**		

Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025. Price/fair value metrics are calculated using the intrinsic valuations as determined by the Morningstar equity research team and weighted in proportion to their portfolio weight within the relevant Morningstar equity index.

Sectors: It's Increasingly Difficult to Find Undervalued Opportunities

As the broad market valuation trades at a premium to fair value and returns broaden out across the market away from the Magnificent 7, the number of undervalued stocks has dwindled. Overvalued sectors such as financial services, industrials and utilities are broadly overvalued, and fewer number of undervalued stocks remain. However, sectors where overvaluation is concentrated in only a few mega-cap names such as consumer cyclical and consumer defensive, numerous other opportunities remain for individual stock selection.

US Star Rating Distribution by Sector



Source: Morningstar Research Services LLC. Data as of Jan 31, 2025.

How We Assess Uncertainty for Markets and Sectors

We assess uncertainty at a market- or sector-level by adapting the methodology we employ for individual stocks. This involves aggregating stock-level Uncertainty Ratings assigned by our analysts then adjusting the result to capture diversification effects.

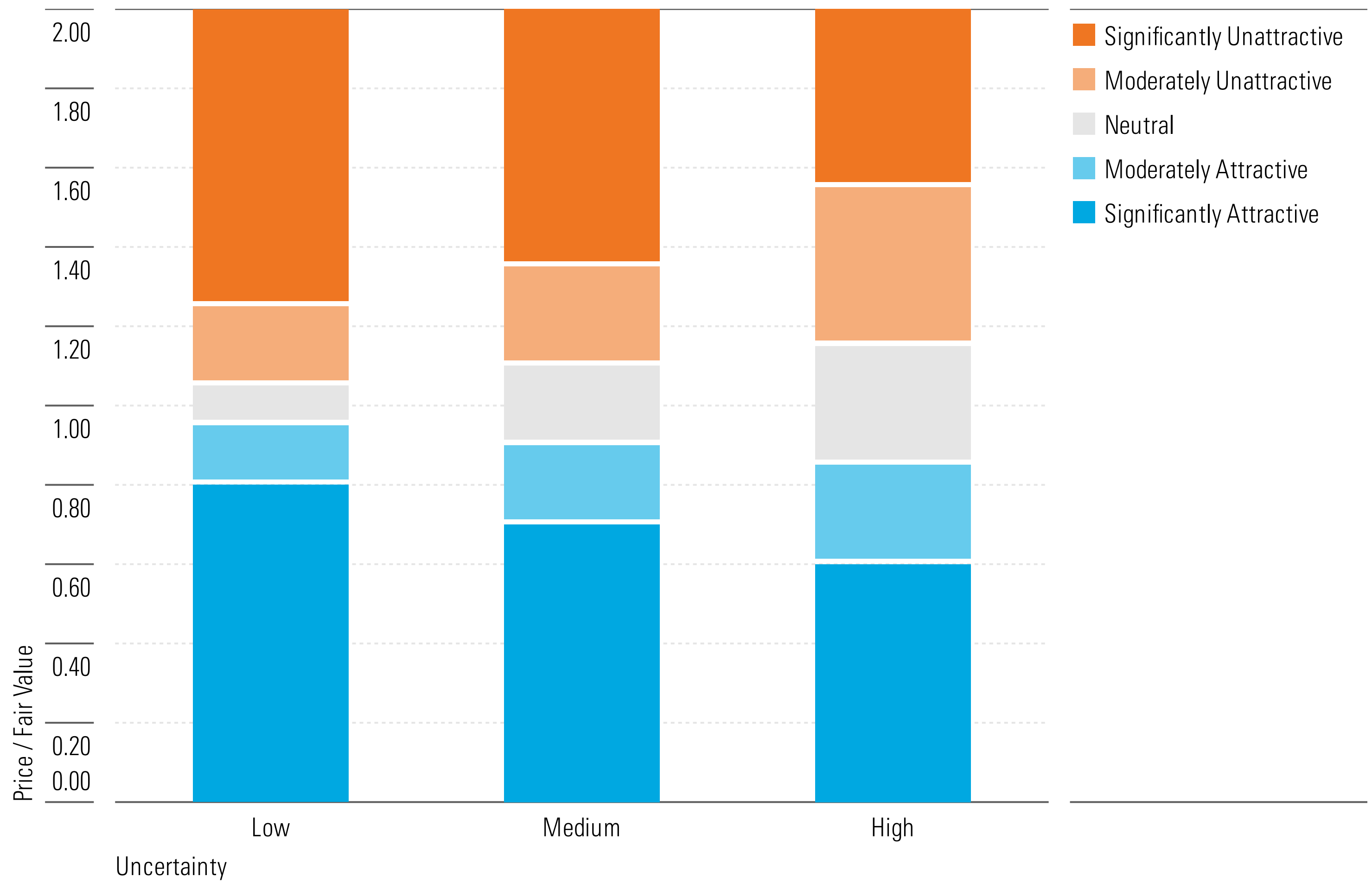
To facilitate comparability and drill-down, we use the same scale for markets and sectors as we do for individual stocks. As a result, and due to diversification effects, our assessment of market- or sector-level uncertainty will tend to be lower than that of the typical stock.

As with the Star Rating for Stocks, the "margin of safety" required for a market or sector to be deemed attractive or unattractive increases with greater uncertainty, as shown in the exhibit at right.

For example, a sector with Low uncertainty would need to trade at 5% discount to fair value to be deemed "Moderately Attractive", while a sector with Medium uncertainty would need to trade at a 10% discount.

The Greater the Uncertainty, the Greater Premium or Discount Required

Equity Market or Sector Attractiveness by Uncertainty Assessment



Uncertainty: Low Correlations Within Sectors Support Lower Uncertainty Versus Individual Stocks

Sector	Index Weight	Uncertainty	Key Sources of Uncertainty
Basic Materials	2%	**Medium**	▪ Many producers sell commodities, making commodity prices the greatest source of uncertainty. Commodity prices are subject to strong volatility, which can create large swings in producer financial results. ▪ Commodity price spreads create risk. For example, natural gas prices are a key determinant of many chemical companies' input costs, while oil prices are key to prices, and this creates inherent volatility in unit profits. Some firms manage this risk through hedging, passing these costs to customers, or long-term contracts with fixed pricing, in the case of industrial gas. ▪ Environmental impacts and consequences on human health could create financial risks from fines or lawsuits or even outright product bans.
Communication Services	10%	**Medium**	▪ Advertising sales, which drive the bulk of revenue across the sector, are sensitive to changes in the economic outlook. ▪ Legislation, regulation, and the actions of firms that control key choke points (like Apple) can alter how consumer data is created and used. ▪ Meta and Alphabet are pouring tens of billions of dollars into R&D and infrastructure to develop artificial intelligence technology, but the future of AI is highly uncertain. ▪ Traditional wireless and broadband services are staples that should see stable demand.
Consumer Cyclical	12%	**Medium**	▪ Manufacturing primarily discretionary goods, the consumer cyclical sector is exposed to moderate levels of uncertainty. ▪ The ability to appeal to changing consumer demands is integral. Investments in both physical outlets and e-commerce platforms can be necessary to support demand. ▪ Demand declines can manifest based on economic conditions, weighing on sales and profits if discounting is necessary to clear excess inventory.

Source: Morningstar Research Services LLC. Data as of Jan 31, 2025.

Uncertainty: Sector-Level (Continued)

Sector	Index Weight	Uncertainty	Key Sources of Uncertainty
Consumer Defensive	5%	**Low**	▪ Consumer defensive firms tend to sell essential, daily use products, and thus realize lower levels of uncertainty. ▪ Volatile commodity, packaging, and labor costs can constrain margins. Efforts to unlock efficiencies and/or raise prices (influenced by brand strength) to offset inflationary headwinds may fail to prove durable. ▪ The rise in e-commerce penetration serves as a formidable, but not insurmountable, challenge for consumer-packaged-goods (CPG) manufacturers and retailers.
Energy	3%	**Medium**	▪ Primary source of uncertainty stems from volatile commodity prices in oil, gas, and natural gas liquids (NGLs). Commodity pricing has a disproportionate impact on energy firms' returns and cash flows, particularly given large, fixed cost bases. ▪ The global energy transition and the move toward alternative sources of energy means oil will eventually face secular decline. ▪ Large, capital-intensive projects could face cost over-runs from factors outside firms' control, such as those involving foreign governments, while policy changes like those derived from climate scrutiny could also increase operating costs.
Financial Services	14%	**Medium**	▪ Many drivers of financial sector earnings, such as interest rates and equity market prices, can be volatile. ▪ Financial leverage in the financial sector amplifies returns but also increases solvency risk. ▪ The true cost of financial products may not be known for years, as loans and insurance policies are written upfront, but defaults and claims are recognized over time. ▪ The financial services sector is highly regulated, with changes in regulation that can put different players at an advantage or disadvantage.

Source: Morningstar Research Services LLC. Data as of Jan 31, 2025.

Uncertainty: Sector-Level (Continued)

Sector	Index Weight	Uncertainty	Key Sources of Uncertainty
Healthcare	10%	**Low**	▪ Providing largely inelastic products/services, the healthcare sector typically faces lower levels of uncertainty. ▪ Regulatory decisions can impact the outlook for drug, device and tool companies. For example, the Food and Drug Administration (FDA) may ultimately decide to reject approval of a drug or device. ▪ Legislative decisions can influence pricing for most healthcare industries. ▪ Research and development can increase uncertainty, but the largest R&D focused firms tend to reduce risk by holding a portfolio of products.
Industrials	7%	**Medium**	▪ Manufacturers of capital goods and industrial products often serve cyclical end markets that are sensitive to global economic conditions. As such, earnings and cash flow tend to ebb and flow with the business cycle. ▪ Many industrial firms extract revenue from their installed base through the sale of aftermarket products and services, which damps cyclicality and boosts profit margins. Digitalization is a secular trend that has expanded the aftermarket opportunity. ▪ Some firms, such as defense contractors, have long product cycles and extensive sales backlogs that provide revenue visibility.
Real Estate	2%	**Medium**	▪ Interest rates can meaningfully impact real estate valuations. ▪ Office and hotel real estate sectors are facing unique risks related to work from home dynamics and lower business travel. ▪ Supply-side dynamics, like construction costs and regulations, and macroeconomic factors, impacting demand, are key to our real estate outlook.

Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025.

Uncertainty: Sector-Level (Continued)

Sector	Index Weight	Uncertainty	Key Sources of Uncertainty
Technology	32%	**Medium**	▪ The Technology sector is an interesting combination of constantly changing technology shifts, and pockets of stability and monopoly like dominance. Technology is always changing. Previously differentiated technology becomes commoditized or out of date as new technology emerges. This changes the winners and losers more dramatically than more stable sectors. ▪ Growth outlooks for technology companies are often more fundamentally uncertain than the outlooks for lower uncertainty industries. This is particularly true for younger, higher growth technology companies, although even for some of the largest companies, such as Nvidia, growth expectations can change dramatically. ▪ Technology companies with wide moats can create stability on key items, such as pricing, making them more stable and attractive than pure commodity businesses where more aspects of the business are completely out of the company's control.
Utilities	2%	**Low**	▪ Rate changes dictate utilities' earnings and cash flow, and these rates depend on maintaining constructive relations with regulators. Weakening relations with regulators could cause them to cut a firm's allowed return and in turn, squeeze their profits, but long track records of constructive ratemaking eases the risk for investors. ▪ Energy demand (e.g. electricity or natural gas) could fall and utilities' capital plans could face potential cost overruns, requiring utilities to request customer rate increases to support earned returns. ▪ Tightening environmental compliance regulations could lead to more capital investment and higher operating costs, raising the risk that utilities might not recover those costs through customer rates.

Source: Morningstar Research Services LLC. Data as of Jan 31, 2025.

Concentration: Top 10 Largest US Covered Companies by Market Cap

Top Ten Largest US Covered Companies by Market Cap

Name/Ticker	Rating	P/FV	Economic Moat	Uncertainty	Sector	Style Box	Market Cap ($B)
Apple AAPL	★★	1.18	Wide	Medium	Technology	Large Core	3,545.2
Microsoft MSFT	★★★★	0.85	Wide	Medium	Technology	Large Core	3,085.5
Nvidia NVDA	★★★	0.92	Wide	Very High	Technology	Large Growth	2,940.5
Alphabet GOOGL	★★★★	0.93	Wide	Medium	Communication Servic	Large Core	2,506.2
Amazon.com AMZN	★★	1.19	Wide	Medium	Consumer Cyclical	Large Core	2,499.2
Meta Platforms META	★★★	0.90	Wide	High	Communication Servic	Large Core	1,746.1
Tesla TSLA	★★	1.62	Narrow	Very High	Consumer Cyclical	Large Growth	1,301.4
Broadcom AVGO	★★	1.16	Wide	Medium	Technology	Large Growth	1,037.2
Berkshire Hathaway BRK.B	★★★	1.00	Narrow	Low	Financial Services	Large Core	1,010.4
Walmart WMT	★	1.69	Wide	Medium	Consumer Defensive	Large Core	788.6

Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025.

Concentration: In 2024, Only 10 Stocks Were Responsible for 58% of the Market Return

- Returns broadened out in second half of 2024 as market rotated out of overvalued and overextended large-cap AI growth stocks and into value and small-cap.
- Attribution analysis of Morningstar US Market Index reveals returns from 10 stocks accounted for 58% of the total market return in 2024. Return attribution has widened out as the top 10 accounted for over 70% of the market return as of June 30.
- Nvidia by itself accounted for 19% of total market return in 2024.
- However, based on our valuations, we think the excess gains are likely behind us. Only Google and Microsoft remain 4-star-rated stocks and Nvidia and Meta are rated 3 stars. Apple, Amazon, Broadcom, Tesla, and Netflix are rated 2 stars and JP Morgan Chase is rated 1 star.

Only 10 Stocks Were Responsible for 58% of Market Return in 2024.

Name/Ticker	Index Weighting (%)	2024 Return (%)	Contribution to Index Return (%)
Nvidia NVDA	4.94	171.17	4.50
Apple AAPL	5.86	30.07	1.90
Amazon.com AMZN	3.39	44.39	1.42
Broadcom AVGO	1.35	107.70	1.25
Alphabet GOOGL	3.57	35.51	1.24
Meta Platforms META	2.19	65.42	1.15
Tesla TSLA	1.24	62.52	0.97
Microsoft MSFT	6.14	12.09	0.80
JP Morgan Chase JPM	1.15	40.92	0.47
Netflix NFLX	0.56	83.07	0.39

Source: Morningstar Research Services LLC. Data as of Jan. 31, 2025, unless otherwise indicated.

Market Sentiment

Our assessment of the popularity of the US equity market (and potential for herding behavior) based on flows, expectations, and momentum.

US Equity Market Dominance Has Led to Prolonged Period of Inflows and High Investor Expectations

US Equity Market Sentiment Score

Very Popular (--)	**Popular (-)**	Neutral (=)	Unpopular (+)	Very Unpopular (++)

Market Sentiment Score by Region

Asset Class	Flows	Expectations	Momentum	OVERALL SCORE
USA	**-**	**-**	**-**	**-**
Canada	++	=	-	=
United Kindom	++	=	=	=
Europe ex UK	=	=	=	=
Japan	+	=	=	=
Pacific ex Japan	=	=	=	=
Emerging Markets	+	=	=	=

Our Market Sentiment methodology is contrarian. We assign "+" marks for negative trends as we believe over time the trends will reverse, and our view will benefit from the reversal.

The Market Sentiment score is composed of three pillars:

- "Flows" represents fund flows into the category as a percentage of total net assets relative to history.
- "Expectations" measures forward earnings expectations on a short-term, long-term, and absolute basis relative to history.
- "Momentum" is the trailing nominal local currency return on a short-term basis.

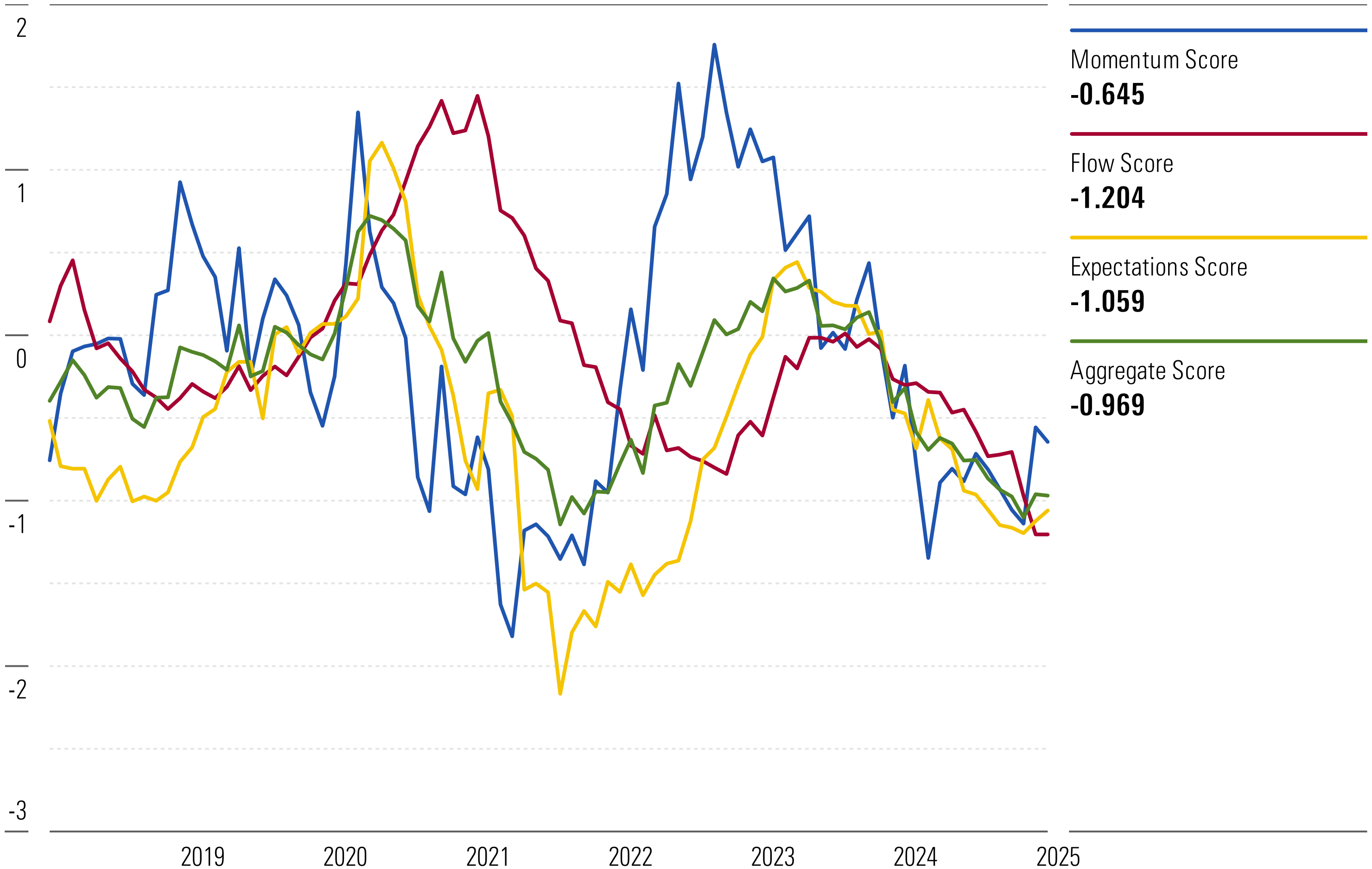
Overall, the US equity market sits at a Market Sentiment Rating of Popular. Our contrarian view is compressed by strong fund flows, positive momentum, and aggressive positive earnings expectations. The US equity market is positioned as the least contrarian of major regions/countries that we analyze.

Source: Morningstar Multi Asset Research
-- Very Popular; - Popular, = Neutral, + Unpopular; ++ Very Unpopular

Significant Popularity of US Equity Market Triggered by Period of Exceptional Returns

Ten-Year Trailing Market Sentiment Score and Subcomponents

US equities are popular.



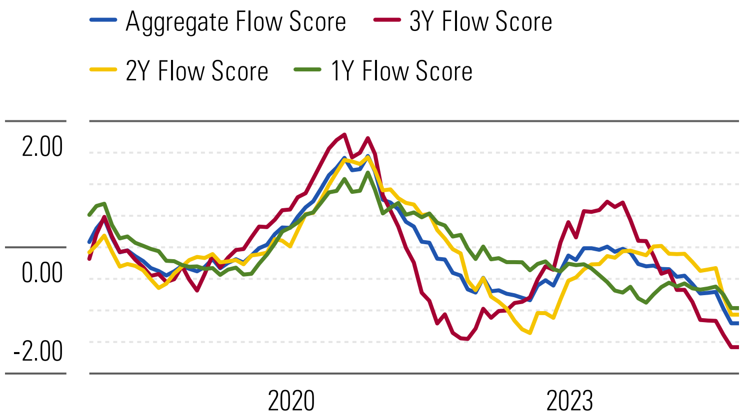
The overall contrarian score is a simple average of the three subcomponents Flows, Expectations, and Momentum. The three subcomponents are recorded as the z-score of the score component relative to its own history. These z-scores are then multiplied by negative 1 to signify that when an asset class is experiencing positive market sentiment investors should be conservative, and vice versa.

The US equity market has continuously increased in popularity in recent years, largely due to the change in flow score. Overall, the US equity market currently appears to have popular market sentiment as inflow remain extremely elevated relative to history.

Source: Morningstar Investment Management LLC. Flows data from Morningstar Direct as of Jan. 31, 2025. Expectations and Momentum data from MSCI and FactSet as of Jan. 31, 2025. Actual z-scores are multiplied by negative 1 so that higher component z-scores, which are indicative of stronger market sentiment, result in a negative overall score

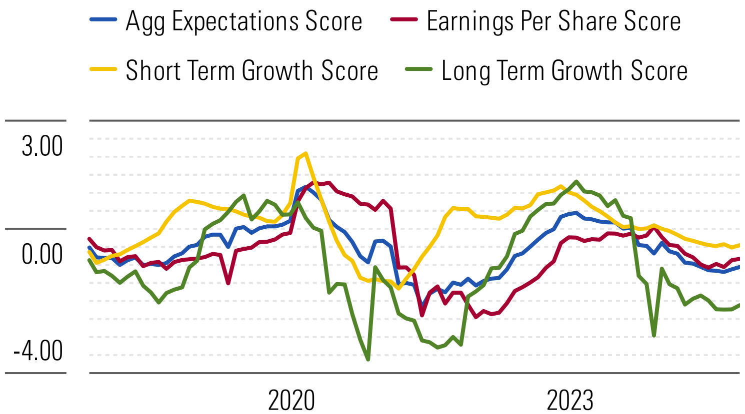
US Equity Market Sentiment Score Decomposition

Flows—Outflows Increasing; Less Popular



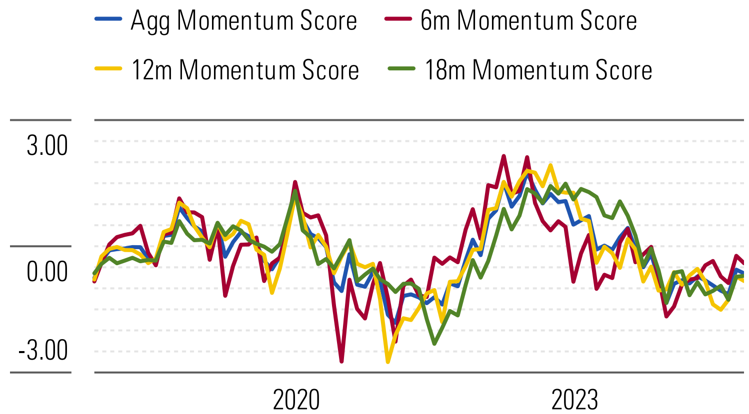
The overall flows score is a simple average of its three components: the one-year, two-year, and three-year flow scores. A component flow score is the z-score calculated using the current and historical sector fund flows as a percentage of total net assets. Simply put, higher sector fund flows as a percentage of total net assets relative to history results in more negative component z-scores and, therefore, a more negative overall score, indicating a less attractive investment from a market sentiment perspective.

Expectations—High Relative to History



The overall expectations score is the weighted average of its three components: the long-term earnings growth (25%), short-term earnings growth (25%), and EPS scores (50%). The long-term earnings growth score is the z-score calculated using the current and historical aggregate three- to five-year absolute earnings growth forecasts from sell-side analysts. Similarly, the short-term earnings growth score is the z-score calculated using the current and historical NTM aggregate earnings growth forecasts. Finally, the EPS score is the z-score calculated using the current and historical three-year changes in trailing EPS.

Momentum—Low Due to Recent Underperformance



The overall momentum score is a simple average of its three components: the six-month, 12-month, and 18-month momentum scores. A component momentum score is the z-score calculated using the current and historical local nominal total return data over the specified period. Simply put, higher local nominal total returns relative to history result in a more negative component z-score and, therefore, a more negative overall score, indicating a less attractive investment from a market sentiment perspective.

Note: Actual z-scores are multiplied by negative 1 so that higher component z-scores, which are indicative of stronger market sentiment, result in a negative overall score.

Appendix: Definitions

10-Yr Nominal/Real Expected Return: Expected return (conditional) over the next 10-years based on today's prevailing market price and valuation dynamics; Driven by Morningstar's top-down valuation model.

Asset Class Valuation: Assessment pillar output based solely on Morningstar's top-down valuation model.

Asset Class Valuation Adjustment: Impact to expected return based on the difference between current market levels and our top-down valuation model's long-term expectations.

Asset Class Assessment: Morningstar's view of the reward-for-risk for a given asset class, combining our top-down asset class valuation model with our bottom-up equity research analyst company level aggregate.

Long-Run Expected Return: Expected market return considering Morningstar's long-term forecasts. Based on Morningstar's top-down valuation model assuming no valuation adjustment.

Market Sentiment: Assessment Pillar designed to measure the level of herding/popularity within a given asset class.

Price/Fair Value: Measure of the current market price of an asset compared to its Morningstar derived fair market price.

Stock Level Valuation: Assessment pillar output based solely on Morningstar's equity research analysts bottom-up aggregated view.

Stock Level Valuation Adjustment: Impact to expected return based on the market cap weighted equity analyst derived price-to-fair value company level roll up.

Pillar Scoring Breakdown for our Top-Down and Bottom-Up Methodologies

Asset Class Pillar Scoring

- We calculate the difference between the current expected return and the long-term expected return. We then standardize this using a risk adjustment.
- We use the breakpoints as defined below:
    - Significantly Unattractive: Bottom 10% of asset classes
    - Moderately Unattractive: Next 10%–32.5% of asset classes
    - Neutral: Next 32.5%–67.5% of asset classes
    - Moderately Attractive: Next 67.5%–90% of asset classes
    - Significantly Attractive: Top 10% of asset classes

Stock Level Pillar Scoring

Roll-up methodology

- The roll-up methodology involves consolidating individual stock-level metrics into asset class-level assessment.
    - Coverage Filter: We include only those stocks covered by the Equity Research team.
    - Weight Rescaling: After filtering for ER-covered stocks, we rescale the weights, so they sum to 100% among the remaining constituents.
    - Metric Aggregation:
        - Valuation: We compute the intrinsic weighted-average P/FV across the ER-covered stocks, using their rescaled weights.
        - Uncertainty Rating: We determine the asset class-level UR using analyst-driven approaches. The portfolio-level standard deviation is then categorized into one of the defined UR tiers (Low, Medium, High, Very High).

Scoring methodology

The scoring methodology converts the aggregated valuation measure adjusted by the aggregate uncertainty assessment, into a star rating equivalent.

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