Morningstar® Markets Observer

Q4 2024 Data as of Sept. 30, 2024

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Market Overview

Market Dashboard

US stocks performed well in 2024's third quarter. However, in a reversal from the first half of the year, small- and mid-cap stocks led the way, not large-growth ones. International stocks also outperformed the US market, with developed and emerging markets showing similar returns. US fixed-income indexes saw gains of more than 5% as Treasury yields fell. Commodities held flat as gains in areas such as gold were offset by declines in oil prices.

		Return (%)						Fundamental Measures			
Equities	**Dividend Yield**	**YTD**	**3 Mo**	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**	**P/E**	**P/B**	**P/S**	**P/C**
Morningstar US Large Cap	1.1	23.9	5.1	38.4	12.3	16.8	13.9	29.4	5.7	4.0	21.0
Morningstar US Small Cap	1.4	10.5	8.5	26.0	4.1	9.8	8.8	18.5	2.3	1.6	11.7
Morningstar Developed Markets ex-US	3.0	12.8	8.1	24.7	4.8	8.1	5.7	15.7	1.8	1.4	9.5
Morningstar Emerging Markets	2.4	16.2	8.1	25.2	1.6	6.9	4.8	14.8	1.8	1.3	6.0

Fixed Income	**Yield to Maturity**	**YTD**	**3 Mo**	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**
Morningstar US Core Bond	4.2	4.5	5.2	11.4	–1.4	0.3	1.8
Morningstar US Corporate Bond	4.7	5.3	5.8	14.0	–1.2	1.1	2.8
Morningstar US High-Yield Bond	7.2	8.0	5.3	15.7	3.2	4.7	5.0
Morningstar US Municipal Bond	3.8	2.7	2.7	10.6	0.1	1.4	2.6
Morningstar Emerging Markets Bond	5.9	7.5	5.7	16.1	–0.7	1.1	3.1

Broad Commodities		**YTD**	**3 Mo**	**1 Yr**	**3 Yrs**	**5 Yrs**	**10 Yrs**
Bloomberg Commodity		5.9	0.7	1.0	3.7	7.8	0.0

Interest Rates (%)	**Current**	**1 Yr Ago**
2 Yr Treasury	3.7	5.0
5 Yr Treasury	3.6	4.6
10 Yr Treasury	3.8	4.6
20 Yr Treasury	4.1	4.7
Prime Rate	8.0	8.5

Commodities (USD)	**Current**	**1 Yr Ago**
Brent Crude Oil	71	95
Gold	2,630	1,871

3-Month Return (%)

	Value	Blend	Growth
Large	8.7	7.9	2.2
Mid	9.6	10.8	6.0
Small	9.7	8.8	7.0

- >8.0
- 4.0 to 7.9
- 0.0 to 3.9
- –3.9 to –0.1
- –7.9 to –4.0
- <–8.0

1-Year Return (%)

	Value	Blend	Growth
Large	27.1	36.6	35.8
Mid	31.2	27.9	28.7
Small	25.6	25.7	26.9

- >20.0
- 10.0 to 19.9
- 0.0 to 9.9
- –9.9 to –0.1
- –19.9 to –10.0
- <–20.0

5-Year Return (%)

	Value	Blend	Growth
Large	11.3	16.4	13.9
Mid	10.3	11.8	11.6
Small	10.9	10.1	7.7

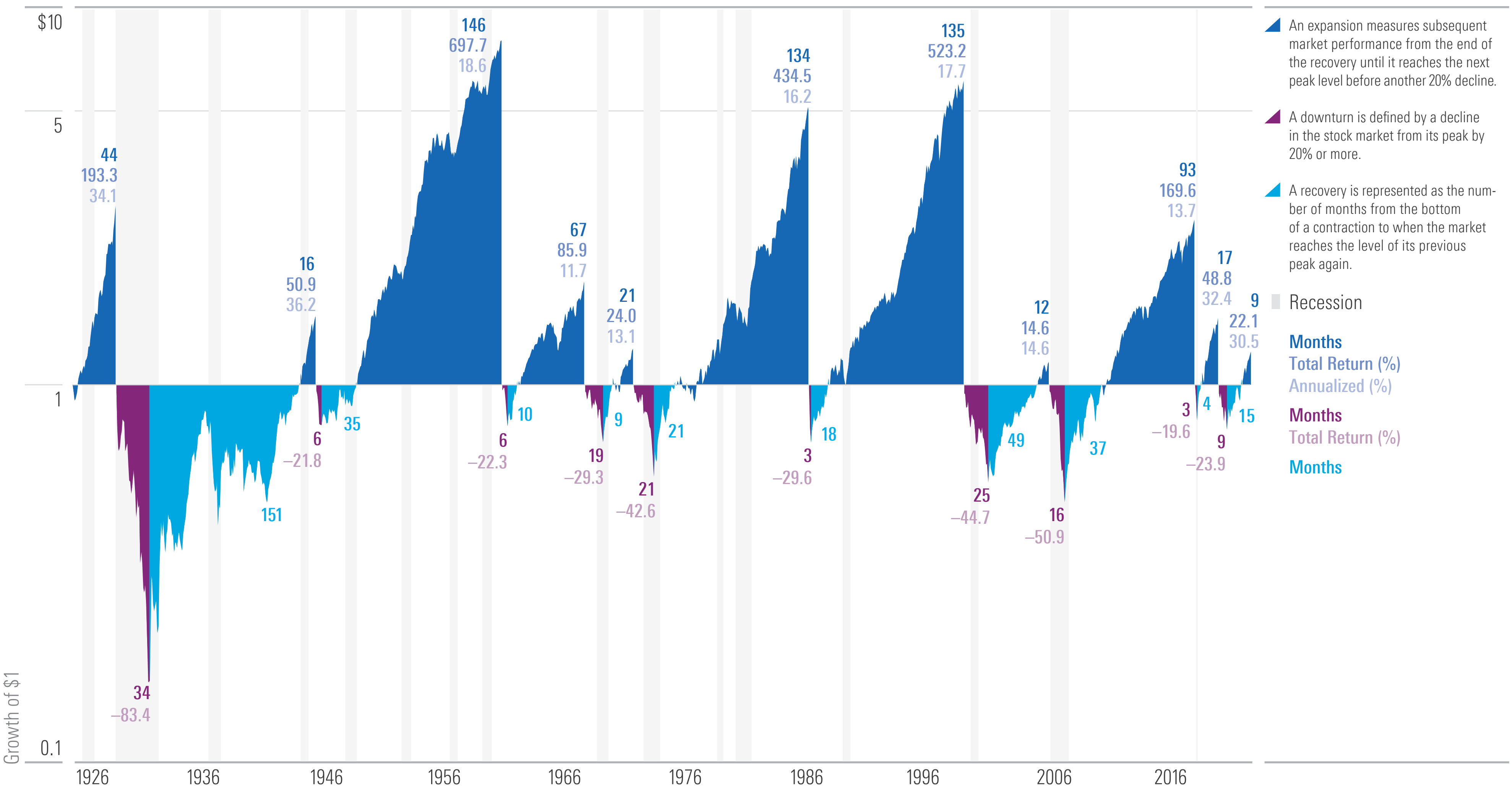
- >20.0
- 10.0 to 19.9
- 0.0 to 9.9
- –9.9 to –0.1
- –19.9 to –10.0
- <–20.0

Source: Morningstar. Data as of Sept. 30, 2024.

US Market Expansion Forges Ahead in 2024's Third Quarter

After fully recovering from a downturn at the end of 2023, the US market expanded further in the third quarter of 2024. Unlike the previous quarter, small- and mid-cap equities saw gains, showing a broadening of the market expansion. Large-cap stocks saw gains as well, but to a lesser extent.

US Market Downturns, Recoveries, and Expansions

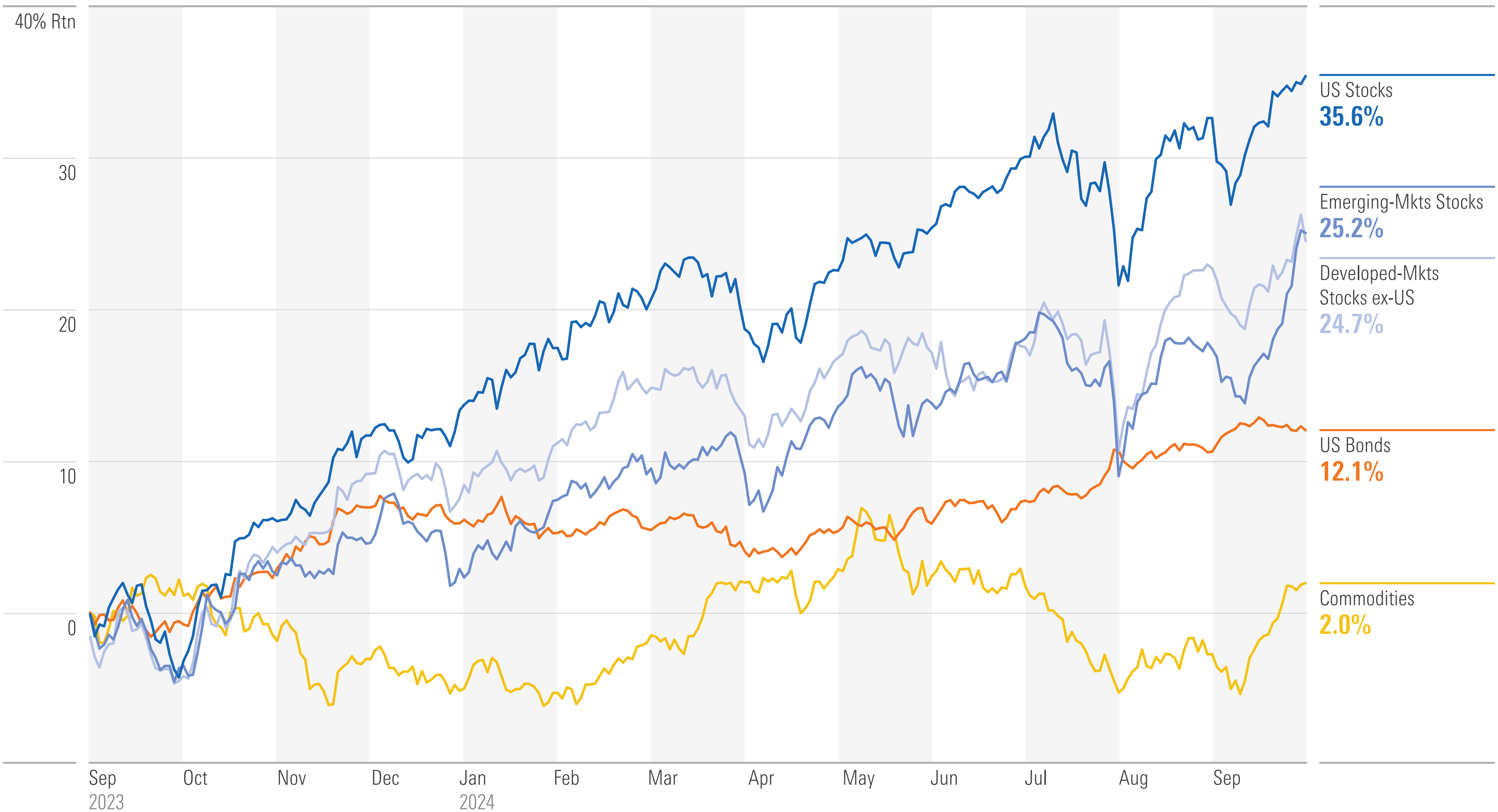


QM06

Source: Stocks—Ibbotson Associates SBBI US Large Stock Index. Recession data from the National Bureau of Economic Research (NBER). Data as of Sept. 30, 2024.

Trailing 12-Month Performance of Major Asset Classes

Despite lagging in the third quarter, US stocks have greatly outpaced international stocks in the 12 months through September 2024. Outside the US, emerging-markets stocks jumped ahead of their developed-markets counterparts thanks to China's stock market rally in September. US bonds have delivered double-digit returns amid lower short-term yields and tighter credit spreads. Despite their own September rally, commodities are up just 2.0% in the past year.

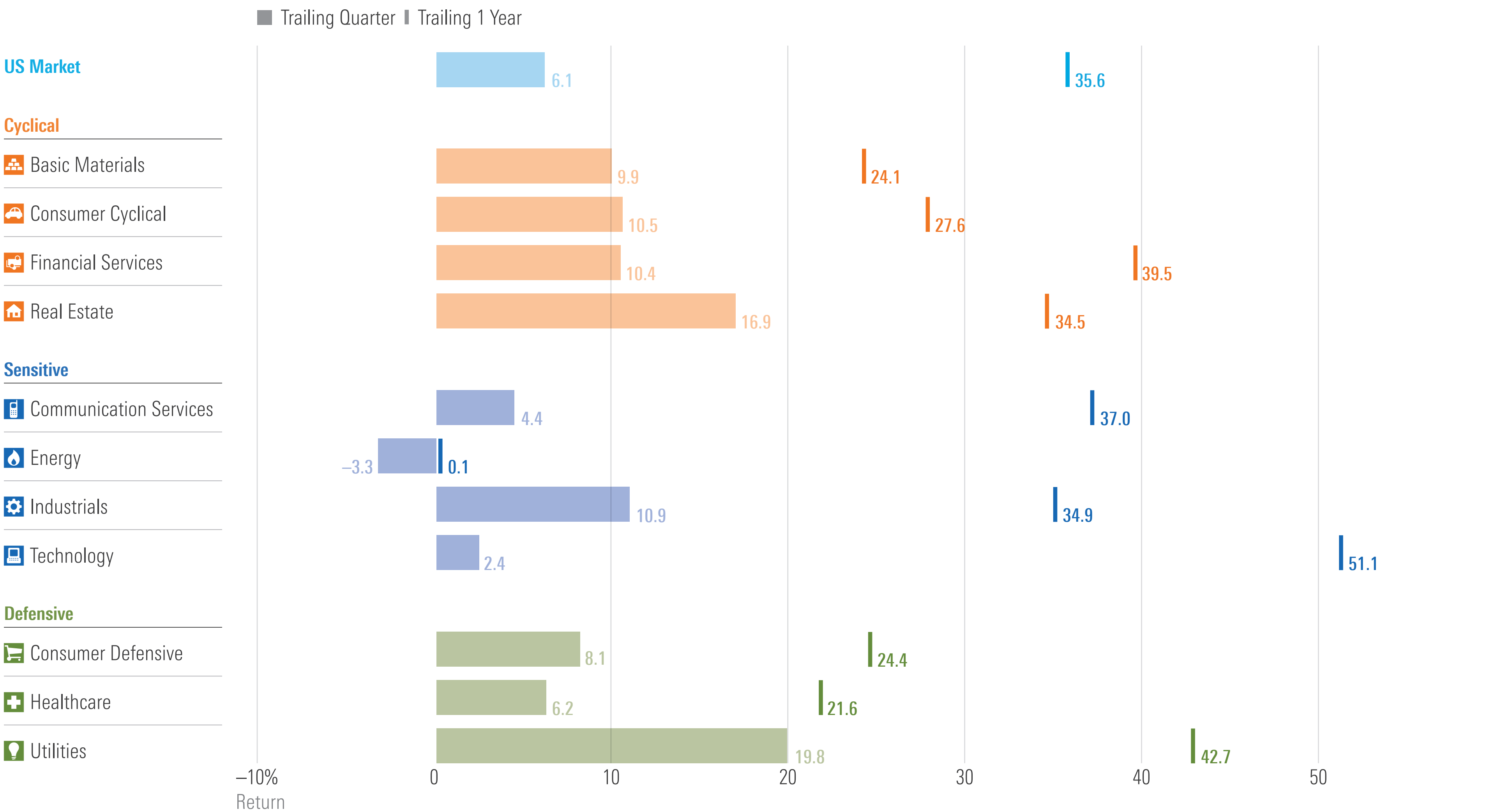


QM01

Source: US stocks—Morningstar US Market Index. Developed-markets stocks ex-US—Morningstar Developed Markets ex-US Index. Emerging-markets stocks—Morningstar Emerging Markets Index. US bonds—Morningstar Core Bond Index. Commodities—Bloomberg Commodity Index. Data as of Sept. 30, 2024.

US Equity Sector Performance

Ten of 11 US sectors had positive returns in 2024's third quarter, with energy being the exception as oil prices fell. The Federal Reserve's interest-rate cut in September buoyed interest-rate-sensitive sectors like utilities and real estate, which were top performers in the quarter. Meanwhile, technology and communication services lagged, although results still look impressive over the trailing 12-month period.

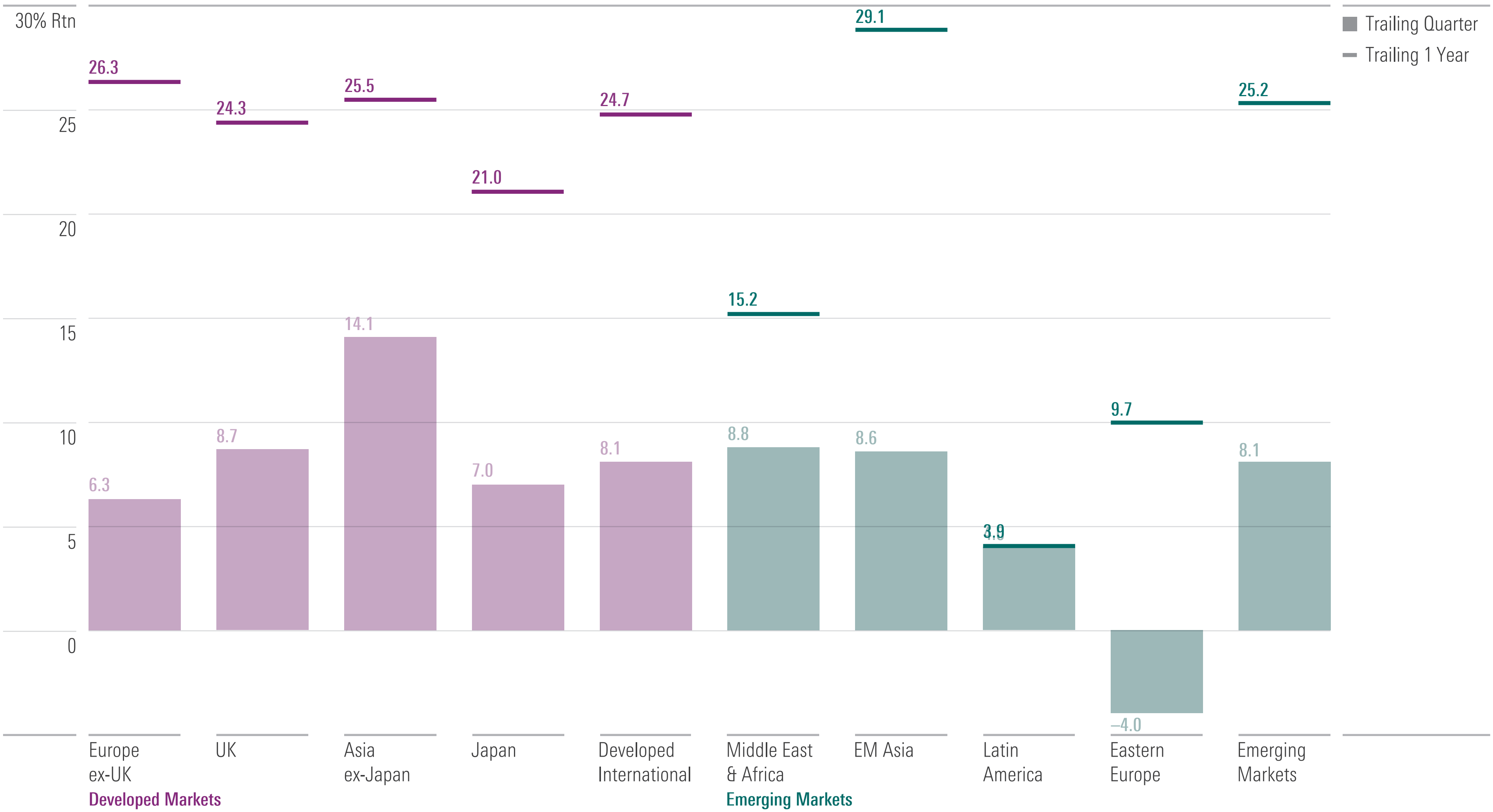


QM04

Source: Morningstar Sector Indexes; Data as of Sept. 30, 2024.

International Stock Market Performance

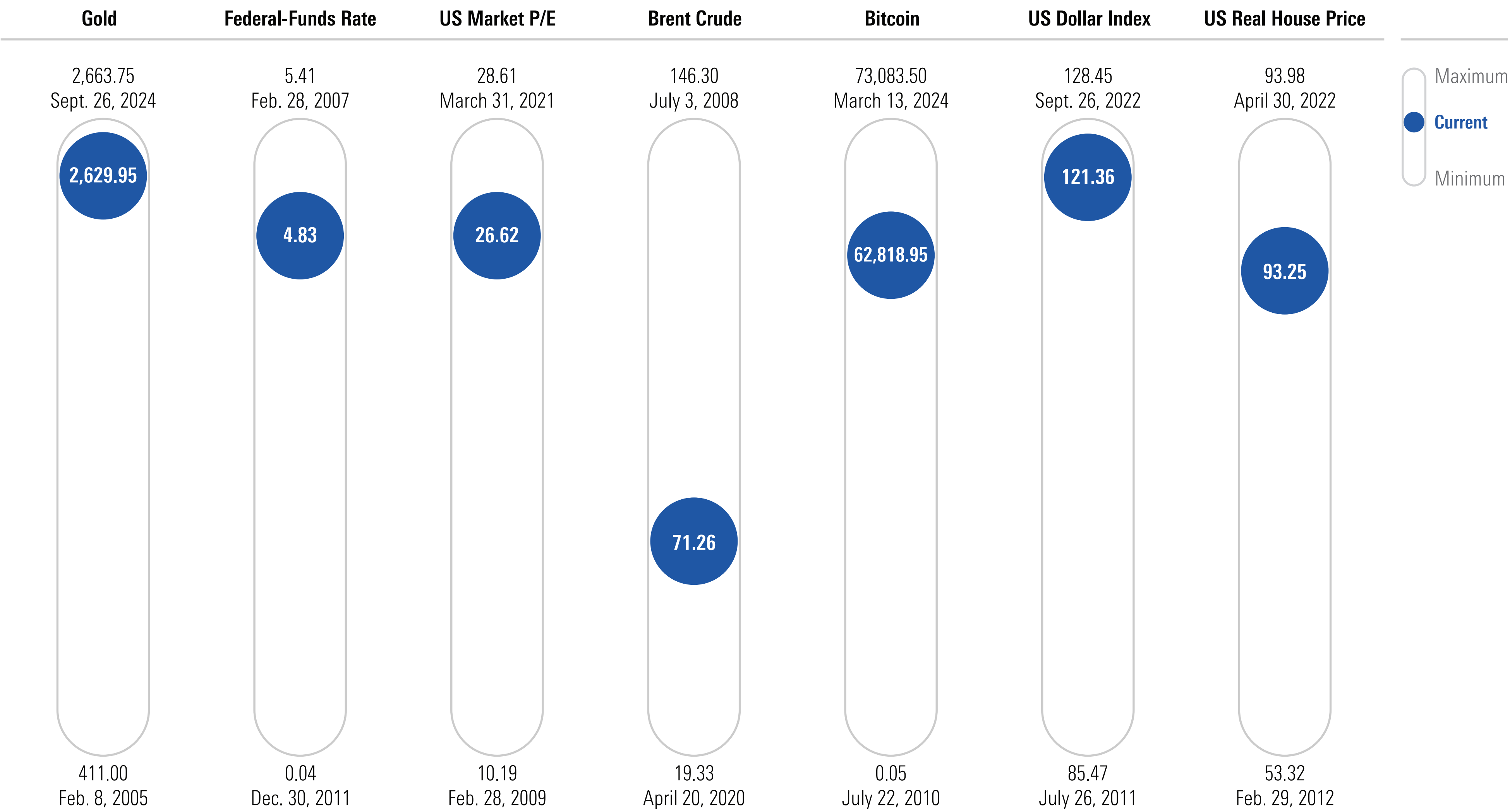
China's late-September 2024 rally lifted the Morningstar Emerging Markets and Morningstar Asia ex-Japan indexes in the third quarter, though South Korea fell alongside poor performance from Samsung and SK Hynix. Despite a July 2024 market correction, Japan performed well as the market stabilized and the yen strengthened. UK equities also rose after the Bank of England cut interest rates. Despite lagging the US market, all regions outside the US have still produced positive returns in the past year.



Source: Morningstar Indexes. All returns are calculated in US dollars. Data as of Sept. 30, 2024.

Market Thermometer

Markets sat in a unique position entering 2024's fourth quarter. The Federal Reserve's decision to cut rates by 0.5% pushed the price of gold to another all-time high, with expectations of further rate cuts in the mix. The price/earnings multiple of the US market increased in 2024's third quarter, while the US dollar remained strong ahead of an uncertain US presidential election. The chart below displays where each indicator sits relative to its maximum and minimum of the past 20 years.



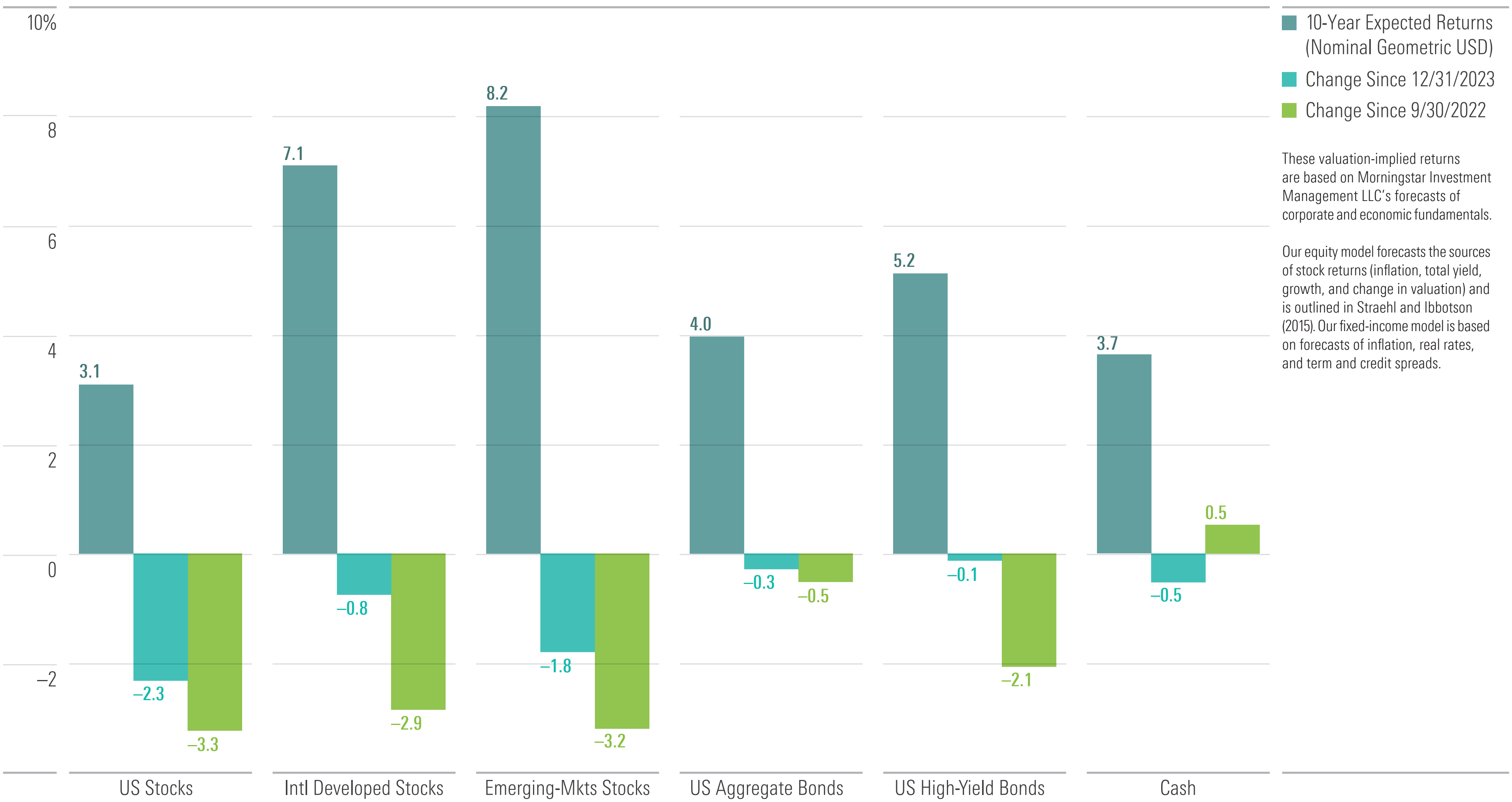
QM016

Source: Morningstar Direct, Federal Reserve Bank of St. Louis, National Association of Realtors, Macrobond. Minimums and Maximums for the period Oct. 1, 2004, to Sept. 30, 2024.

Valuation-Implied Returns: Short-Term Moderation, Longer-Term Improvement

One measure of valuation we find useful for cross-asset-class comparisons is valuation-implied returns. Strong performance across equities and fixed income in 2024's third quarter had a moderating effect on VIRs versus the start of the year. When compared with two years ago, equity VIRs have declined across regions. Fixed-income VIRs have declined as well outside of cash.

Morningstar Investment Management LLC (10-Year Valuation-Implied Returns)



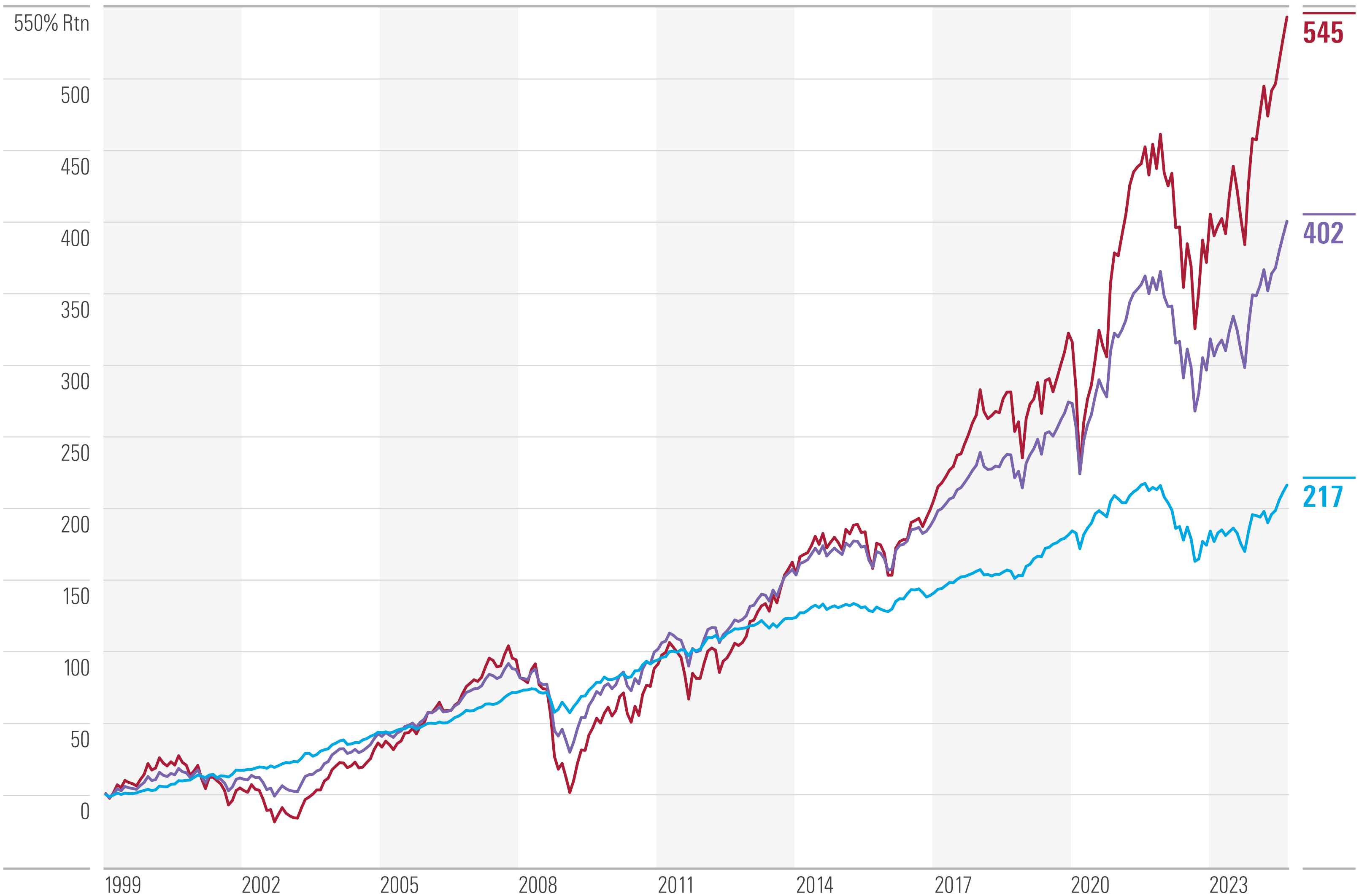
These valuation-implied returns are based on Morningstar Investment Management LLC's forecasts of corporate and economic fundamentals.

Our equity model forecasts the sources of stock returns (inflation, total yield, growth, and change in valuation) and is outlined in Straehl and Ibbotson (2015). Our fixed-income model is based on forecasts of inflation, real rates, and term and credit spreads.

Ibbotson, R., & Straehl, P. 2015. "The Supply of Stock Returns: Adding Back Buybacks." Data as of Sept. 30, 2024.

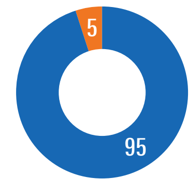
Performance of Risk-Based Portfolios

Gains of differing dispersion can be found in 2024's third quarter when we examine the performance of risk-based portfolios. While bonds posted strong returns, equity markets did, too, so the aggressive portfolio led the way. The conservative portfolio, while having a lower return than the aggressive one, also performed well, gaining 5.9% in the quarter. All the portfolios have delivered double-digit positive returns in the last 12 months, no matter the risk tolerance.



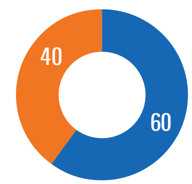
Aggressive Total Return (%)

Qtr	1 Yr	3 Yr	5 Yr	10 Yr	Risk
7.8	28.0	6.5	10.5	9.0	14.8



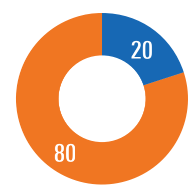
Moderate Total Return (%)

Qtr	1 Yr	3 Yr	5 Yr	10 Yr	Risk
7.0	22.0	3.6	7.1	6.5	9.6



Conservative Total Return (%)

Qtr	1 Yr	3 Yr	5 Yr	10 Yr	Risk
5.9	14.9	0.4	2.8	3.3	4.7



Stocks Bonds

QAA2

Source: Conservative portfolio—Morningstar Conservative Target Risk Index. Moderate portfolio—Morningstar Moderate Target Risk Index. Aggressive portfolio—Morningstar Aggressive Target Risk Index. Returns for periods longer than one year are annualized. Data as of Sept. 30, 2024.

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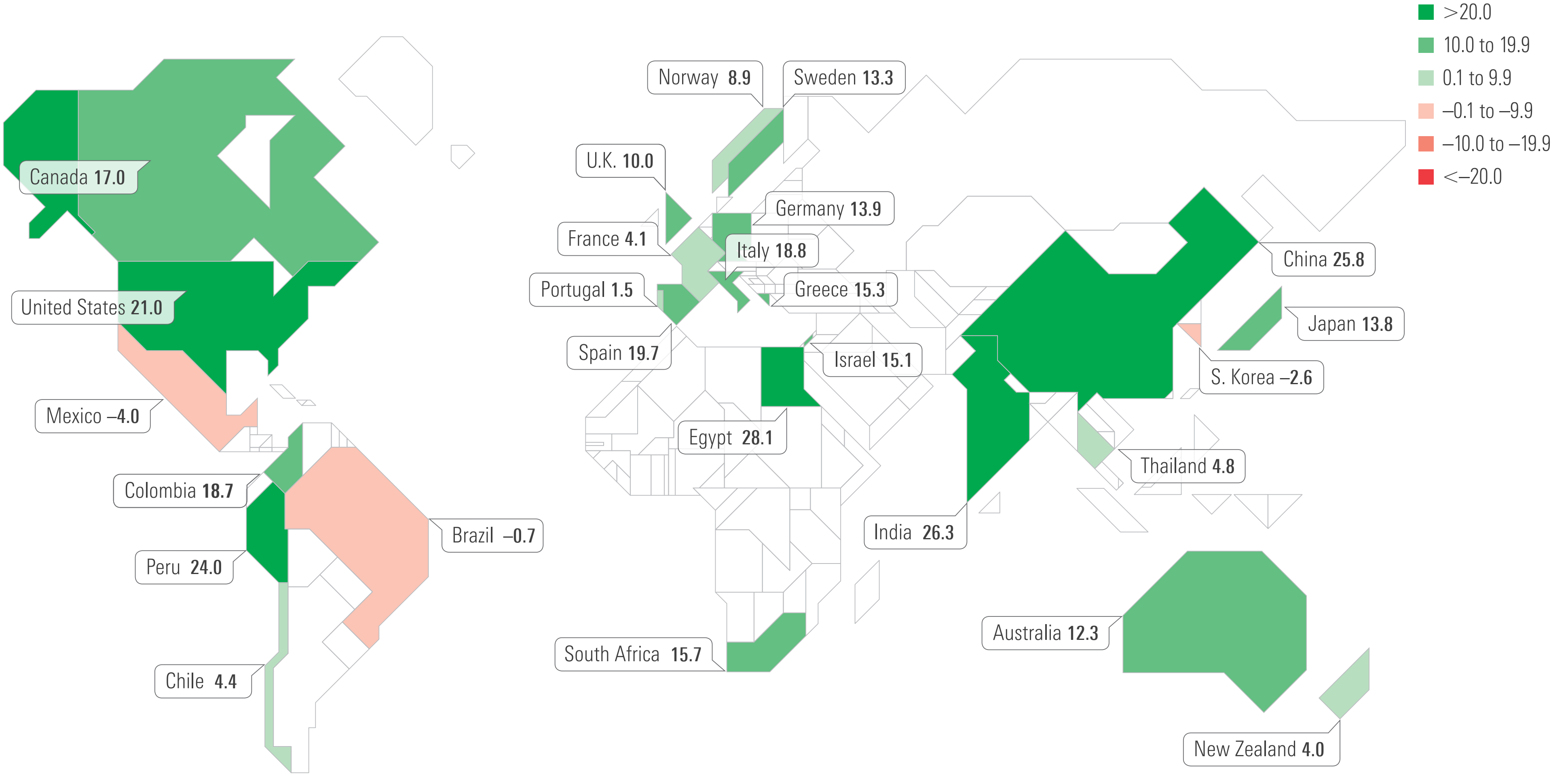
Equities

Global Market Barometer

Most equity markets around the world performed strongly in 2024 through September. The US market continued to shine, but several emerging markets have also posted impressive returns, including India. Chinese equities were sent sharply higher near the end of the third quarter following the announcement of government stimulus packages. While Egyptian stocks were up nearly 30% in the year to date, a plunging local currency meant returns were negative in US dollar terms.

YTD Returns of Morningstar Country Indexes in Base Currency (%)



Source: Morningstar Country and Region Indexes. Data as of Sept. 30, 2024.

Equity Market Performance Decomposition

The return decomposition shows that the key regional drivers of 2024 returns through September were price/earnings and profit margin expansion. Results were mixed across sectors, though. Information technology and financials experienced P/E and margin expansion with sales growth, while P/E contractions offset margin improvement and sales growth in communication services. A weaker US dollar in the third quarter also helped non-US returns.

YTD Return Decomposition

	USD Return (%)	≈ Total Yield (%)	+ Δ P/E (%)	+ Δ Margins (%)	+ Δ Sales (%)	+ Δ Currency (%)	+ Other (%)
Countries/Regions							
USA	21.32	2.10	9.40	5.78	3.42	0.00	0.62
AC Asia ex JP	21.16	1.97	8.11	36.30	–26.72	–0.53	2.03
World	18.86	2.23	9.11	6.33	0.57	0.11	0.51
AC World	18.66	2.21	9.39	9.66	–3.17	–0.05	0.62
EM	16.86	2.20	11.25	26.04	–22.59	–1.49	1.46
United Kingdom	15.41	3.10	9.20	3.20	–6.45	5.73	0.63
EAFE	12.99	2.49	5.10	7.88	–4.00	1.02	0.49
Europe	12.77	2.64	6.58	5.11	–3.65	1.83	0.26
Japan	12.35	1.76	–4.66	12.36	3.65	–1.64	0.88
Europe ex UK	12.01	2.50	5.62	4.71	–1.71	0.73	0.15
Developed-Market Sectors							
Information Technology	26.99	1.37	12.01	9.71	1.87	–0.12	2.15
Communication Services	25.47	2.46	–13.39	30.16	5.16	0.00	1.08
Utilities	22.87	3.11	13.01	18.18	–13.13	0.38	1.32
Financial	21.80	2.98	2.36	12.08	3.13	0.29	0.96
Industrials	18.39	1.98	18.19	–3.27	0.74	0.11	0.63
Healthcare	14.14	2.19	4.60	1.80	5.47	0.36	–0.28
Consumer Staples	13.00	2.42	11.29	–1.43	0.31	0.42	–0.01
Consumer Discretionary	11.82	1.69	1.77	7.66	0.90	–0.01	–0.20
Materials	10.30	2.56	30.05	–17.04	–5.34	0.28	–0.20
Energy	5.68	4.44	30.33	–22.33	–5.17	0.32	–1.90

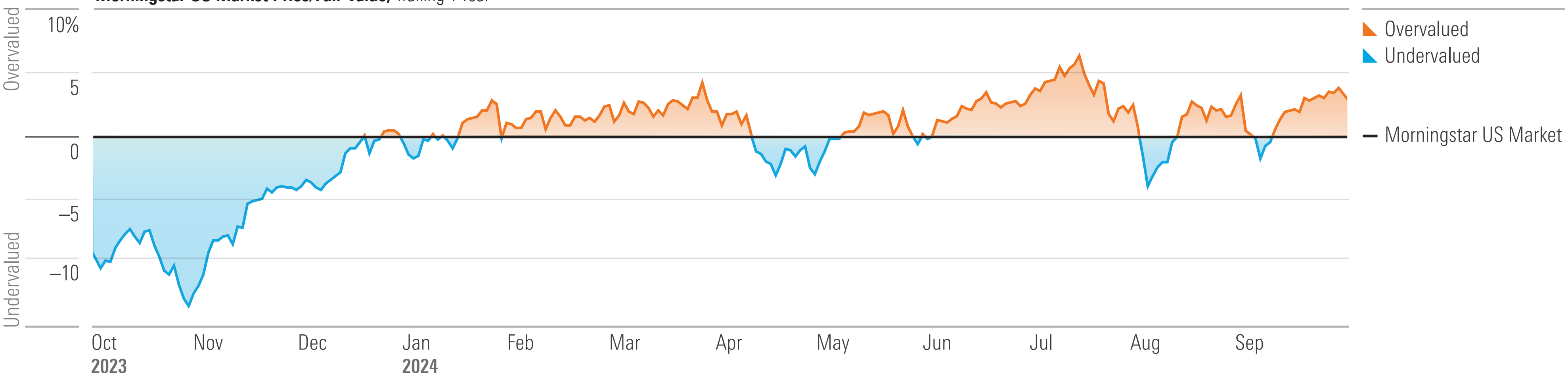
QE58

Source: Morningstar Investment Management LLC analysis. Data as of Sept. 30, 2024. For illustrative purposes only.

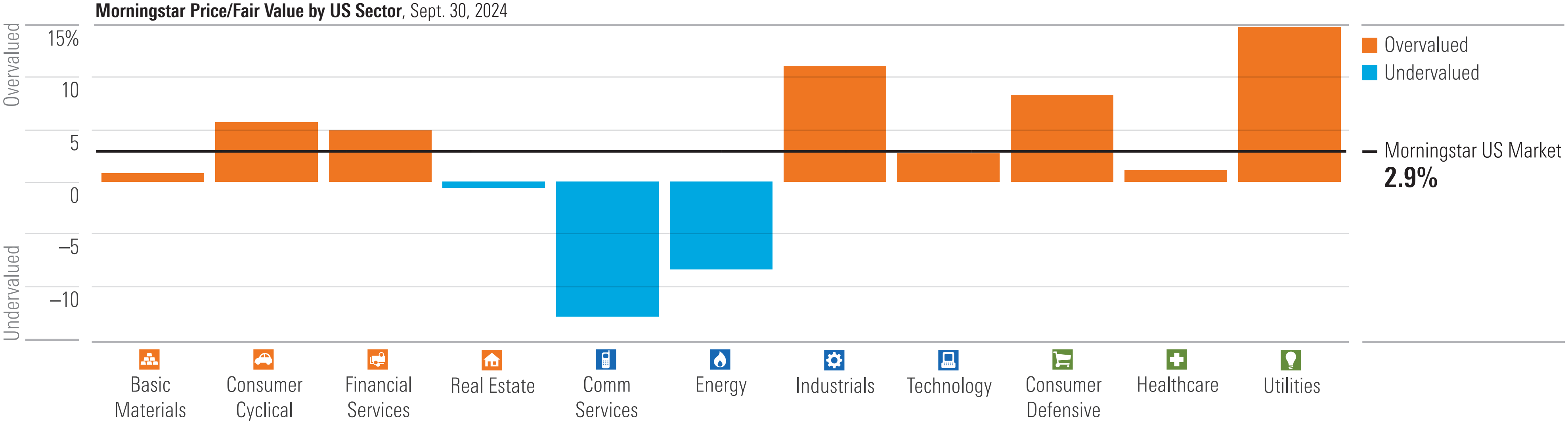
Morningstar Price/Fair Value

The median analyst-covered stock in the Morningstar US Market Index has been modestly overvalued for much of 2024 (through September) as equities climbed higher. The Morningstar US Market Index was 2.9% overvalued as of Sept. 30, 2024, with the utilities and industrials sectors standing out as being more than 10% overvalued. Conversely, the communication services and energy sectors were trading at the biggest discounts (of 13% and 8%, respectively).

Morningstar US Market Price/Fair Value, Trailing 1-Year



Morningstar Price/Fair Value by US Sector, Sept. 30, 2024

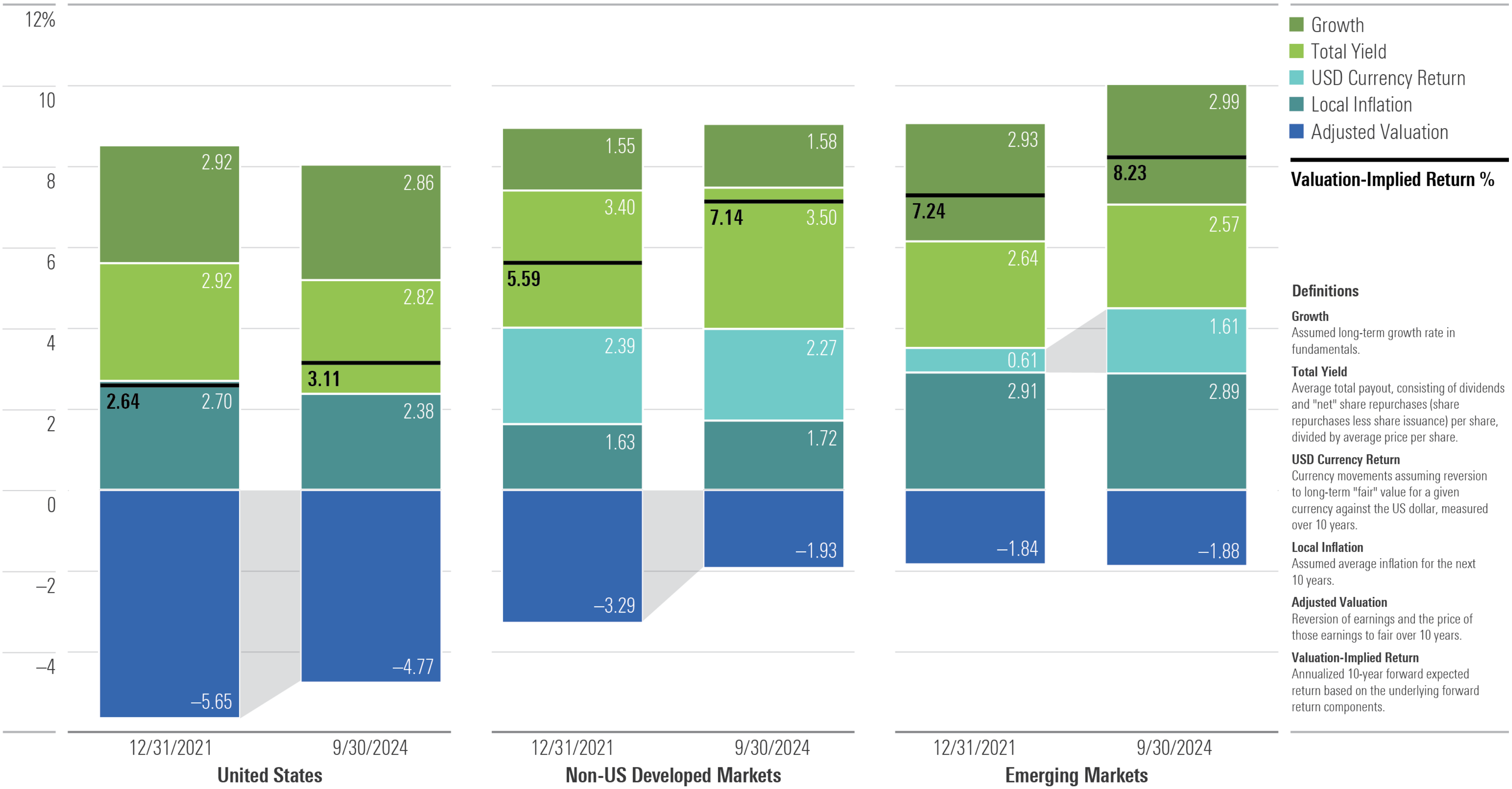


Source: Morningstar analyst fair value data. Data as of Sept. 30, 2024.

Understanding Sources of Forward-Looking Returns

As of Sept. 30, 2024, emerging-markets stocks had a valuation-implied return of 8.2% to US dollar investors, well in excess of the 3.1% estimate for US stocks. The difference stems primarily from valuation and currency rather than expected growth rates or total yields (dividends plus net share repurchases). Emerging-markets stocks are much closer to normal levels of earnings and valuation than their US counterparts, which are trading at elevated valuations.

Valuation-Implied Return Building Blocks



Definitions

Growth
Assumed long-term growth rate in fundamentals.

Total Yield
Average total payout, consisting of dividends and "net" share repurchases (share repurchases less share issuance) per share, divided by average price per share.

USD Currency Return
Currency movements assuming reversion to long-term "fair" value for a given currency against the US dollar, measured over 10 years.

Local Inflation
Assumed average inflation for the next 10 years.

Adjusted Valuation
Reversion of earnings and the price of those earnings to fair over 10 years.

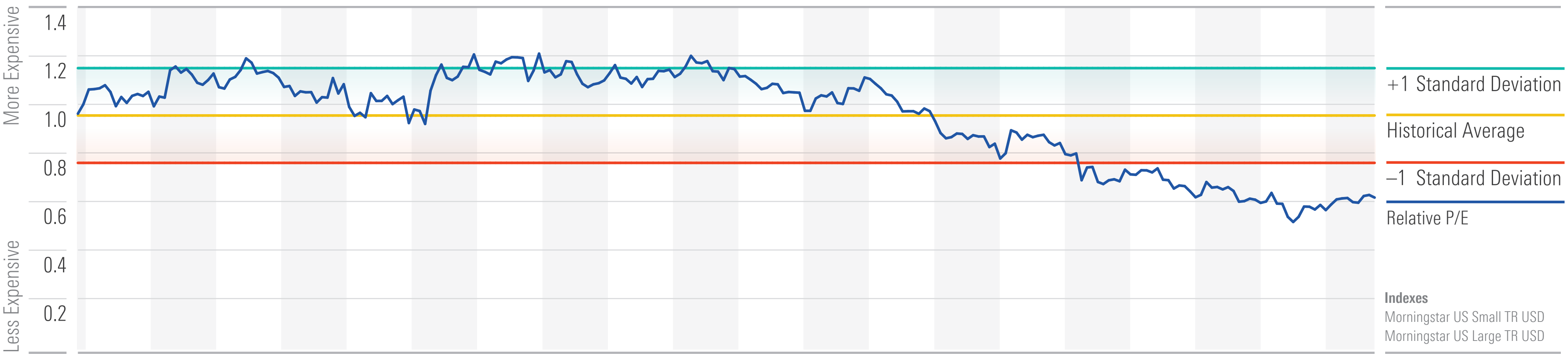
Valuation-Implied Return
Annualized 10-year forward expected return based on the underlying forward return components.

Source: Morningstar Direct; Morningstar Investment Management LLC Analysis. Data as of Sept. 30, 2024. For illustrative purposes only.

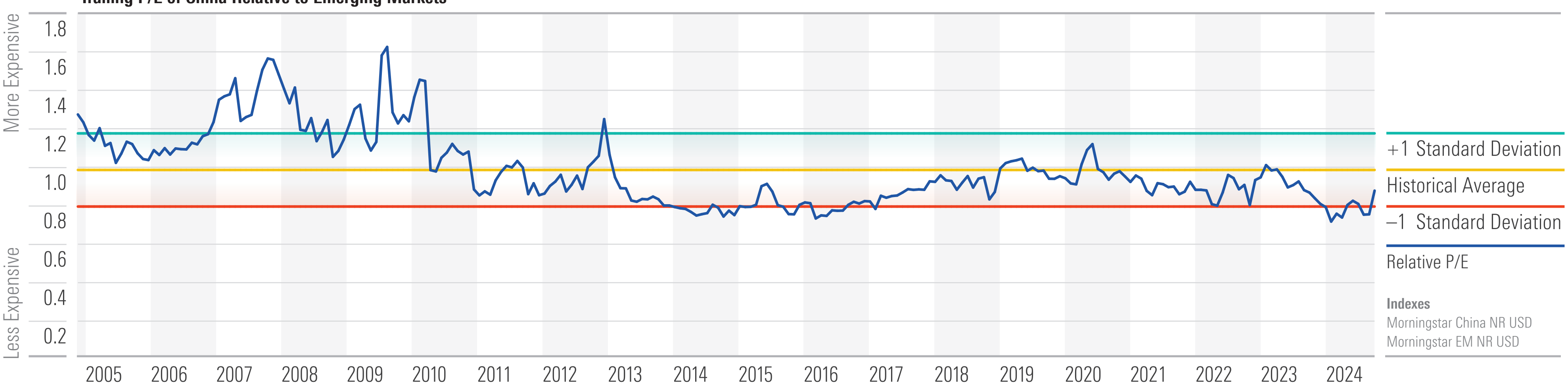
What's Cheap? Breaking Down Valuation Disparities in Global Markets

We examined price/earnings ratios on a relative basis over the last 20 years. Despite outperforming US large caps in 2024's third quarter, US small caps continue to look historically cheap. Chinese stocks came roaring back in the second half of September 2024, ending the quarter a bit closer to their historical average valuation levels relative to the broad emerging-markets index.

Trailing P/E of US Small Cap Relative to US Large Cap



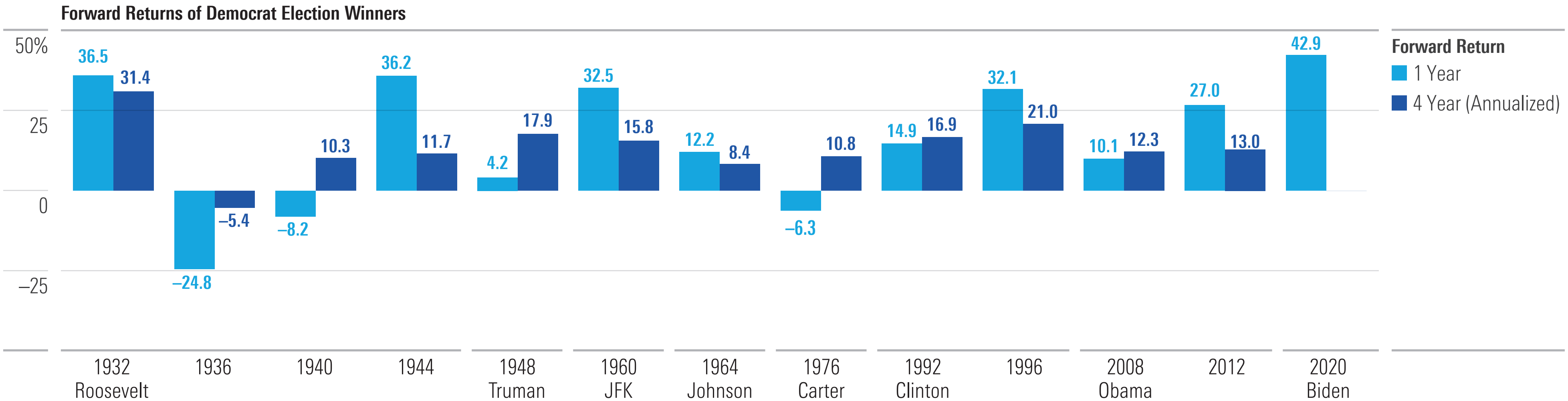
Trailing P/E of China Relative to Emerging Markets

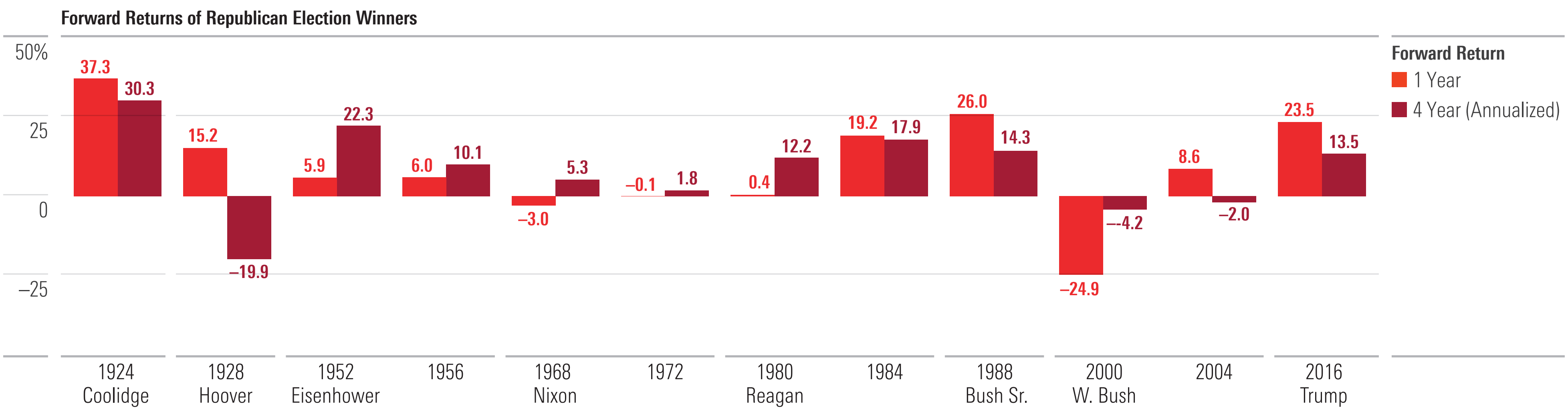


Source: Morningstar Direct, Morningstar Investment Management LLC Analysis. Data as of Sept. 30, 2024. For illustrative purposes only.

Elections, Political Parties, and Markets: A Mixed Bag

We sorted one- and four-year total returns for the S&P 500 index starting Nov. 1 for the last 25 US presidential elections. Forward one-year returns were positive in 10 of 13 Democratic-won elections, compared with nine of 12 of Republican-won elections. Over forward four-year periods, returns were positive for Democrats in 11 of 12 instances; for Republicans it was nine of 12. Since November 2020, when Democrat Joe Biden won, the index was up 17.4% annualized through September 2024.

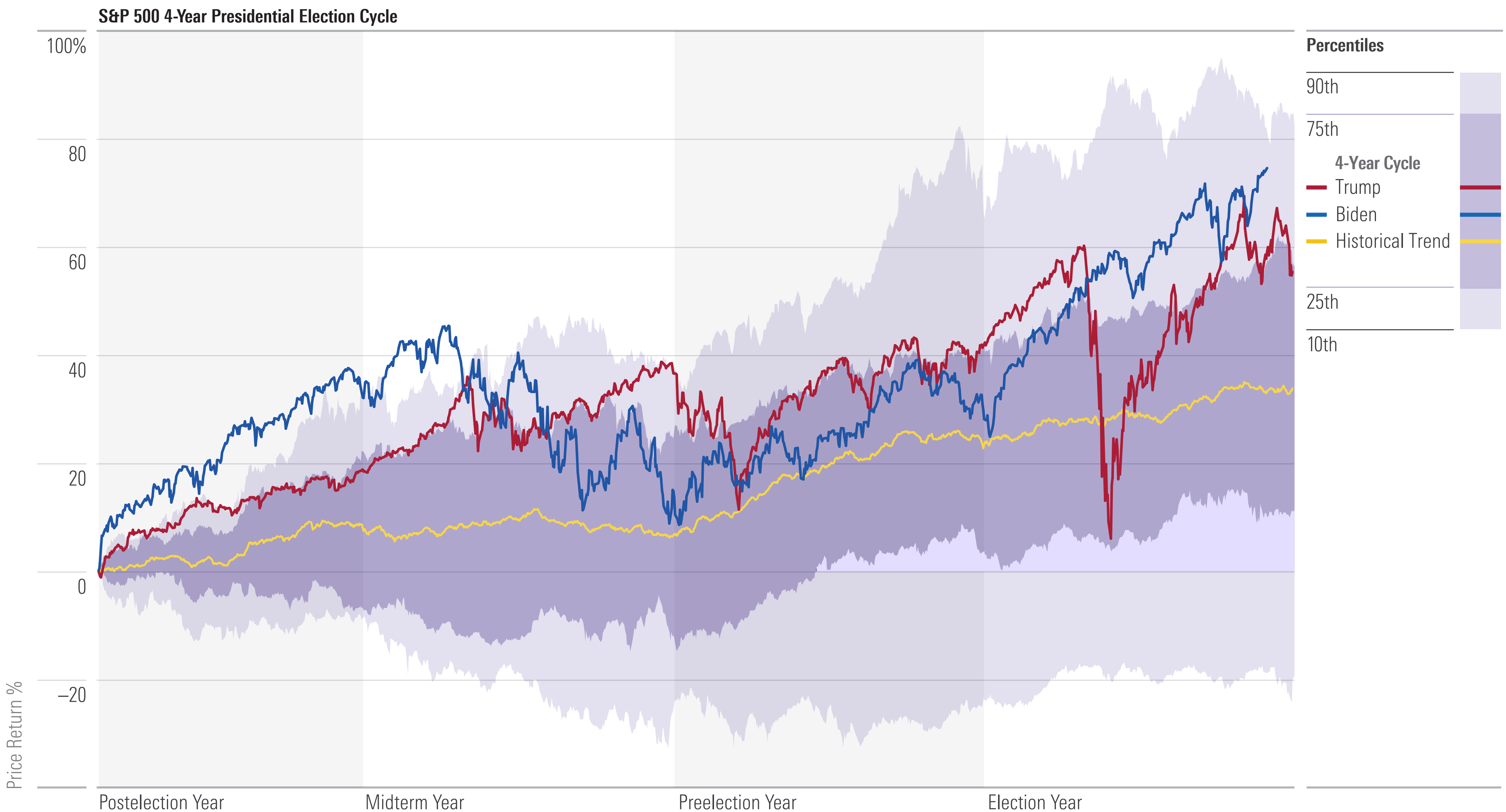




Source: Macrobond; Morningstar Investment Management LLC Analysis. Returns are total returns. Data as of Sept. 30, 2024. For illustrative purposes only.

Election Cycles: A Historically Wide, but Typically Positive, Range of Outcomes

The below chart shows the distribution of daily price returns (that is, excluding dividends) for the S&P 500 index over four-year US presidential election cycles dating back to 1928. Starting Nov. 1 of each election year, through Oct. 31 four years later, the average index price return is a cumulative 34%, though there's a wide range of outcomes. Both Trump (2016-20) and Biden (so far in 2020-24) oversaw returns well above the historical trend.

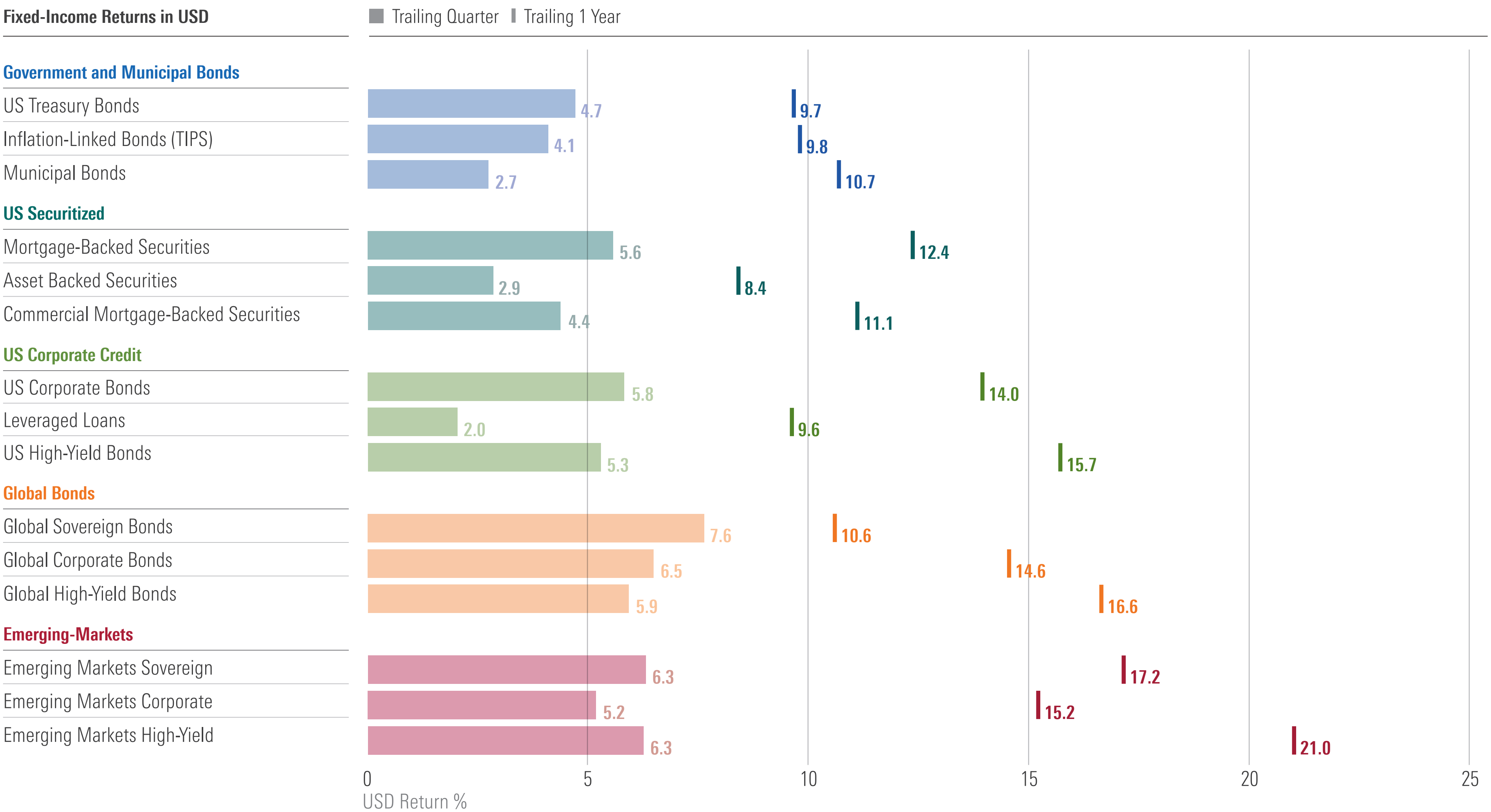


Source: Macrobond; Morningstar Investment Management LLC Analysis. Returns are Price Returns. Data as of Sept. 30, 2024. For illustrative purposes only.

Fixed Income

All Major Bond Sectors Post Positive Results in 2024's Third Quarter

Bond investors had a lot to cheer about in 2024's third quarter. High-quality and long-duration bonds—like US Treasuries, agency mortgages, and investment-grade corporates—led the way as yields fell. Strong fundamentals and a healthy economy kept credit-sensitive assets, including bank loans and high-yield bonds, in positive territory as well.



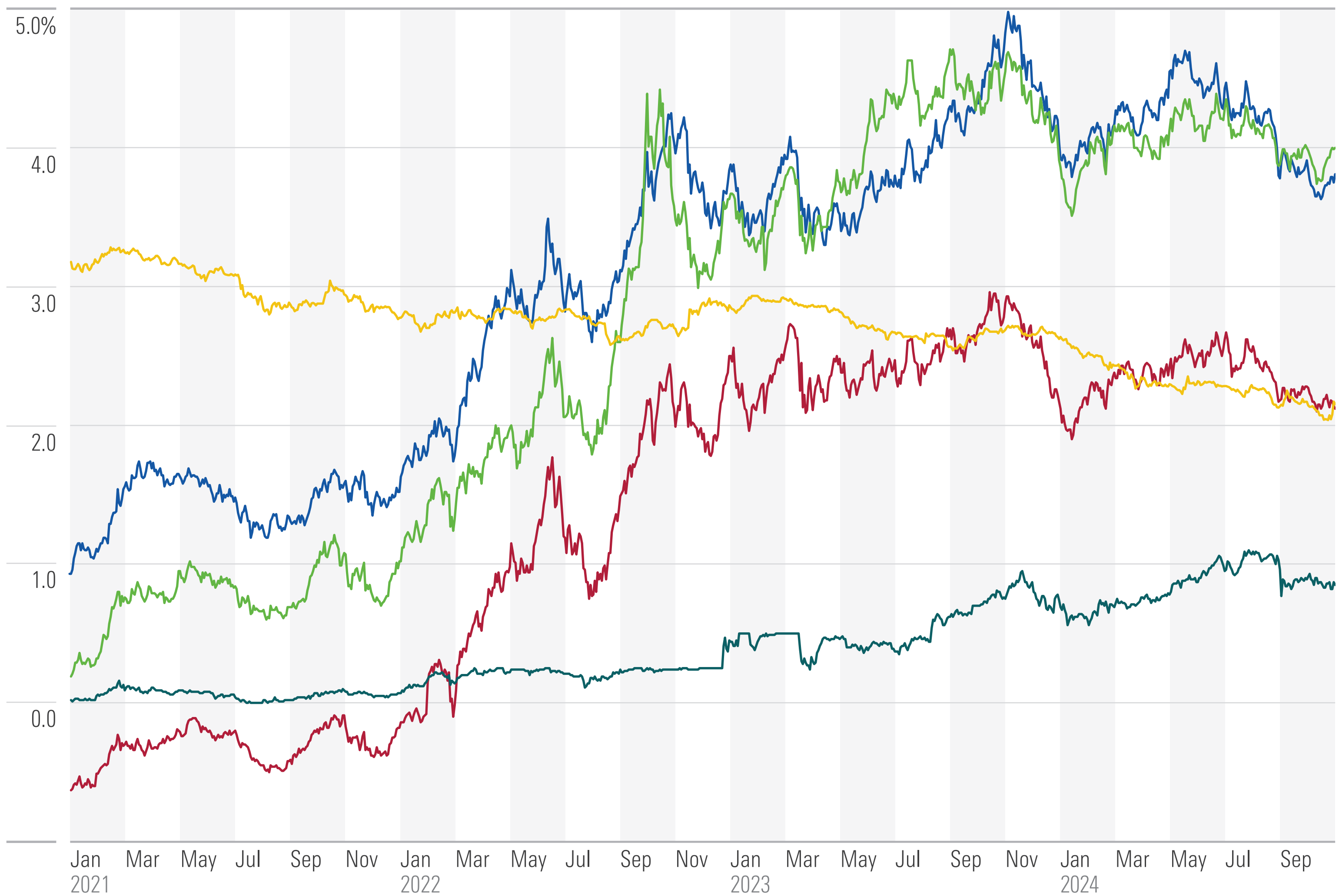
QFI36

Source: Morningstar Indexes. Data as of Sept. 30, 2024.

Global Rates Fall in 2024’s Third Quarter

The third quarter was a significant turning point for central banks around the globe. Most central banks have clearly signaled the onset of easing, and many sovereign 10-year yields traded lower after trending higher in the first half of the year. The People’s Bank of China announced a series of stimulus measures, while the Bank of England and European Central Bank both cut rates during the quarter.

Global Sovereign Benchmarks 10-Year Yield



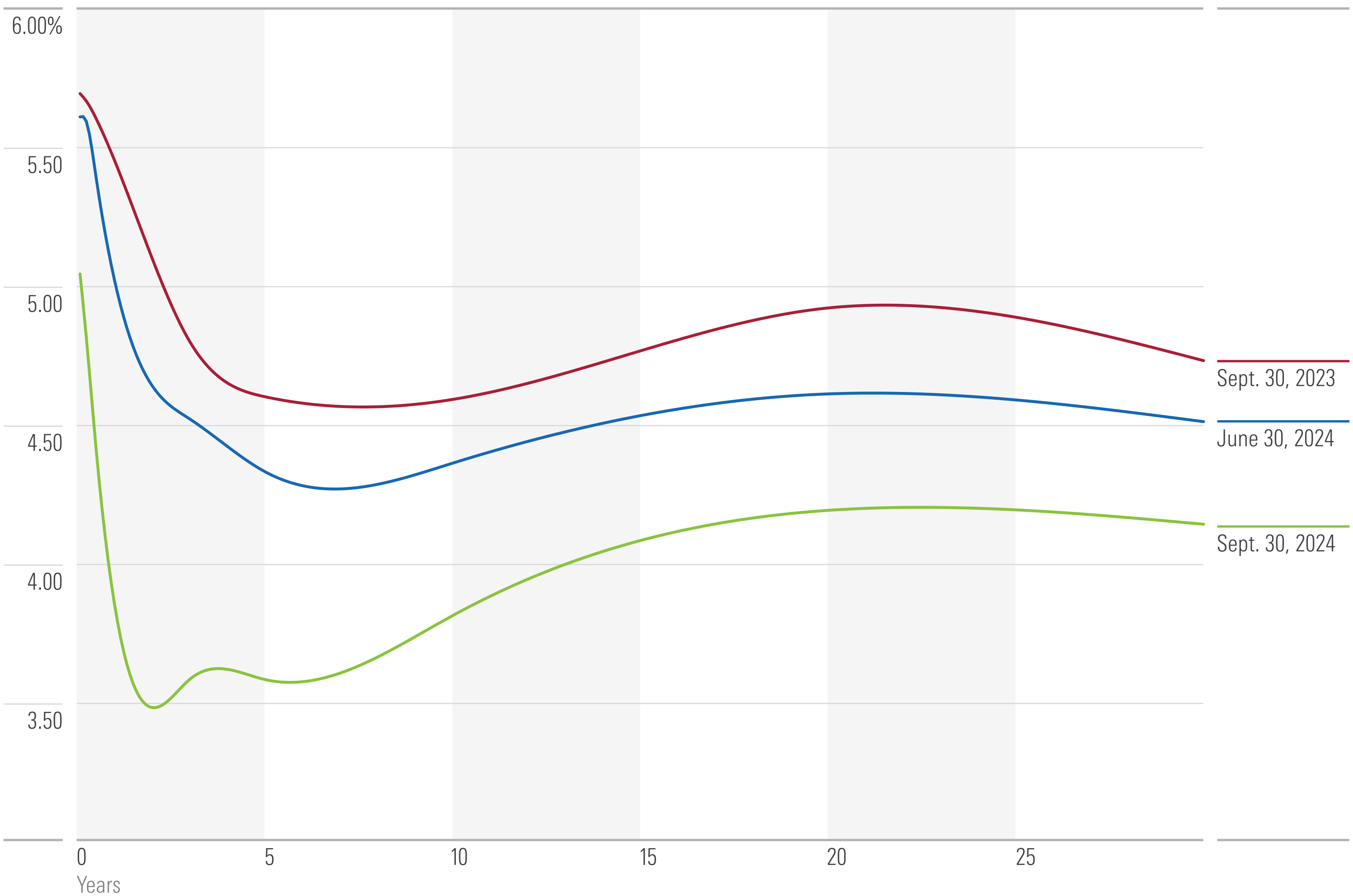
	Current Yield (%)	Change in Last Year (%)
United Kingdom	4.0	–0.4
United States	3.8	–0.8
China	2.2	–0.5
Germany	2.1	–0.7
Japan	0.9	0.1

Source: Macrobond Financial. Data as of Sept. 30, 2024.

Yields Decrease Across the US Treasury Yield Curve

The Federal Reserve changed its course and cut the target range for the short-term federal-funds rate by 0.5% on Sept. 18, 2024. Long-term yields followed short-term yields lower over the quarter, and bond prices increased. The spread between the 10-year and two-year yields also turned positive, meaning the yield curve isn't inverted for the first time in over two years.

US Treasury Yield Curve



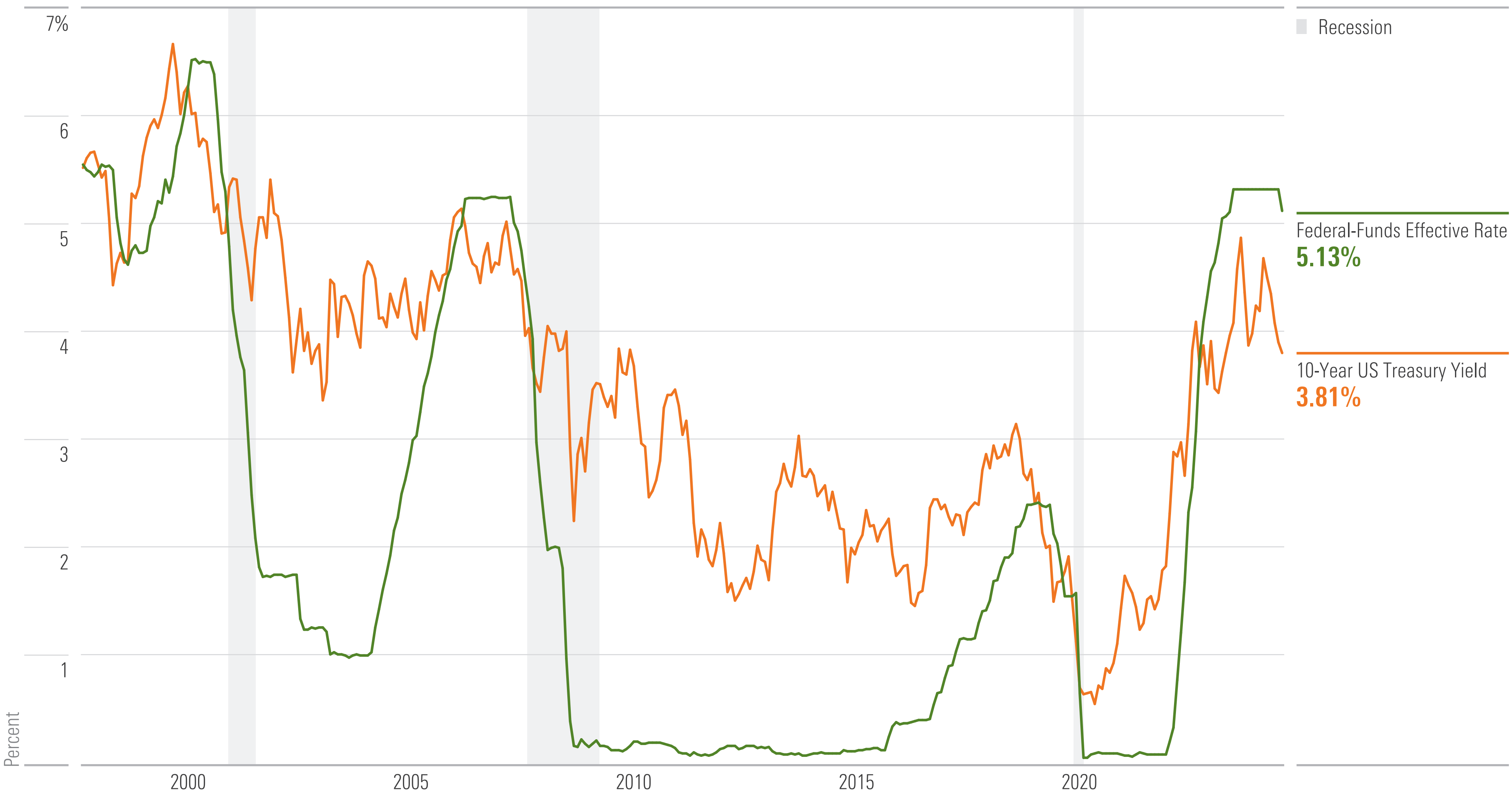
Yields	Sept. 30, 2024	3-Month Change %	12-Month Change %
3-Month	4.7	–0.8	–0.8
2 Year	3.7	–1.1	–1.4
5 Year	3.6	–0.8	–1.0
10 Year	3.8	–0.6	–0.8
30 Year	4.1	–0.4	–0.6
Spreads			
2s10s	0.2	0.5	0.6
5s30s	0.6	0.4	0.4

Source: Macrobond Financial. Data as of Sept. 30, 2024.

Will History Repeat Itself?

The Federal Reserve began cutting its policy rate in September 2024, and historically when that happened, the US had already been in recession; the yield curve has usually been flat or slightly inverted during such periods, too. But now, odds of a recession are low, and there is a large divergence between the Fed's policy rate and the 10-year US Treasury yield. As such, this cycle is more complicated, and the outlook for long-term yields remains foggy.

10-Year US Treasury Yield vs. Federal-Funds Rate



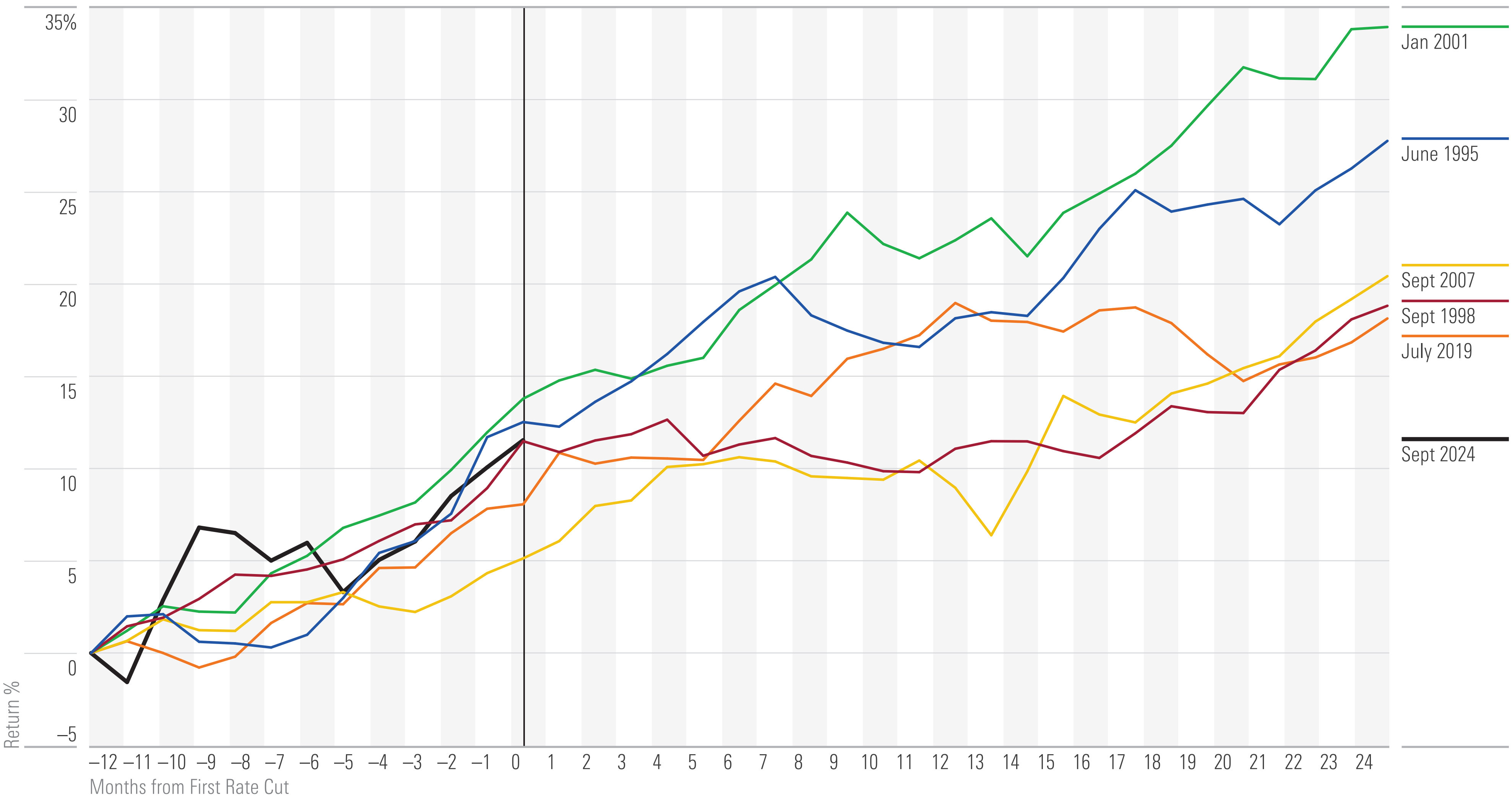
QFI59

Source: Federal Reserve Bank of St Louis. Data as of Sept. 30, 2024.

Bond Markets Have Historically Rewarded Investors During Rate Cuts

As bond investors have learned over the past few years, the path of interest rates is hard to predict. But bonds have historically posted strong returns after the Federal Reserve cuts its short-term rate. With the Fed cutting its short-term rate by 0.5% in September 2024, the backdrop may be supportive for more positive returns if interest rates continue to fall.

Bond Market Returns When the Federal Reserve First Cuts Rates



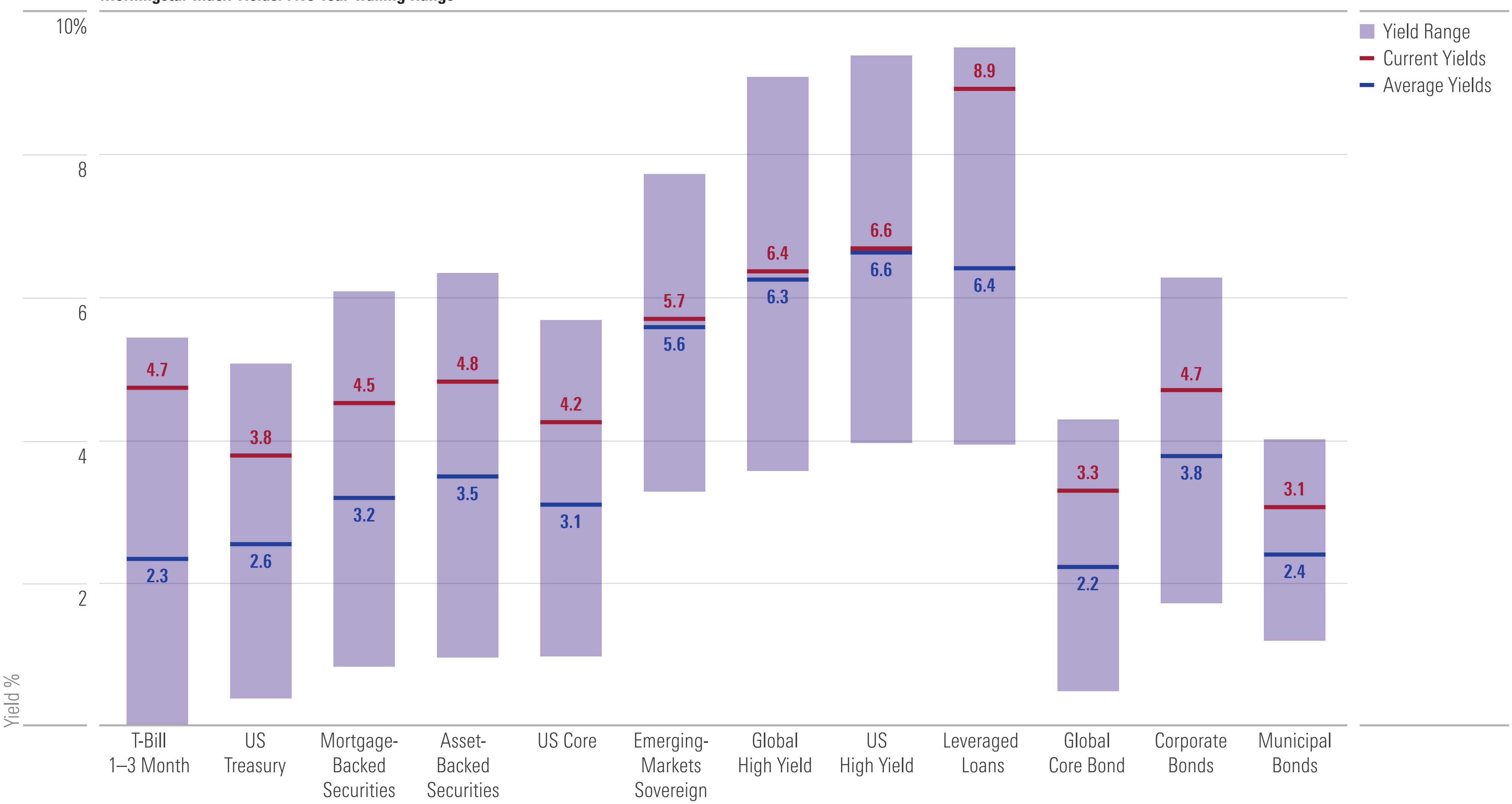
QFI55

Source: Morningstar Direct and Analyst Calculations. Bloomberg US Aggregate Bond Index. Data as of Sept. 30, 2024.

Yields Across Fixed Income Remain High

While yields fell in 2024's third quarter, all major fixed-income sectors still carry yields above their five-year average, making bonds more attractive for yield-seeking investors. But investors' ability to earn relatively high yields in short-term and safer assets, like money market funds, may be short-lived if the Federal Reserve continues on its rate-cutting path.

Morningstar Index Yields: Five-Year Trailing Range

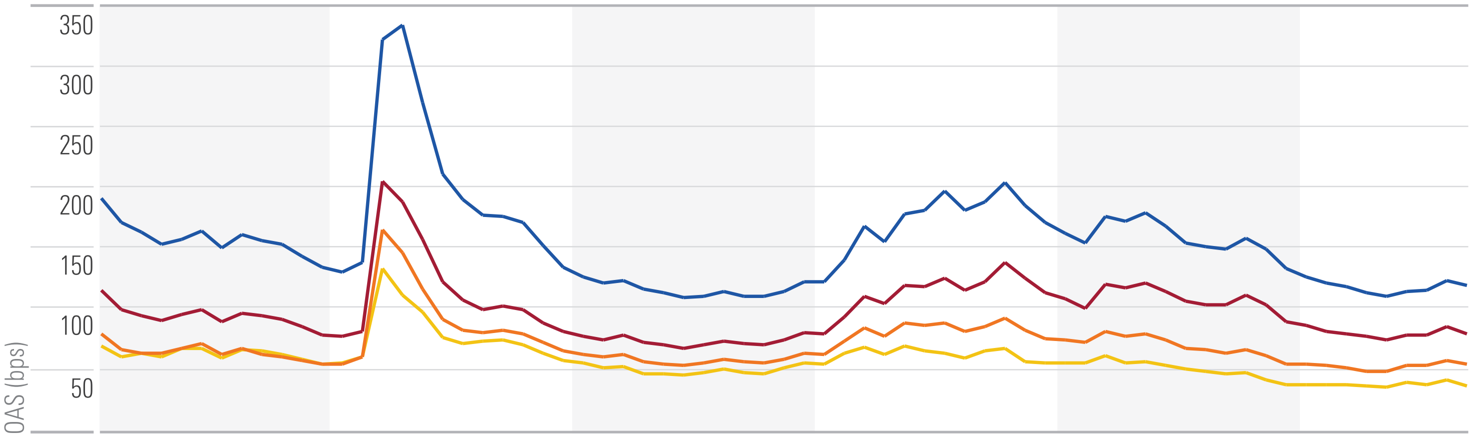


QFI49

Credit Spreads Remain Tight

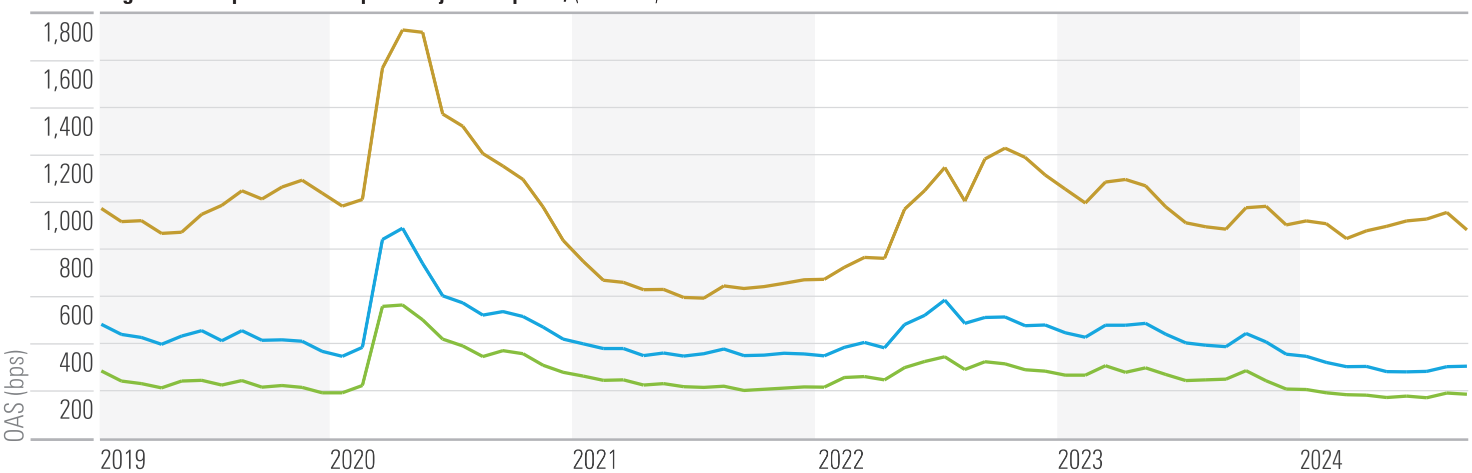
Corporate credit spreads, an indicator of the broader economy's health and investors' confidence in credit markets, remained at historically tight levels during 2024's third quarter, suggesting rich valuations. A resilient economy has provided a tailwind for corporate bonds, but weakening corporate fundamentals and the upcoming 2024 US presidential election could all cause future credit market volatility.

Investment-Grade Option-Adjusted Spread, (2019–24)



Spreads	Sept. 30, 2024	5-Year Average	5-Year High	5-Year Low
BBB	120	155	335	110
A	80	99	206	68
AA	55	72	166	49
AAA	37	58	134	36

High-Yield Corporate Bond Option-Adjusted Spread, (2019–24)

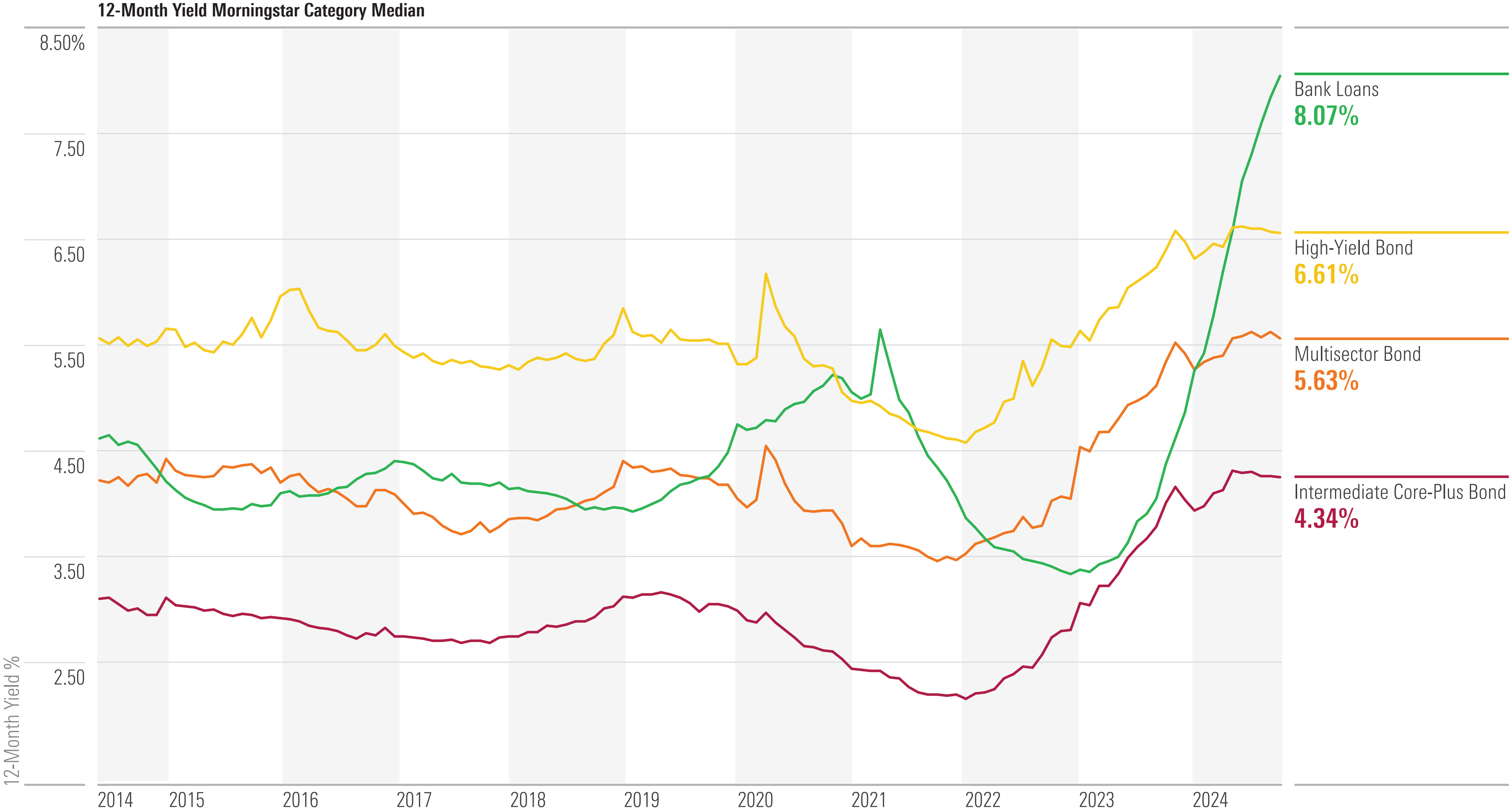


Spreads	Sept. 30, 2024	5-Year Average	5-Year High	5-Year Low
CCC	895	975	1,744	605
B	316	442	902	292
BB	197	280	576	182

Source: Federal Reserve Bank of St Louis. Data as of Sept. 30, 2024.

Leveraged Loans Offer High Yields, for Now

As the Federal Reserve hiked its short-term rate by over 500 basis points over the course of 2022 and 2023, bank loans—also known as leveraged loans—saw yields move substantially higher than most fixed-rated bonds. Leveraged loans are floating-rate in nature, making their prices less sensitive to rising rates. Leveraged loans' higher yields and lower duration increase their appeal when rates rise but could face technical pressure as the Fed continues on its rate-cutting path.



Source: Morningstar Direct. Data as of Sept. 30, 2024.

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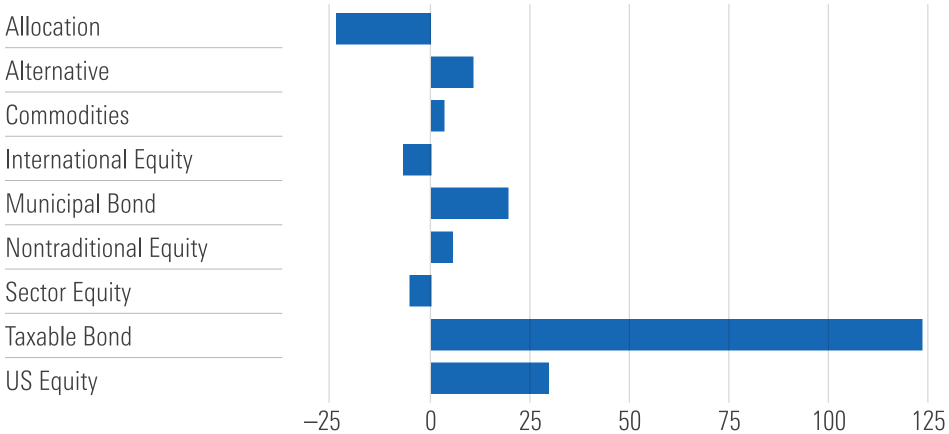
Funds

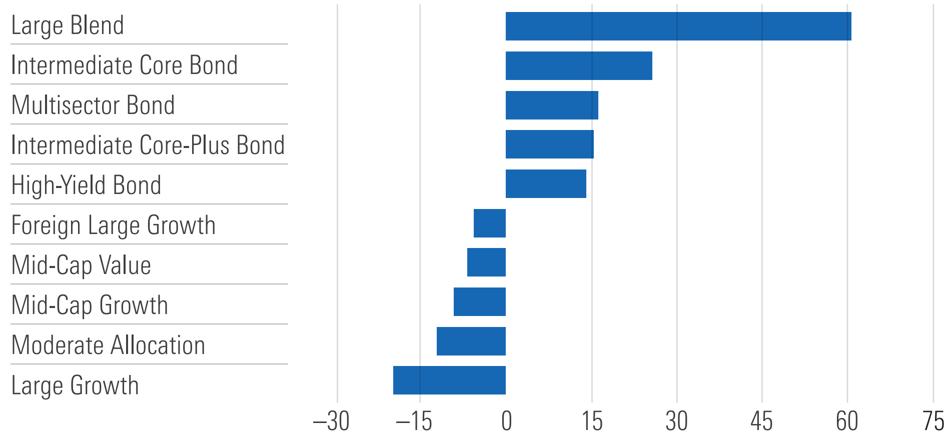
Top- and Bottom-Performing Morningstar Categories

China region was the top-performing Morningstar Category in 2024's third quarter, following a sharp rally in the second half of September 2024; categories that include China exposure also did well, like Pacific/Asia ex-Japan stock and diversified Pacific/Asia. Other bright spots include interest-rate-sensitive categories like utilities, real estate, and financials. The ever-volatile digital assets category was the worst-performing category in the third quarter, though it remains up nearly 100% in the past year.

Trailing Quarter Flows ($ Bil)



Top and Bottom Trailing Quarter Flows by Category ($ Bil)



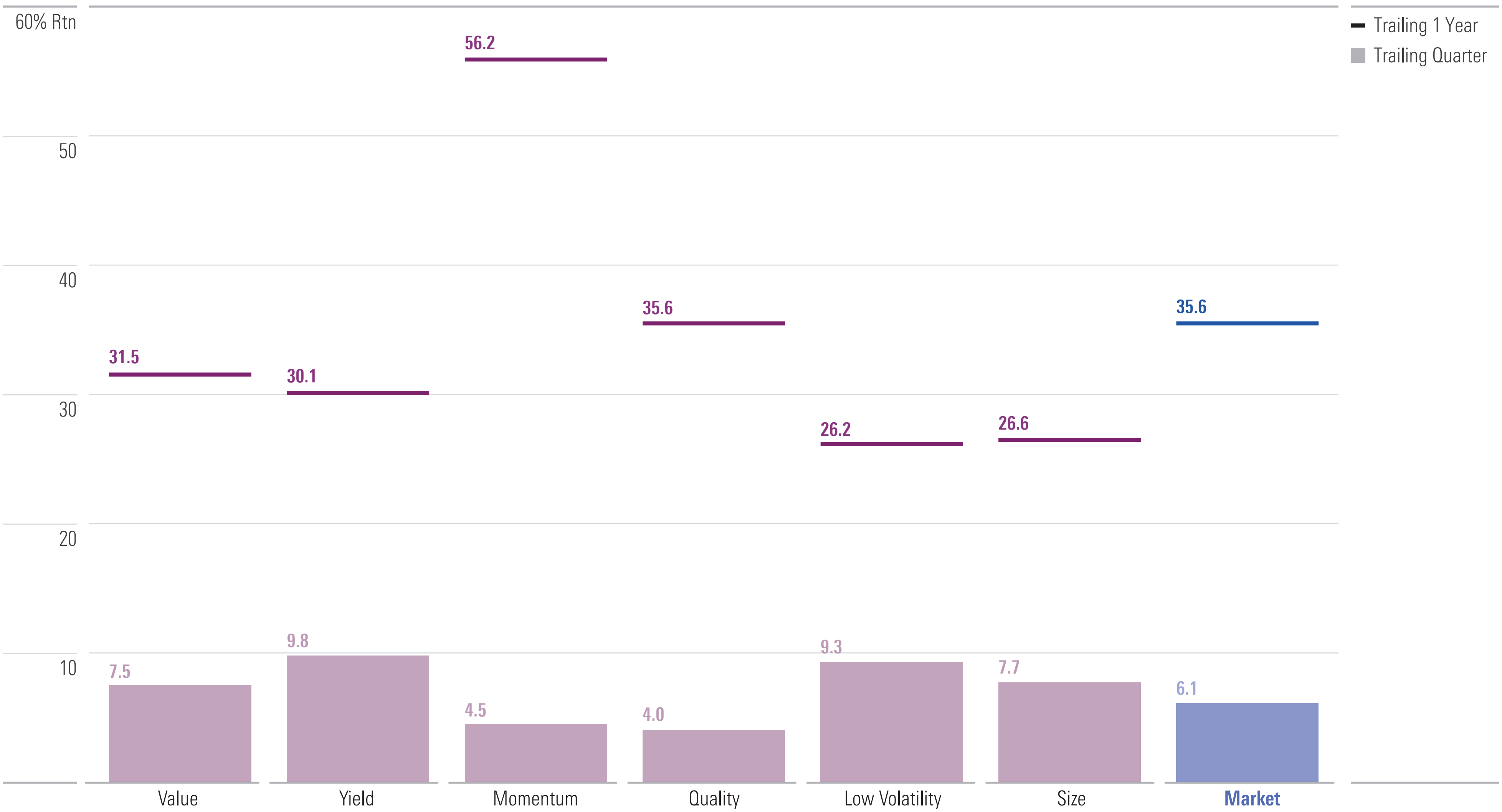
Top-Performing Morningstar Categories	US Category Group	Return (%) Trailing Quarter	Return (%) Trailing 1 Year	Quarterly Flow ($ Mil)
China Region	China Region	19.2	14.0	–848
Utilities	Utilities	17.5	37.3	2,451
Equity Precious Metals	Equity Precious Metals	16.8	44.1	–298
Real Estate	Real Estate	15.8	32.1	3,023
Global Real Estate	Global Real Estate	15.6	28.3	–1,259
Infrastructure	Infrastructure	12.9	26.4	499
Financial	Financial	10.8	38.3	1,079
Pacific/Asia ex-Japan Stk	Pacific/Asia ex-Japan	10.1	25.8	–872
Industrials	Industrials	10.1	29.6	–691
Diversified Pacific/Asia	Diversified Pacific/Asia	9.8	24.7	–210

Bottom-Performing Morningstar Categories	US Category Group	Return (%) Trailing Quarter	Return (%) Trailing 1 Year	Quarterly Flow ($ Mil)
Digital Assets	Alternative	–4.3	97.4	5,014
Systematic Trend	Alternative	–4.0	–2.6	335
Equity Energy	Sector Equity	–2.7	0.5	–3,469
Commodities Broad Basket	Commodities	–0.2	1.1	–2,593
Multistrategy	Alternative	0.9	7.4	153
Macro Trading	Alternative	1.0	7.9	844
Equity Market Neutral	Alternative	1.6	10.9	342
Ultrashort Bond	Taxable Bond	1.7	6.5	10,569
Muni National Short	Municipal Bond	1.9	5.9	–257
Muni Single State Short	Municipal Bond	2.0	6.1	14

>20
10 to 19.9
0 to 9.9
–9.9 to 0
–19.9 to –10
<–20

Factor Index Performance

Within equities, several "factors" have been identified that have outperformed the market over long periods or have been associated with superior risk-adjusted performance. They include value, yield, momentum, quality, low volatility, and small size. Though momentum remains the clear winner over the 12 months through September, it gave way in the third quarter to higher-yielding and less-volatile stocks.



QMF36

Source: Morningstar Direct. Value—Morningstar US Value Factor Index, Yield—Morningstar US Yield Factor Index, Momentum—Morningstar US Momentum Factor Index, Quality—Morningstar US Quality Factor Index, Low Volatility—Morningstar US Low Volatility Factor Index, Size—Morningstar US Size Factor Index Market—Morningstar Market Index. Data as of Sept. 30, 2024

Manager Industry Experience Isn't a Differentiator, but Firm Tenure Is

Many firms advertise how experienced their portfolio managers are. Yet aggregated survey data indicate that nearly all named equity portfolio managers have many years of industry service. The length of time managers have spent in their current role or at their current firm shows greater dispersion, however, making those traits a better differentiator. Analyst years of experience and firm tenures also vary widely, as do the level of research personnel supporting each strategy.

		Percentile				
	Sample Size	5th	25th	50th	75th	95th
Manager Years of Experience (Firm Average)	48	20.5	23.1	25.9	26.9	36.3
Manager Years at Current Employer (Firm Average)	48	9.7	14.0	16.5	20.1	28.7
Number of Funds a Single Portfolio Manager Oversees (Firm Average)	48	1.0	1.4	2.2	3.5	5.7
Analyst Years of Experience (Firm Average)	44	7.5	10.8	14.1	18.0	22.2
Analyst Years at Current Employer (Firm Average)	44	3.4	4.8	7.1	9.0	13.6
Research Personnel Per Distinct Strategy at Firm	46	1.1	1.8	2.7	4.0	7.5

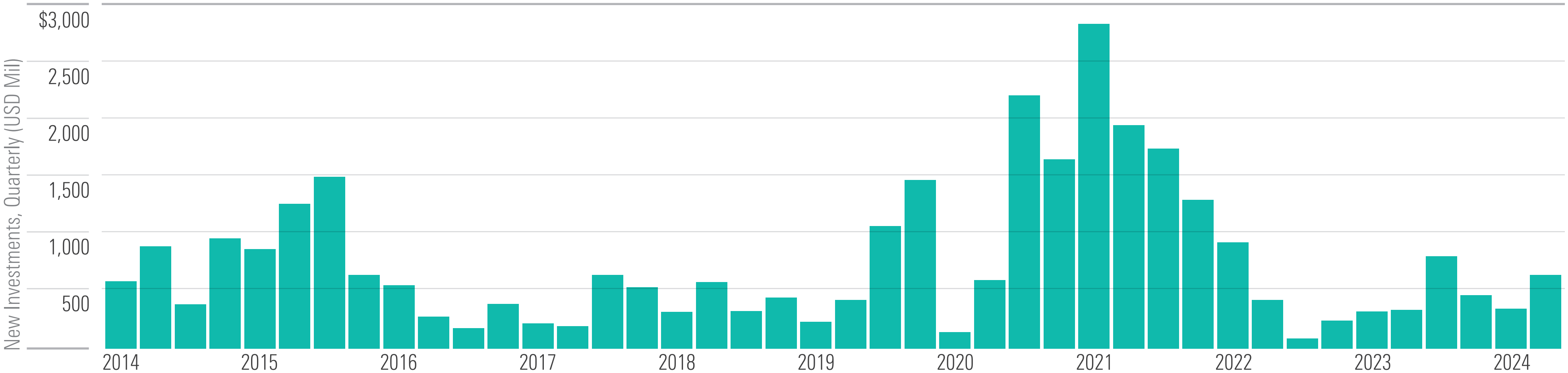
QMF76

Source: Morningstar Active Equity Benchmarking Report by Adam Sabban. Surveyed data as of Dec. 31, 2023, or more recent.

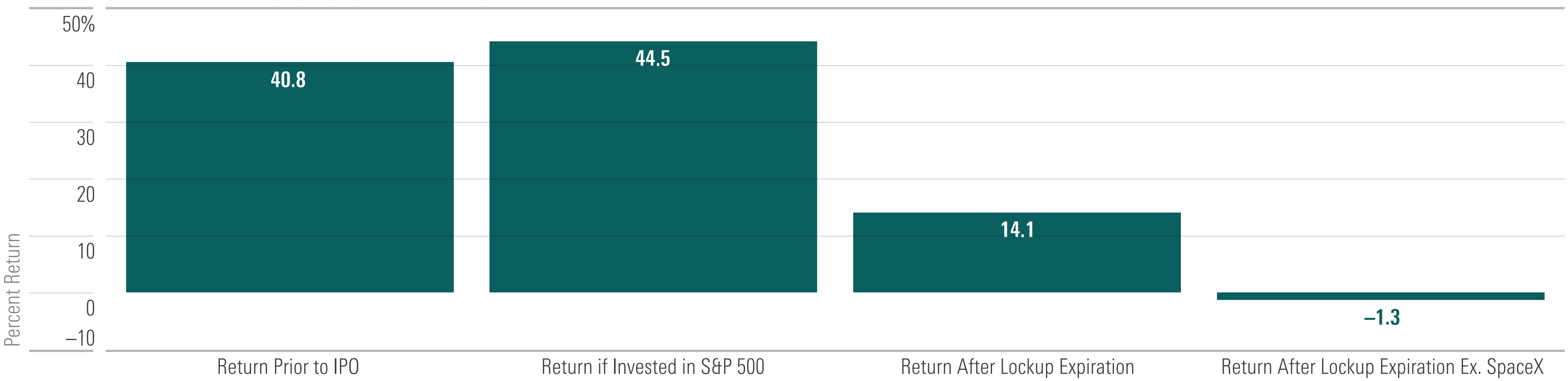
Mutual Funds Have Little to Show for Tens of Billions Invested in Private Company Equities

Since January 2014, through June 2024, USD 34 billion was invested in private company equities by US-focused mutual funds. Private stakes generated a 40.8% return pre-IPO, less than what would've been earned had those allocations been placed in the S&P 500 instead. But several private stakes tanked following their IPOs (such as Rivian), and the return after accounting for lockup periods was just 14.1%. Further, SpaceX holds up that gain, and mutual funds in aggregate lost money without it.

Quarterly New Investments in Private Companies by Mutual Funds: 2014-24



Return on Private Company Equity Positions Held by Mutual Funds: 2014-24



QMF77

Source: Mutual Funds & Unicorns: A Fruitless Marriage, by Jack Shannon. Data as of June 30, 2024.

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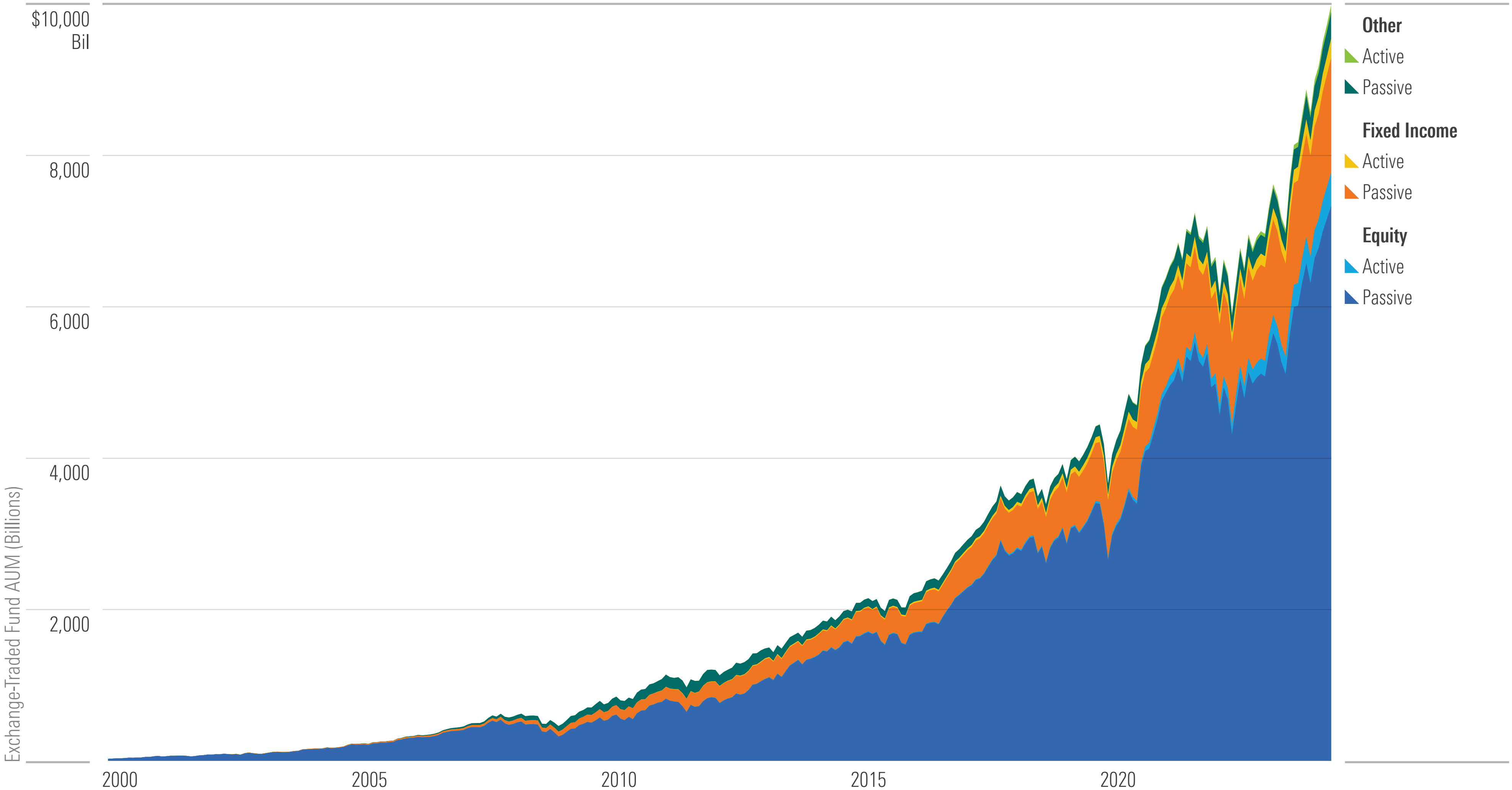
ETF Assets Hit USD 10 Trillion

Seemingly nothing can stop the growth of exchange-traded funds. Assets held in US ETFs surpassed USD 10 trillion in September 2024, thanks largely to rising markets and relentless inflows. Passive-stock ETFs led the charge, but innovations such as active ETFs, cryptocurrency ETFs, and options-based strategies spawned a new wave of investor, and provider, interest in the vehicle.

ETFs' Road to USD 10 Trillion



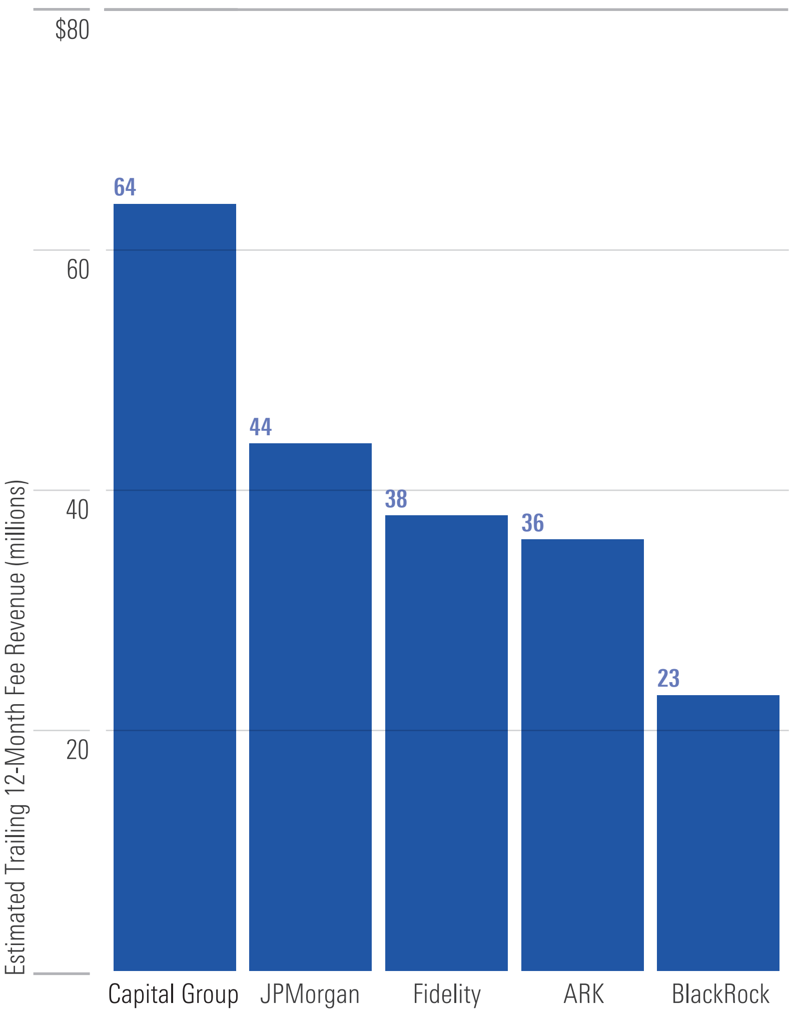
QMF78

Source: Morningstar Direct. Data as of Sept. 30, 2024.

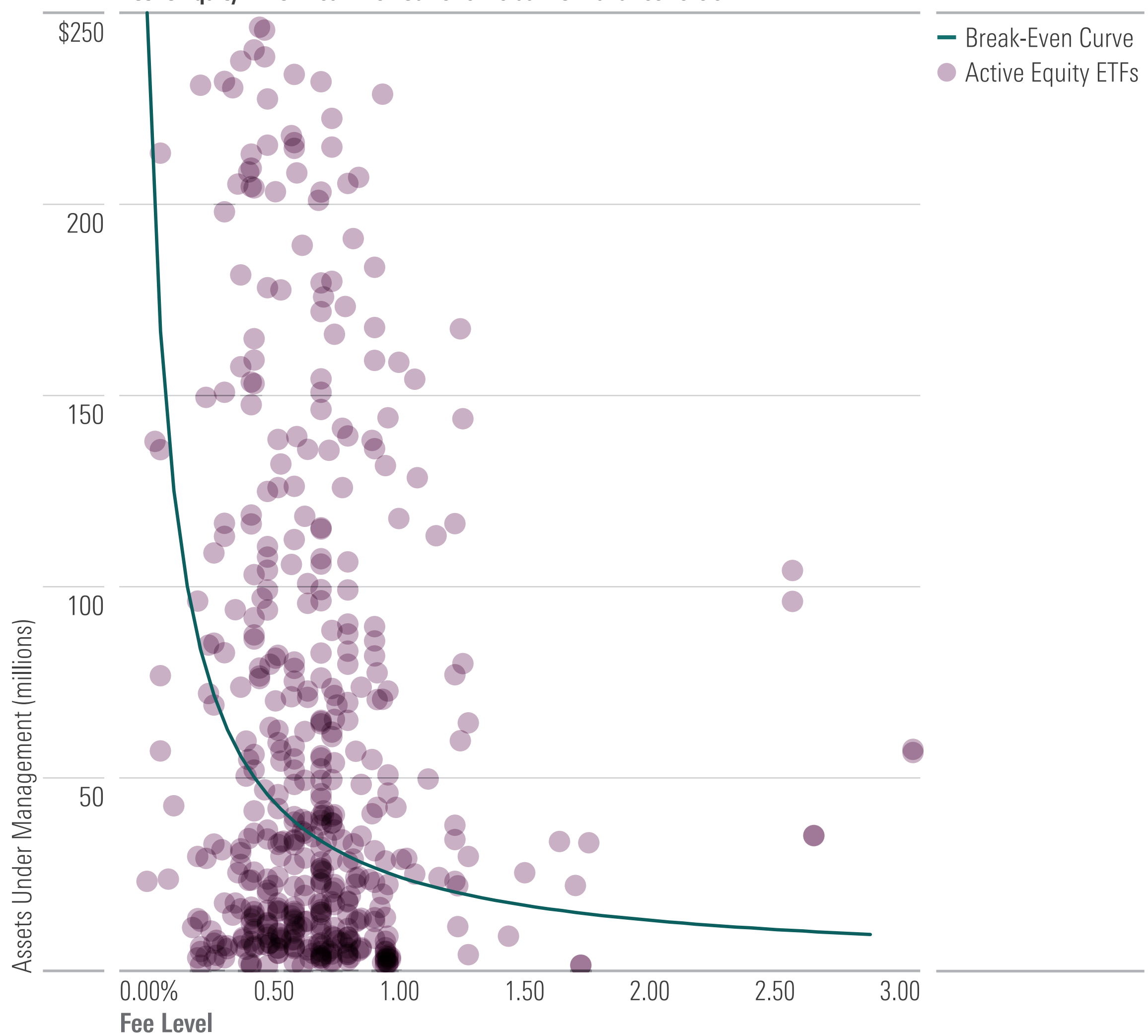
Around 40% of Active Equity ETFs Are at Risk of Closure

Exchange-traded funds represent a massive opportunity for active mutual fund managers, but not all will see sustained success. Excluding systematic strategies from firms like Dimensional and American Century's Avantis, active equity ETFs are a small but growing sliver of the USD 10 trillion US ETF landscape. Dozens of firms have launched active equity ETFs lately, yet many likely don't generate more annual revenue than a USD 250,000 estimate of an ETF's annual operating expenses.

Active Equity ETFs: Fee Revenue by Provider



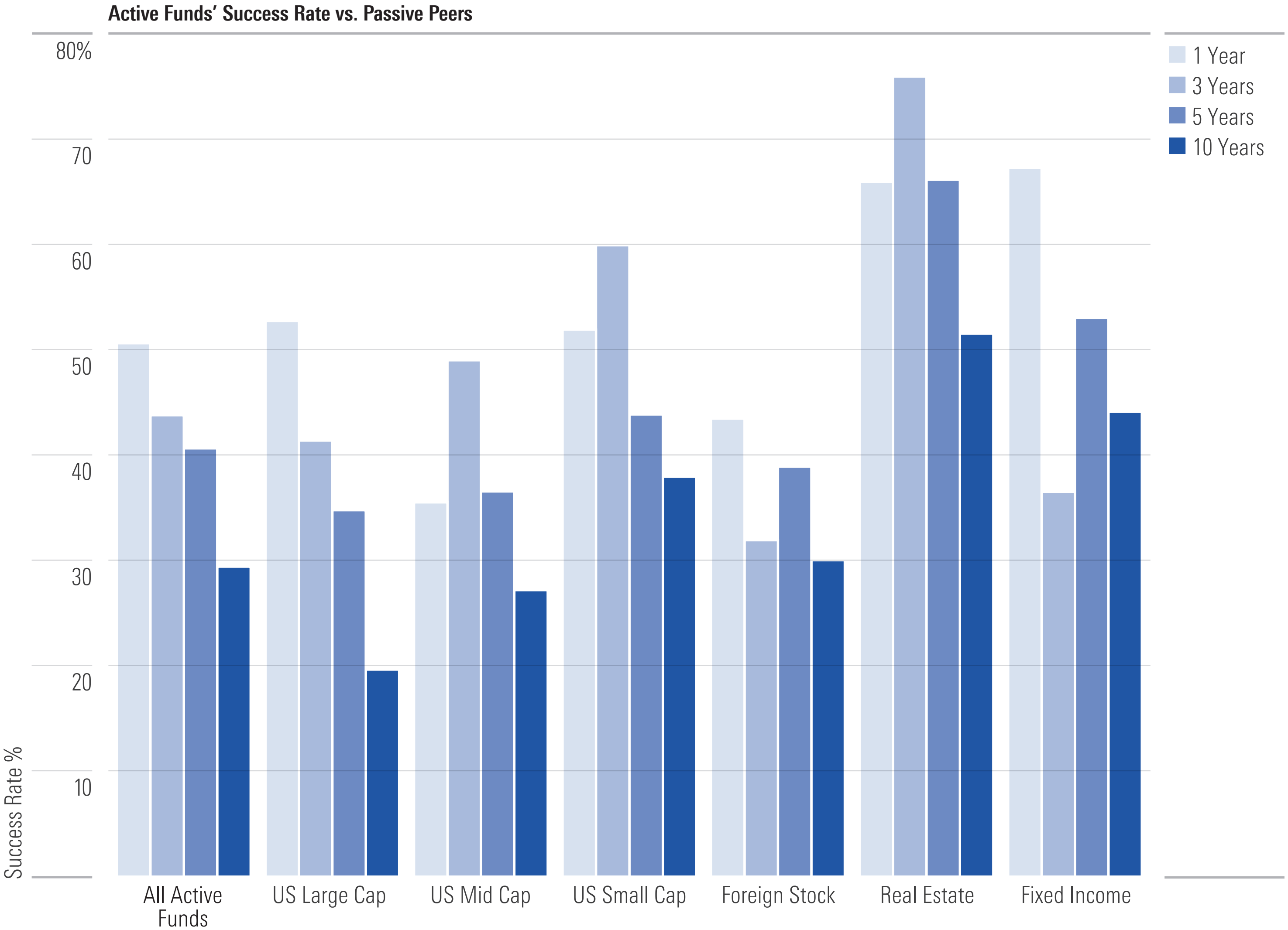
Active Equity ETFs: Break-Even Curve vs. Actual AUM and Fee Levels

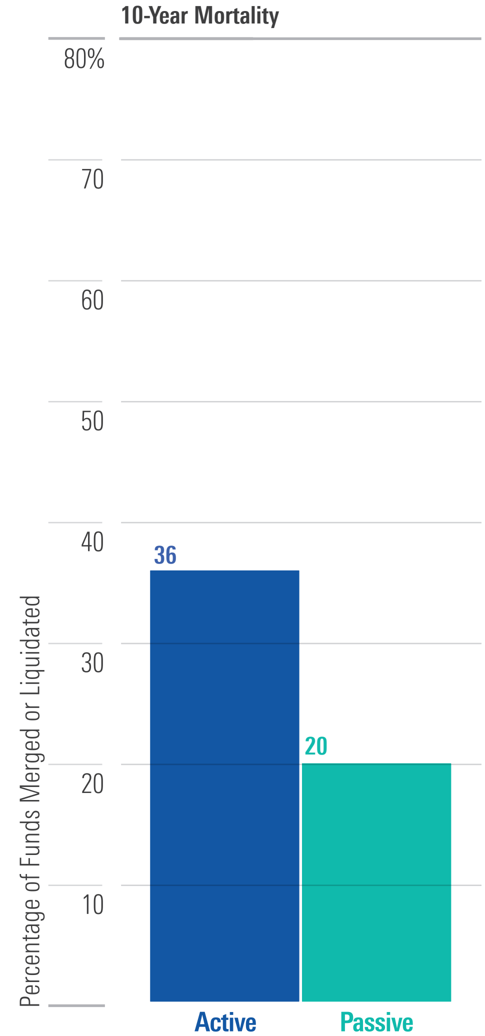


Source: Morningstar. Data as of Sept. 30, 2024. Both charts include only nonsystematic active equity ETFs. Left chart multiplies an eligible ETF's prospectus-adjusted expense ratio by its trailing 12-month average AUM and aggregates at the firm level. Right chart excludes ETFs with more than USD 250 million AUM.

Success Rarely Persists for Active Funds

Success for active managers can be fleeting. In four of the six broad US category groups displayed (including US large caps and fixed income), actively managed funds beat a composite of their passive peers more than half the time in the 12 months through June 2024. But active managers have less to show over longer periods, and the success rate across all US active funds was below 30% in the trailing 10 years.





QMF63

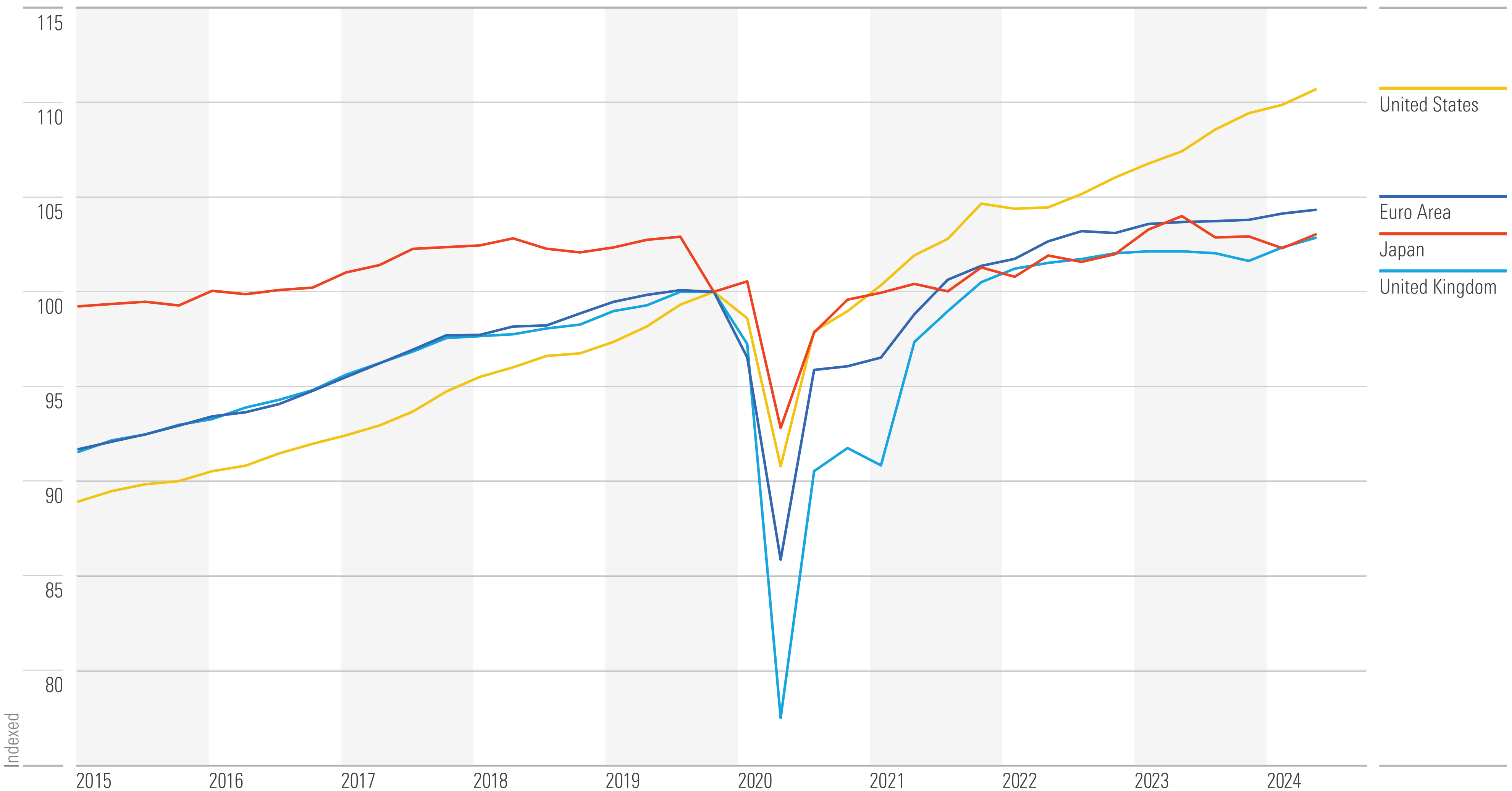
Source: Morningstar's US Active/Passive Barometer. Data as of June 30, 2024.

Economic Indicators

US Economy Has Outperformed Since Start of Pandemic

US real gross domestic product grew at a 2.3% average annual rate since the fourth quarter of 2019, through 2024's second quarter, exceeding what most forecasters had projected on the eve of the pandemic. The US economy has soared past other major advanced economies over that time frame. Each of these economies is running near maximum output, so the causes of the divergence must be more on the supply side than the demand side. Productivity growth has been impressive in the US.

Real GDP (Index, Q4 2019 = 100) **for Selected Advanced Economies**

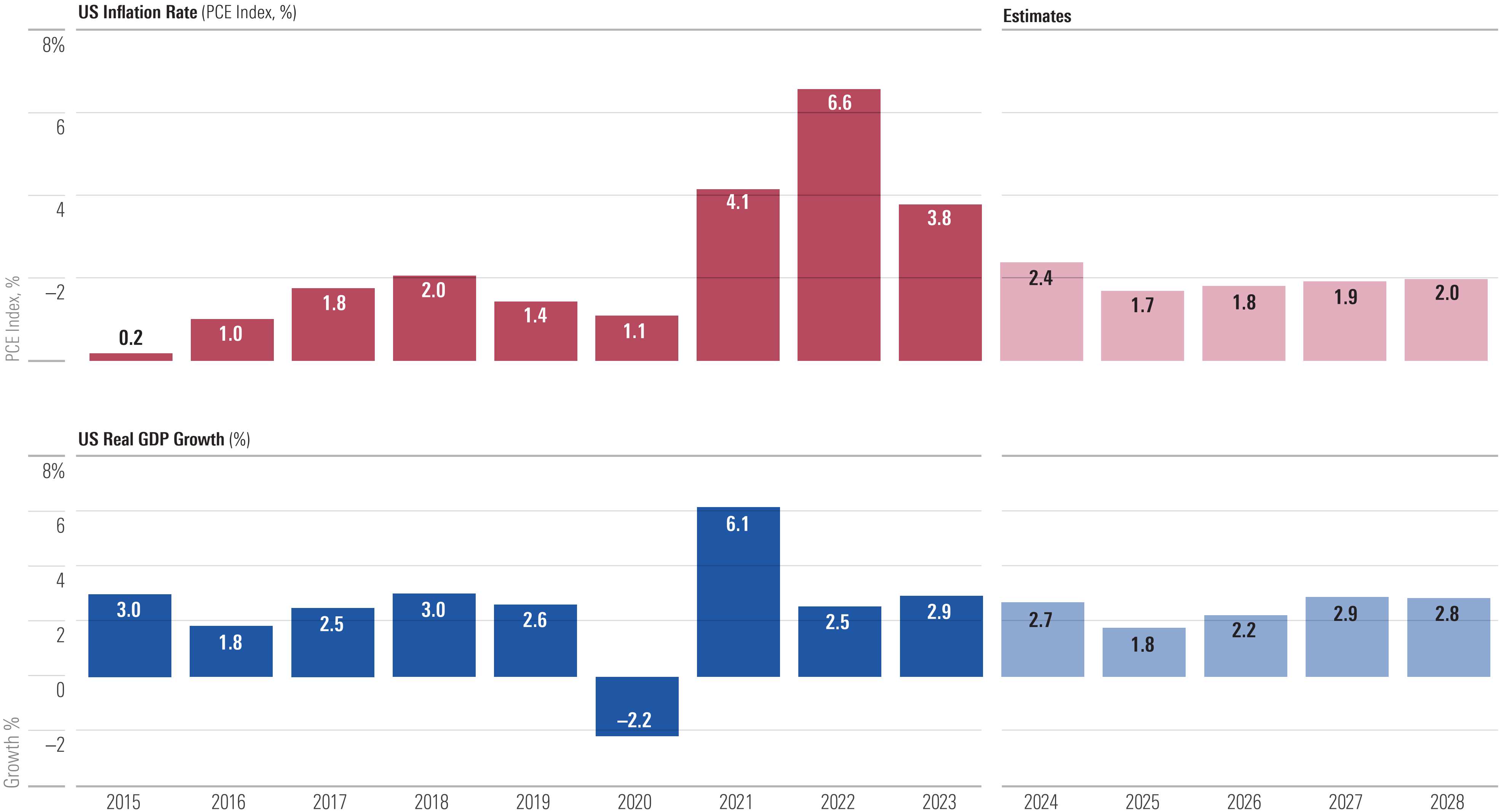


QEI256

Source: US Bureau of Economic Analysis, UK Office for National Statistics, Eurostat, Japanese Cabinet Office. Data as of June 30, 2024.

US GDP Growth Will Trough in 2025 Before Recovering

We expect US GDP growth to slow over the next year, owing to depleted household savings and other factors. The alleviation of supply constraints along with cooling demand is pushing inflation down, and we expect inflation about in line with the Federal Reserve's 2% target in 2025 and beyond. This should allow the Fed to cut rates aggressively, triggering a GDP growth rebound in 2026 and following years.

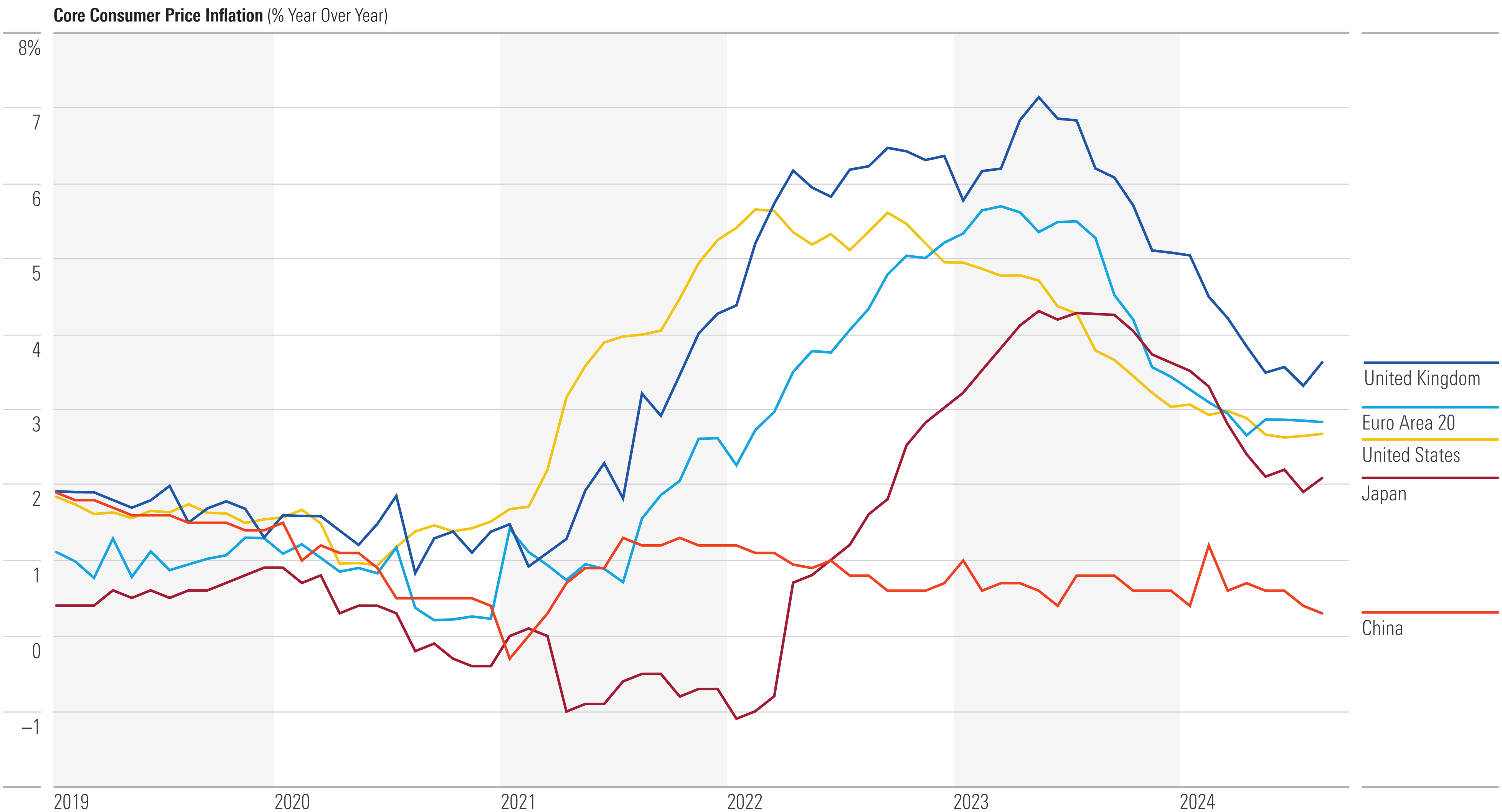


QEI235

Source: US Bureau of Economic Analysis,

Inflation Is Marching Back to Normal

Core inflation for most major economies has receded greatly after peaking in 2022. We're not quite at the point to declare "mission accomplished" in the battle against high inflation, but it's very close. Inflation should continue to normalize as supply disruptions are resolved and demand cools off. China could also transmit its low inflation to the rest of the world via expanded exports, but this could run afoul of protectionist backlash.



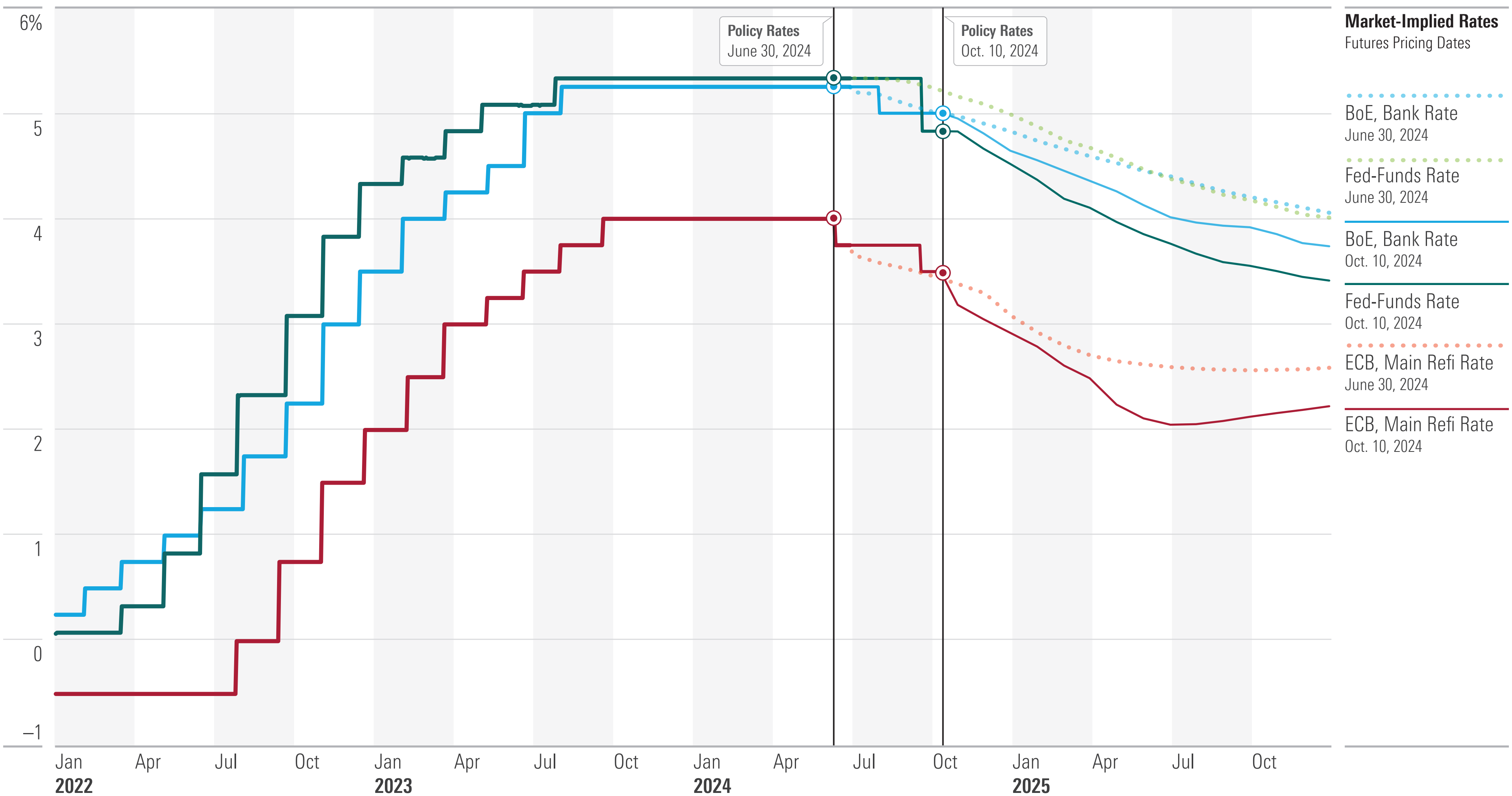
QEI246

Source: Macrobond.

Monetary Policy Loosening on the Way

Market expectations for the paths of central bank policy rates drifted lower during the third quarter, owing principally to favorable data on inflation in the US along with weak data on economic activity in Europe. The Federal Reserve proceeded with its first rate cut in September 2024, following the Bank of England and European Central Bank, which initiated cutting in July and June, respectively.

Fed, ECB, and BoE Market-Implied Paths of Policy Rates

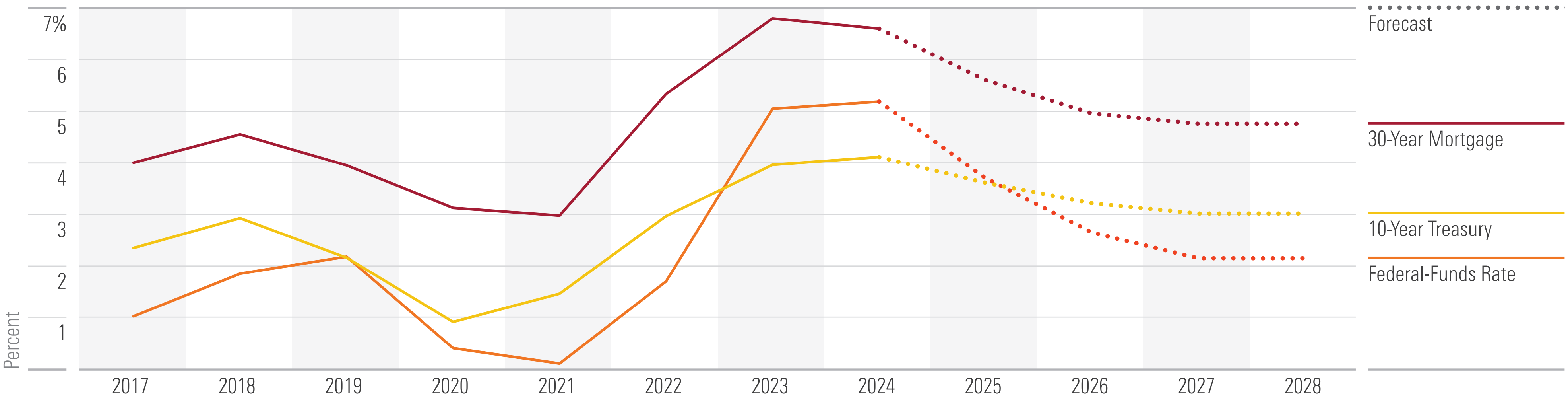


QEI213

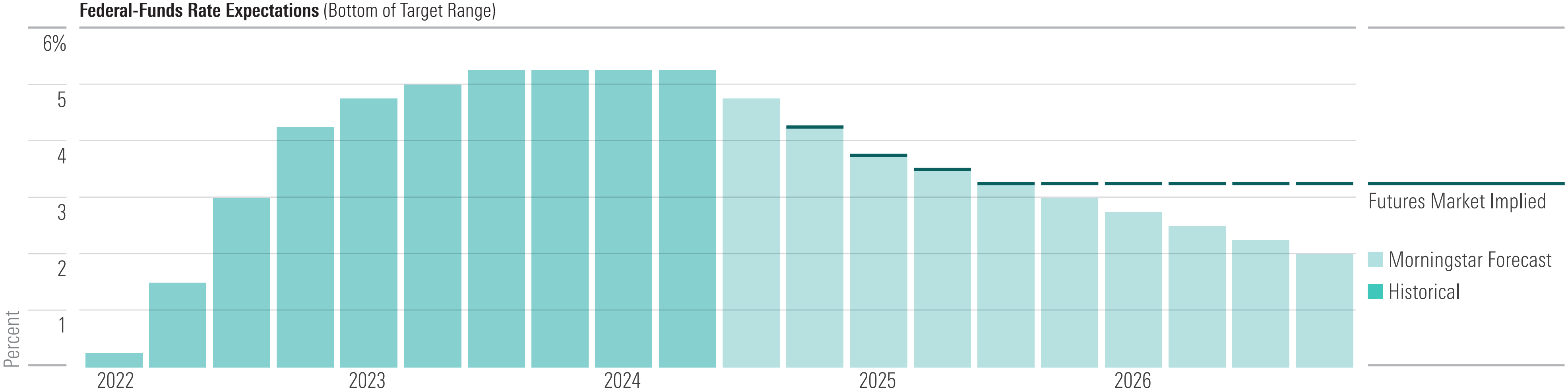
We Project US Interest Rates to Fall Lower Than the Market Expects

Our forecasts for the path of the federal-funds rate are well below market expectations, growing into a nearly 2-percentage-point gap by the end of 2026. Our optimism on inflation coming down is a key reason why we expect interest rates to fall faster than the market. Also, we disagree with the emerging view that the neutral rate of interest has jumped compared with its prepandemic level. We expect the 10-year Treasury yield to reach 3.0% by 2027, down from 4.1% as of October 2024.

Interest-Rate Forecast (Annual Average)



Federal-Funds Rate Expectations (Bottom of Target Range)

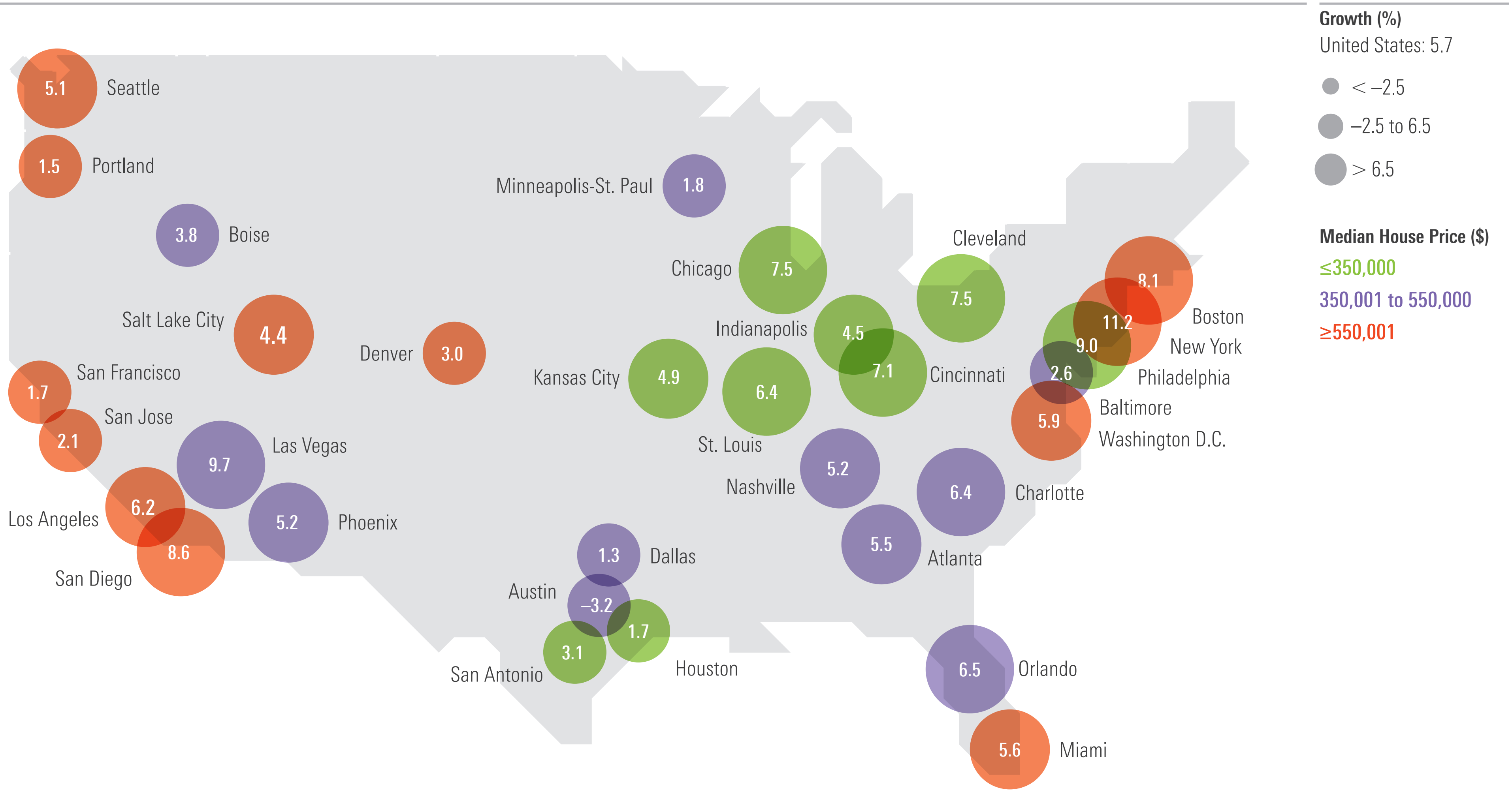


Source: Federal Reserve, Morningstar.

US Home Price Appreciation Running Hot Again

After a dip in 2022, housing price growth has been strong since mid-2023, and it stands at 6% year over year as of second-quarter 2024. Geographically, the gains are fairly broad-based. Price growth has been weaker in Texas markets, where supply is beginning to overtake demand, thanks to vigorous building.

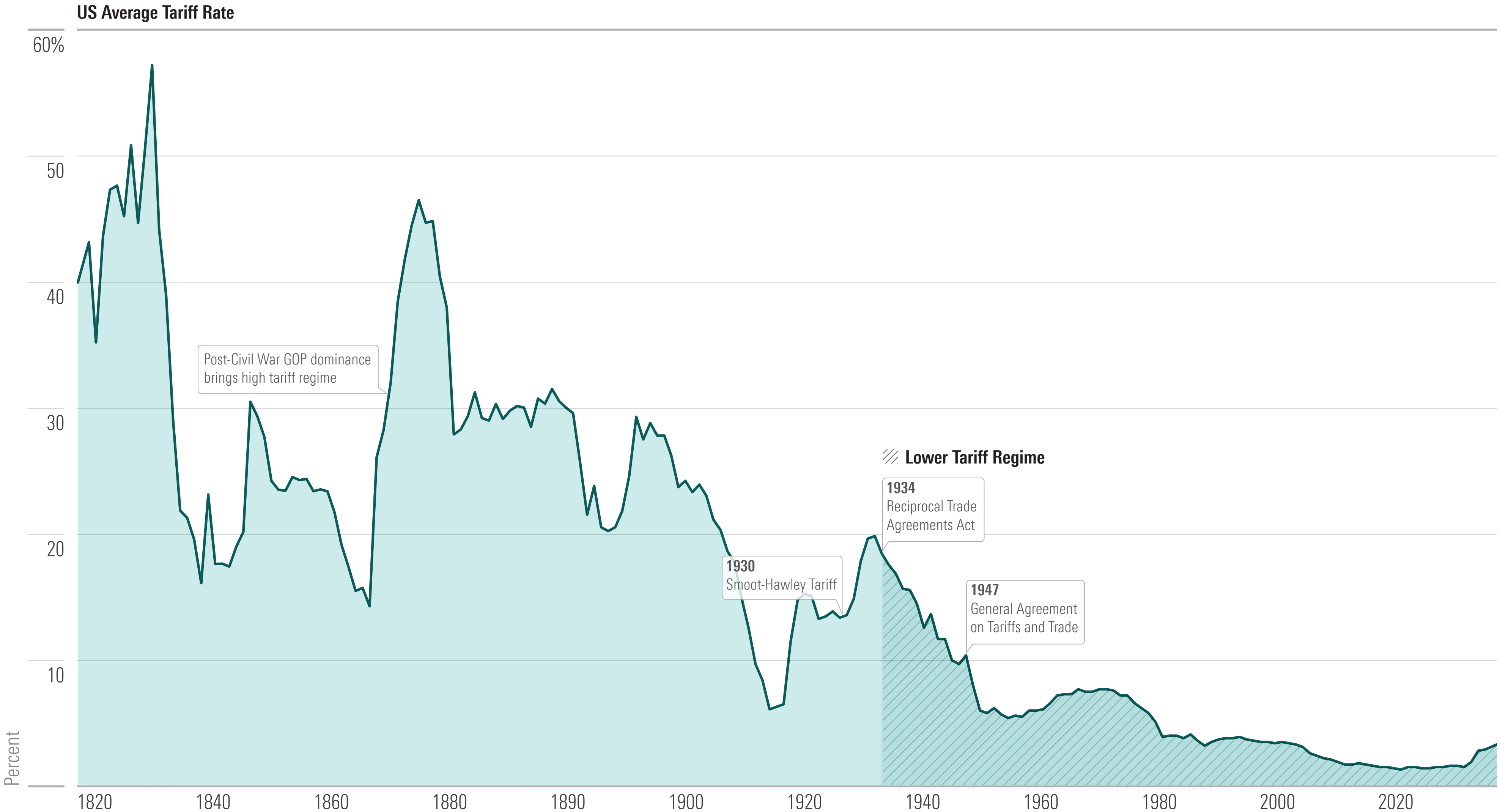
Year-Over-Year Price Growth, Q2 2024



Source: National Association of Realtors, Federal Housing Finance Agency.

High Tariffs Were Once the Norm for the US

Low tariff rates have been the norm for the US and most other major economies since the end of World War II, but that hasn't always been the case. From the second half of the 19th century to the early 20th, the US had very restrictive tariffs. One key lesson is that high tariffs, once they're in place, are very hard to dislodge, owing to vested interests and the need for unified control over government. Douglas Irwin's *Clashing Over Commerce* is a magisterial account of this history.



QEI253

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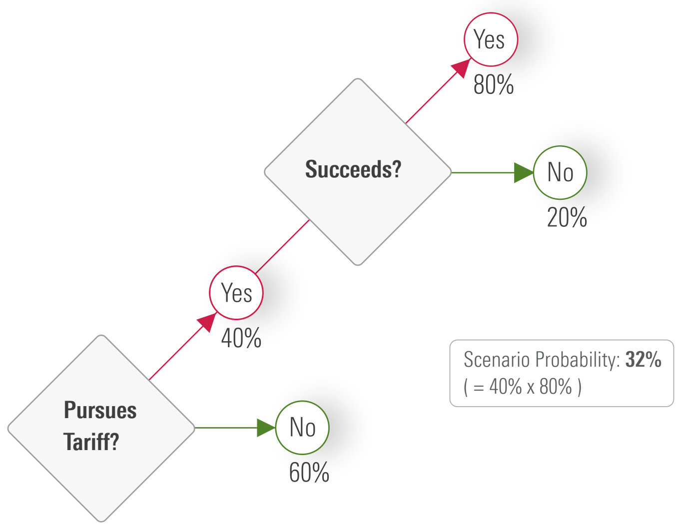
Higher Tariffs Could Reduce US Real GDP

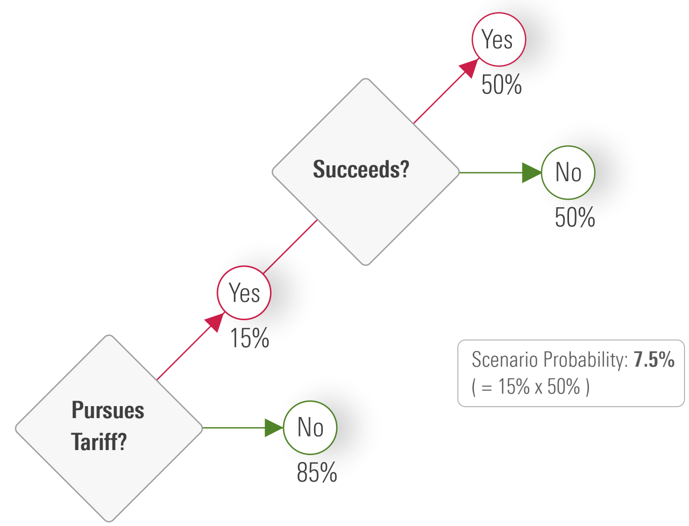
In contrast to most issues, US presidents can enact sweeping changes on trade without congressional approval. We estimate that Donald Trump's proposed tariff hikes would subtract 1.9% from the long-run level of US real GDP. Still, we think it's more likely than not that Trump would back down from the threatened tariffs, particularly the 10% uniform hike. This leads to a probability-weighted impact of 0.13%. See our Q3 2024 US Economic Outlook for further details.

Probability Trees (Conditional on Trump Winning Election)

60% China Tariff Scenario



10% Uniform Tariff Hike Scenario



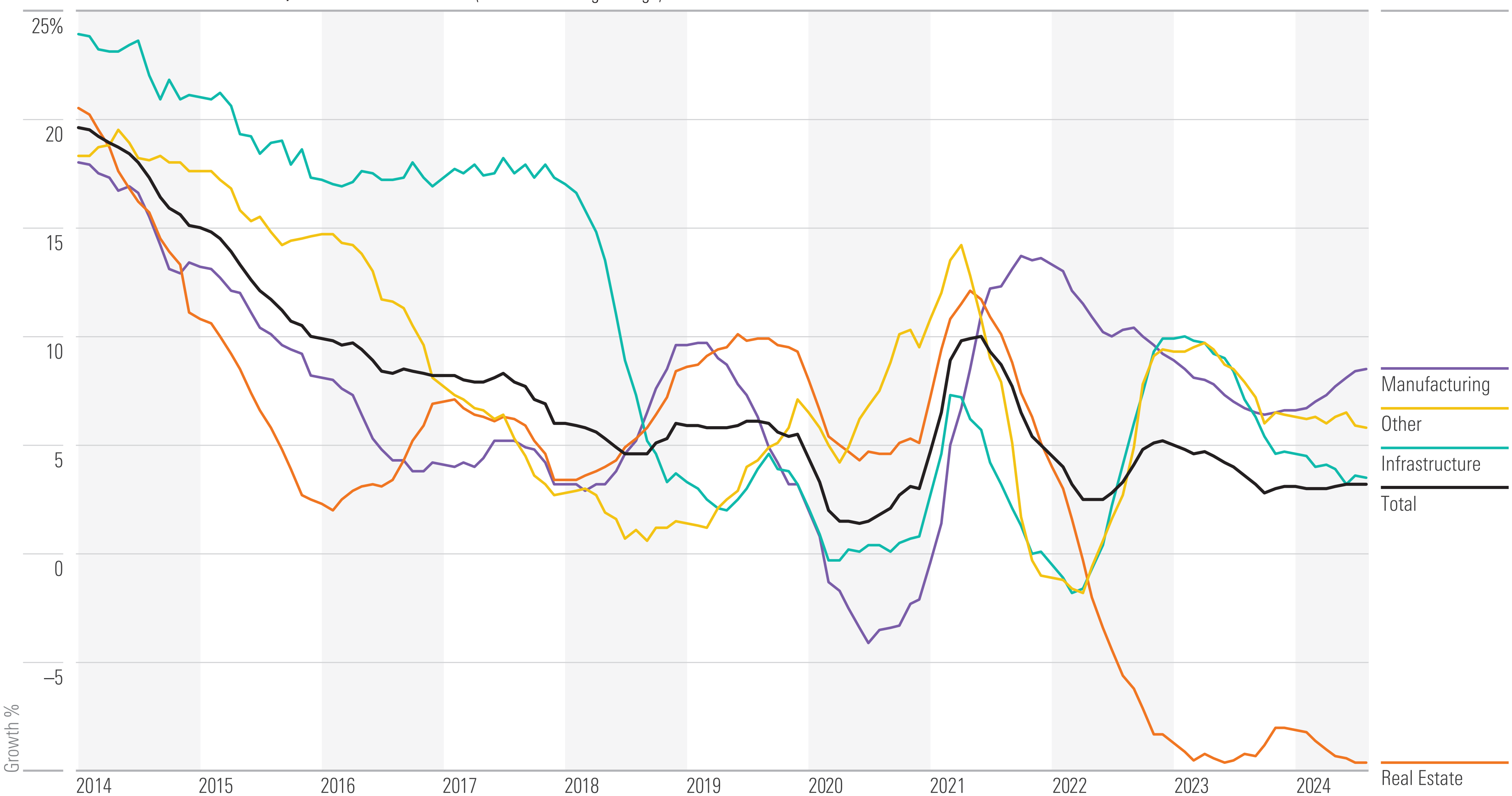
US GDP Impact of Tariff Hike Scenarios

	Impact (% GDP)	% Probability if Trump Wins	Probability-Weighted Impact (% GDP)
10% Uniform Hike	1.40	7.50	0.05
60% on China	0.50	32.00	0.08
Total	1.90	—	0.13

Real Estate Bust Weighing Heavily on China's Economy

China's fixed-asset investment growth remains very weak compared with the 2010s, standing at only around 3% year over year as of August 2024, with the collapsing of the real estate bubble a major driver. Manufacturing is the only bright spot, but growth could weaken there, too, owing to overcapacity and protectionist backlash. The stimulus measures announced thus far seem insufficient to change the situation, although markets seem to be interpreting this as a signal of more to come.

China Fixed-Asset Investment, % Growth Year Over Year (12-Month Moving Average)

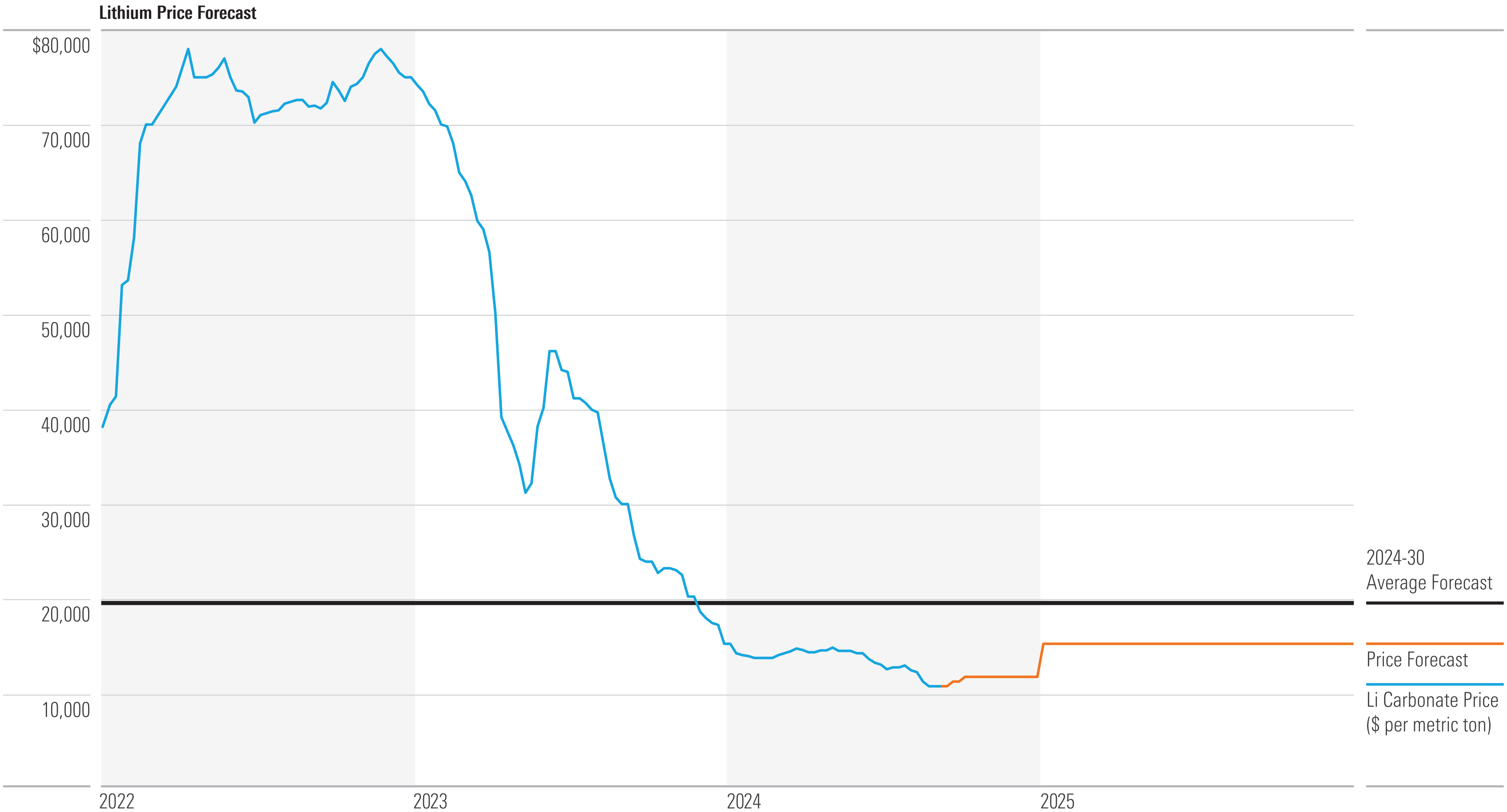


QEI249

Source: Macrobond, China National Bureau of Statistics.

We Expect Lithium Prices Will Rise in 2025

Lithium prices are at multiyear lows due to oversupply. We expect prices will rise in 2025 spurred by supply cuts. Just as record-high prices in 2022 incentivized strong supply growth, low prices halted investment by many producers. Over the medium term, lithium prices will recover to the marginal cost of production, which we view as USD 20,000 per metric ton. This moderate price recovery won't deter continued gains in EV adoption, which we expect to reach 40% of global auto sales by 2030.



Source: Morningstar, International Energy Agency.

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Index and Disclosure

Index Definitions

The **Morningstar Style Index** family consists of 16 indexes that track the US equity market by capitalization and investment style to create an integrated system. The indexes were built using a comprehensive and nonoverlapping approach based on the methodology of Morningstar Style Box.

The **Morningstar Sector Index** family consists of 14 indexes—three Super Sector and 11 Sector indexes that track the US equity market using a consumption-based analysis of economic sectors in a comprehensive, nonoverlapping structure. The sector indexes are consumer defensive, healthcare, utilities, basic materials, consumer cyclical, financial services, real estate, communications services, energy, industrials, and technology.

The **Morningstar Global Equity indexes** offer a consistent view of global investment opportunities by applying the same rules for every market around the world. Covering 97% of stocks by market capitalization, the indexes encompass 45 countries in both developed and emerging markets. The index family is designed to work as an integrated system, allowing for meaningful global views across market capitalization and regions.

The **Morningstar Target Risk Index** family is designed to meet the needs of investors who would like to maintain a target level of equity exposure. The index family provides global equity market risk levels that are scaled to fit five equity market risk profiles: aggressive, moderately aggressive, moderate, moderately conservative, and conservative.

The **S&P 500 index** includes 500 leading companies and captures approximately 80% coverage of available market capitalization.

The **Russell 2000 Index** measures the performance of the 2,000 smallest companies in the Russell 3000 Index.

The **MSCI EAFE Index** captures the returns of large- and mid-cap equities across developed markets in Europe, Australasia, and the Far East, excluding the US and Canada.

The **MSCI Emerging Markets Index** captures the returns of large- and mid-cap equities across 23 emerging-markets countries. The index covers approximately 85% of the free float-adjusted market capitalization in each country.

The **Bloomberg Commodity Index** represents 20 commodities, which are weighted for economic significance and market liquidity.

The **Bloomberg US Aggregate Bond Index** is a broad-based benchmark that measures the investment grade, US-dollar-denominated, fixed-rate taxable-bond market. The index includes Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS and CMBS (agency and nonagency).

The **Bloomberg US 5–10 Year Corporate Bond Index** measures the investment return of US-dollar-denominated, investment-grade, fixed rate, taxable securities issued by industrial, utilities, and financial companies with maturities between five and 10 years.

The **BofA Merrill Lynch US High Yield Master II Index** tracks the performance of US-dollar-denominated below-investment-grade corporate debt publicly issued in the US domestic market. Qualifying securities must have a below-investment-grade rating (based on an average of Moody's, S&P, and Fitch).

The **Bloomberg Municipal Bond Index** measures the broad market for investment-grade, tax-exempt bonds with a maturity of at least one year.

The **JP Morgan EMBI Global Diversified Index** tracks the performance of dollar-denominated sovereign bonds issued by a selection of emerging-markets countries. The index limits the weights of countries with larger debt stocks by only including a specified portion of these countries' eligible current face amounts of debt outstanding.

The **London Fix Gold PM Index** is the price of gold per ounce at 15:00 GMT determined by the five members of the London Gold Pool.

The **Bloomberg Livestock Index** reflects the returns of an unleveraged investment in futures contracts on livestock commodities. The index consists of two commodity futures (lean hogs and live cattle).

The **Bloomberg Grains Index** reflects the returns of an unlevered investment in futures contracts on grains commodities. The index consists of three commodity futures (corn, soybeans, and wheat).

The **Bloomberg Precious Metals Index** reflects the returns of an unleveraged investment in futures contracts on precious-metals commodities. The index consists of two commodity futures (gold and silver).

The **Bloomberg Industrial Metals Index** reflects the returns of an unleveraged investment in futures contracts on industrial metals commodities. The index consists of four commodity futures (copper, aluminum, zinc, and nickel).

The **Bloomberg Energy Index** reflects the returns of an unleveraged investment in futures contracts on energy commodities. The index consists of five commodity futures (natural gas, WTI crude oil, Brent crude oil, unleaded gasoline, and heating oil).

The **Morningstar Long-Only Commodity Index** is a fully collateralized commodity futures index that is long all 20 eligible commodities and uses a dollar-weighted open interest weighting scheme.

The **Brent Crude Oil Index** tracks the spot price of Brent crude oil.

The **Morningstar US Market Index** covers the top 97% market capitalization of the US equity markets.

The **Morningstar Developed Ex US Index** captures the performance of the stocks located in the developed countries across the world. Stocks in the index are weighted by their float capital, which removes corporate cross ownership, government holdings, and other locked-in shares.

The **Morningstar Emerging Markets Index** captures the performance of the stocks located in the emerging countries across the world. Stocks in the index are weighted by their float capital, which removes corporate cross ownership, government holdings, and other locked-in shares.

The **Morningstar Core Bond Index** is a broad investment-grade index that includes the largest, most important sectors of the investment-grade US bond market. The index is composed of the Morningstar US Government Bond, US Corporate Bond, and US Mortgage Bond indexes.

The **Morningstar Intermediate US Government Bond Index** includes US Treasury and US government agency bonds with maturities between four and seven years. The Morningstar Intermediate Corporate Bond Index includes US corporate bonds with maturities of between four and seven years.

The **Morningstar US Corporate Bond Index** includes US corporate bonds with maturities of more than one year and at least USD 500 million outstanding.

The **Morningstar Short-Term Core Bond Index** includes all bonds in the Morningstar Core Bond Index that have maturities between one and four years.

The **Morningstar Emerging Markets Composite Bond Index** includes the most liquid sovereign and corporate bonds issued in US dollars by the governments and corporations of the most prominent emerging markets.

The **Morningstar US Mortgage Bond Index** tracks approximately 98% of the fixed-rate mortgages issued by Ginnie Mae, Fannie Mae, and Freddie Mac.

The **Morningstar Long-Term US Government Bond Index** includes US Treasury and US government agency bonds with maturities of seven years or longer.

The **Morningstar Long-Term Corporate Bond Index** includes US corporate bonds with maturities of seven years or longer.

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

The **Bloomberg US Corporate High Yield ex-Energy Index** represents the universe of fixed rate, non-investment-grade debt not in the energy sector.

The **Bloomberg US Treasury 7-10 Year Bond Index** measures the performance of US Treasury securities that have a remaining maturity of at least seven years and less than 10 years.

The **Bloomberg US Treasury 20+ Year Bond Index** represents the performance of US Treasury securities that have a remaining maturity of greater than 20 years.

The **Bloomberg Emerging Markets Local Currency Broad Bond Index** represents the performance of the sovereign, local-currency bond markets of emerging-markets countries. The Barclays Municipal Bond Index is representative of the broad market for investment-grade, tax-exempt bonds with a maturity of at least one year.

The **Citigroup WGBI Non-USD 5+ Year Bond Index** measures the performance of fixed-rate, local-currency, investment-grade sovereign bonds. It comprises debt from over 20 countries.

The **S&P/LSTA Leveraged Loan Index** tracks the universe of syndicated leveraged loans.

The **MSCI China A Local Currency Index** captures large- and mid-cap equities listed on the Shanghai and Shenzhen exchanges.

Disclosures

Past performance is no guarantee of future results. This is for illustrative purposes only and not indicative of any investment. The information, data, analyses, and opinions presented herein do not constitute investment advice, are provided solely for informational purposes, and therefore are not an offer to buy or sell a security or invest in a specific asset class or strategy. An investment cannot be made directly in an index. The data assumes reinvestment of all income and does not account for taxes or transaction costs. Diversification does not eliminate the risk of experiencing investment losses. Holding a portfolio of securities for the long-term does not ensure a profitable outcome, and investing in securities always involves risk of loss.

Risk and return are measured by standard deviation and compound annual return, respectively. Standard deviation measures the fluctuation of returns around the arithmetic average return of the investment. The higher the standard deviation, the greater the variability (and thus risk) of the investment returns.

Stocks are not guaranteed and have been more volatile than the other asset classes.

Small-company stocks are more volatile than large-company stocks and are subject to significant price fluctuations, business risks, and are thinly traded.

Government bonds and Treasury bills are guaranteed by the full faith and credit of the United States government as to the timely payment of principal and interest. Bonds in a portfolio are typically intended to provide income and/or diversification. US government bonds may be exempt from state taxes and income is taxed as ordinary income in the year received. With government bonds, the investor is a creditor of the government.

With **corporate bonds**, an investor is a creditor of the corporation and the bond is subject to default risk. Corporate bonds are not guaranteed.

High-yield corporate bonds exhibit significantly more risk of default than investment grade corporate bonds.

Only insured **municipal bonds** are guaranteed as to the timely payment of principal and interest by issuer. However, insurance does not eliminate market risk. A municipal-bond investor is a creditor of the issuing municipality and the bond is subject to default risk. Municipal bonds may be subject to the alternative minimum tax (AMT) and state and local taxes, and federal taxes would apply to any capital gains distributions.

International bonds are not guaranteed. With international bonds the investor is a creditor of a foreign government or corporation. International investments involve special risks such as fluctuations in currency, foreign taxation, economic and political risks, liquidity risks, and differences in accounting and financial standards.

International stocks involve special risks such as fluctuations in currency, foreign taxation, economic and political risks, liquidity risks, and differences in accounting and financial standards. Liquidity is typically lower in emerging markets than in developed markets. The risk of principal and return may be significantly greater than that of other developed international markets.

Sector investments are narrowly focused investments that typically exhibit higher volatility than the market in general. Sector investments will fluctuate with current market conditions and may be worth more or less than the original cost upon liquidation.

Growth and value stocks: Although value stocks have outperformed growth stocks, please keep in mind that each type of stock carries unique risks which include, but are not limited to, economic risk, market risk, company risk, and strategy risk.

Gold/commodities investments will be subject to the risks of investing in physical commodities, including regulatory, economic and political developments, weather events, natural disasters, and market disruptions. Exposure to the commodities markets may subject the investment to greater volatility than investments in more traditional securities, such as stocks and bonds.

Holders of **preferred stock** are usually guaranteed a dividend payment and their dividends are always paid out before dividends on common stock. In event that the company fails, there's a priority list for a company's obligations, and obligations to preferred stockholders must be met before those to common stockholders. On the other hand, preferred stockholders are lower on the list of investors to be reimbursed than bondholders are.

Mutual funds are sold by prospectus, which can be obtained from your financial professional or the company and which contains complete information, including investment objectives, risks, charges and expenses. Investors should read the prospectus and consider this information carefully before investing or sending money.

Holding an exchange-traded fund does not ensure a profitable outcome and all investing involves risk, including the loss of the entire principal. Since each ETF is different, investors should read the prospectus and consider this information carefully before investing. The prospectus can be obtained from your financial professional or the ETF provider and contains complete information, including investment objectives, risks, charges and expenses. ETF risks include, but are not limited to, market risk, market trading risk, liquidity risk, imperfect benchmark correlation, leverage, and any other risk associated with the underlying securities. There is no guarantee that any fund will achieve its investment objective. In addition to ETF expenses, brokerage costs apply. Fees are charged regardless of profitability and may result in depletion of assets.

Credit/default risk: Debt securities are subject to credit/default risk, which is the risk associated with the issuer failing to meet its contractual obligations either through a default or credit downgrade.

Interest-rate risk: Debt securities have varying levels of sensitivity to changes in interest rates. In general, the price of a debt security tends to fall when interest rates rise and rise when interest rates fall. Securities with longer maturities and mortgage securities can be more sensitive to interest rate changes.

This publication contains certain forward-looking statements which involve known and unknown risks, uncertainties, and other factors that may cause the actual results to differ materially from any future results expressed or implied by those projected statements. Past performance does not guarantee future results.

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