



What's Old Is New Again

4Q 2024 Macro and
Markets Review

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Questions We Heard from Our Clients During 4Q 2024



What do the election results mean for the economy and markets?



Does global equity diversification still make sense?



Is the stock market overvalued?



Where are the opportunities?



How much more will the Fed cut in 2025?



What risk does the deficit impose?



Is now the right time to get invested/stay invested?



Should we make any changes?

As of December 31, 2024
Source: Bernstein analysis

Our 2025 Perspective: What's Old Is New Again

The Equity Bull Continues to Run

We've experienced a strong start to the current bull market, up 70% since the bottom in October 2022. We think the run continues given solid macro and micro growth. Valuation and policy are risks, however.

Economy Solid Now, Policy Impact Unclear

With the labor market sound, consumers continue to spend modestly leading to solid, if unspectacular, growth. President-elect Trump's economic policies present the potential for a better...or worse outcome.

Asset Allocation Should Reflect All Possible Outcomes

At uncertain times, investors must acknowledge their limited ability to forecast accurately. Given this, a diversified, multi-asset class approach is most prudent.

As of December 31, 2024. **Current analysis and forecasts do not guarantee future results.**
Source: Bernstein analysis

2025 Macro Outlook

Where We've Been and Where We're Going

- **Global Growth:** Growth is likely to slow modestly, but greater divergence may occur between the US and the globe.
- **Monetary Policy:** Easing has begun, and policymakers are likely to continue to proceed gradually.
- **Bond Yields:** Cyclical factors indicate rates are likely to move lower, but low constituency for fiscal restraint may provide pressure in the other direction.
- **Inflation:** Inflation has been easing; However, we are assuming tariffs halt the improvement and send prices higher. It remains to be seen whether the increase is one time or the start of a trend.

	Pre-Pandemic	Post-Pandemic	
	Five Years Ago (2019)	2024**	Forecast 2025
US GDP*	2.3%	2.4%	1.6%
Global GDP*	2.8%	2.6%	2.4%
Policy Rate	1.50%–1.75%	4.25%–4.50%	3.50%–3.75%
10Y Treasury Rate	1.92%	4.58%	3.75%
US Inflation	1.5%	3.1%	3.3%
S&P 500	3,231	5,882	6,400
S&P 500 Earnings	\$164	\$239	\$264
S&P 500 P/E**	18x	22x	22x

As of December 31, 2024. **Historical analysis is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.**

*US GDP forecasts presented as 4Q/4Q; global is YoY. **Forward P/E for the next 12 months as of year-end. **Actuals as of December 31, 2024 except for US GDP, Global GDP, and US Inflation which remain forecasts.

Source: Bloomberg, Bureau of Economic Analysis, Congressional Budget Office, Federal Reserve, FRED, S&P, and Bernstein analysis

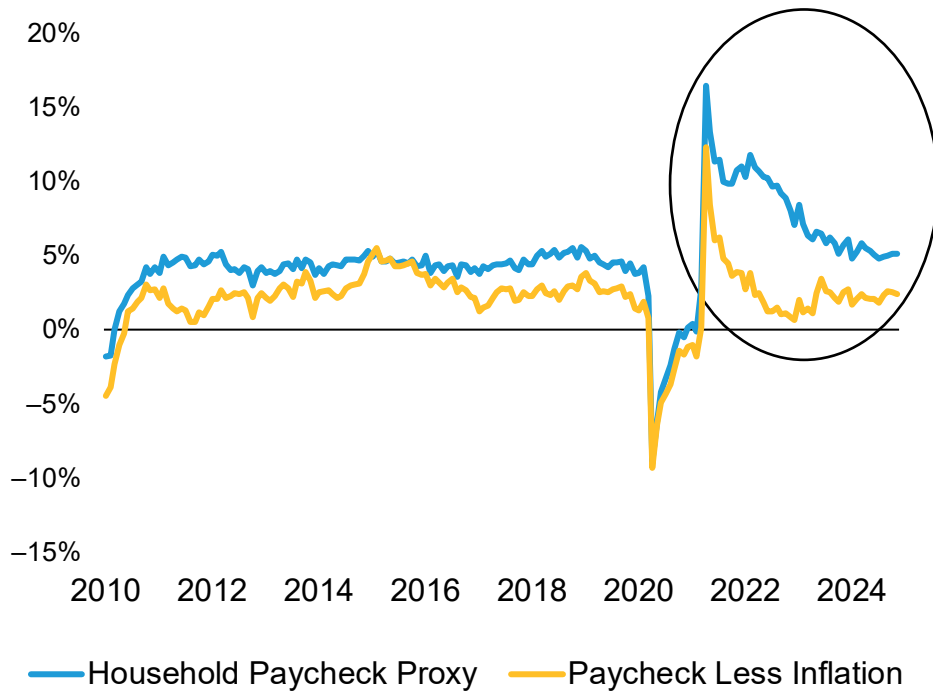
2025 US Economy: A Solid Foundation, with Policy Uncertainty

- The results of the US election come on the heels of data showing a resilient US economy, albeit one with high price levels versus 2019
- The trajectory for the US, though, depends on what policy changes ensue
 - Trade restrictions are likely both to slow growth and to push prices higher, leaving the Fed in an uncomfortable position
- For now, we anticipate that easing will continue as the FOMC waits to see what policies are implemented and how they impact the data flow
 - Easing is supportive of growth and should allow the expansion to continue
- Fiscal policy is likely to be more expansive than previously forecast in the US, but only gradually
 - Trade policy (i.e. tariffs) may be immediate while tax cuts could take time

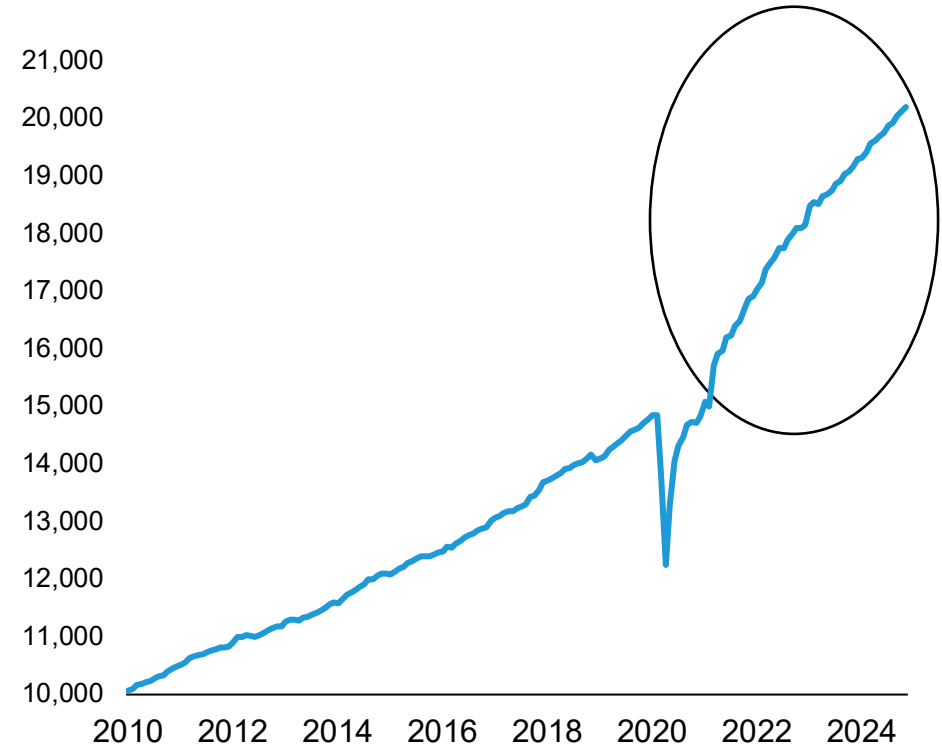
As of December 31, 2024. **Current analysis and forecasts do not guarantee future results.**
Source: Bernstein analysis

Growing Paycheck Has Supported Spending

Change in Aggregate Payrolls
Percent, YoY



Growth in Consumer Spending
USD, Billions



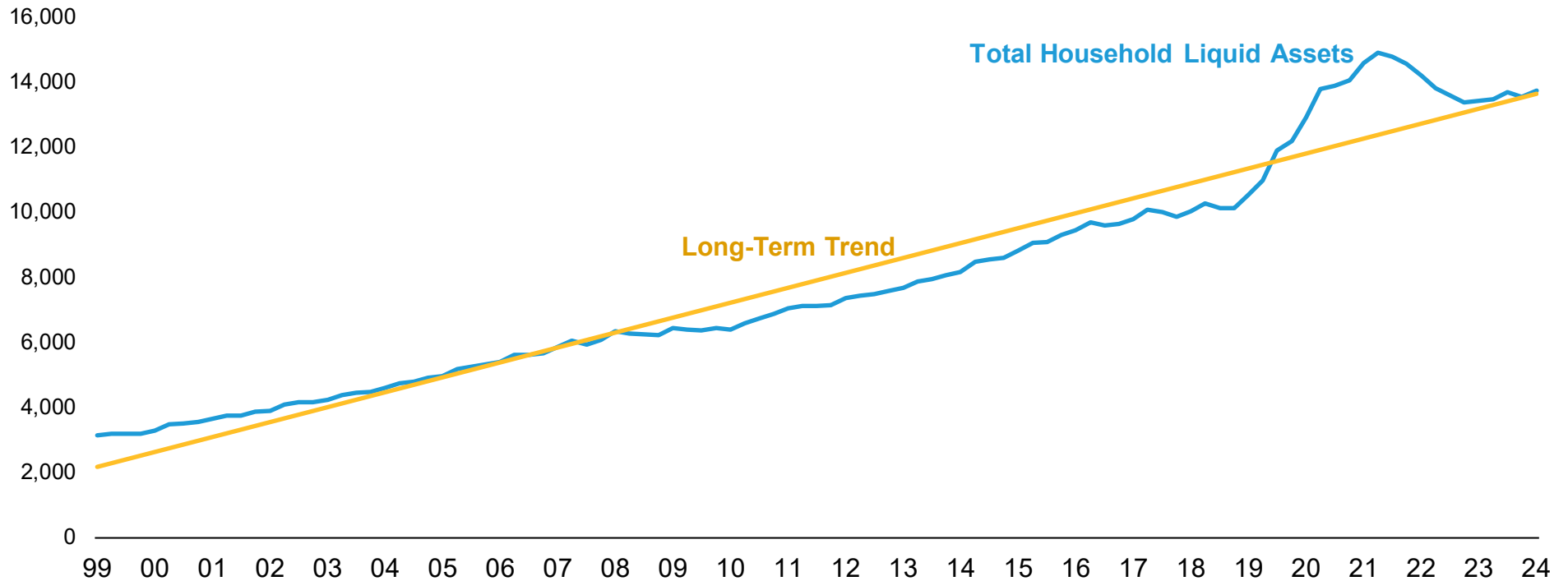
As of December 31, 2024. **Historical analysis is not necessarily indicative of future results.**

*As measured by Personal Consumption Expenditures.

Source: FRED, Federal Reserve Bank of St. Louis, U.S. Bureau of Economic Analysis, Bureau of Labor Statistics, and Bernstein analysis

Excess Savings Back on Trend

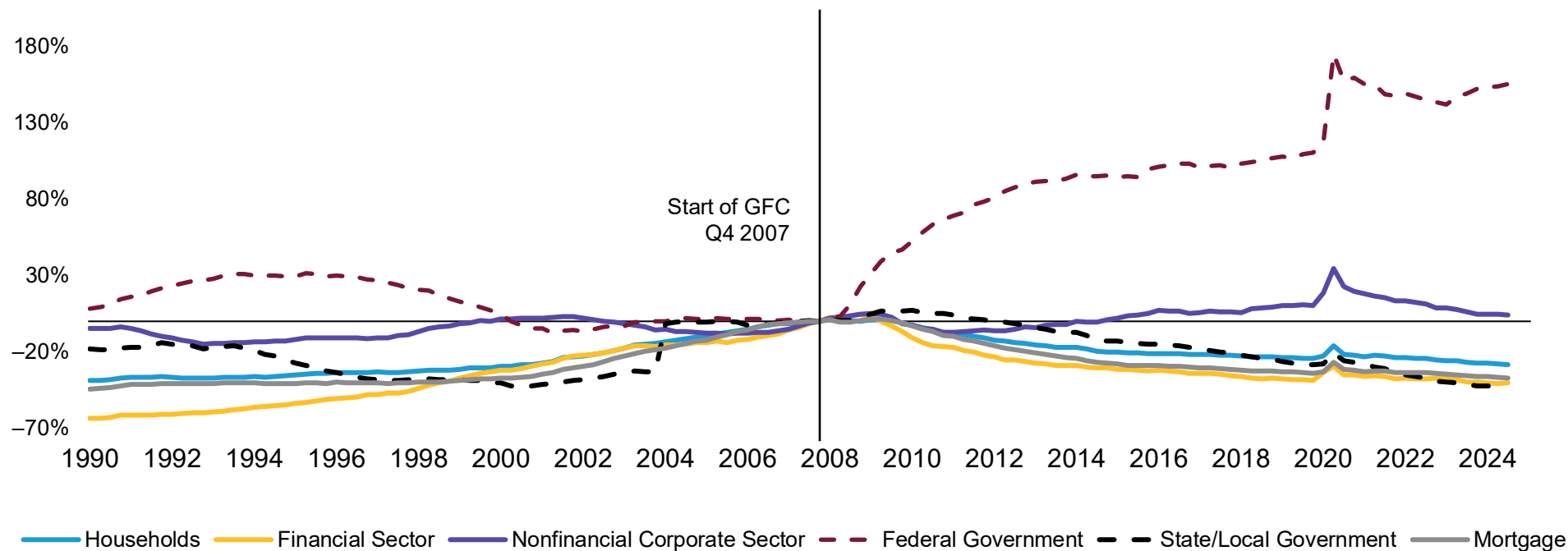
Total Household Liquid Assets and Long-Term Trend
USD Billions



As of December 31, 2024. **Historical analysis is not necessarily indicative of future results.**
Source: US Federal Reserve and Bernstein analysis

Aside from The Federal Government, Debt Levels Look Reasonable

Debt by Sector Relative to GDP vs. Start of GFC



As of December 31, 2024. **Historical analysis is not necessarily indicative of future results.**
Source: FRED, Federal Reserve Bank of St. Louis, Bloomberg, and Bernstein analysis

Fiscal Policy Post-Election

Republican White House/Republican Congress

- Tax Cuts and Jobs Act fully extended
- Possibility of additional tax cuts
- Increased discretionary spending
- Tariffs could offset tax cuts from a fiscal perspective

Net Expansion Likely

Democratic White House/Divided Government

- TCJA partially expires
- Likelihood of higher effective corporate tax rate
- Slow growth in discretionary spending
- Tariffs unlikely

Net Neutral/Slight Contraction

Republican White House/Divided Government

- TCJA partially expires
- Additional tax cuts unlikely
- Slow growth in discretionary spending
- Tariff policy the wild card

Depends on Tariffs

Democratic White House/Democratic Congress

- TCJA partially expires in 2025
- Possibility of other corporate or high income taxes
- Additional spending likely, partially offset by higher taxes

Net Expansion Likely

Anatomy of a Tariff Decision: Inflation and Growth Implications

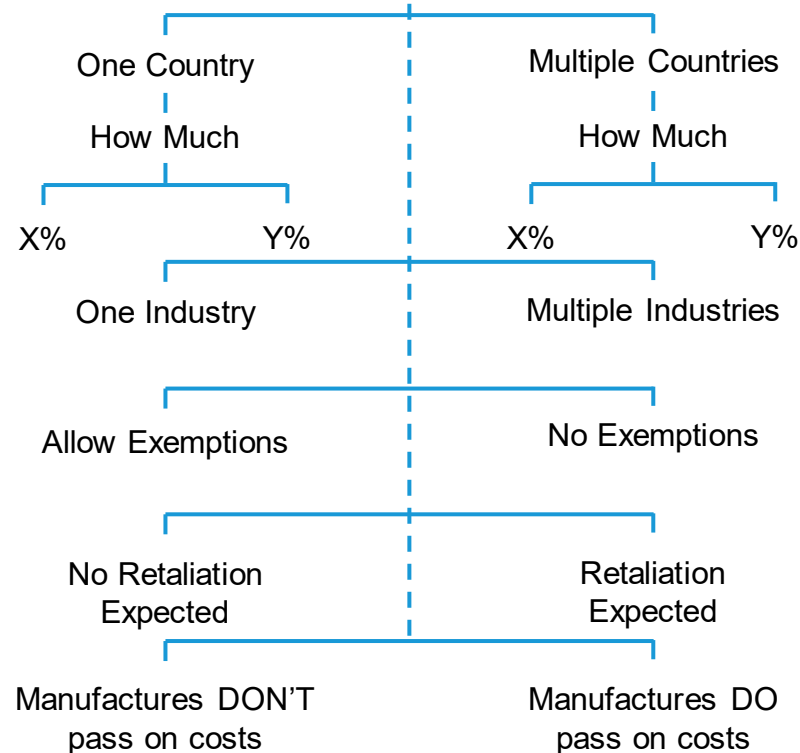
Implement a Tariff?

No

Yes

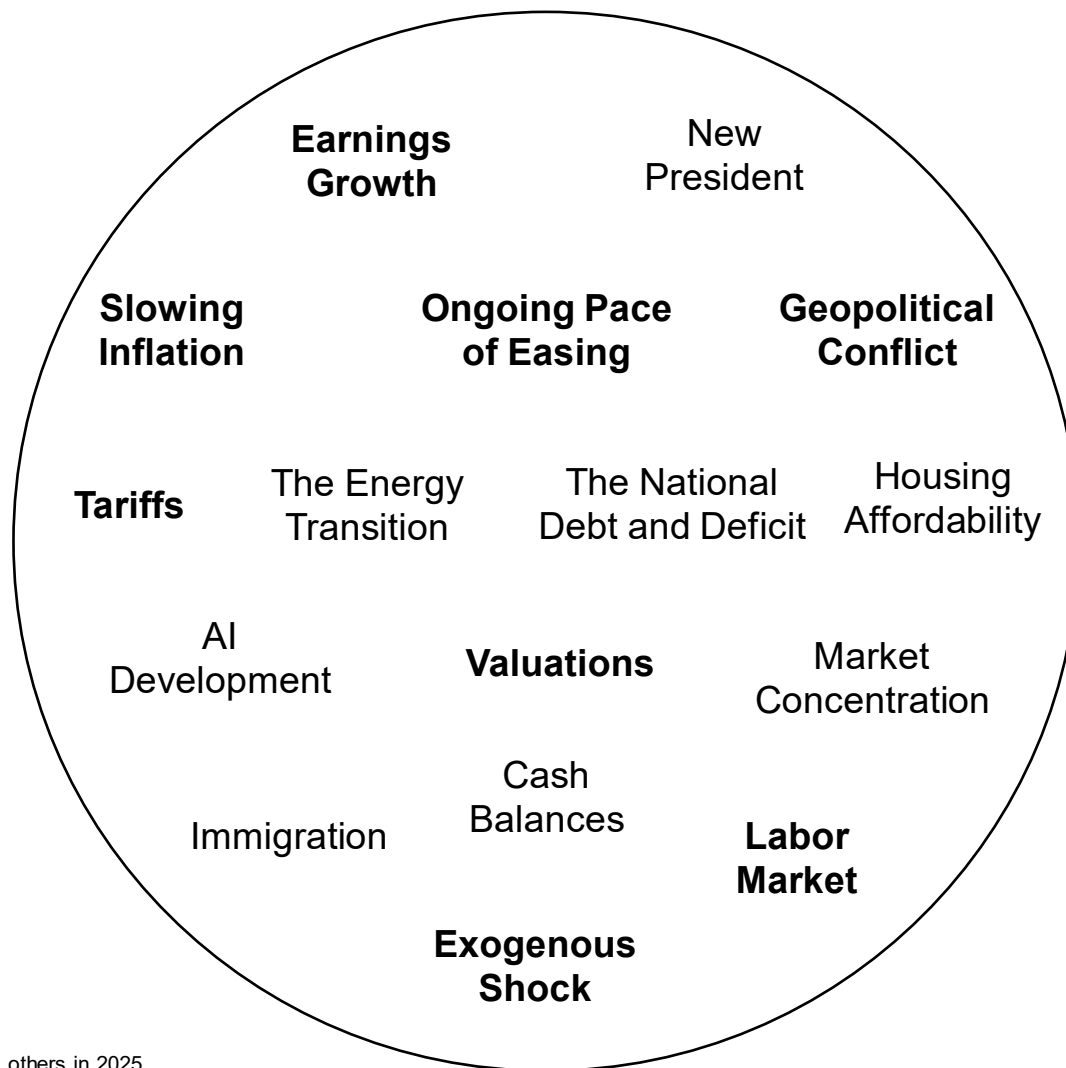
Our Early Assumptions:

- 10% increase in aggregate effective tariff rate (2018 was 6.5%)
 - Note, every 10% equals 1% of inflation if passed on to consumers
- As such, we have marked up our **inflation impact** forecast from 2.4% to 3.3%
 - This is a one-time increase, ex-retaliation / trade war
- **Growth impact** is less clear. Tariffs boost revenue, all else equal, but could lead to retaliatory tariffs and/or reduced domestic consumption due to higher prices.



As of December 31, 2024. Current analysis and forecasts do not guarantee future results.
Source: Bernstein analysis

The 2025 Known Unknowns Giving Economists and Investors Pause



As of December 31, 2024

Bold denotes risks that are more likely than others in 2025.

Source: Bernstein analysis

2025 Markets Outlook

Understanding the Nov–Dec Market Response to the Election

Equities focused on the business-friendly policies, bonds on the inflationary risk

Republican White House Republican Congress

Financial Impact:

Equities Up (+2%)
Yields Up (+30 bps)
Dollar Up (+5%)

Fiscal: Tax cuts extended; fiscal expansion through additional cuts

Democratic White House Republican or Split Congress

Financial Impact:

Equities Down
Yields Down
Dollar Down

Fiscal: Modest Austerity

Republican White House Democratic or Split Congress

Financial Impact:

Equities Up
Yields Up
Dollar Up

Fiscal: Expansionary on both taxes and spending

Democratic White House Democratic Congress

Financial Impact:

Equities Flat
Yields Up
Dollar Down

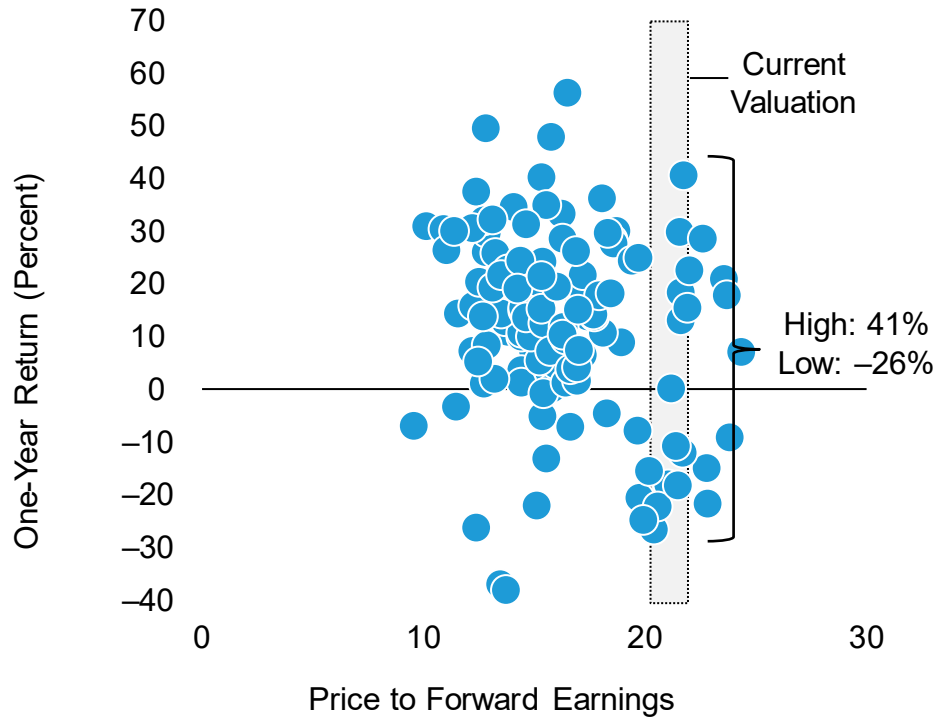
Fiscal: Tax cuts not extended, partially offsetting spending

As of December 31, 2024. **Current analysis does not guarantee future results.**
Equities represented by the S&P 500 and yields by the 10-Year US Treasury.
Source: Bernstein analysis

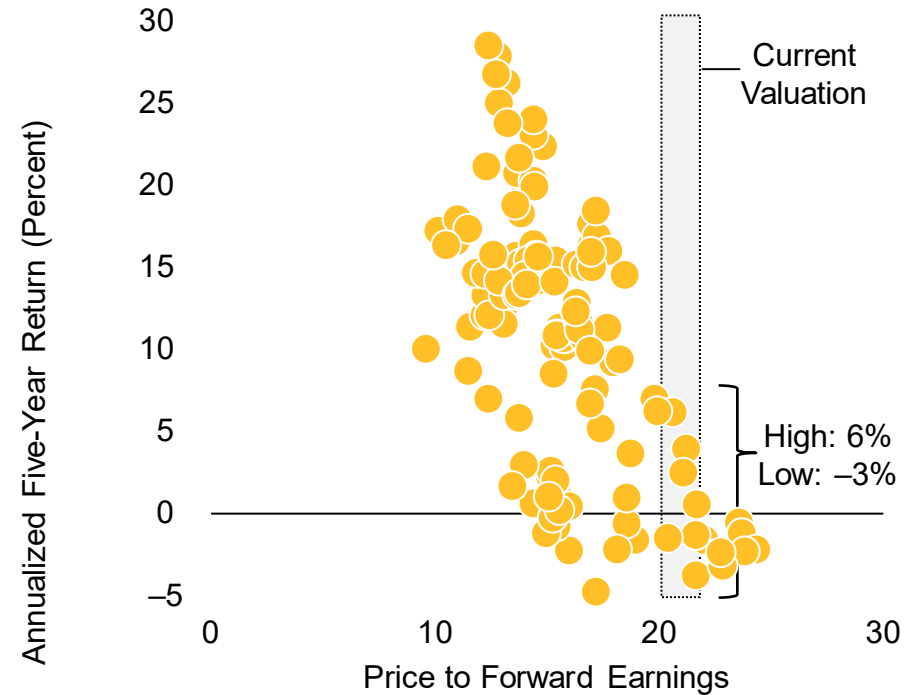
US Valuations Extended vs. History, but Also Not Predictive Near Term

Valuations can remain at current levels for the foreseeable future

One-Year Horizon: Wide Range of Possible Returns



Five-Year Horizon: More Predictable



As of December 31, 2024. **Historical analysis is not necessarily predictive of future results.**

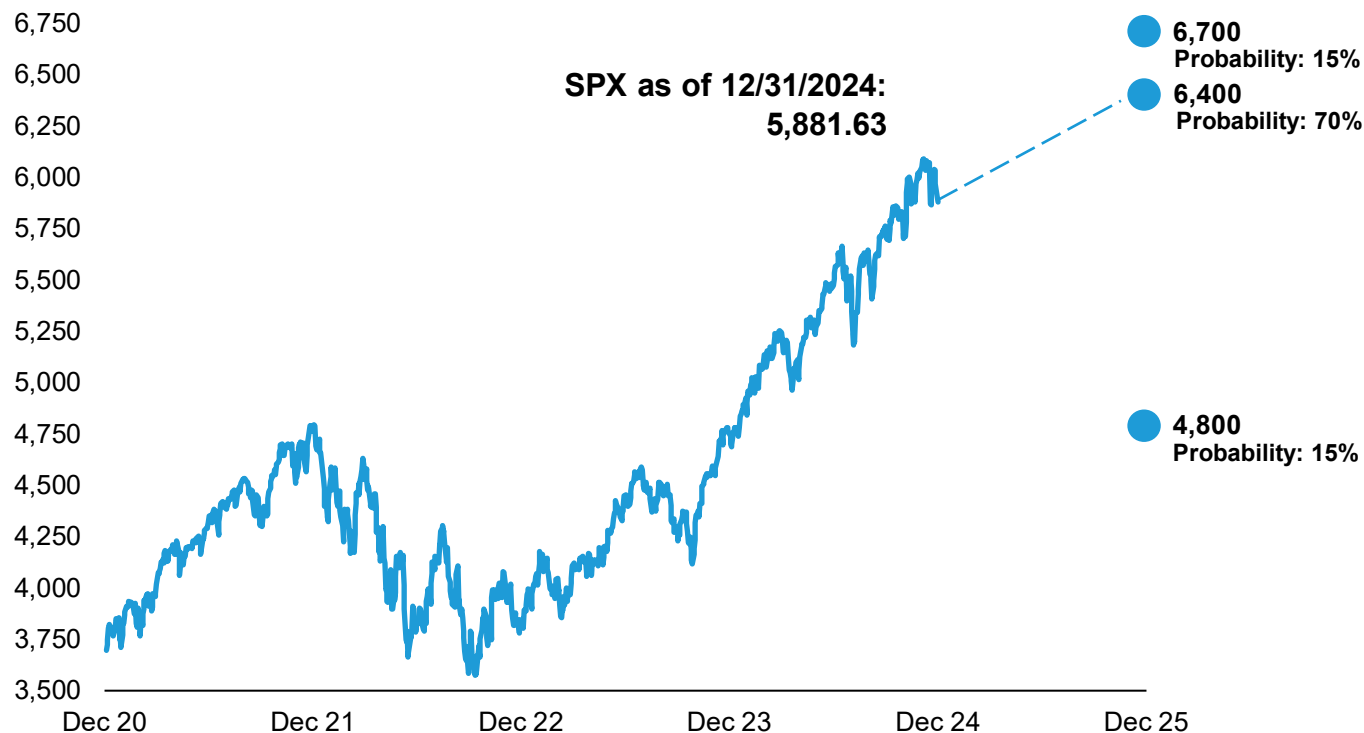
Left-hand chart is based on quarterly data for rolling one-year periods from December 1989 through September 2024. Right-hand chart is based on quarterly data for rolling five-year periods from December 1994 through September 2024.

Source: Bloomberg, FactSet, Haver Analytics, Standard & Poor's, and Bernstein analysis

Our 2025 S&P 500 Base, Bull, and Bear Case Assumptions

Forecasting earnings growth while holding our nose on valuations

Scenario Analysis: S&P 500, YE 2025—not incl. dividends



Bull: Would necessitate no economic slowdown, earnings growth of ~13% through 2026, corporate tax cuts, and only targeted tariffs. Inflation falls toward target, Fed cuts through 2025. P/E ~21x

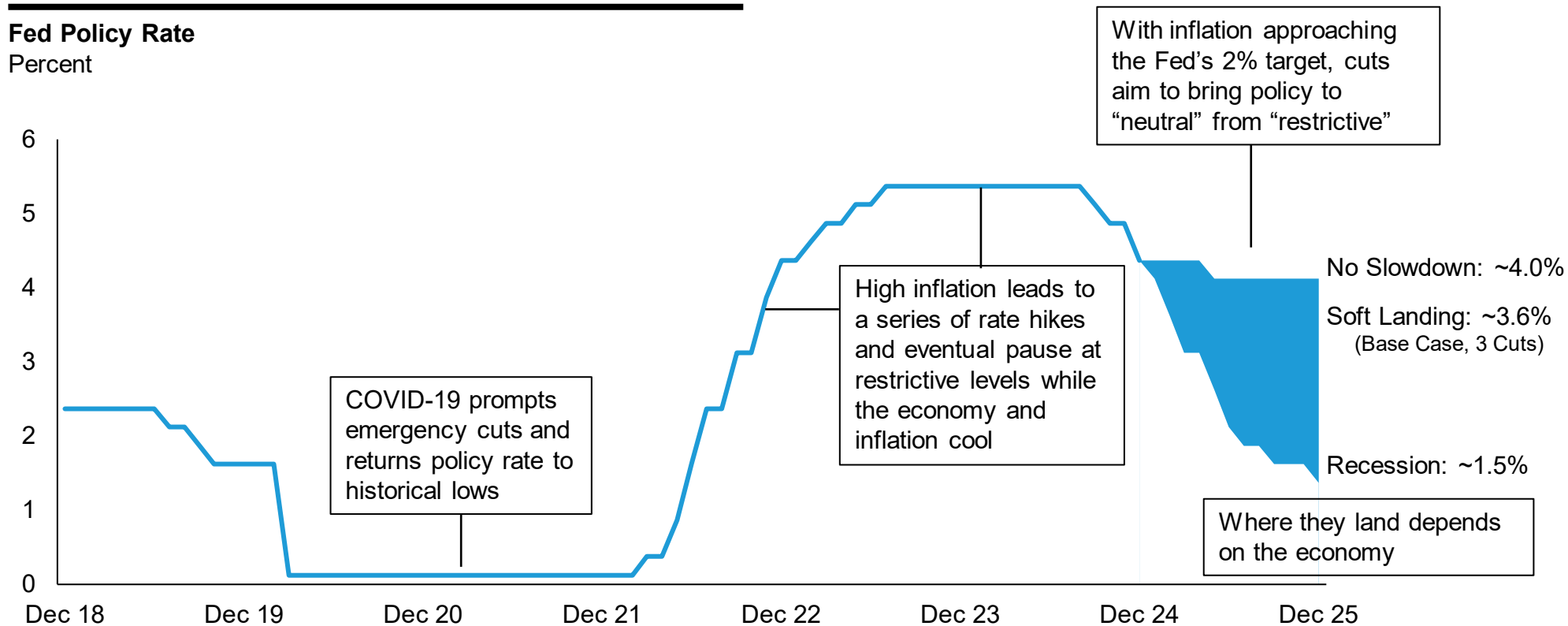
Base: Assumes no or only very modest economic slowdown, ~9% earnings growth, some but not all of Trump's pro-growth policies. Inflation deceleration moderates. Fed pauses in 2025. P/E ~22x

Bear: Would necessitate inflation reacceleration with market fear of Fed overtightening or an exogenous shock. <5% EPS growth through 2026 P/E ~18x

As of December 31, 2024. Past performance and historical analysis do not guarantee future results. There is no guarantee that any estimates or forecasts will be realized. Source: Bloomberg, S&P, and Bernstein analysis

The Fed: Where to from Here?

Our base case assumes fed funds approaches 3.625% by year-end 2025

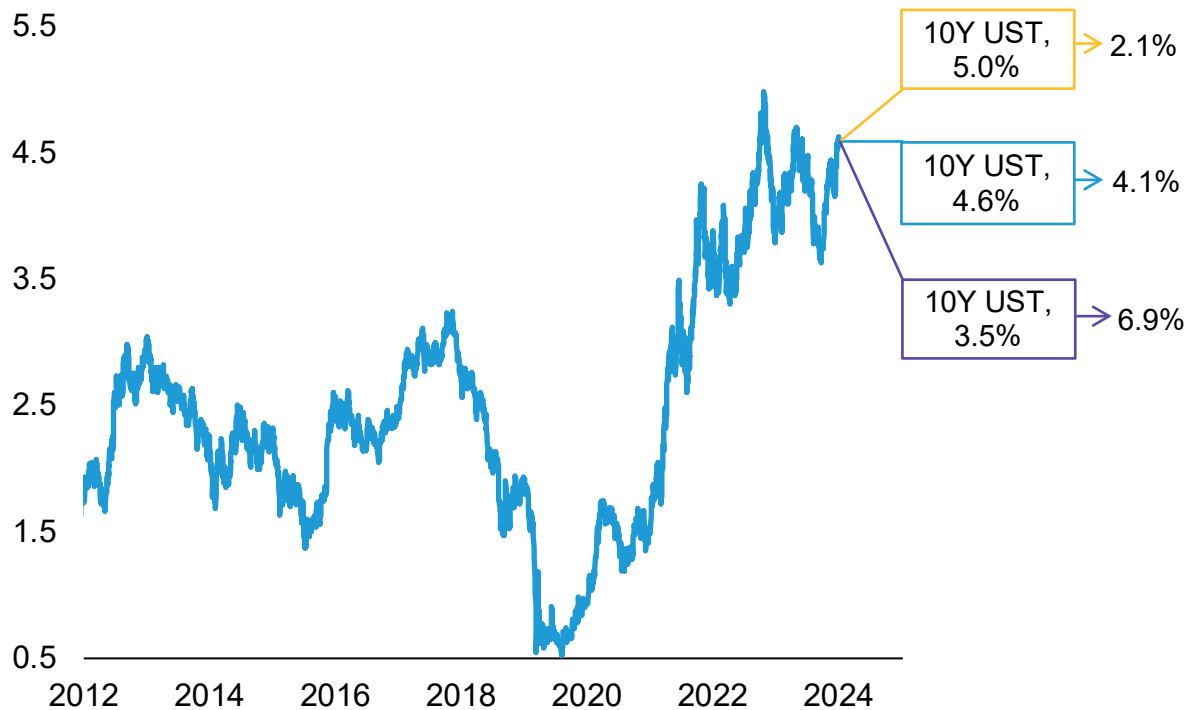


As of December 31, 2024. **Current analysis and forecasts do not guarantee future results.**
Source: Bloomberg, US Federal Reserve, and Bernstein analysis

Expect Positive Returns...Even If Yields Rise to 5%

Expected 12-Month Municipal Returns Scenario Analysis

10-Year US Treasury Yield, Percent



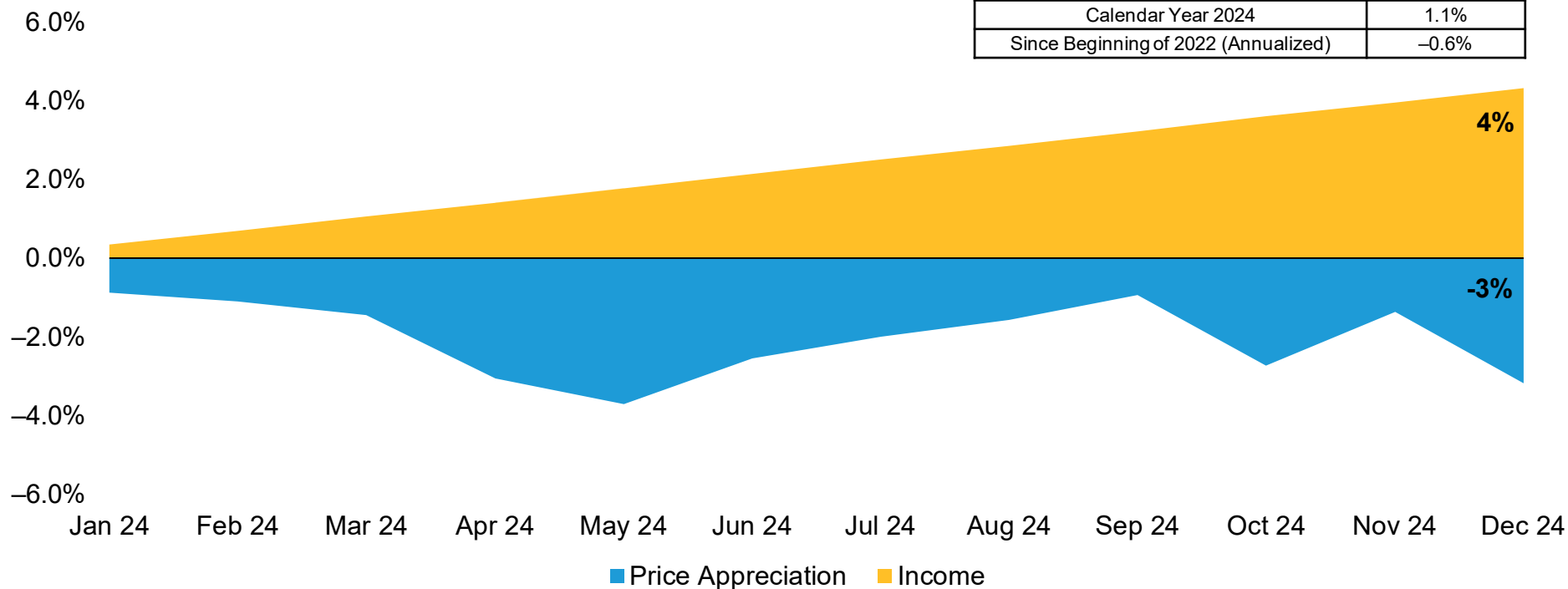
- Our year-end 2025 forecast is a 10Y yield at 3.75%
- If correct, munis should deliver a return of ~6%
- But if rates rise to 5%, for example, investors should still earn a positive return (~2%)

As of January 3, 2025. **Past performance and forecasts do not guarantee future results.** Display reflects expected returns of the Bloomberg Municipal Bond Index under three scenarios: 10-year US Treasury yields rise to 5.00%, remains the same, or declines to 3.50% over the next 12 months.
Source: Bloomberg and Bernstein analysis

Higher Income Helpful To Bond Returns in 2024

Bloomberg Municipal Bond Index

Cumulative total return decomposed since December 2023

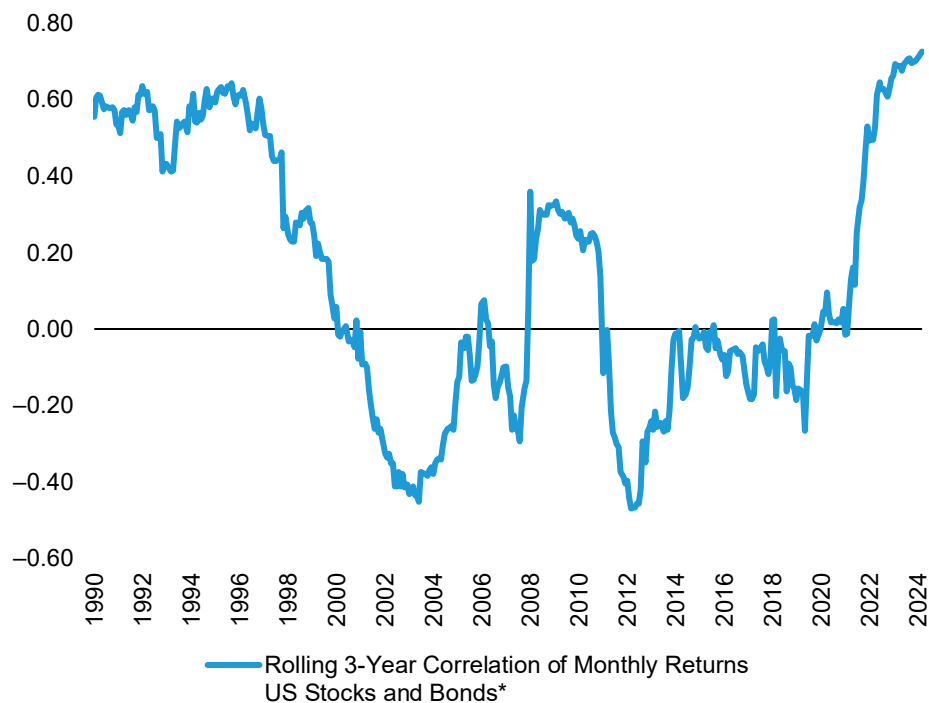


	Return
First 9 Months of 2022	-12.1%
Calendar Year 2022	-8.5%
Calendar Year 2023	6.4%
Calendar Year 2024	1.1%
Since Beginning of 2022 (Annualized)	-0.6%

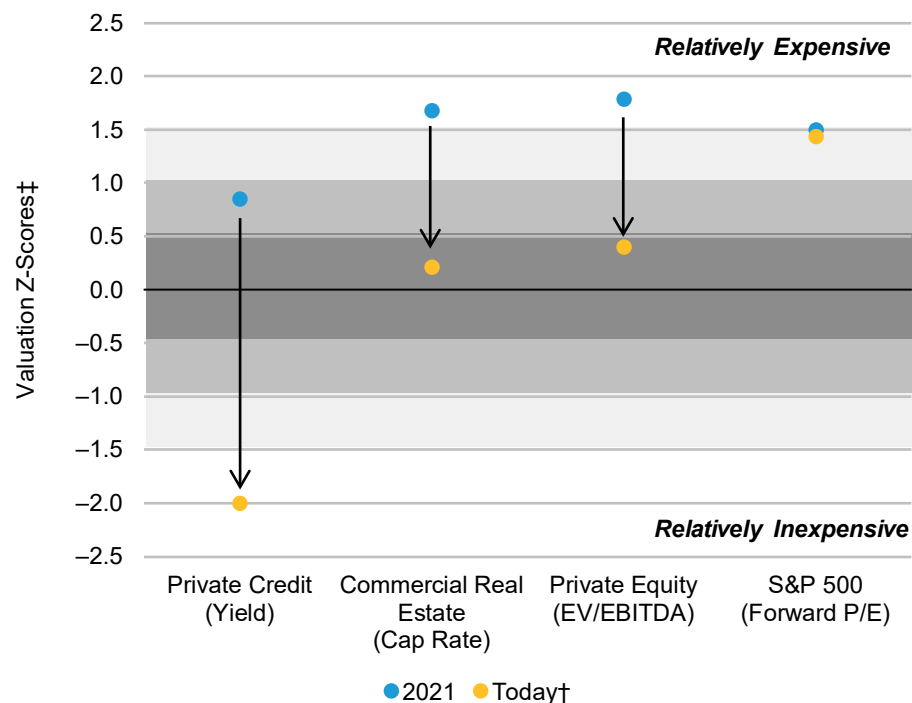
As of December 31, 2024. Past performance is not necessarily indicative of future results.
Source: Barclays Live, Bloomberg, and Bernstein analysis

Private Markets Bring Needed Diversification, Upside Potential

Rising stock/bond correlations highlight benefits of diversification



Dislocations have led to relatively attractive private market valuations

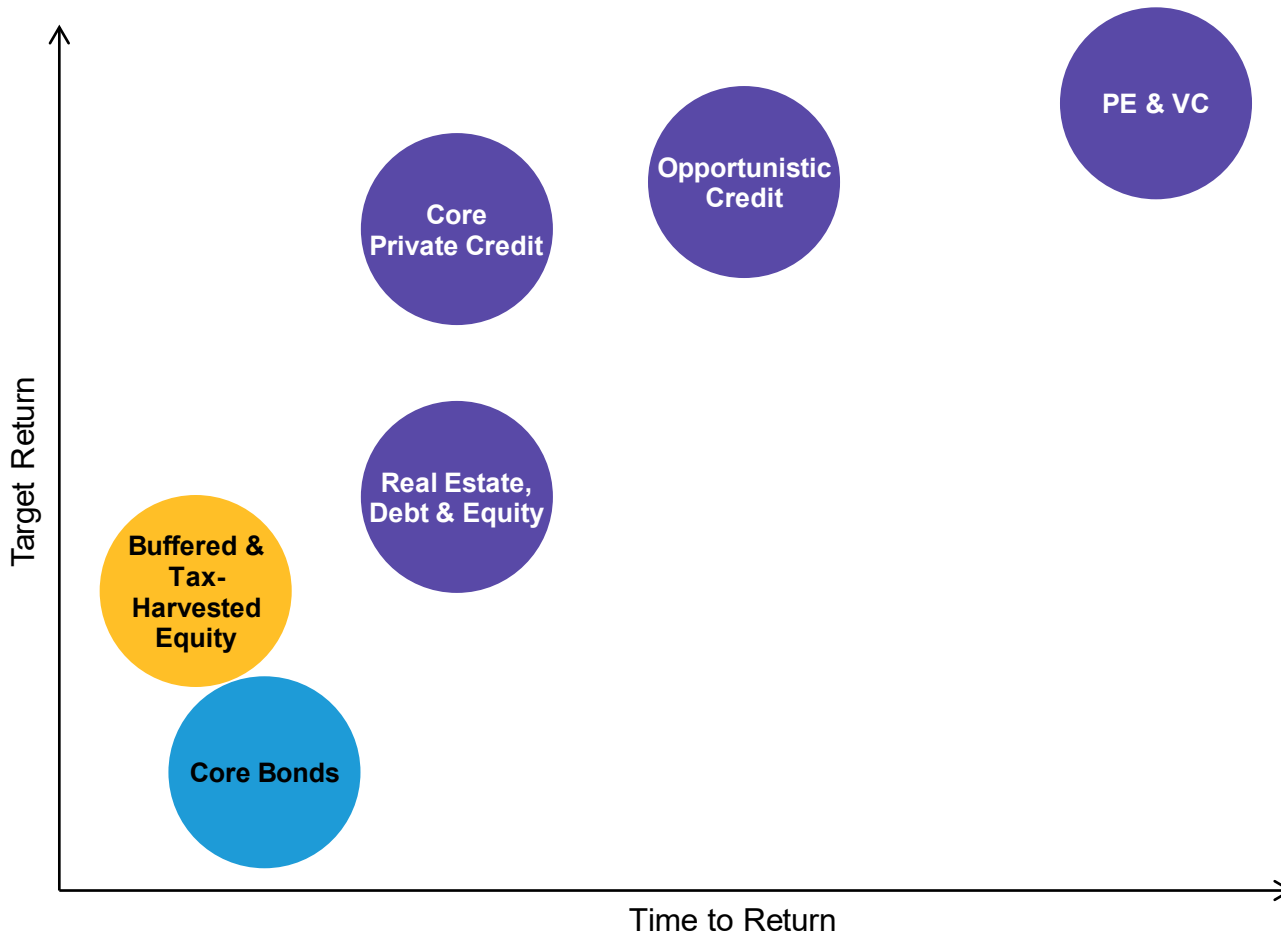


As of December 31, 2024. Past performance and historical analysis do not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.

*Stocks represented by the S&P 500 Index and bonds by Bloomberg US Aggregate Index. †Current as of December 17, 2024. ‡Z-score represents the relative distance, in terms of standard deviations, a specific data point is from the average of a data set.

Source: Bloomberg, S&P, Preqin, Pitchbook, and Bernstein analysis

Best Ideas for 1H 2025



Opportunities Catalyzed by the Current Environment:

Near-Term Volatility
Upside participation with downside protection or the benefit of active tax-loss harvesting

Peak Rates
The hiking cycle has ended, and the economy is expected to slow into 2025. Current yields plus potential for price appreciation look appealing.

Liquidity Dislocation
Still constrained supply of capital in private markets, creating opportunity for those who can provide liquidity

As of December 31, 2024. For illustrative purposes only. Past performance is no guarantee of future returns. Target returns are hypothetical performance and not projections, predictions, or guarantees of future performance, and there can be no assurance that the target return will be achieved.
Source: Bernstein analysis

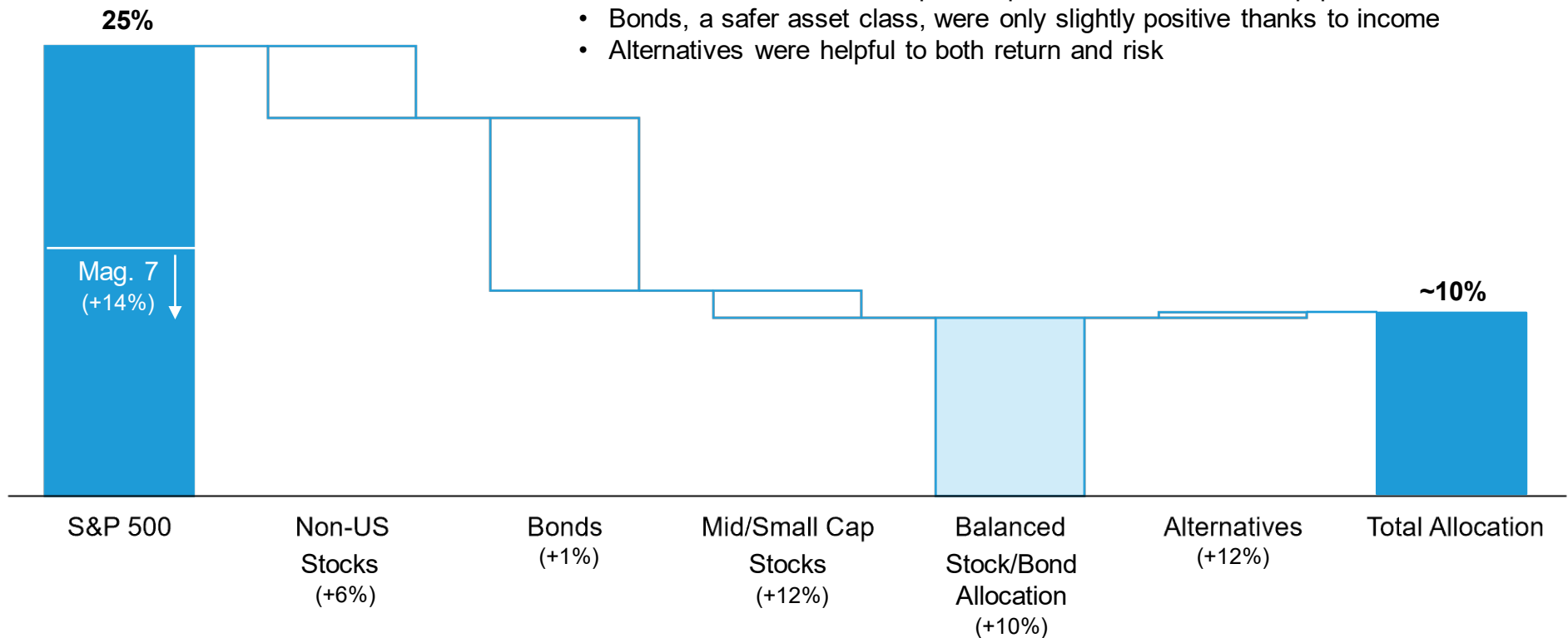
Thoughts on Diversification

"Why Were Most Investors Not Up 25% (SPX Return) Last Year?"

Prudent Diversification Means An Investor Will Never, Only, Own The Best Performer

An Illustrative Example (2024)

- US large cap stocks led the pack again in 2024
- Non-US and Small/Mid Cap were positive, but couldn't keep pace
- Bonds, a safer asset class, were only slightly positive thanks to income
- Alternatives were helpful to both return and risk



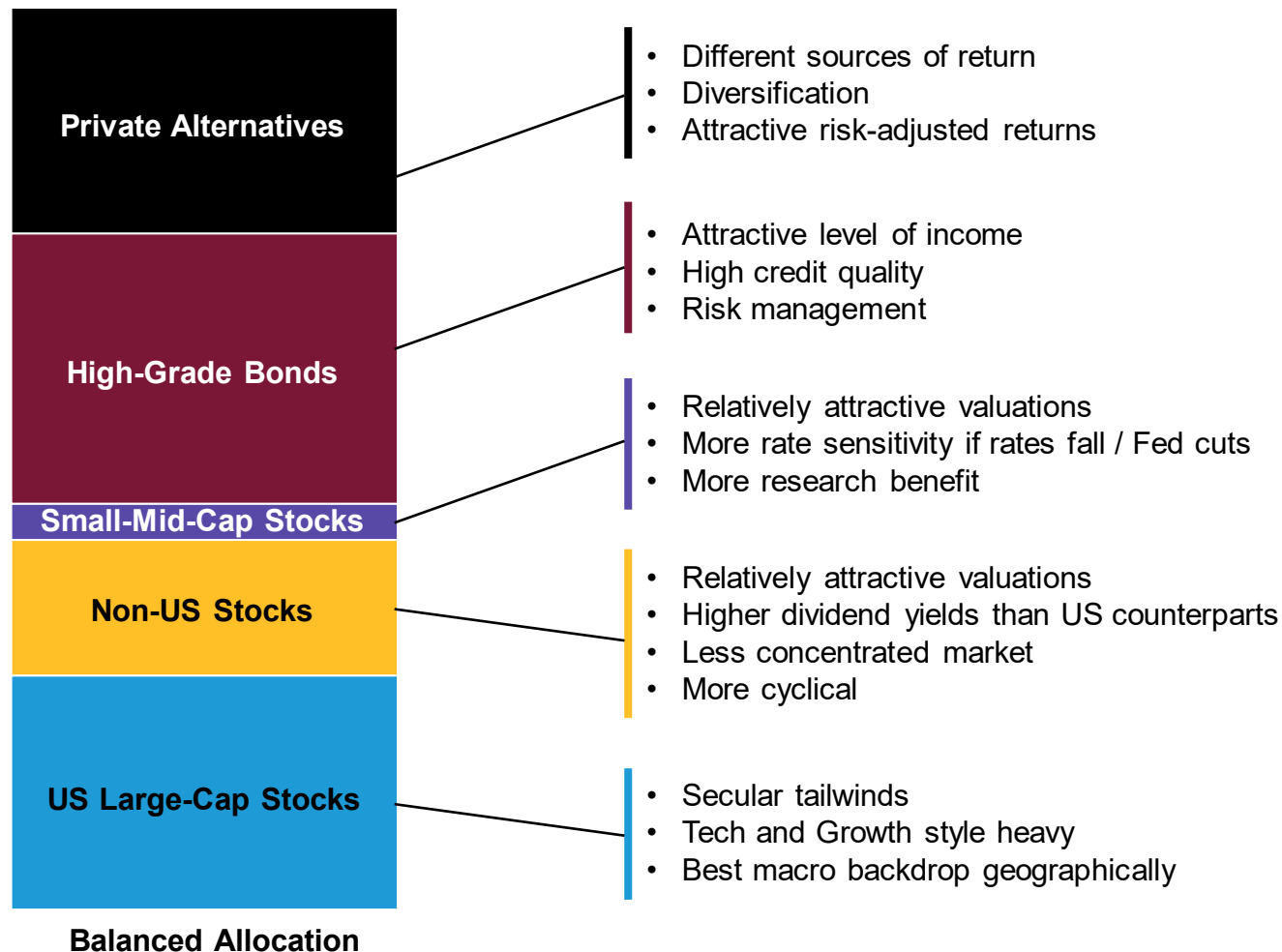
As of December 31, 2024

Illustrative example uses a moderate growth account with roughly 50% allocated to global equities, 35% to municipal bonds and 15% to a diversified set of alternatives. Mid/Small Cap Stocks is US only.

Source: Bernstein analysis

Why Be Balanced? Preparation for Varied Market Environments

Prudent diversification means an investor will never, only, own the best performer



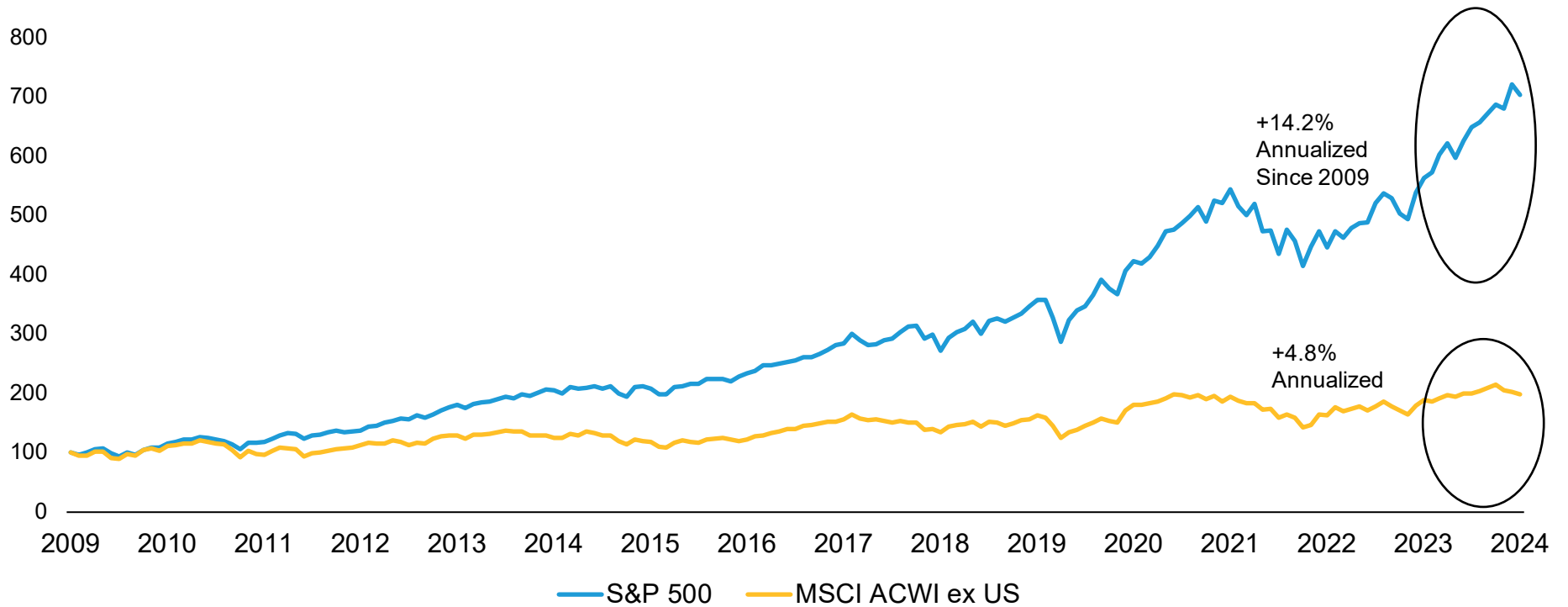
As of December 31, 2024

Diversification does not eliminate the risk of loss.

Source: Bernstein analysis

US Stock Leadership vs. Rest of World Expanded in 2024

Growth of \$100
USD

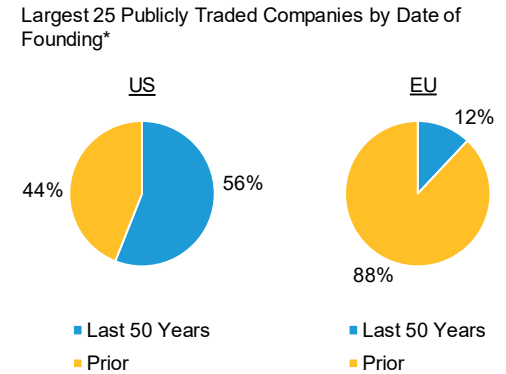
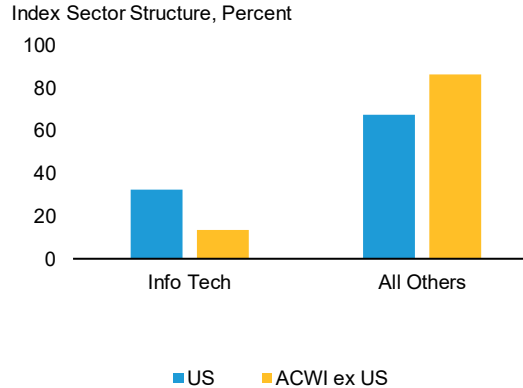
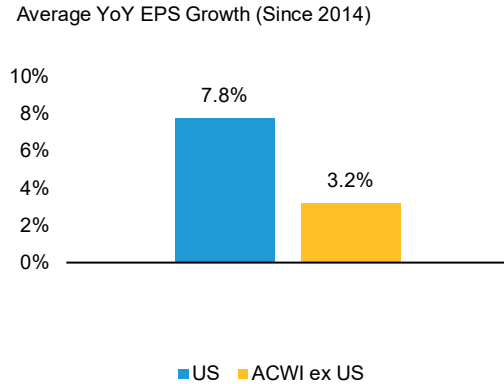


As of December 31, 2024. **Past performance does not guarantee future results.**
Source: S&P, MSCI, and Bernstein analysis

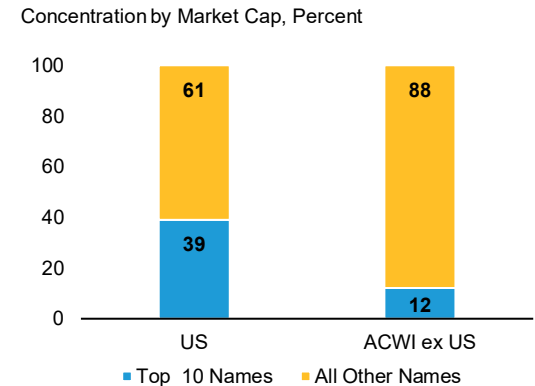
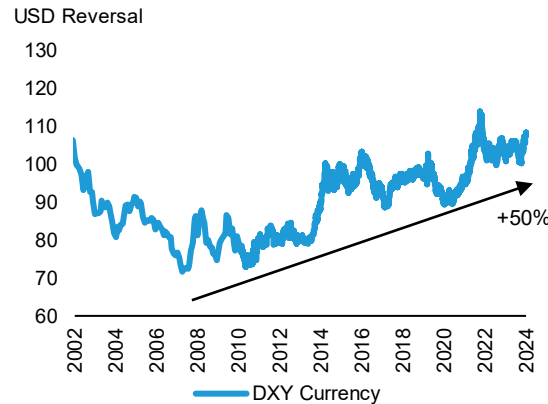
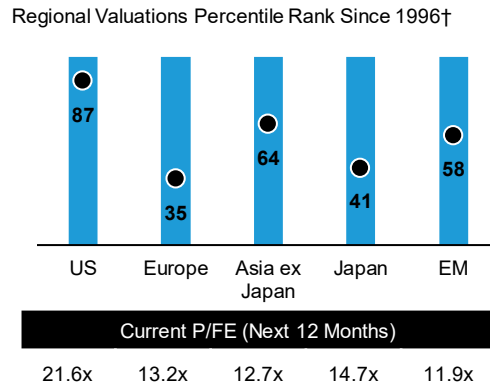
Will Leadership Ever Change?

US macro, micro, and market structure are the “why.” Things change, though.

Why the US Has Led



Why Leadership May Change



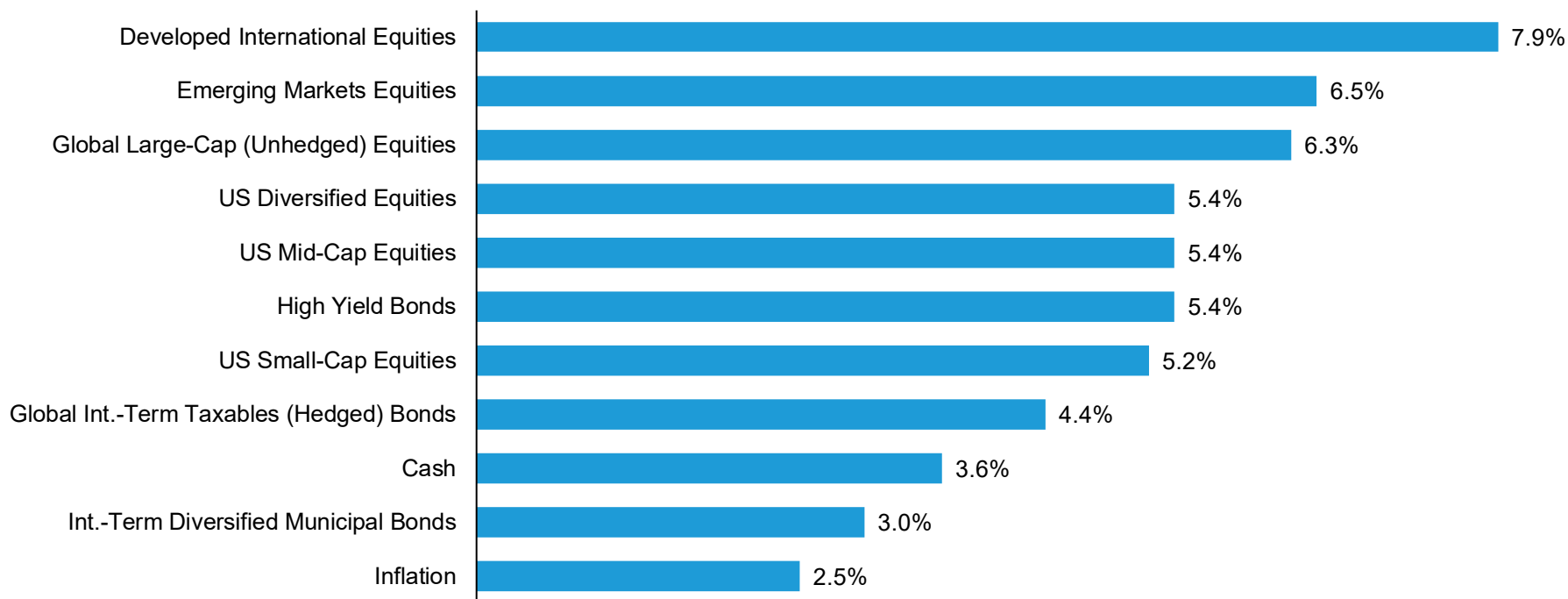
As of December 31, 2024. **Past performance does not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.**

*Note that some discretion on founding dates was used given complicated company origins. †US represented by the S&P 500, Europe by MSCI Europe, Asia ex Japan by MSCI Asia ex Japan, Japan by MSCI Japan, and emerging markets by MSCI Emerging Markets.

Source: Bloomberg, FactSet, Bureau of Labor Statistics, S&P, MSCI, and Bernstein analysis

10-Year Capital-Market Projections: Asset Classes

Median 10-Year Growth Rate (pre-tax)

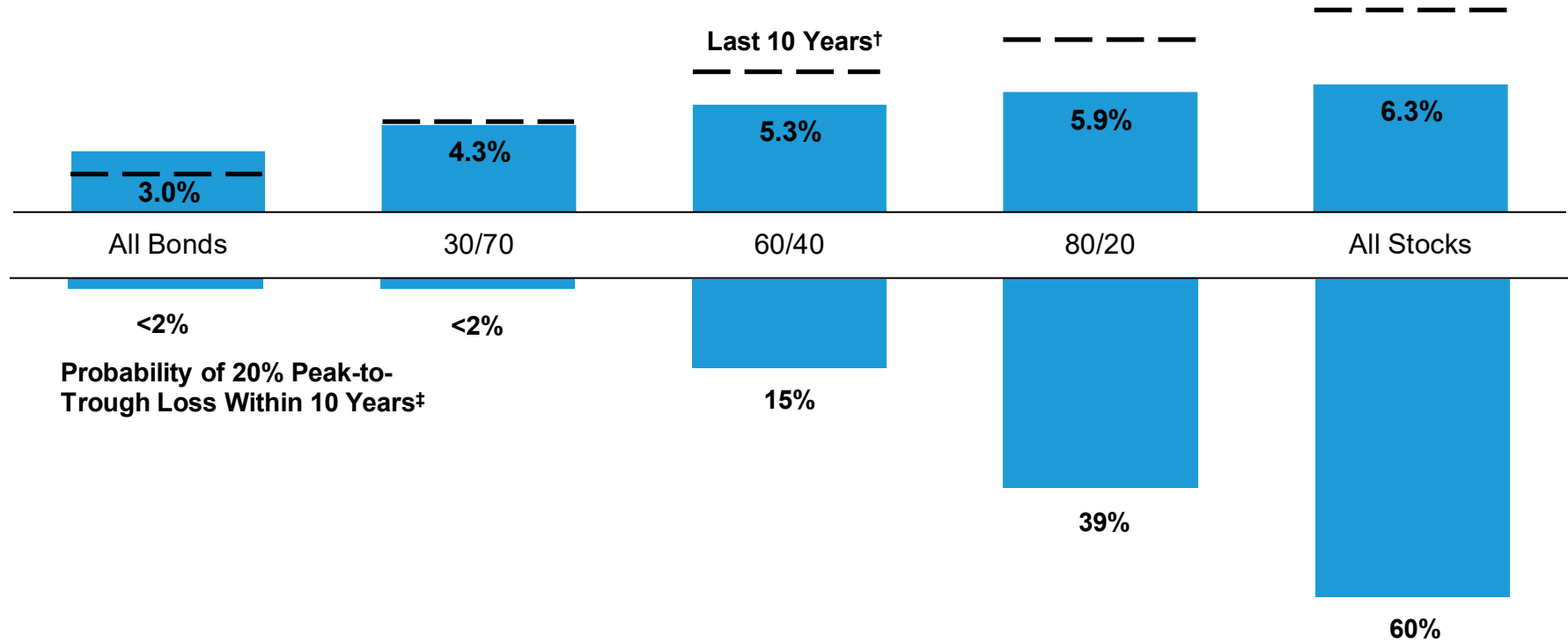


As of December 31, 2024. **Data do not represent past performance and are not a promise or a range of future results.** Based on 10,000 simulated trials each consisting of 10-year periods. Reflects AB's estimates and the capital-market conditions of June 30, 2024. For hedge-fund asset classes, Mean Annual Income represents income and short-term capital gains.

Appendix

Expected Returns Across Allocations

Projected median 10-year annualized return*



As of December 31, 2024. **Neither past nor forecasted performance is necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized.** *Median 10-year forecast represents pretax compound annual growth rates and reflects Bernstein's estimates and the capital-market conditions as of June 30, 2024. Stocks are represented by the MSCI World Index, and bonds are represented by intermediate-term diversified municipals.

†Stocks are represented by the MSCI World Index, and bonds are represented by the Lipper Intermediate Muni Bond Fund Avg.

‡Projections indicate the probability of a peak-to-trough decline in pretax, pre-cash-flow cumulative returns of 20% over the period analyzed. Because the Bernstein Wealth Forecasting System uses annual capital-market returns, the probability of peak-to-trough losses measured on a more frequent basis (such as daily or monthly) may be understated. The probabilities depicted above include an upward adjustment intended to account for the incidence of peak-to-trough losses that do not last an exact number of years. Stocks are represented by the MSCI World Index, and bonds are represented by intermediate-term diversified municipals.

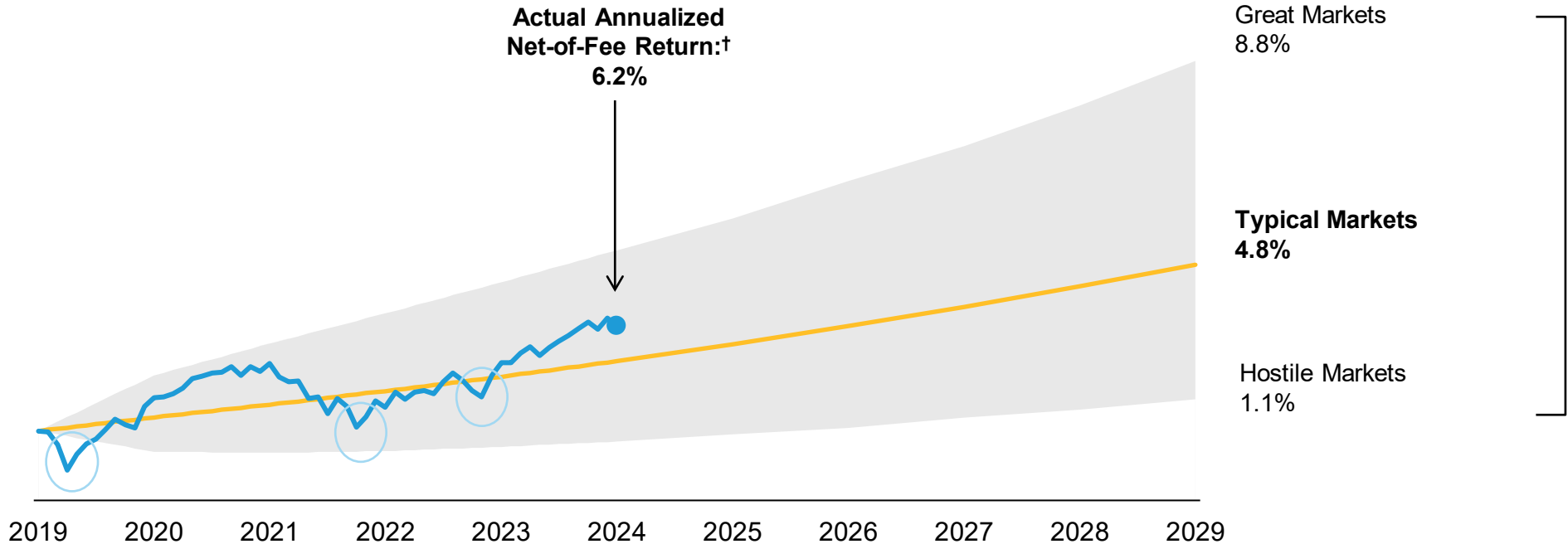
See Notes on the Bernstein Wealth Forecasting System at the end of this presentation for further details.

Source: Bloomberg Barclays, FactSet, Lipper, MSCI, Russell, S&P, and AB

Despite Sell-Offs, Long-Term Investors Remain Above Plan

Projected* and Actual Returns (Annualized)

10-Year Forecasted Returns (as of December 2019)



As of December 31, 2024. **Past performance does not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.**

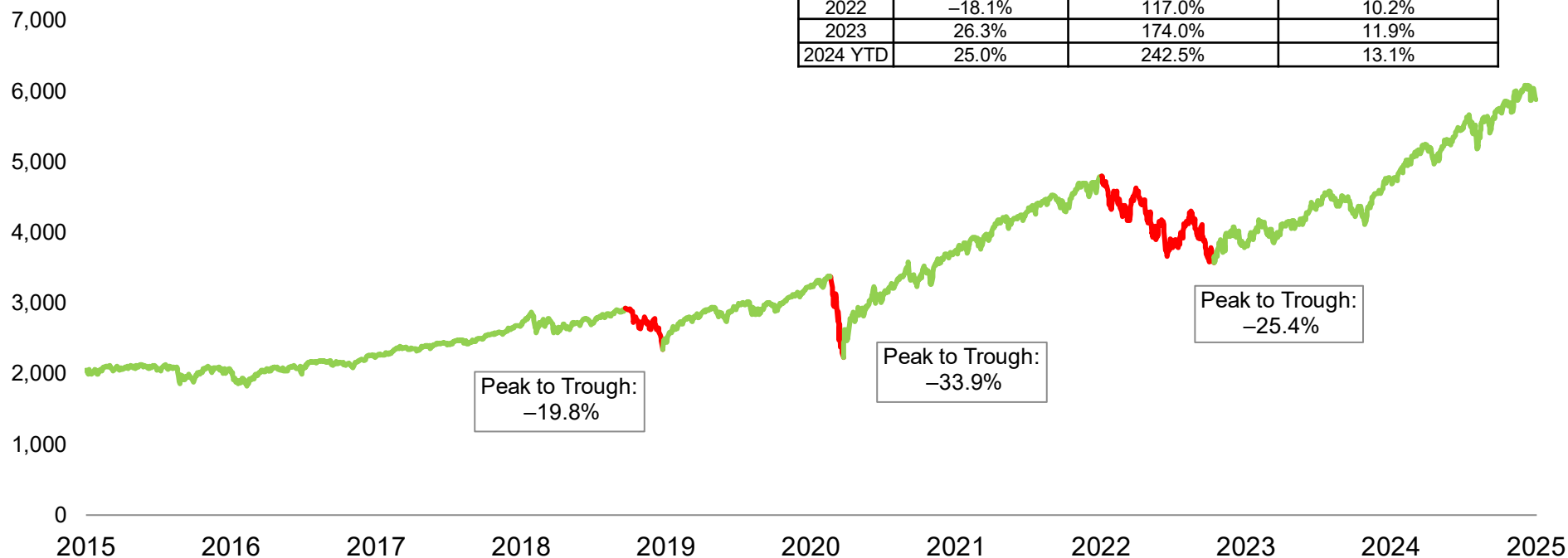
*Great markets represents 10th percentile, typical markets represents 50th percentile, and hostile markets represents 90th percentile. Based on Bernstein's estimates of the range of returns for the applicable capital markets as of December 31, 2019, for a 60/40 stock/bond allocation. Stocks modeled as 21% US diversified, 21% US value, 21% US growth, 7% US small-/mid-cap, 22.5% developed international, and 7.5% emerging markets. Bonds modeled as intermediate-term diversified municipals. Data do not represent past performance and are not a promise of actual future results or a range of future results. See Notes on the Bernstein Wealth Forecasting System at the end of the presentation for further details.

†Actual annualized net-of-fee return for the period beginning December 31, 2019 through December 31, 2024. The hypothetical performance of the Moderate Portfolio Simulation (MPS) is a simulated portfolio intended to illustrate the investment experience of a Bernstein taxable client who was invested in a moderate growth allocation of Bernstein investment services. Represents monthly returns. Assumes no portfolio additions or withdrawals over the period. Results based on pretax returns and do not reflect the impact of taxes. It is presented for illustrative purposes only, and no representation is made that an investor will, or is likely to, achieve profits or experience losses similar to those shown. See disclosures at the end of this presentation for additional information regarding the simulation's composition and calculation methodology.

Source: AB

Last Decade Equity Returns Superb Despite 2018, 2020, and 2022 Declines

S&P 500 Index

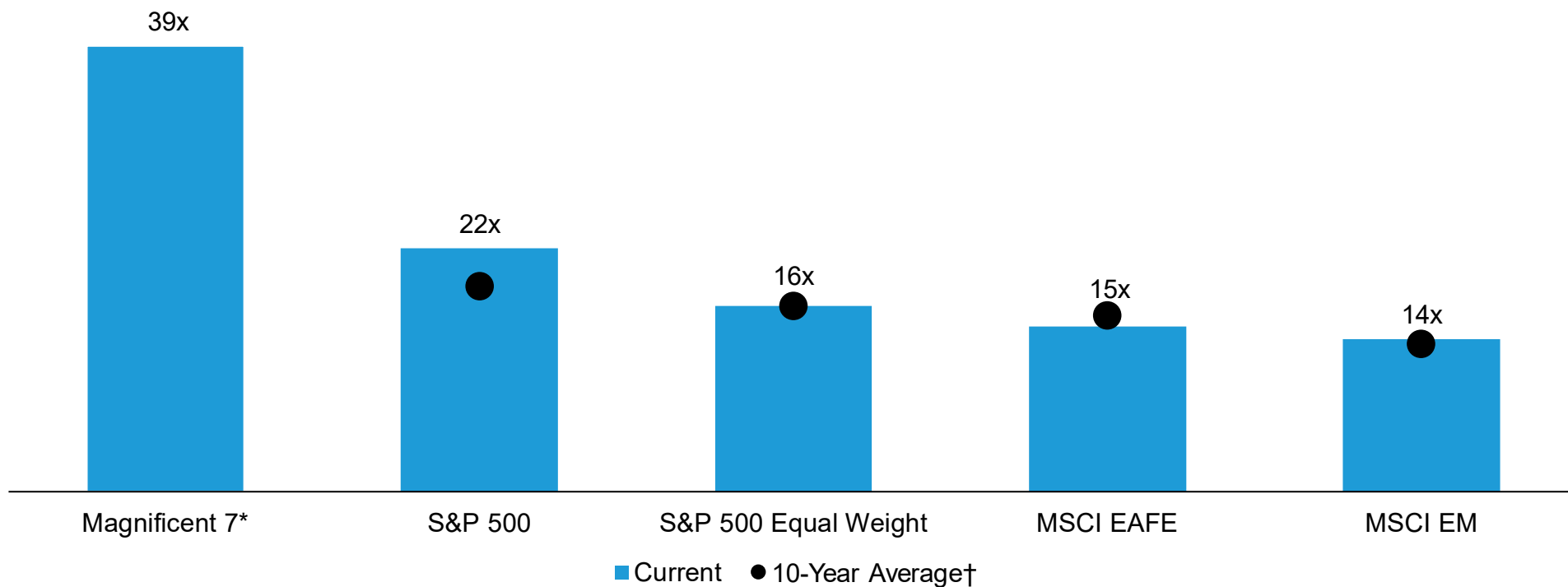


Year	Calendar Year Return	Cumulative Return Since 2014	Annualized Return Since 2014
2015	1.4%	1.4%	1.4%
2016	12.0%	13.5%	6.5%
2017	21.8%	38.3%	11.4%
2018	-4.4%	32.2%	7.2%
2019	31.5%	73.9%	11.7%
2020	18.4%	108.9%	12.8%
2021	28.7%	164.9%	14.9%
2022	-18.1%	117.0%	10.2%
2023	26.3%	174.0%	11.9%
2024 YTD	25.0%	242.5%	13.1%

As of December 31, 2024. **Past performance does not guarantee future results.**
Source: Bloomberg, S&P, and Bernstein analysis

Beyond Leaders, Valuations More Reasonable

12-Month Forward Price/Earnings Ratio



As of December 31, 2024. **Past performance does not guarantee future results.** Simulated or hypothetical performance results have certain inherent limitations. No representation is being made that any account will, or is likely to, achieve returns or a volatility profile similar to those being shown.

*Magnificent 7 is the average price/NTM earnings of the following: NVIDIA, Tesla, Apple, Meta, Alphabet, Microsoft, and Amazon.

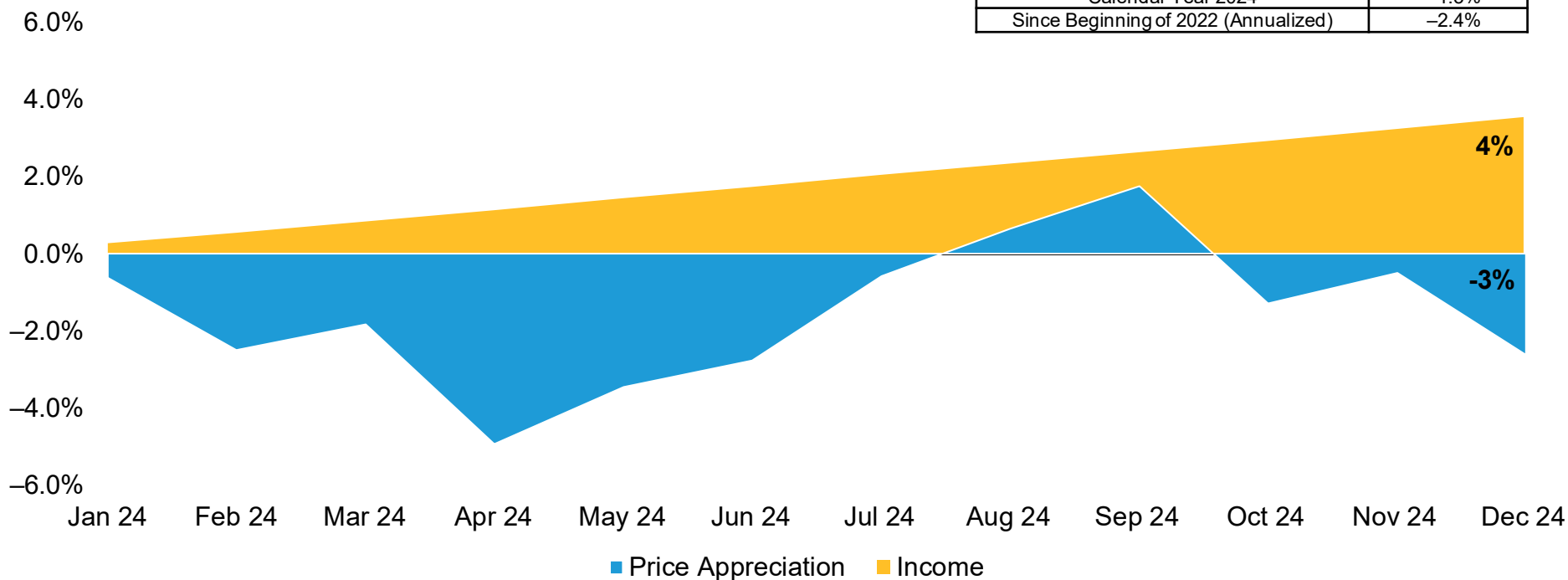
†Average of month-end 12-month forward price/earnings ratios.

Source: BlackRock, Bloomberg, FactSet, MSCI, S&P, and Bernstein analysis

Higher Income Helpful To Bond Returns in 2024

Bloomberg US Aggregate Index

Cumulative total return decomposed since December 2023

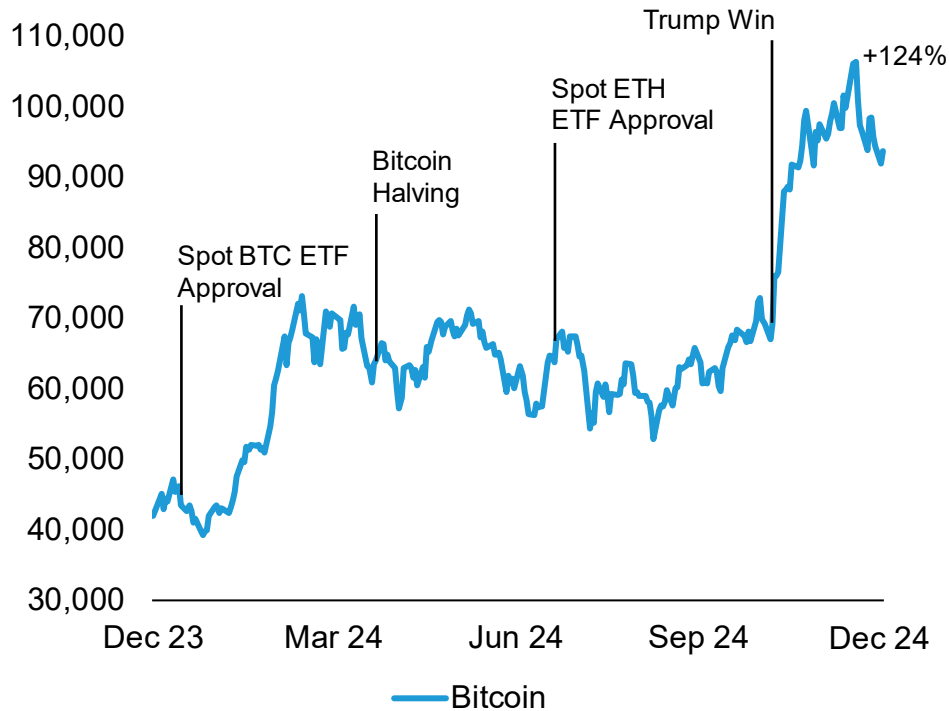


	Return
First 9 Months of 2022	-14.6%
Calendar Year 2022	-13.0%
Calendar Year 2023	5.5%
Calendar Year 2024	1.3%
Since Beginning of 2022 (Annualized)	-2.4%

As of December 31, 2024. Past performance is not necessarily indicative of future results.
Source: Barclays Live, Bloomberg, and Bernstein analysis

What About Crypto?

Bitcoin Spot Rate to USD



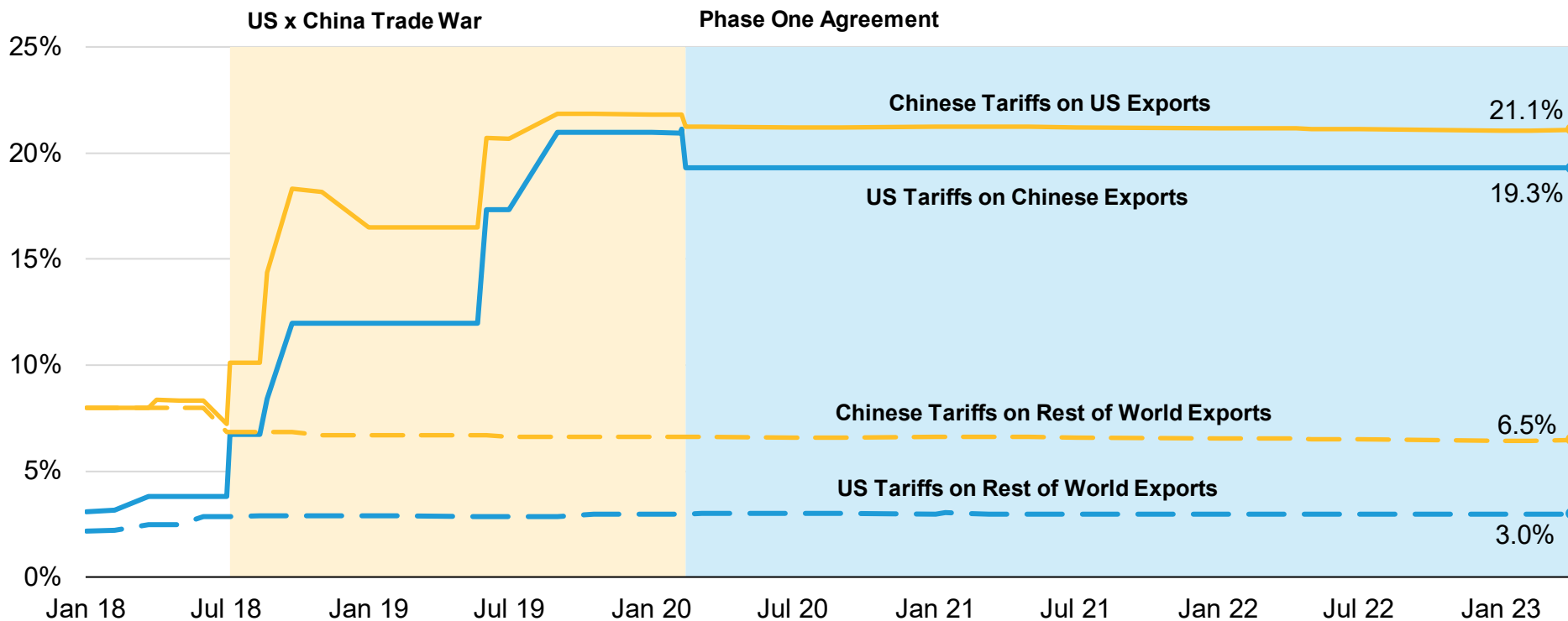
Our Advice:

- In the wake of the election, cryptoassets have rallied broadly on expectations that the incoming Trump administration will be relatively friendly to the industry
- As we did at the [introduction of spot bitcoin ETFs](#), we continue to see a future for this technology and its use cases. However, in our view, this will necessitate [ongoing technological improvements and an increasingly robust regulatory framework](#).
- As in our in-depth [white paper](#) from 2021, it remains our belief that investors should approach the space responsibly, effectively as they would venture capital, given its extremely uncertain future fundamentals and high level of risk.

As of December 31, 2024. **Past performance is not necessarily indicative of future results.**
Source: Bloomberg and Bernstein analysis

What Happened in 2018

A Trade War in Stages

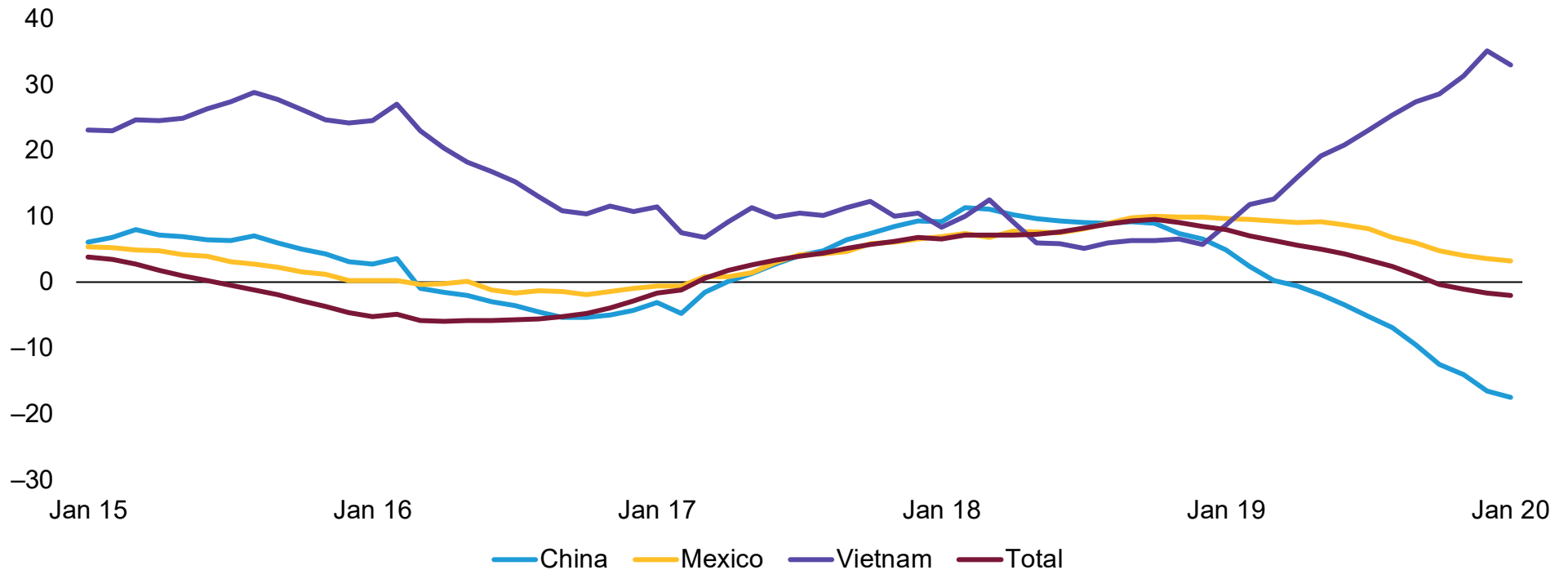


As of December 31, 2024. For illustrative purposes only.

Source: The Peterson Institute for International Economics and Bernstein analysis

US Trade Was Reoriented Elsewhere After 2018

YoY Growth Rate of 12-month sum of US imports by source

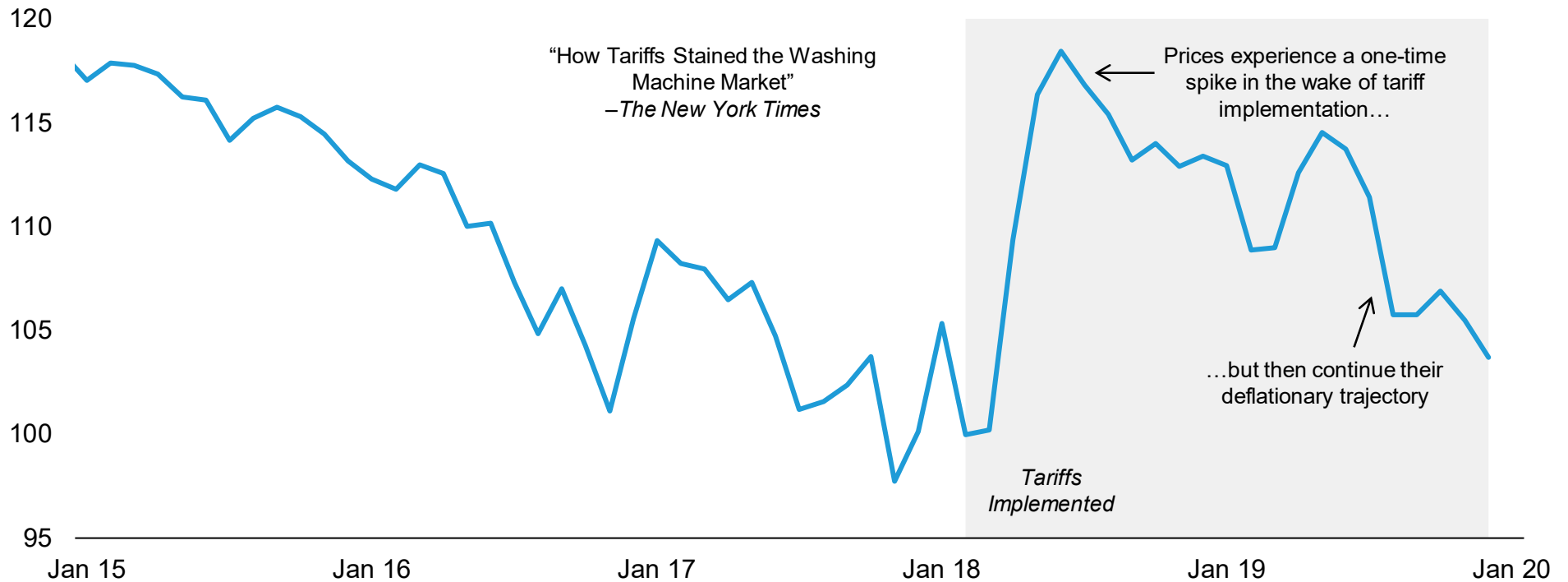


As of December 31, 2024. For illustrative purposes only.
Source: LSEG Datastream and Bernstein analysis

2018 Laundry Equipment Tariffs – A Case Study

Laundry Equipment CPI Level

Indexed to February 2018

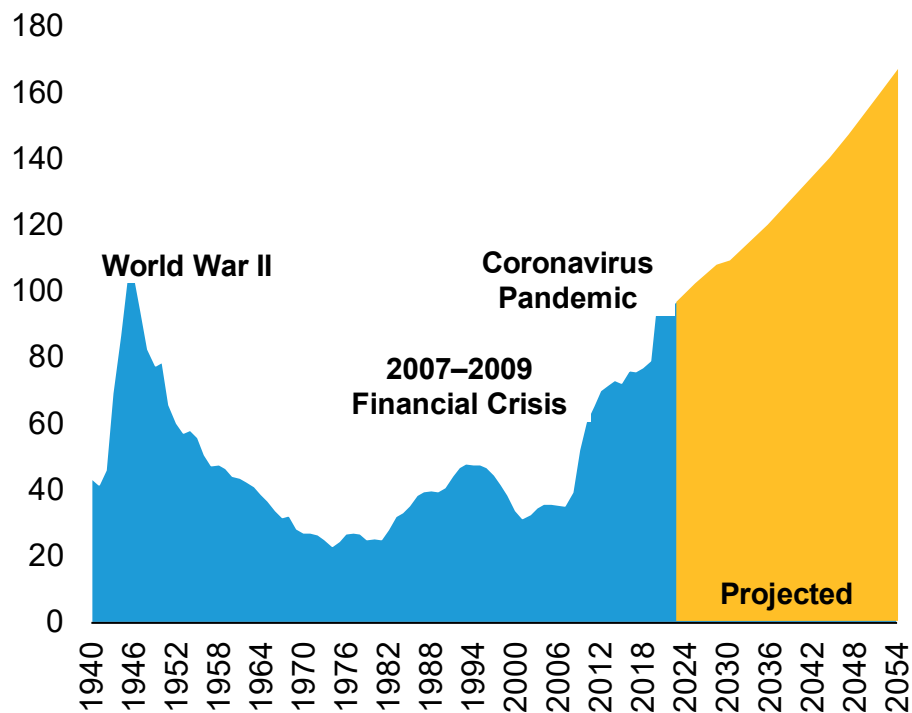


As of December 31, 2024. For illustrative purposes only.
Source: FactSet, Bureau of Labor Statistics, and Bernstein analysis

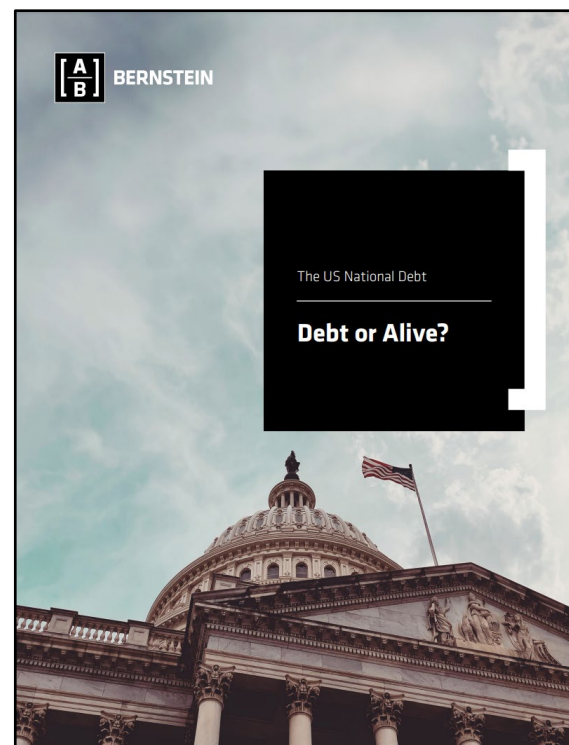
Warning Lights Are Flashing, but Alarms Are Not Blaring

Federal Debt Held by the Public

Percentage of GDP



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As of December 31, 2024. **Historical analysis is not necessarily indicative of future results.**
Source: Congressional Budget Office and Bernstein analysis

Geopolitics: Events Rarely Have a Lasting Market Impact

Select geopolitical events since 1970 and S&P 500 returns (percent)

Event	First Trading Day	1 Week	1 Month	1 Quarter	1 Year
Watergate	6/19/1972	-0.1	-1.4	0.4	-3.0
Yom Kippur War*	10/8/1973	1.4	-3.9	-10.0	-43.2
Three Mile Island Accident	3/28/1979	-0.1	-0.7	-0.2	-4.2
Iran Hostage Crisis*	11/5/1979	-1.0	3.6	12.3	24.3
Reagan Assassination Attempt*	3/30/1981	0.6	0.6	-1.6	-16.9
Challenger Space Shuttle	1/28/1986	3.2	9.3	16.8	32.0
Iran-Contra Affair	11/3/1986	0.7	2.1	12.3	3.2
Iraq Invades Kuwait*	8/2/1990	-4.7	-8.9	-12.8	12.8
Desert Storm/First Gulf War*	1/17/1991	4.5	17.2	23.6	36.6
LA Riots	4/29/1992	2.0	2.3	2.8	10.2
WTC Bombing (1993)	2/26/1993	1.2	2.1	2.2	8.3
Oklahoma City Bombing	4/19/1995	1.4	3.1	11.3	30.5
Centennial Park Olympic Bombing	7/29/1996	4.3	4.6	10.8	50.6
Kenya/Tanzania Embassy Bombings	8/7/1998	-1.3	-10.5	5.1	21.0
USS Cole Bombing*	10/12/2000	-1.6	0.2	-2.5	-18.5
Bush-Gore Hanging Chad*	11/7/2000	-5.6	-5.5	-5.3	-20.9
9/11*	9/17/2001	-4.9	-0.9	4.7	-15.5
War in Afghanistan*	10/8/2001	1.9	3.0	9.8	-24.2

Key Takeaway: Stocks have generally shrugged off geopolitical events, since they rarely have a lasting impact on the business cycle.

Event	First Trading Day	1 Week	1 Month	1 Quarter	1 Year
SARS†	2/11/2003	-0.1	-3.2	12.2	39.5
Second Gulf War	3/20/2003	-0.5	2.4	14.3	29.2
Madrid Train Bombings	3/11/2004	0.0	1.5	1.5	9.5
Orange Revolution-Ukraine	11/22/2004	1.1	2.2	3.1	8.6
Asian Tsunami	12/27/2004	0.3	-3.4	-2.7	6.8
London Bombings	7/7/2005	2.4	2.7	0.2	8.6
Hurricane Katrina	8/29/2005	1.1	1.0	5.7	9.5
Arab Spring	12/17/2010	1.2	4.2	1.6	0.2
Hurricane Sandy	10/29/2012	1.1	-0.0	7.0	27.3
Boston Marathon Bombing	4/15/2013	-2.1	3.0	6.3	16.7
Russia/Ukraine/Crimea	2/27/2014	1.6	0.5	3.5	16.8
Greek Referendum	11/5/2015	-1.2	-0.3	-8.4	1.4
Brexit	6/24/2016	-0.7	3.1	3.0	17.8
Trump Surprise Election Win	11/8/2016	1.6	5.4	8.1	24.0
Hurricane Harvey/Irma/Maria	8/25/2017	1.4	2.8	7.2	20.2
US-China Trade War‡	1/22/2018	2.2	-2.6	-3.7	-3.1
Coronavirus Outbreak†	3/11/2020	-12.5	2.0	10.1	46.2
Russia Invades Ukraine	2/24/2022	1.8	5.5	-7.8	-7.4
Israel-Hamas War	10/9/2023	0.9	0.4	10.1	35.5

Summary	1 Week	1 Month	1 Quarter	1 Year
Average	0.4	1.2	4.1	10.6
% of Events Negative	36	33	28	28
Conflict/War Avg.	0.9	2.0	3.8	7.0
Terrorism Avg.	-0.1	0.7	4.4	12.4
Political Avg.	-0.2	1.1	2.4	5.3
Environmental Avg.	0.8	-0.1	3.4	11.9
Social/ Public Health Avg.	1.4	2.2	8.1	22.2

As of December 31, 2024. **Past performance does not guarantee future results.**

*Denotes the geopolitical event occurred during a recession or six months prior to the start of a recession.

†Date that China officially notified the WHO of the outbreak.

‡Tariffs on imports of solar panels and washing machines imposed.

Source: FactSet, Bloomberg, National Bureau of Economic Research, S&P 500, World Health Organization, and Bernstein analysis

10-Year Capital-Market Projections: Asset Classes

	Median 10-Year Growth Rate	Mean Annual Return	Mean Annual Income	One-Year Volatility	10-Year Annual Equivalent Volatility
Cash Equivalents	3.6%	3.8%	3.8%	0.5%	5.0%
Short-Term Treasuries	4.3%	4.4%	4.1%	1.2%	4.3%
Short-Term Taxables	4.5%	4.7%	4.5%	1.5%	4.4%
Short-Term Diversified Municipals	2.9%	3.0%	2.9%	0.9%	3.1%
Int.-Term Treasuries	4.5%	4.7%	4.3%	5.5%	3.1%
Int.-Term Taxables	4.8%	4.9%	4.8%	5.9%	3.4%
Int.-Term Corporates	4.9%	5.1%	5.2%	6.7%	4.0%
Int.-Term Diversified Municipals	3.0%	3.1%	3.1%	4.7%	3.0%
Global Int.-Term Taxables (Hedged)	4.4%	4.6%	4.4%	4.9%	3.7%
Int.-Term TIPS	4.8%	5.3%	4.8%	3.9%	7.3%
High Yield	5.4%	6.1%	8.0%	12.5%	7.8%
Global Large-Cap (Unhedged)	6.3%	7.6%	2.1%	15.7%	14.8%
US Diversified	5.4%	6.9%	1.7%	16.5%	15.5%
US Value	5.8%	7.2%	2.0%	16.2%	15.2%
US Growth	5.0%	6.9%	1.5%	18.3%	16.9%
US Mid-Cap	5.4%	7.2%	1.6%	17.9%	17.0%
US Small-/Mid-Cap	5.4%	7.3%	1.5%	18.7%	17.8%
US Small-Cap	5.2%	7.5%	1.3%	20.5%	19.7%
Developed International	7.9%	9.8%	3.2%	18.1%	17.0%
Emerging Markets	6.5%	9.4%	2.9%	22.0%	19.9%
Global REITs	5.7%	7.3%	4.5%	17.7%	16.1%
Real Assets	5.6%	6.6%	3.6%	13.5%	14.2%
Diversified Hedge Fund	5.9%	6.2%	3.2%	10.6%	14.9%
Inflation	2.5%	2.9%	n/a	1.5%	6.3%

Based on 10,000 simulated trials each consisting of 10-year periods. Reflects AB's estimates and the capital-market conditions of June 30, 2024. For hedge-fund asset classes, Mean Annual Income represents income and short-term capital gains.

Data do not represent past performance and are not a promise or a range of future results.

Notes on the Bernstein Wealth Forecasting SystemSM

1. Purpose and Description of the Bernstein Wealth Forecasting Analysis

The Bernstein Wealth Forecasting Analysis is designed to assist investors in making their long-term investment decisions as to their allocation of investments among categories of financial assets. Our planning tool consists of a four-step process: (1) Client-Profile Input: the client's asset allocation, income, expenses, cash withdrawals, tax rate, risk-tolerance level, goals, and other factors; (2) Client Scenarios: in effect, questions the client would like our guidance on, which may touch on issues such as when to retire, what his/her cash-flow stream is likely to be, whether his/her portfolio can beat inflation long-term, and how different asset allocations might effect his/her long-term security; (3) The Capital-Markets Engine: our proprietary model that uses our research and historical data to create a vast range of market returns, which takes into account the linkages within and among the capital markets, as well as their unpredictability; and (4) A Probability Distribution of Outcomes: based on the assets invested pursuant to the stated asset allocation, 90% of the estimated ranges of returns and asset values the client could expect to experience are represented within the range established by the 5th and 95th percentiles on "box-and-whiskers" graphs. However, outcomes outside this range are expected to occur 10% of the time; thus, the range does not establish the boundaries for all outcomes. Expected market returns on bonds are derived taking into account yield and other criteria. An important assumption is that stocks will, over time, outperform long bonds by a reasonable amount, although this is in no way a certainty. Moreover, actual future results may not meet Bernstein's estimates of the range of market returns, as these results are subject to a variety of economic, market, and other variables. Accordingly, the analysis should not be construed as a promise of actual future results, the actual range of future results, or the actual probability that these results will be realized. The information provided here is not intended for public use or distribution beyond our private meeting.

Notes on the Bernstein Wealth Forecasting System

2. Modeled Asset Classes

The following assets or indexes were used in this analysis to represent the various model classes:

Asset Class	Modeled As	Annual Turnover
Cash Equivalents	3-month US Treasury bills	100%
Short-Term Treasuries	US Treasuries of 2-year maturity	50%
Short-Term Taxables	Taxable bonds of 2-year maturity	50%
Short-Term Diversified Municipals	AA-rated diversified municipal bonds of 2-year maturity	50%
Int.-Term Treasuries	US Treasuries of 7-year maturity	30%
Int.-Term Taxables	Taxable bonds of 7-year maturity	30%
Int.-Term Corporates	US investment-grade corporate debt of 7-year maturity	30%
Int.-Term Diversified Municipals	AA-rated diversified municipal bonds of 7-year maturity	30%
Global Int.-Term Taxables (Hedged)	50% sovereign and 50% investment-grade corporate debt of developed countries of 7-year maturity	30%
Int.-Term TIPS	US TIPS of 7-year maturity	30%
High Yield	Taxable bonds of 7-year maturity with credit characteristics of CSFB High Yield Index II	30%
Global Large-Cap (Unhedged)	MSCI World Index	15%
US Diversified	S&P 500 Index	15%
US Value	S&P/Barra Value Index	15%
US Growth	S&P/Barra Growth Index	15%
US Mid-Cap	Russell Mid-Cap Index	15%
US Small-/Mid-Cap	Russell 2500 Index	15%
US Small-Cap	Russell 2000 Index	15%
Developed International	MSCI EAFE Index (Unhedged)	15%
Emerging Markets	MSCI Emerging Markets Index	20%
Global REITs	NAREIT Index	30%
Real Assets	1/3 NAREIT, 1/3 MSCI ACWI Commodity Producer Index, 1/3 DJ-UBS Commodity Futures Index	30%
Diversified Hedge Fund	Diversified Hedge Fund Asset Class	33%

Notes on the Bernstein Wealth Forecasting System

3. Volatility

Volatility is a measure of dispersion of expected returns around the average. The greater the volatility, the more likely it is that returns in any one period will be substantially above or below the expected result. The volatility for each asset class used in this analysis is listed on the Capital-Market Projections page preceding these Notes. In general, two-thirds of the returns will be within one standard deviation. For example, assuming that stocks are expected to return 8.0% on a compounded basis and the volatility of returns on stocks is 17.0%, in any one year it is likely that two-thirds of the projected returns will be between (8.9)% and 28.8%. With intermediate government bonds, if the expected compound return is assumed to be 5.0% and the volatility is assumed to be 6.0%, two-thirds of the outcomes will typically be between (1.1)% and 11.5%. Bernstein's forecast of volatility is based on historical data and incorporates Bernstein's judgment that the volatility of fixed-income assets is different for different time periods.

4. Technical Assumptions

The Bernstein Wealth Forecasting System is based on a number of technical assumptions regarding the future behavior of financial markets. Bernstein's Capital Markets Engine is the module responsible for creating simulations of returns in the capital markets. These simulations are based on inputs that summarize the current condition of the capital markets as of June 30, 2024. Therefore, the first 12-month period of simulated returns represents the period from June 30, 2024, through June 30, 2025, and not necessarily the calendar year of 2024. A description of these technical assumptions is available on request.

5. Expenses and Spending Plans (Withdrawals)

All results are generally shown after applicable taxes and after anticipated withdrawals and/or additions, unless otherwise noted. Liquidations may result in realized gains or losses, which will have capital-gains tax implications.

6. Tax Implications

Before making any asset-allocation decisions, an investor should review with his/her tax advisor the tax liabilities incurred by the different investment alternatives presented herein, including any capital gains that would be incurred as a result of liquidating all or part of his/her portfolio, retirement-plan distributions, investments in municipal or taxable bonds, etc. Bernstein does not provide tax, legal, or accounting advice. In considering this material, you should discuss your individual circumstances with professionals in those areas before making any decisions.

Notes on the Bernstein Wealth Forecasting System

7. Tax Rates

The Bernstein Wealth Forecasting System has used the following tax rates for this analysis:

Taxpayer	Scenario	Start Year	End Year	Federal Income Tax Rate	Federal Capital-Gains Tax Rate	State Income Tax Rate	State Capital-Gains Tax Rate	Tax Method Type
Client	All	2024	2025	40.8%	23.8%	0.0%	0.0%	Top Marginal
Client	All	2026	2033	43.4%	23.8%	0.0%	0.0%	Top Marginal

The federal income tax rate represents Bernstein's estimate of either the top marginal tax bracket or an "average" rate calculated based upon the marginal rate schedule. The federal capital-gains tax rate is represented by the lesser of the top marginal income tax bracket or the current cap on capital gains for an individual or corporation, as applicable. Federal tax rates are blended with applicable state tax rates by including, among other things, federal deductions for state income and capital-gains taxes. The state income tax rate represents Bernstein's estimate of the "average" rate calculated based upon the applicable state's marginal tax schedule. Where an applicable state tax code permits the exclusion of a portion of capital-gains income from gross income for purposes of calculating state income tax such exclusions have been included in the calculation.

Glossary of Risk and Return Statistics

Summary statistics are based on 10,000 simulated trials. Along each trial (or “path”), price changes and cash flows are projected at an annual interval, out to 50 years. Statistics are computed based on the ranges of outcomes across these paths.

Median Annualized Growth Rate is the annualized median across paths of the compound return over the path to the horizon indicated. This number should not be used in a portfolio optimizer—it reflects the asset class in isolation and can be compared with historical growth rates.

Mean Arithmetic Average Return is the average return across all years and paths to the horizon indicated. It reflects the return that you can expect in a typical year. This number can be entered into a portfolio optimizer.

First-Year Volatility is the standard deviation of log returns across all paths in the first simulated year. It is typically comparable to historical volatilities.

The Dispersion of Cumulative Returns is expressed on an annualized basis as **Annual Equivalent Volatility**; more technically, it is the standard deviation of log cumulative returns, divided by the square root of the horizon in years. If the annual returns are serially independent and identically distributed, then dispersion will equal first-year volatility. When returns are mean-reverting—as for equities whose fundamentals and valuations follow the business cycle—dispersion is smaller than first-year volatility. When returns are persistent—as for bonds driven by yield momentum—dispersion exceeds first-year volatility.

Correlation is measured analogously to dispersion by looking at compound returns across the paths—not by looking along a single path, as the historical estimate implicitly does. Looking historically, we would find that interest-rate levels on cash and bonds have generally moved in tandem, resulting in a positive correlation between them. In CME, if interest rates steadily rise on a particular 10-year path, cash tends to fare better than on the median interest-rate path, while bonds fare worse. So across all paths, cash and bonds are negatively correlated. This perspective is better suited to forward-looking analysis.

Index Descriptions

The **Bloomberg Global High Yield Index** represents noninvestment-grade fixed-income securities of companies in the US, developed, and emerging markets.

The **Bloomberg US Treasury Index** represents the performance of US Treasuries within the US government fixed-income market.

The **Bloomberg 1–10-Year Municipal Bond Index** represents the performance of the long-term tax-exempt bond market consisting of investment-grade bonds.

The **S&P Global Real Estate Investment Trust (REIT) Index** measures the securitized REITs from both developed and emerging markets. REITs act as operating companies that purchase, manage, invest in, maintain, and market real estate.

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

The **MSCI ACWI Commodity Producers Index** is a free-float-adjusted market-capitalization-weighted index that is designed to track the performance of global listed commodity producers.

The **MSCI EAFE (Europe, Australasia, Far East) Index** is a free-float-adjusted, market-capitalization-weighted index that is designed to measure developed-market equity performance, excluding the US and Canada.

The **MSCI Emerging Markets Index** is a free-float-adjusted, market-capitalization-weighted index that is designed to measure equity market performance in the global emerging markets.

The **MSCI USA Index** is a free-float-adjusted, market-capitalization-weighted index that is designed to measure large- and mid-cap US equity market performance.

The **MSCI USA Minimum Volatility Index** aims to reflect the performance characteristics of a minimum variance strategy applied to the US large- and mid-cap equity universe. The index is calculated by optimizing the MSCI USA Index, its parent index, for the lowest absolute risk (within a given set of constraints). Historically, the index has shown lower beta and volatility characteristics relative to the MSCI USA Index.

The **MSCI World Index** is a free-float-adjusted, market-capitalization-weighted index that is designed to measure global developed-market equity performance.

The **Russell 1000[®] Growth Index** measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values.*

The **Russell 1000[®] Value Index** measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.*

The unmanaged **S&P 500 Index** comprises 500 large-capitalization US stocks and is a common measure of the performance of the US stock market.

*The Russell Index methodology results in some companies appearing in both the growth and value indexes.

Glossary

Active Management: Managing a portfolio through security selection designed to outperform the portfolio's benchmark.

Active Share: The degree of difference between a portfolio and its benchmark index, calculated using the weight of individual securities in the portfolio relative to the benchmark. Active share varies between 0% (a portfolio that mirrors its benchmark) and 100% (a portfolio totally different from its benchmark).

Central Bank Policy: The monetary stance taken by a country's central bank, which can vary from extremely accommodative (keeping short-term interest rates very low, typical when economic growth is slow or negative) to extremely tight (raising rates to high levels, typical when inflation is very high).

Correlation: The degree to which two or more securities, asset classes, and/or benchmarks perform in the same direction and magnitude; a lower correlation is generally favorable for active management, and a higher correlation for passive management.

Dispersion (of returns): The difference in return, often between the best- and worst-performing security in a given asset class or investment category. Generally, the higher the dispersion, the more favorable for active management.

Distressed-Credit Hedge Fund: A hedge fund that invests in the debt of companies in financial trouble, including companies that may file for bankruptcy in the near future. If the company emerges from its distress, its debt will sell far above the price paid by the fund.

Duration: For bonds, a measure of interest-rate risk akin to, but more sensitive than, maturity. For every year of a bond's duration, its price can be expected to fall 1% with every one-percentage-point increase in interest rates, or rise 1% with every one-percentage-point decrease in rates.

Dynamic Asset Allocation: Bernstein's research-based tactical-risk-management service (*see below*), designed to reduce the volatility of a balanced-asset portfolio without sacrificing return.

Event-Driven Hedge Fund: Event-driven strategies take advantage of transaction announcements and other one-time events; one example is merger-arbitrage funds, which buy the stock of a target company and hedge the purchase by selling short the stock of the acquiring company.

Global Macro Hedge Fund: A hedge fund that bases its holdings primarily on overall economic and political views of various countries.

Hedging (currency): Using futures and other contracts to exchange one currency for another; for US investors, hedging is generally exchanging a non-US currency for dollars.

Glossary (cont.)

Inflation-Protected Bonds: Bonds whose values are indexed to inflation, normally adjusted on a semiannual basis. The most well known are Treasury Inflation-Protected Securities, or TIPS. Inflation-protected bonds are designed to shield investors from the negative impact of inflation.

Liquidity: The ease with which assets can be traded; the degree of liquidity for any given asset class or security depends on the prevailing market conditions, dealer inventories, and other factors.

Long/Short Hedge Fund: A hedge fund that takes “long” positions—positions of securities bought in the expectation that they will appreciate in value—as well as short-selling other positions, anticipating that they will decline in value. In short selling, the investor generally sells a borrowed security in the expectation that its price will decline and hence can be bought back at a lower price.

Passive Management: Managing a portfolio to essentially duplicate its benchmark index.

Price/Book Ratio: A stock’s current price divided by its book value: its total tangible assets minus its liabilities. A lower price-to-book ratio indicates a low price for a stock relative to the value of its underlying assets.

Price/Earnings Ratio: A stock’s current price divided by the company’s historical or projected earnings per share. A lower price/earnings ratio indicates a low price for a stock relative to its earnings history or potential. The **cyclically adjusted or Shiller P/E**, usually applied to the broad S&P 500 market, generally uses the average of the past 10 years of earnings, adjusted for inflation.

Real Assets: Assets that have tangible value, or are based on assets with tangible value, such as real estate, commodities, and commodity futures.

Roll (bonds): The tendency of a bond to sell for premium returns before maturity as long as the yield curve (*see below*) is upward-sloping, since its coupon rate is normally competing with lower rates as it “rolls down the yield curve.” Roll is a component of bond returns that active managers can exploit.

Tactical Risk Management: Varying the allocation of asset classes in a portfolio in line with generally short-term forecasts of risk and return.

Yield: The income return from an investment, typically based on the interest paid by a bond or the dividends paid by a stock; usually expressed as a percentage based on the security’s cost, market value, or face value.

Yield Curve: The relationship between the yields being offered by bonds at any given time and their maturity; normally, the curve is upward-sloping, but flat or inverted yield curves are not uncommon. Different yield-curve shapes suggest different optimal maturity configurations for a portfolio.

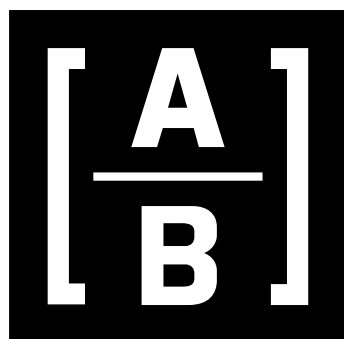
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