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Questions We Heard from Our Clients During 1Q 2024

Will inflation get back to normal?

When will the Fed cut, and by how much?

What happened to that recession we were all worried about?

Are stock returns still concentrated in the "Magnificent Seven"?

Is now the right time to invest excess cash?

How will the election affect markets and the economy?

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

Should we make any changes?

As of March 31, 2024. Source: AB



Investors Await Key Economic and Market Milestones

Seeking Clarity on Inflation and Fed Cuts

Inflation has fallen meaningfully since the summer of 2021—so much so that the Fed is likely to initiate cuts this year. But without a bit more assurance, investors still have uncertainty as to when and by how much.

2024 Soft Landing Still the Most Likely of All Possibilities

The economic slowdown should arrive in 2024 but be a lot less disruptive than previously feared. There are signs (albeit few and far between) that this process has begun.

The Election Question

"What will be the election's impact on the economy/markets?" is easily the question we're asked most often. History suggests the answer is "very little," but given the deficit, geopolitics, and other factors, we're a bit less certain that that answer will prove accurate this time around.

Current analysis and forecasts do not guarantee future results.

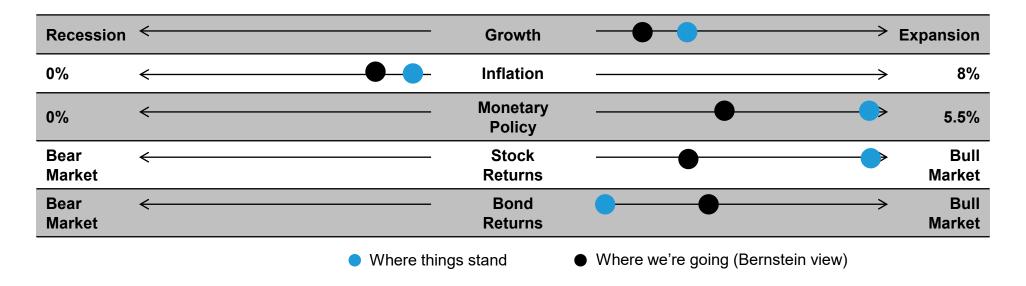
As of April 10, 2024. Source: Bernstein analysis



Macro Outlook



1Q 2024 Diagnostic—Where Things Stand, Where We're Going



- Growth is still ~2% with modest slowing expected
- Recent <u>inflation</u> readings are 3.5%–4%. Fed's 2% target likely reached in 2025
- Monetary policy remains very restrictive—cuts started by year end
- Stock bull market started in October 2022 but pace likely to slow
- Bond rally has stalled of late, but should resume as Fed cuts look more likely

Current analysis and forecasts do not guarantee future results. As of April 10, 2024. Source: AB



Wall Street's Key Economic and Market Expectations for 2024

	Low	Consensus	High	Bernstein
US GDP*	-0.8%	1.5%	3.2%	1.5%
Global GDP*	2.0%	2.8%	4.0%	2.4%
Policy Rate	3.75%– 4.00%	4.50% - 4.75%	5.00%– 5.25%	5.00% - 5.25%
10Y Treasury Rate	3.0%	3.8%	4.9%	4.25%
US Inflation	2.0%	2.4%	3.5%	2.8%

AB's View:

Global growth: Growth is likely to slow, but we do not expect a disruptive hard landing.

Monetary policy: Tightening has ended, and easing is on the horizon, though not likely until 2Q or 3Q in most major economies. The pace hinges on the magnitude of economic deceleration and rate of disinflation.

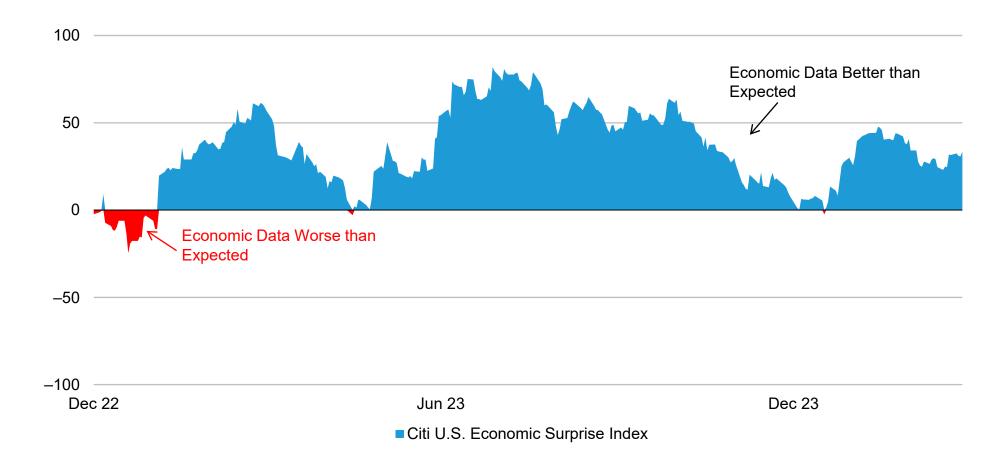
Bond yields: With rate cuts on the horizon, yields will decline, though not as rapidly as seen in 4Q—barring a collapse in growth.

Inflation: Very gradual disinflation is likely to define 2024, but convergence to target is not anticipated until 2025.

As of April 10, 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. Outliers of more than 100 b.p. from difference from highest/lowest estimate are removed. Source: Bloomberg, FactSet, and Bernstein analysis



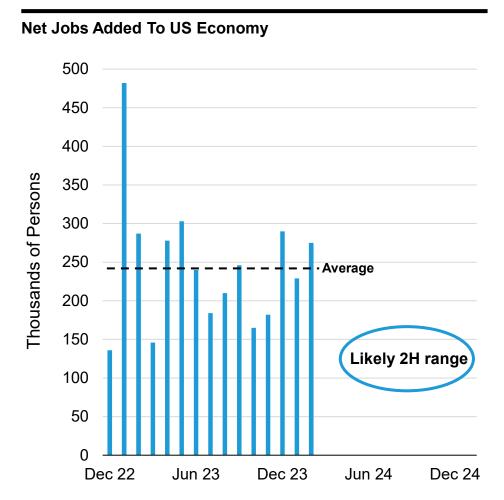
Economy Has Been Performing Better than Expected for the Last Year

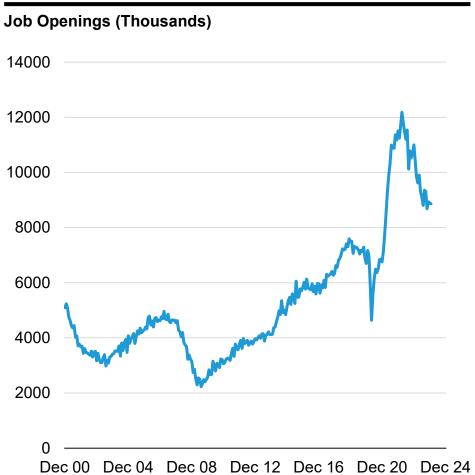


As of March 31, 2024. **Current analysis and forecasts do not guarantee future results.**Source: Bloomberg, Citigroup, and Bernstein analysis



We Expect Hiring To Slow Somewhat From Solid Pace

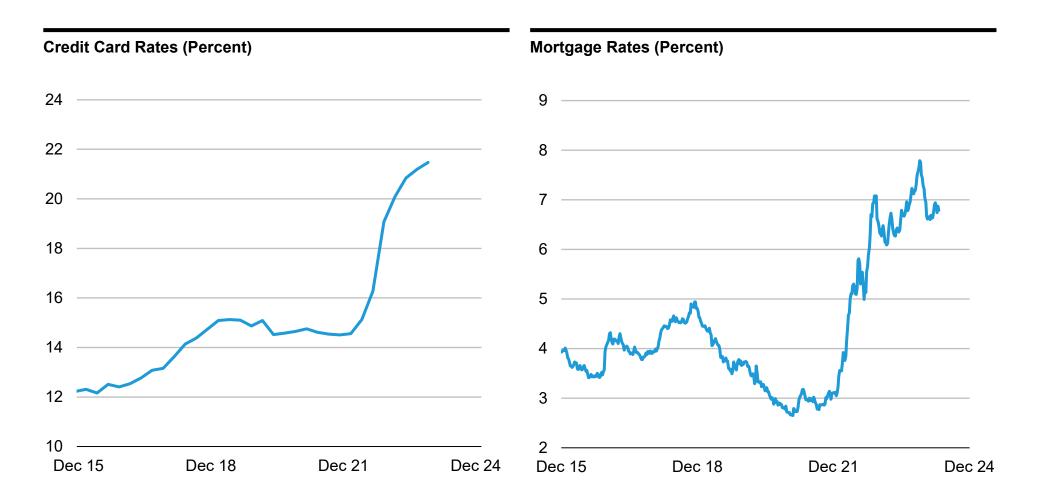




As of March 31, 2024. **Past performance does not guarantee future results.** Source: Federal Reserve, FRED, and Bernstein Analysis.



Persistently Higher Interest Rates Should Slow Consumer Spending

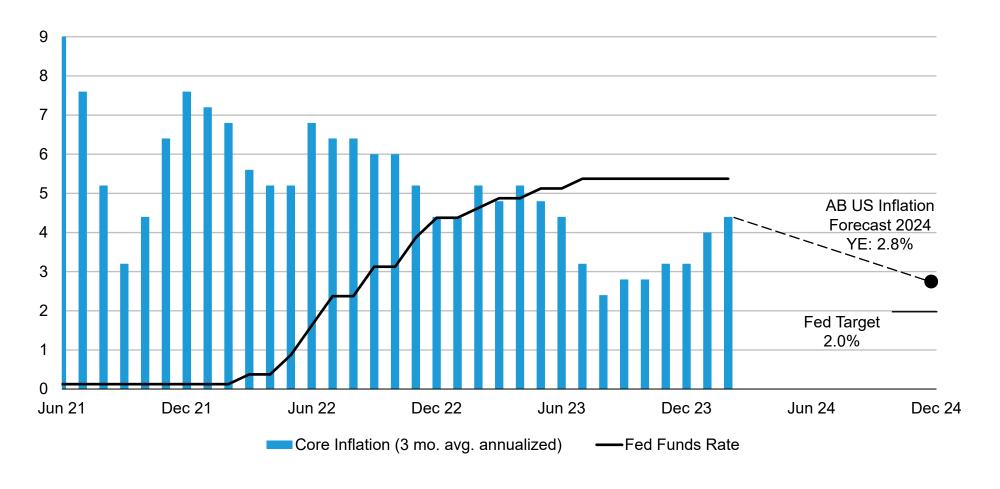


As of March 31, 2024. **Past performance does not guarantee future results.** Source: Federal Reserve, FRED, and Bernstein Analysis.



Given Modest Headwinds, Inflation Should Slow from Q1 Pace

FOMC and tighter financial conditions continue to bring inflation to heel



As of April 10, 2024. **Current analysis and forecasts do not guarantee future results.**Source: Bloomberg, Federal Reserve, and Bernstein analysis

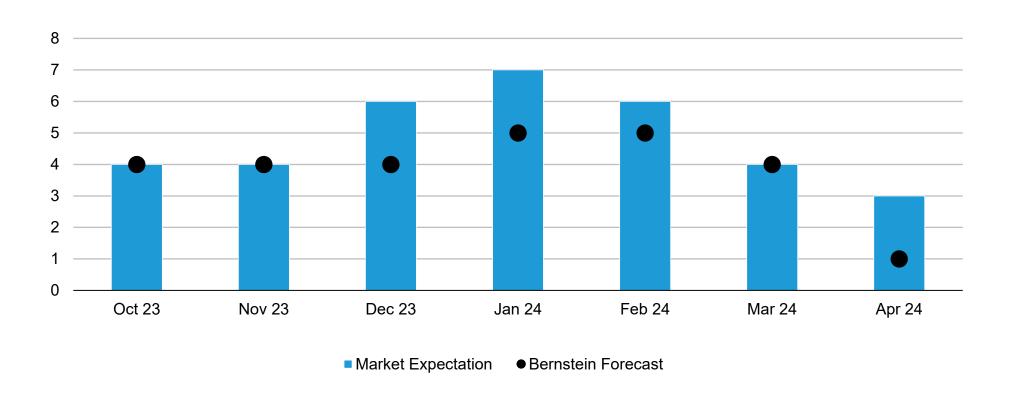


Markets Outlook



Market Expectations for Fed Cuts in 2024 Have Wavered

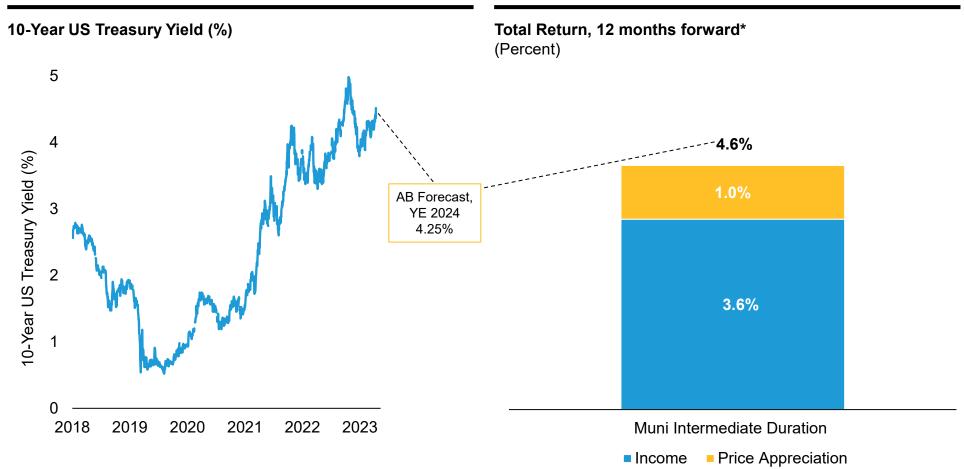
2024 Rate Cut Expectations by Month



As of April 10, 2024. Current analysis and forecasts do not guarantee future results. Source: Bloomberg, Federal Reserve, FRED, and Bernstein analysis



If Yields Fall, Bond Total Return Should Outpace Yield Alone



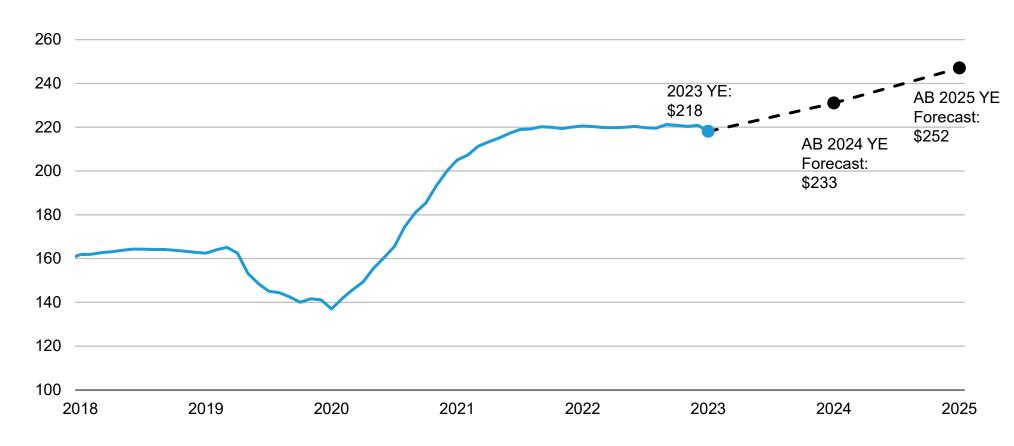
As of April 10, 2024. Past performance and historical analysis do not guarantee future results. Simulated or hypothetical performance results have certain inherent limitations. No representation is being made that any account will or is likely to achieve returns or a volatility profile similar to those being shown.

^{*}Assumes: 10-year UST drops from 4.52% by 0.13% after 6 months and an additional 0.13% after 9 months with a 0.6% beta between 10-year UST and ID municipal yields. Based on the 3.61 YTW and 6.11 Duration of the Bloomberg Municipal Bond Index as of April 10, 2024. Source: Bernstein Analysis



Corporate Earnings Picture Improves by Year-End and into 2025

S&P 500 Trailing 12-Month Earnings per Share

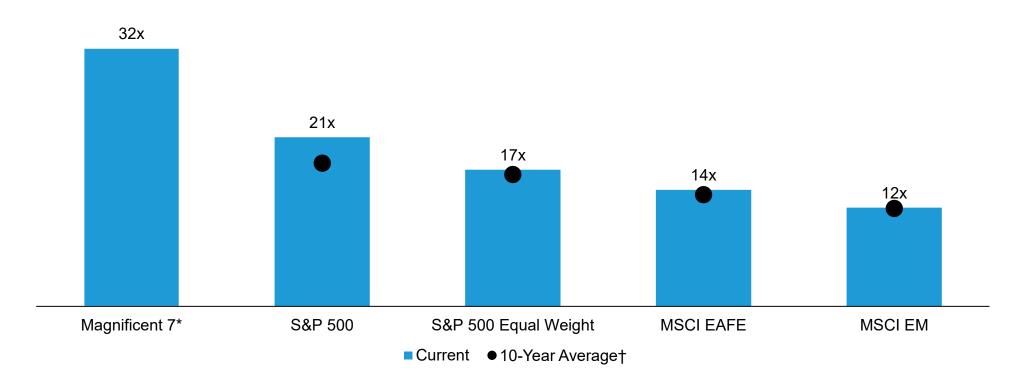


As of March 31, 2024. **Current analysis and forecasts do not guarantee future results.** Source: FactSet, S&P, and Bernstein analysis



Beyond Leaders, Valuations More Reasonable

12-Month Forward Price/Earnings Ratio



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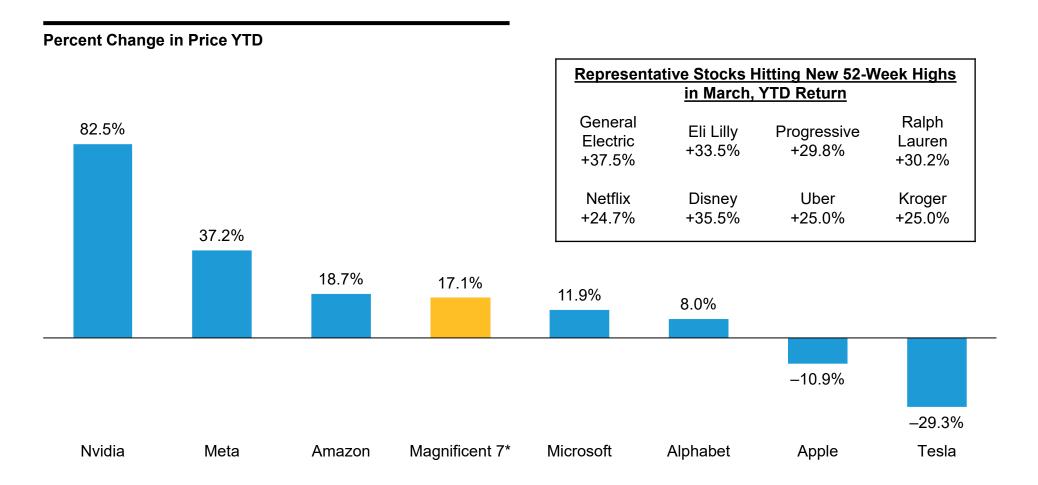
†Average of month-end 12-month forward price/earnings ratios.

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



^{*}Magnificent 7 is the average Price/NTM earnings of the following: Nvidia, Tesla, Apple, Meta, Alphabet, Microsoft, and Amazon.

Dispersion Hits the "Magnificent 7," While Other Notable Stocks Hit Highs



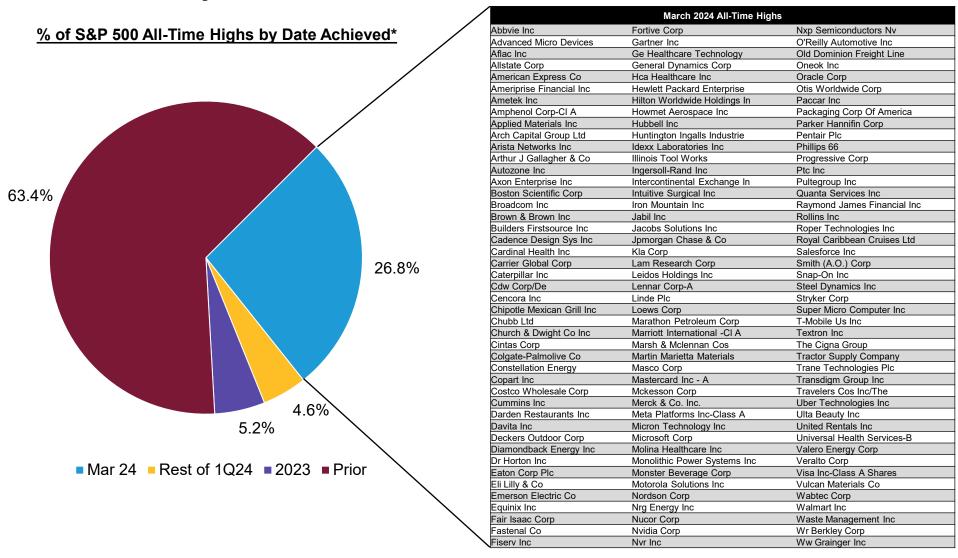
As of March 31, 2024. Past performance does not guarantee future results.

*Magnificent 7 represented by the Bloomberg Magnificent 7 Price Return Index

Source: Bloomberg and Bernstein analysis



The Market Rally Has Broadened Out



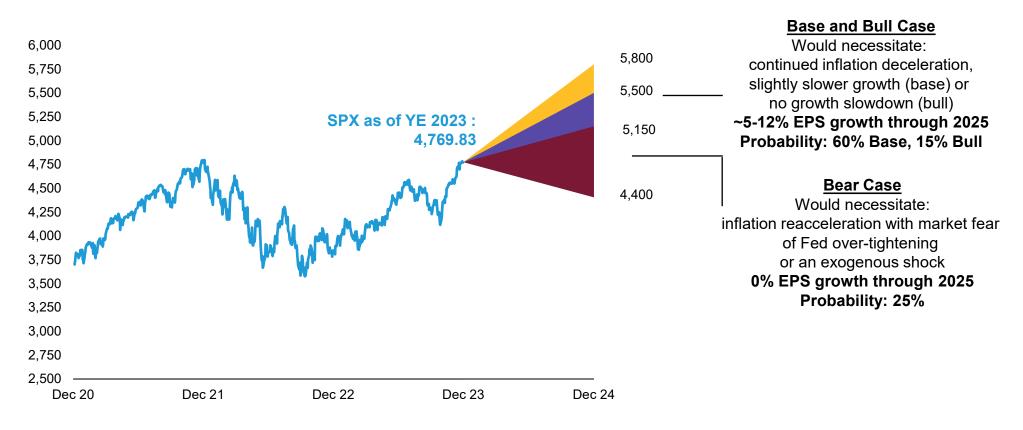
As of March 31, 2024. **Past performance does not guarantee future results.** *All-time highs are the most recent achieved for each stock in the S&P 500. Source: Bloomberg and Bernstein analysis



Raising Our Ranges On Strong YTD Economic Activity

Bullish economic case, more than our Base case, has played out thus far in 2024

Scenario Analysis: S&P 500, YE 2024—not incl. dividends



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



Cash Conundrum



Cash Investors Lost Out Over Last 15 Months

Investors stand to benefit from the imminent deployment of record cash balances

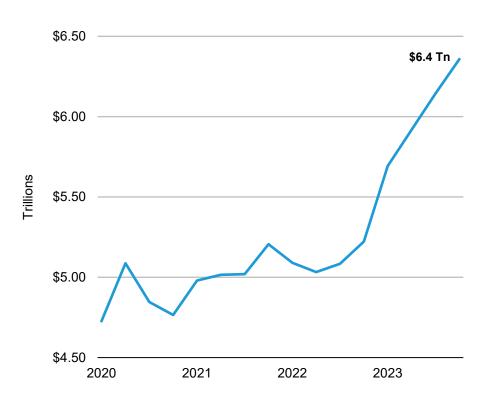
Is Cash King?

Returns Since 2023: Cash vs. Diversified Portfolios

9.4% 5.2% Cash Conservative Moderate (60/40) Aggressive (80/20)

Investors Now Sit on Bloated Cash Balances

Money-Market Funds, Total Asset Level (USD)



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

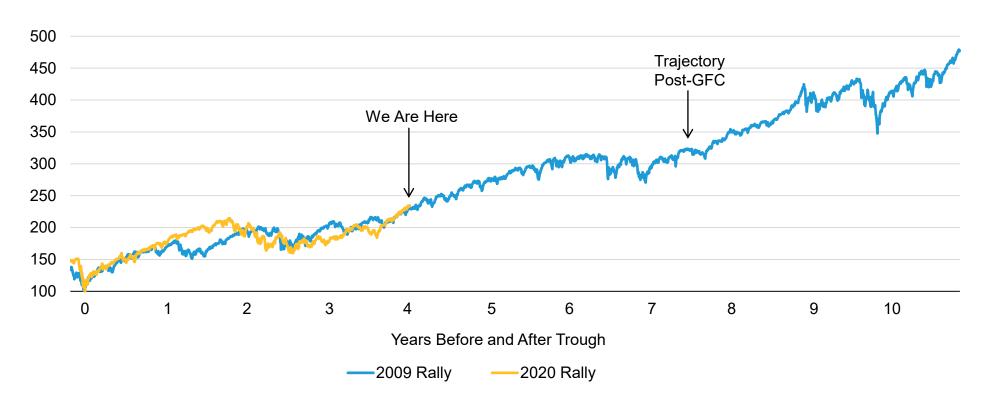
Cash represented by FTSE 0-1-Month T-Bill Index. Global equities are modeled as the MSCI ACWI IMI Index. Bonds are modeled as the Bloomberg Barclays 1-10-Yr Municipal Bond Index. Source: Bloomberg Barclays, Federal Reserve, FRED, MSCI, and Bernstein analysis



Current Market Rally Looks Like 2009's



Relative to Trough



As of March 31, 2024.

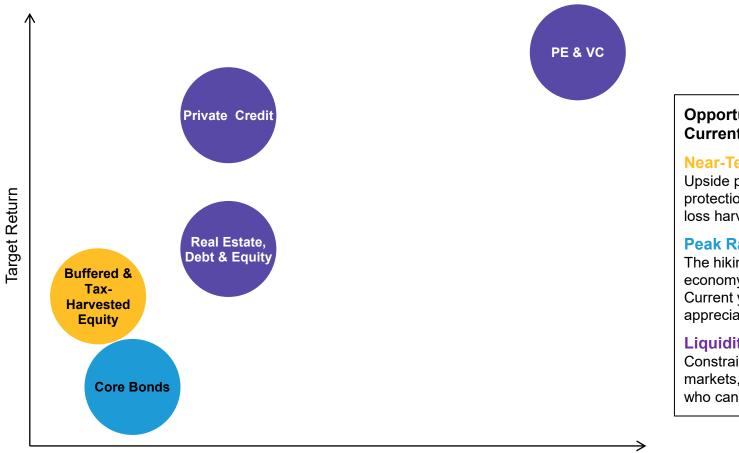
Past performance does not guarantee future results. There is no guarantee that any estimates or forecasts will be realized.

Troughs are as follows: 3/9/2009 and 3/23/2020.

Source: Bloomberg, S&P, and AB



Best Ideas: Prepare for Slowdown While Taking What Market Provides



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 will end soon, and the economy is expected to slow in 2024. Current yields plus potential for price appreciation looks appealing.

Liquidity Dislocation

Constrained supply of capital in private markets, creating opportunity for those who can provide liquidity

Time to Return

As of March 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

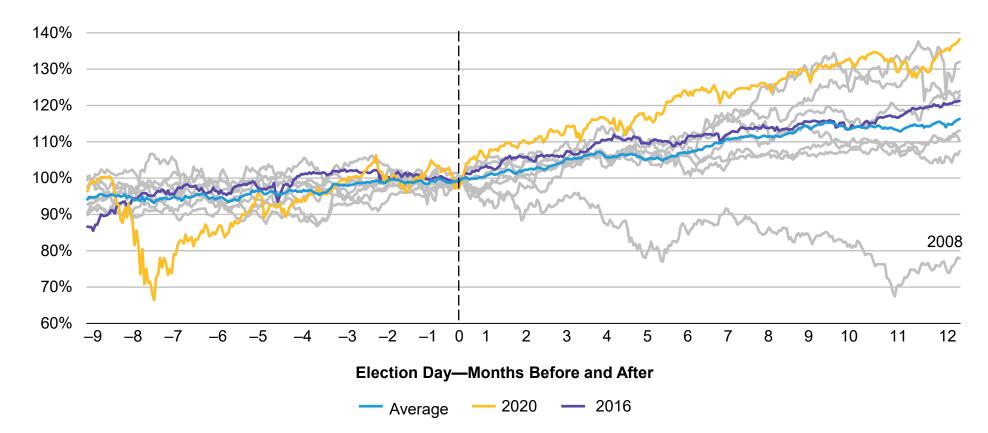


How to Think About Election Impact



Markets Tend to Rally After Election Day, Tread Water Before

S&P 500 Performance Around US Elections, Indexed to Election Day Since 1984



As of March 31, 2024.

Historical analysis is not necessarily indicative of future results.

Source: Bloomberg, S&P, and AB



What to Know About Returns During Administrations

Year	Administration	S&P Return
1929–1933	Hoover	–31%
1933–1945	Roosevelt	12%
1945–1953	Truman	16%
1953–1961	Eisenhower	16%
1961–1963	Kennedy	10%
1963–1969	Johnson	11%
1969–1974	Nixon	–1 %
1974–1977	Ford	15%
1977–1981	Carter	12%
1981–1989	Reagan	15%
1989–1993	Bush	15%
1993–2001	Clinton	17%
2001–2009	Bush	-4 %
2009–2017	Obama	15%
2017–2021	Trump	16%
2021–Current	Biden	12%

As of March 31, 2024.

Historical analysis is not necessarily indicative of future results.

Source: Bloomberg, S&P, Bernstein Research Services, and AB



Policy Differences

Issue/Sector		Biden		Trump
Corporate Taxes	•	Raise corporate tax rate from 21% to 28% Increasing minimum tax for large corporations from 15% to 21%	•	Maintain corporate tax rate at 21% (per 2017 TCJA)
Individual Taxes	•	Top tax rate reverts to 39.6% Estate tax exemption reverts to pre-2017 levels (~1/2 of \$13.6M) Allow SALT deduction limit to expire at the end of 2025 Capital gains tax at ordinary income rate on those making over \$1M Potential for carried interest to be taxed as ordinary income Potential wealth tax of 25% on wealth exceeding \$100M Increase IRS funding for improved enforcement	•	Top tax rate remains at 37% Make the increase in the estate tax exemption from TCJA permanent Raise SALT deduction limit to ~\$20K from \$10K rather than letting it expire
Trade	•	Maintain or reduce existing tariffs Possibly more national security restrictions on China, especially in tech Potential tariffs on Chinese cars Possibly resurrect Trans-Pacific Partnership or other coalition	•	Increase tariffs generally on imports, especially for China Aggressive measures to counter Chinese auto industry and any North American footprint they may establish
China/Taiwan	•	Significant support for Taiwan, only question being the degree	•	Questionable support for Taiwan if China invades
Onshoring	•	Onshoring or reshoring of key national security, tech, and climate priorities	•	Isolationist onshoring/reshoring of a wide range of supply chains
Infrastructure	•	Expansion of government industrial policy akin to the CHIPS Act and Inflation Reduction Act to spur investment in factories and other facilities	•	Incentivize private investment with limited government spending Emphasis on highways and communications
Defense	•	Support Ukraine to prolong defense and deter Russia Encourage Western Europe to contribute their share to NATO Reduce incentives for allies and foes to adjusting military spending due to lack of confidence in US support	•	Limit or end support for Ukraine and force a deal with Russia Ensure Western Europe and other countries ramp up military spending Increased incentives for allies and foes to increase military budgets General pullback of US defense commitments
Immigration	•	Boost Border Patrol and ICE budgets while hiring more immigration judges Increase legal pathways to immigration Potential DREAM Act policy with citizenship path for those born in the US	•	Pledged biggest deportation program in history by rounding up undocumented immigrants and tightening asylum rules
Healthcare	•	Negotiate with drug companies to cap prices paid by Medicare	•	Potentially reverse Affordable Care Act, as attempted in first term Recent focus on fentanyl/cartels
Energy	•	Further incentives for clean energy and more regulation of fossil fuels	•	Reduce fossil fuel regulations Reverse EV incentives and slow Inflation Reduction Act deployment
Big Tech	•	Continued crackdown on investment/acquisition via antitrust enforcement	•	Likely DOJ investigations and congressional hearings

As of March 31, 2024.

Past performance is not necessarily indicative of future results.

Note that in no way are we attempting to be political or biased toward one candidate or another. Rather we're attempting to state the policies as communicated by each candidate **BERNSTEIN** or our assessment of what may be their priorities.

Source: AB

Appendix



What We Said at Year-End 2023

Our Expectations

It's Only March, but...

"The (Fed's) dovish tone provides an improved backdrop in 2024."



"The economic slowdown should arrive in 2024. That said, the slowdown should be modest."



"We expect cash to underperform...again."



"With rate cuts on the horizon, yields will decline, though not as rapidly as seen in 4Q."



"Gradual disinflation is likely to define 2024, but convergence to target is not anticipated until late 2024 or even 2025."

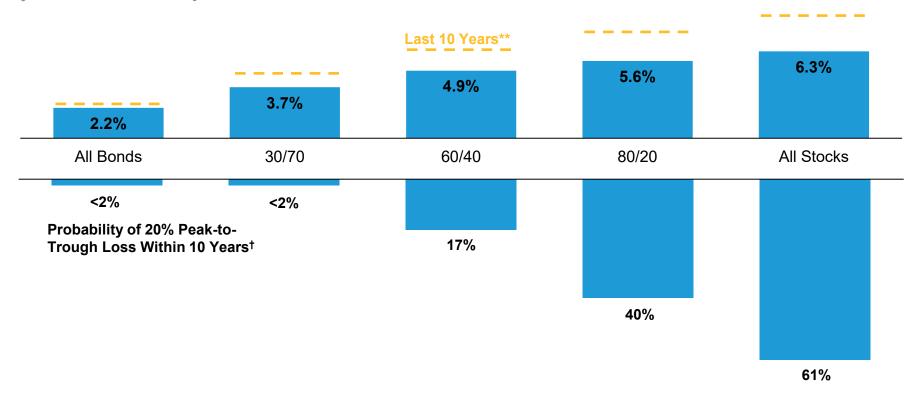


As of March 31, 2024. Source: AB



Expected Returns Across Allocations

Projected median 10-year annualized return*



As of March 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.

See Notes on Bernstein Wealth Forecasting System for further details.

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

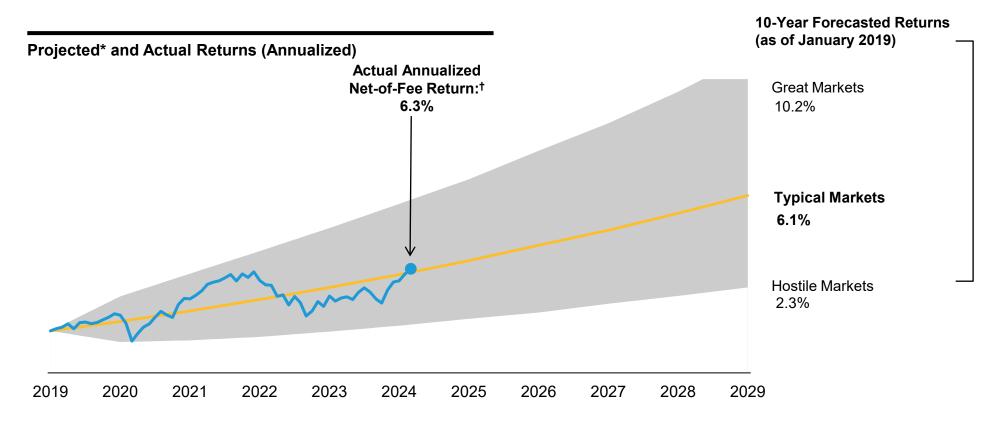


^{*}Median five-year forecast represents pretax compound annual growth rates and reflects Bernstein's estimates and the capital-market conditions as of December 31, 2023. Stocks are represented by the MSCI World Index, and bonds are represented by intermediate-term diversified municipals.

^{**}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 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.

Despite Sell-Offs, Long-Term Investors Remain Well Within Plan



As of March 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 January 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 Bernstein Wealth Forecasting System for further details.

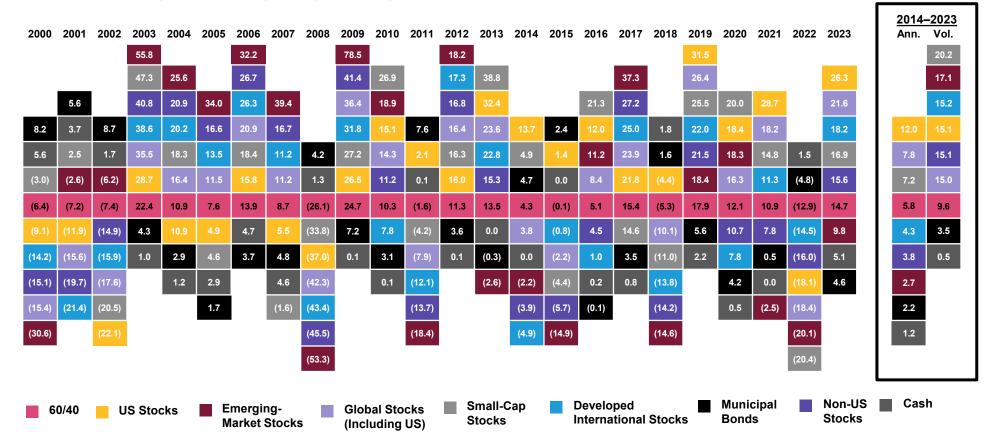
†The hypothetical performance of the Moderate Portfolio Simulation (MPS) is a simulated portfolio intended to illustrate the investment experience of a Bernstein taxable client who was invested in a moderate growth allocation of Bernstein investment services. Represents monthly returns. Assumes no portfolio 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



Consistently Timing Asset-Class Leadership Is Impossible

Index returns by calendar year (percent)



As of March 31, 2024—all returns are in USD terms.

Past performance is not indicative of future results.

60/40 represented by MSCI ACWI IMI/Bloomberg Barclays 1–10-Year Municipal Bond Index, US stocks by the S&P 500, emerging-market stocks by the MSCI Emerging Markets Index, global stocks (including US) by the MSCI ACWI IMI, small-cap stocks by the Russell 2000 Index, developed international stocks by the MSCI EAFE Index, municipal bonds by Bloomberg Barclays 1–10-Year Municipal Bond Index, non-US stocks by the MSCI ACWI ex US Index, and cash by FTSE 0-1 Month T-Bill Index.

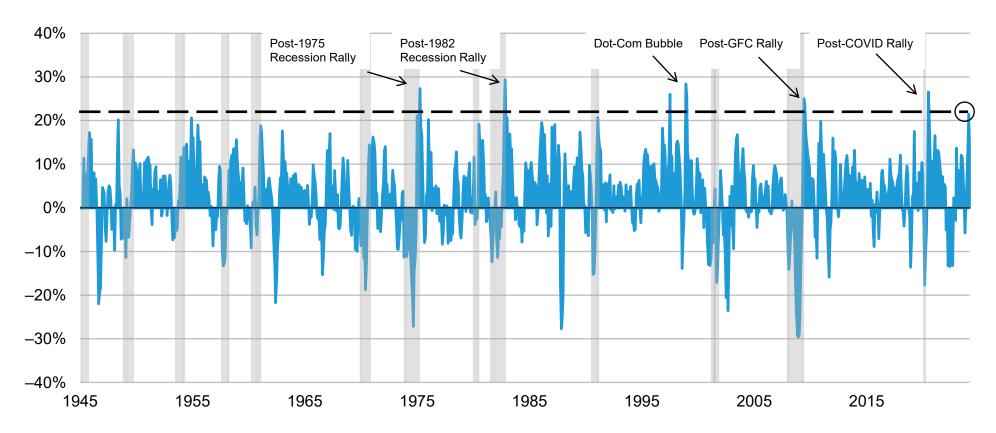
Source: Bloomberg Barclays, MSCI, Russell, S&P, and AB



Strength of Current Rally Among Notable but Limited Company

Rolling Four-Month Percent Change in S&P 500

January 1945-March 2024



As of March 31, 2024.

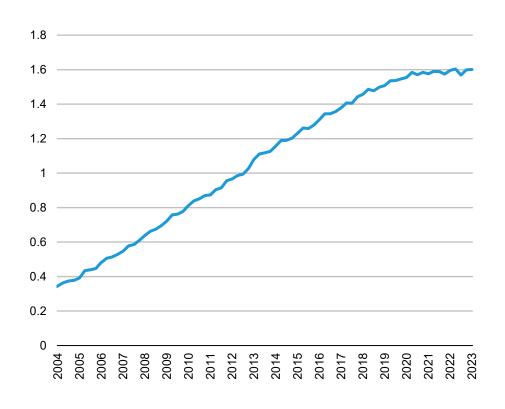
Past performance does not guarantee future results.

Source: Bloomberg, Standard & Poor's, and AB



Student Loan Payments to Resume

Student Loans Outstanding (USD Trillions)*



Student Loan Math

- Roughly \$1.6 trillion in outstanding student loans, at an average interest rate of roughly 5.0%
- That implies payments of \$80 billion per year, or roughly 0.4% of GDP; 0.1% per quarter
- Distributional effects could magnify the impact for lower-income households.

As of March 31, 2024.

Past performance does not guarantee future results.

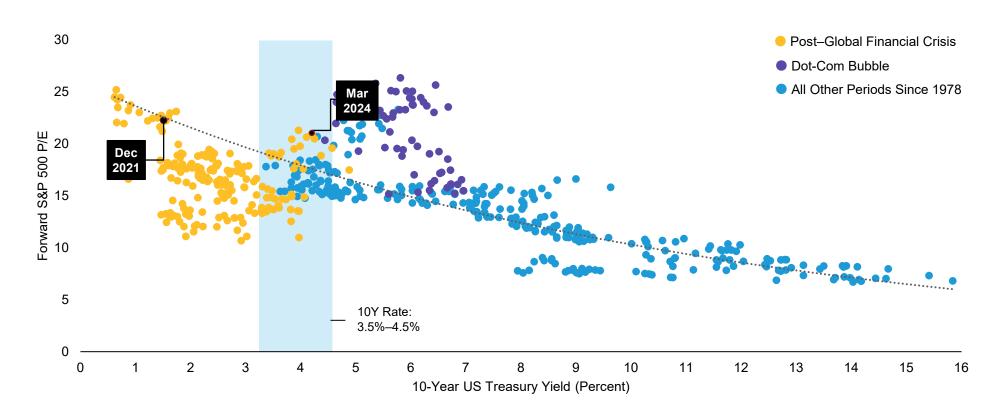
*As reported in Household Debt and Credit Report from Q4 2023.

Source: Federal Reserve of NY, and AB



Stock Valuations Relative to Interest Rates

Forward P/E Multiples* and Interest Rates Since 1978



Historical analysis is not necessarily indicative of future results.

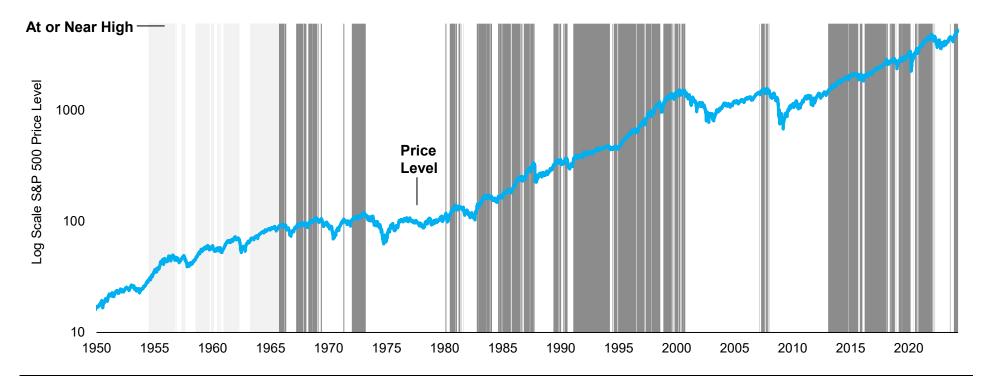
*Forward P/E multiples represent earnings estimates for the next 12 months. Dot-com bubble 12/31/96–9/30/2000. Post–global financial crisis 12/31/2007–present. Chart trend line is for 1978–2007. Source: Bloomberg, S&P, and AB



Markets Are Often Reaching New Heights

S&P 500 at or Near All-Time Highs*

January 1950-March 2024



Since 1949, the S&P 500 has been at or near all-time highs 43% of the time.

As of March 31, 2024.

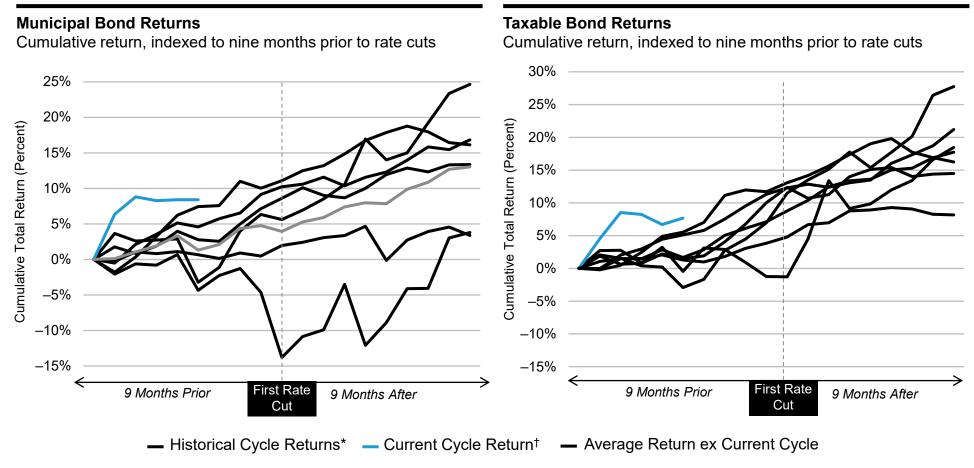
Historical analysis is not necessarily indicative of future results.

*At or near all-time high represents all price levels that are within 5% of the last all-time high or are a new all-time high. Source: S&P, Bloomberg, and AB



Bonds Begin to Rally in Advance of First Cut

Fixed-income returns in rate-cut cycles since 1980, indexed to nine months before first cut



As of March 31, 2024. Past performance and historical analysis do not guarantee future results.

Source: Bloomberg, Federal Reserve, and Bernstein analysis



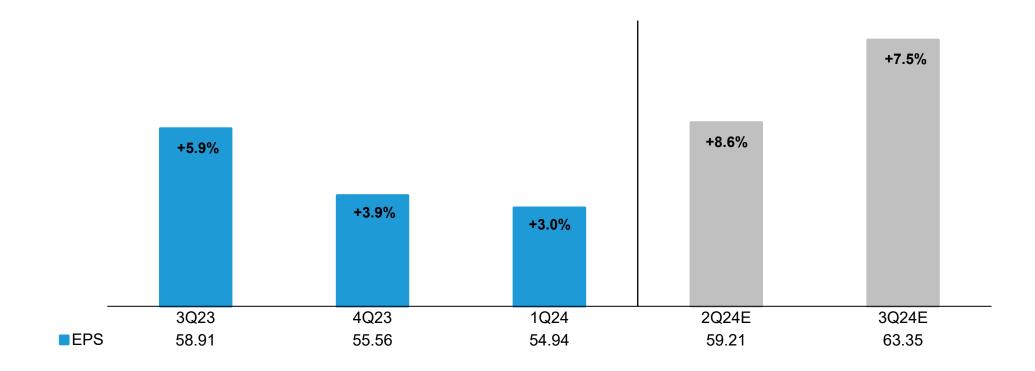
^{*}Historical rate-cut cycles include the following: August 1981, September 1984, June 1989, July 1985, January 2001, and September 2007.

[†]Hypothetical current cycle, assuming first rate cut will occur June 2024

Municipal bonds represented by the Bloomberg Municipal Index. Taxable bonds represented by the Bloomberg US Aggregate Index.

US Earnings Have Been Solid of Late, Expected To Ramp

S&P 500 EPS



As of March 31, 2024. **Current analysis and forecasts do not guarantee future results.** Source: FactSet, S&P, and Bernstein analysis



Even Investing at *Market Tops* Has Beaten Sitting on the Sidelines

Returns since WWII

Average Returns
Investing Equal Amounts
at <u>Each Market Top</u>





Annualized Return Since WWII: 11.0%

As of March 31, 2024.

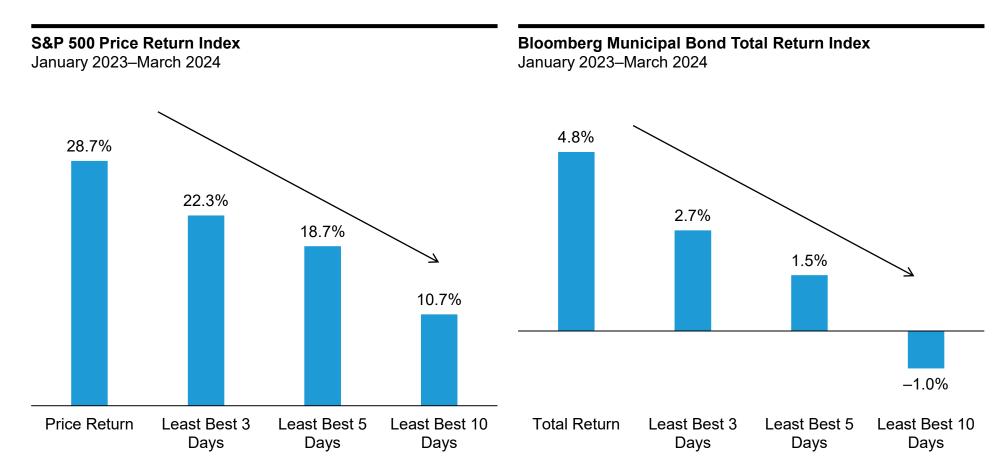
Past performance is not necessarily indicative of future results. There is no guarantee that any estimates or forecasts will be realized. Bear markets are defined as market declines of 20% from the previous high through the lowest close after the 20% decline. The bottom of each bear market is defined as the lowest point after the market declines 20% and before the market recovers. The top is defined as the highest point before the 20% sell-off. The average return figures are for the S&P 500, are annualized, and assume that the investor invested equal amounts at the bottom and top for each bear market starting September 2, 1945 (the first bear market begins May 29, 1946). Average yield on cash is derived from the average yield of US 3-Month Treasury Bills, starting from January 4, 1954, through present. All returns are based on daily frequency and include dividends and price returns.

Source: Bloomberg, S&P, and AB



Time Is Money

Missing just a few days in the market can completely erase gains



Past performance does not guarantee future results.

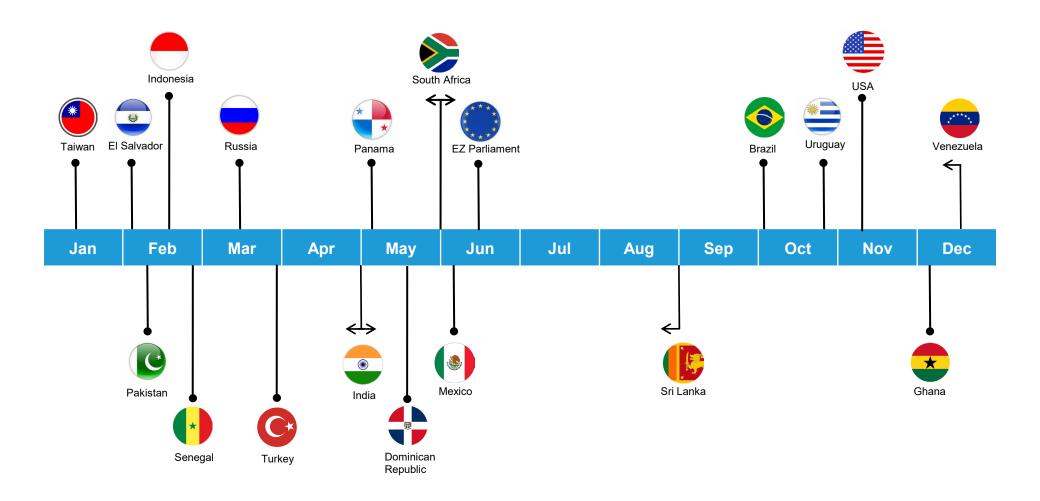
As of March 31, 2024.

Source: Bloomberg, S&P 500, and Bernstein Analysis



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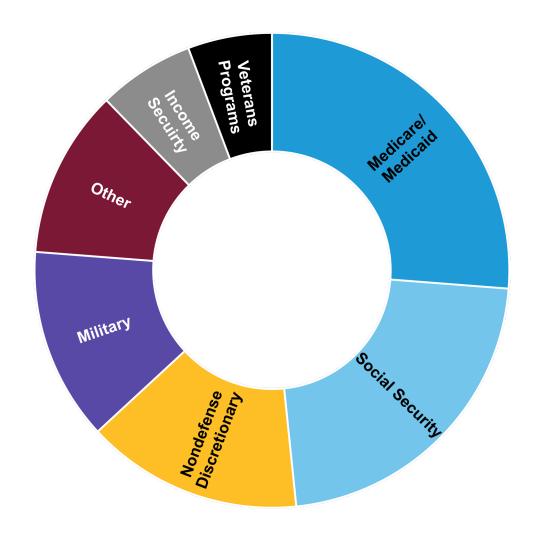
Elections in 2024: It Isn't Just the US



As of March 31, 2024. Source: AB



The US Federal Government Is an Insurance Company with an Army



As of March 31, 2024. Source: Congressional Budget Office



What Happens Next on the US Budget

- The total deficit is unlikely to change, irrespective of the electoral outcome.
- There will likely be different ways of getting to the deficit; different balances between taxing and spending, but absent true fiscal reform, the deficit itself is likely to persist.
- True fiscal reform very likely has to be bipartisan because it would be so unpopular with the electorate.
- That means that government debt is likely to continue to grow both in outright terms and as a percentage of GDP.
- Higher debt service costs are an additional headwind to growth, not only for the private sector but also for the public sector.



Source: Congressional Budget Office

As of March 31, 2024.

Geopolitics: Events Rarely Have a Lasting Market Impact

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

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

	First				
Event	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	N/A

Summary	1 Week	1 Month	1 Quarter	1 Year
Average	0.4	1.2	4.1	9.9
% of Events Negative	36	33	28	28
Conflict/War Avg.	0.9	2.0	3.8	2.9
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 March 31, 2024. Historical analysis is not necessarily indicative of future results.

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



^{*}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

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	3.7%	3.9%	3.9%	0.5%	5.0%
Short-Term Treasuries	4.4%	4.5%	4.2%	1.2%	4.4%
Short-Term Taxables	4.7%	4.8%	4.7%	1.5%	4.5%
Short-Term Diversified Municipals	2.7%	2.9%	2.7%	0.9%	3.0%
IntTerm Treasuries	3.9%	4.1%	4.1%	6.0%	3.2%
IntTerm Taxables	4.3%	4.4%	4.9%	6.3%	3.6%
IntTerm Corporates	4.5%	4.7%	5.4%	7.1%	4.2%
IntTerm Diversified Municipals	2.6%	2.7%	2.9%	4.9%	3.0%
Global IntTerm Taxables (Hedged)	4.1%	4.3%	4.6%	5.2%	3.8%
IntTerm TIPS	4.2%	4.7%	4.6%	4.1%	7.4%
High Yield	5.2%	5.9%	8.6%	13.2%	8.1%
Global Large-Cap (Unhedged)	6.4%	7.6%	2.3%	15.7%	14.8%
US Diversified	4.9%	6.4%	1.9%	16.5%	15.5%
US Value	5.2%	6.6%	2.1%	16.2%	15.3%
US Growth	4.6%	6.4%	1.6%	18.3%	17.0%
US Mid-Cap	5.0%	6.7%	1.6%	17.9%	17.1%
US Small-/Mid-Cap	4.9%	6.8%	1.5%	18.7%	17.9%
US Small-Cap	4.8%	7.0%	1.4%	20.4%	19.7%
Developed International	6.9%	8.8%	3.4%	18.1%	17.0%
Emerging Markets	6.9%	9.9%	3.5%	22.4%	20.1%
Global REITs	5.8%	7.5%	4.8%	19.1%	16.3%
Real Assets	5.4%	6.6%	3.7%	13.9%	14.5%
Diversified Hedge Fund	6.0%	6.3%	3.3%	10.6%	15.0%

Based on 10,000 simulated trials each consisting of 10-year periods. Reflects AB's estimates and the capital-market conditions of June 30, 2023. 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.



Estimated Spending Rate and Core Capital Amounts: Based on Age

Sustainable Spending Rate*

Allocation	0/100	20/80	40/60	60/40	80/20	100/0
Age 55	1.4%	1.8%	2.1%	2.2%	2.2%	2.0%
Age 65	2.0	2.4	2.6	2.8	2.8	2.6
Age 75	3.0	3.4	3.6	3.8	3.7	3.7

Estimated Core Capital—Spending \$100,000

USD Millions

Allocation	0/100	20/80	40/60	60/40	80/20	100/0
Age 55	\$7.4	\$5.5	\$4.8	\$4.5	\$4.6	\$4.9
Age 65	4.9	4.1	3.8	3.6	3.6	3.8
Age 75	3.3	2.9	2.8	2.6	2.7	2.7

Spending is a percentage of initial value of portfolio and is grown with inflation; spending rates assume maintaining spending with a 90% level of confidence. Based on Bernstein estimates of the range of returns for the applicable capital markets over the periods analyzed as of June 30, 2023. Data do not represent past performance and are not a promise of actual future results. See Notes on Wealth Forecasting at the end of this presentation for further details. All information on longevity and mortality-adjusted investment analyses in this study is based on mortality tables compiled in 2000. To reflect that high-net-worth individuals live longer than average, we subtract three years from each individual's age (e.g., a 55-year-old would be modeled as a 52-year-old), In our mortality-adjusted analyses, the life span of an individual varies in each of our 10,000 trials in accordance with mortality tables.

Source: Society of Actuaries RP-2000 mortality tables and AB



^{*}These spending rates are for couples and assume an allocation of globally diversified stocks. Asset allocations assume globally diversified stocks. Globally diversified stocks are represented by the following allocation for a 100% return-seeking allocation: 17.3% US value, 17.3% US growth, 12.8% US diversified, 6.4% US small-/mid-cap, 19.7% developed foreign markets, 10.9% emerging markets, 10.2% US Low Vol Equity, 5.4% high-risk international. Equity geography weights may shift in proportion to total return-seeking allocation. Bonds are represented by diversified intermediate-term municipal bonds in the proportions noted. Additional detail regarding allocation available upon request.

Notes on the Bernstein Wealth Forecasting System

1. Purpose and Description of Wealth Forecasting Analysis

Bernstein's 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 affect 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 prov



Notes on the Bernstein Wealth Forecasting System (cont.)

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%
IntTerm Treasuries	US Treasuries of 7-year maturity	30%
IntTerm Taxables	Taxable bonds of 7-year maturity	30%
IntTerm Corporates	US investment-grade corporate debt of 7-year maturity	30%
IntTerm Diversified Municipals	AA-rated diversified municipal bonds of 7-year maturity	30%
Global IntTerm Taxables (Hedged)	50% sovereign and 50% investment-grade corporate debt of developed countries of 7-year maturity	30%
IntTerm 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 (NDR) 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 (cont.)

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 that precedes 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

Bernstein's 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 December 31, 2022. Therefore, the first 12-month period of simulated returns represents the period from December 31, 2022, through December 31, 2023, and not necessarily the calendar year of 2023. 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 (cont.)

7. Tax Rates

Bernstein's Wealth Forecasting Analysis 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	2023	2025	40.8%	23.8%	0.0%	0.0%	Top Marginal
	Client	All	2026	2032	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.



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.



Disclosures and Important Information

Hypothetical, back-tested, or simulated performance has many inherent limitations, only some of which are described herein. The hypothetical performance shown herein has been constructed with the benefit of hindsight and does not reflect the impact that certain economic and market factors might have had on the decision-making process. No hypothetical, back-tested, or simulated performance can completely account for the impact of financial risk in actual performance. Therefore, it will invariably show better rates of return. The hypothetical performance results herein may not be realized in the actual management of accounts. No representation or warranty is made as to the reasonableness of the assumptions made or that all assumptions used in constructing the hypothetical returns have been stated or fully considered. Assumption changes may have a material impact on the returns presented. This material is not representative of any particular client's experience. Investors should not assume that they will have an investment experience similar to the hypothetical, back-tested, or simulated performance results and actual results subsequently achieved by any investment strategy. Prospective investors are encouraged to contact the representatives of the investment manager to discuss the methodologies (and assumptions) used to calculate the hypothetical performance shown herein.

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