

OLD GUARD PRESENTATION

FINANCIAL MARKETS

AND

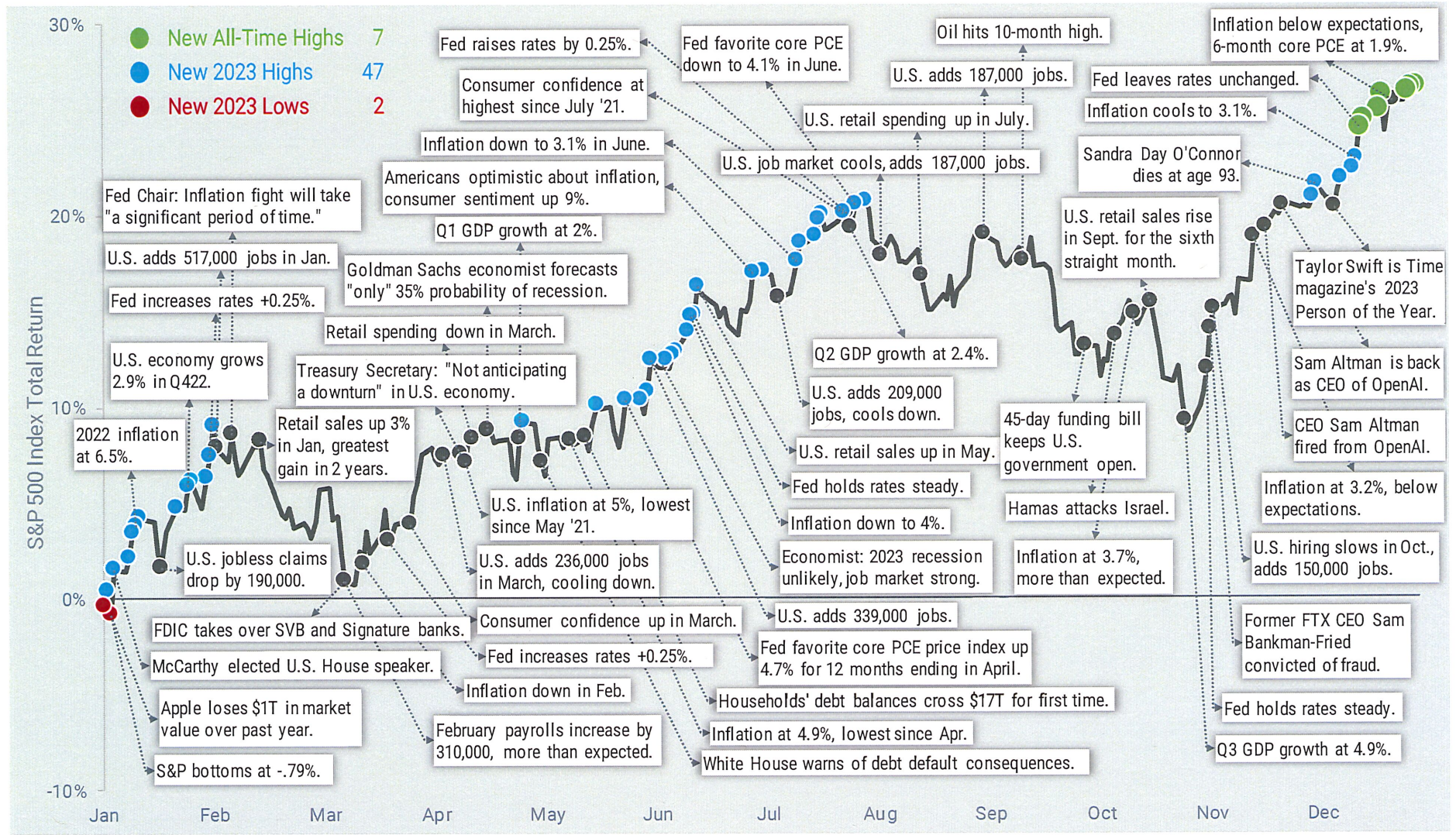
THE ECONOMY

TFMULLANEY

23 Jan 2024

The Stories of 2023

Figure 1 | S&P 500 Index Return and Headlines in 2023

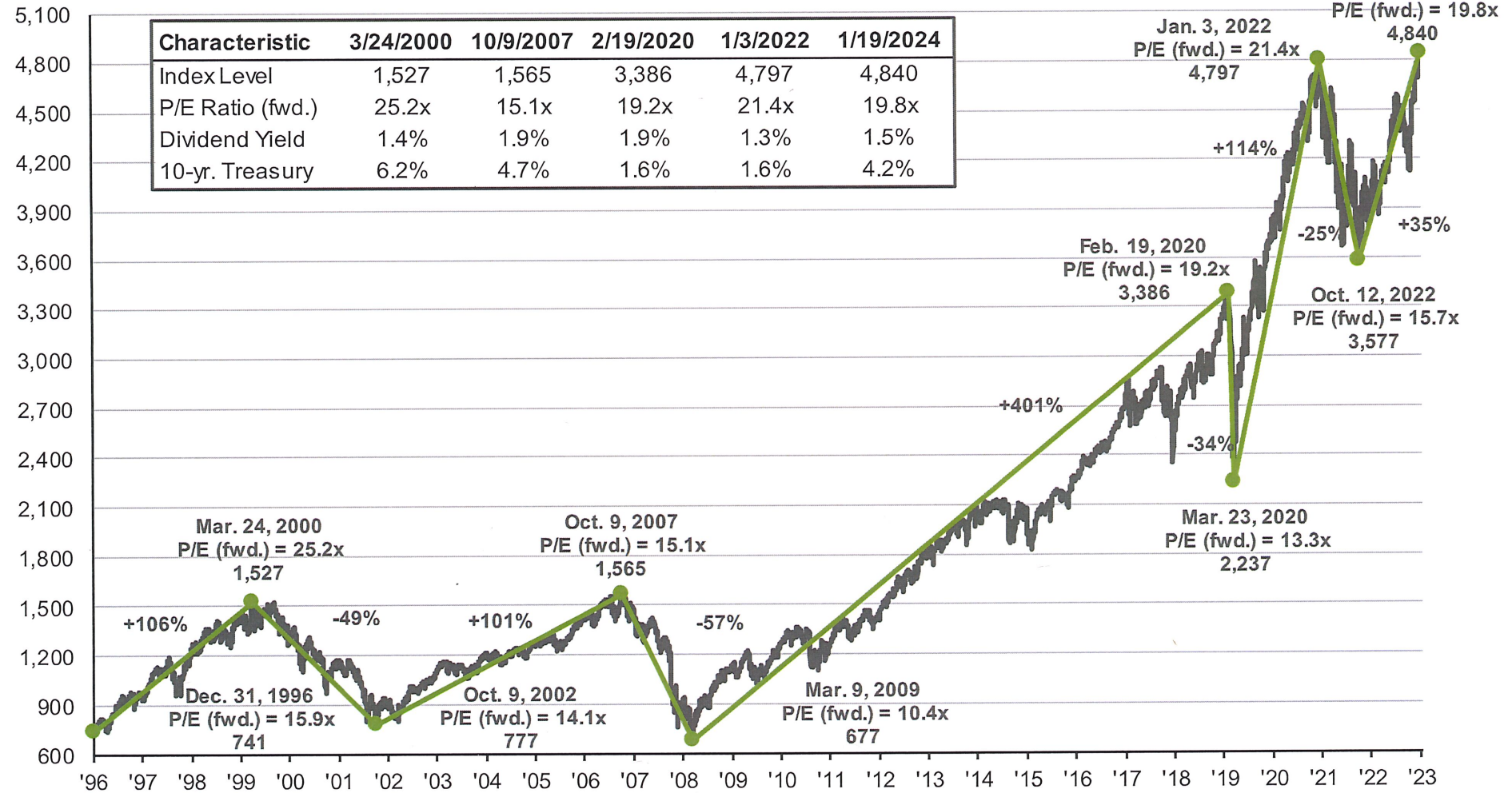




S&P 500 Index at inflection points

Equities

S&P 500 Price Index



Source: Compustat, FactSet, Federal Reserve, Refinitiv Datastream, Standard & Poor's, J.P. Morgan Asset Management. Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price-to-earnings ratio is a bottom-up calculation based on IBES estimates and FactSet estimates since January 2022. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns.
 Guide to the Markets – U.S. Data are as of January 19, 2024.



S&P 500 valuation measures

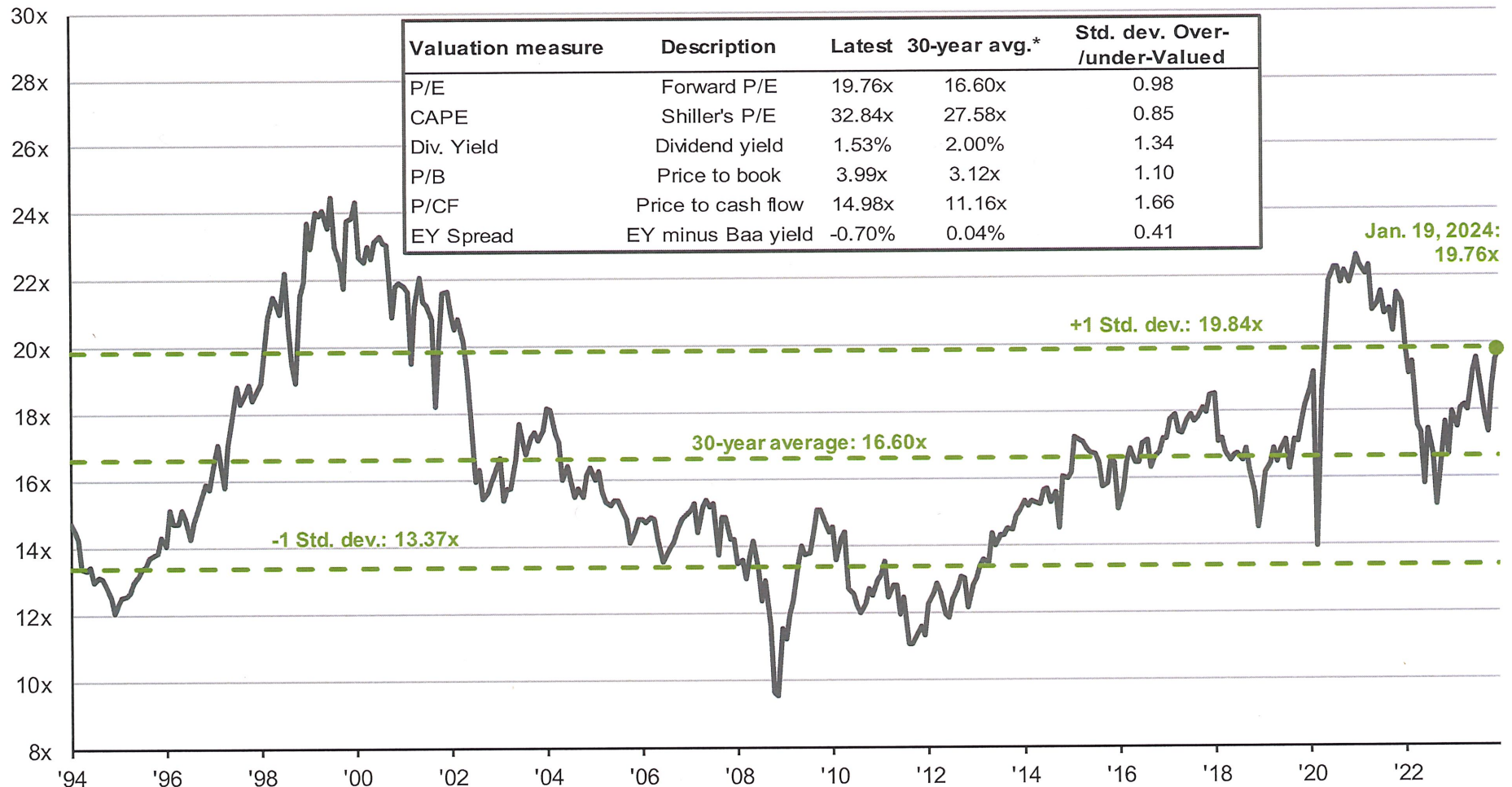
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Equities

S&P 500 Index: Forward P/E ratio



Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management. Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since January 1999 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are \$245. Average P/E and standard deviations are calculated using 30 years of history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 30 years for each measure. *Averages and standard deviations for dividend yield and P/CF are since November 1995 due to data availability. Guide to the Markets - U.S. Data are as of January 19, 2024.

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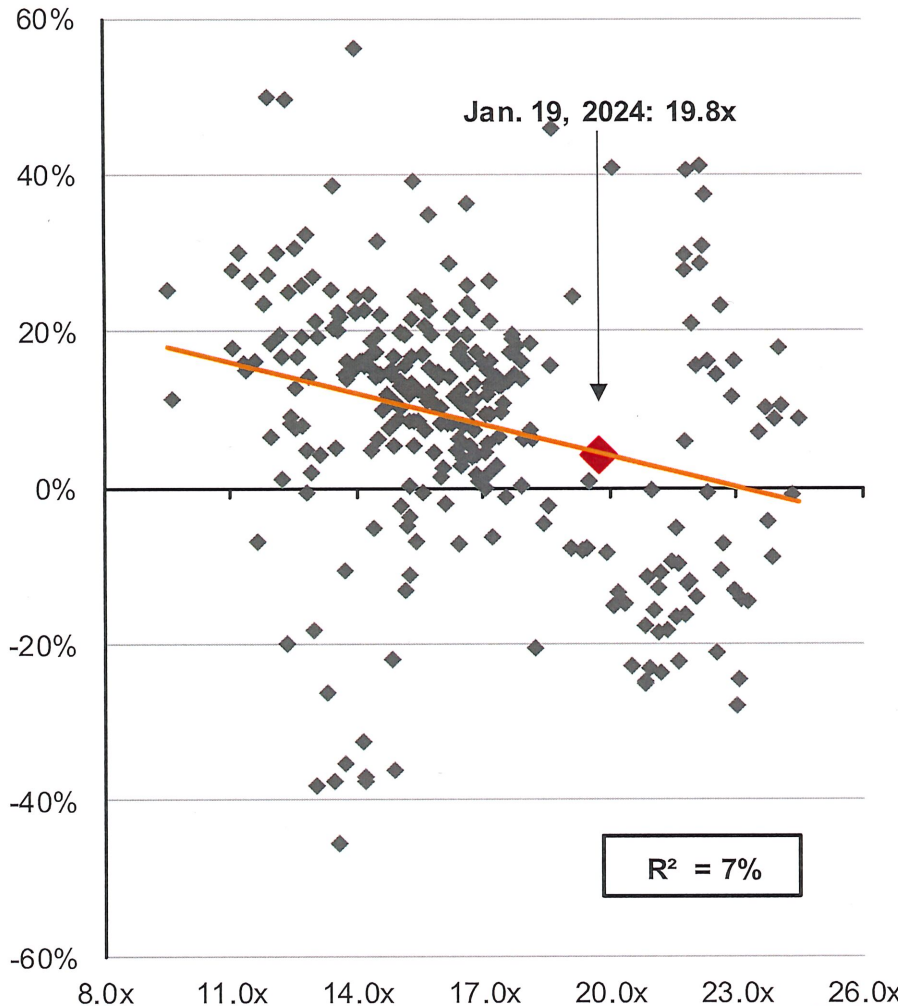


P/E ratios and equity returns

Equities

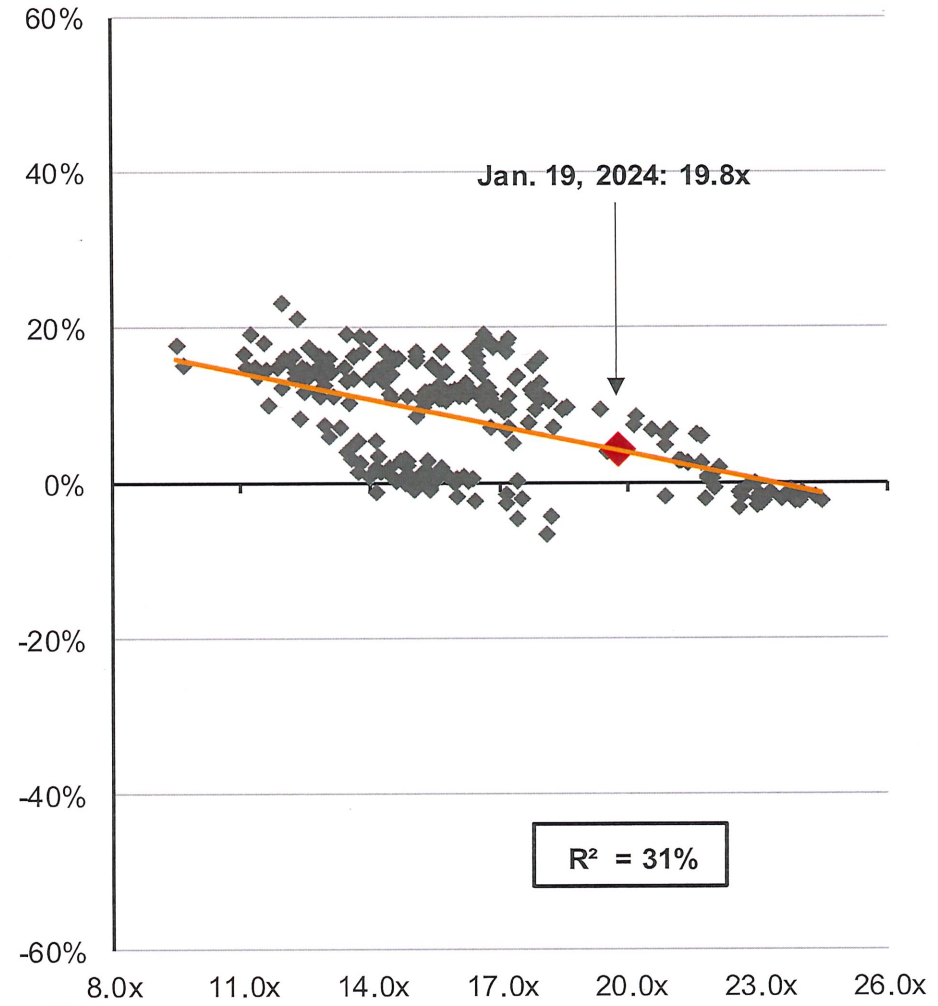
Forward P/E and subsequent 1-yr. returns

S&P 500 Total Return Index



Forward P/E and subsequent 5-yr. annualized returns

S&P 500 Total Return Index



Source: FactSet, Refinitiv Datastream, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
 Returns are 12-month and 60-month annualized total returns, measured monthly, beginning 12/31/1998. R^2 represents the percent of total variation in total returns that can be explained by forward price-to-earnings ratios. Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since February 1998 and by FactSet since January 2022.
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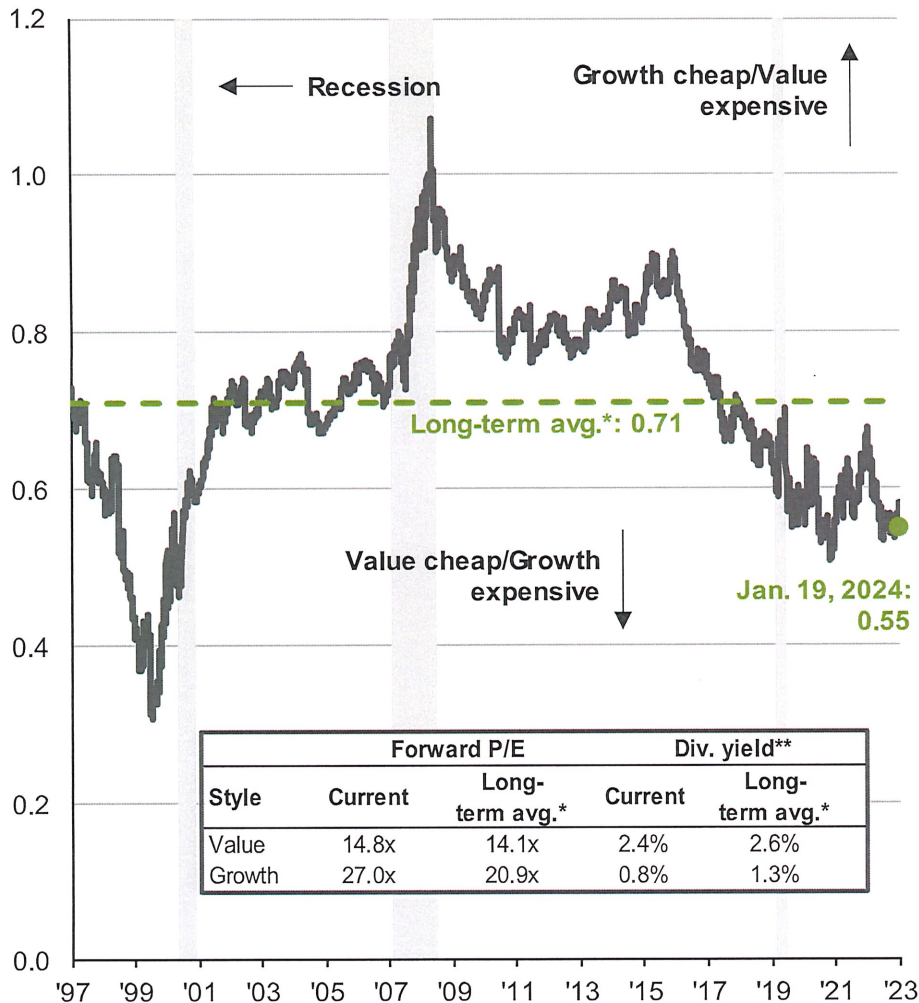


Value vs. Growth: Valuations and interest rates

Equities

Value vs. Growth relative valuations

Rel. fwd. P/E ratio of Value vs. Growth, 1997 - present



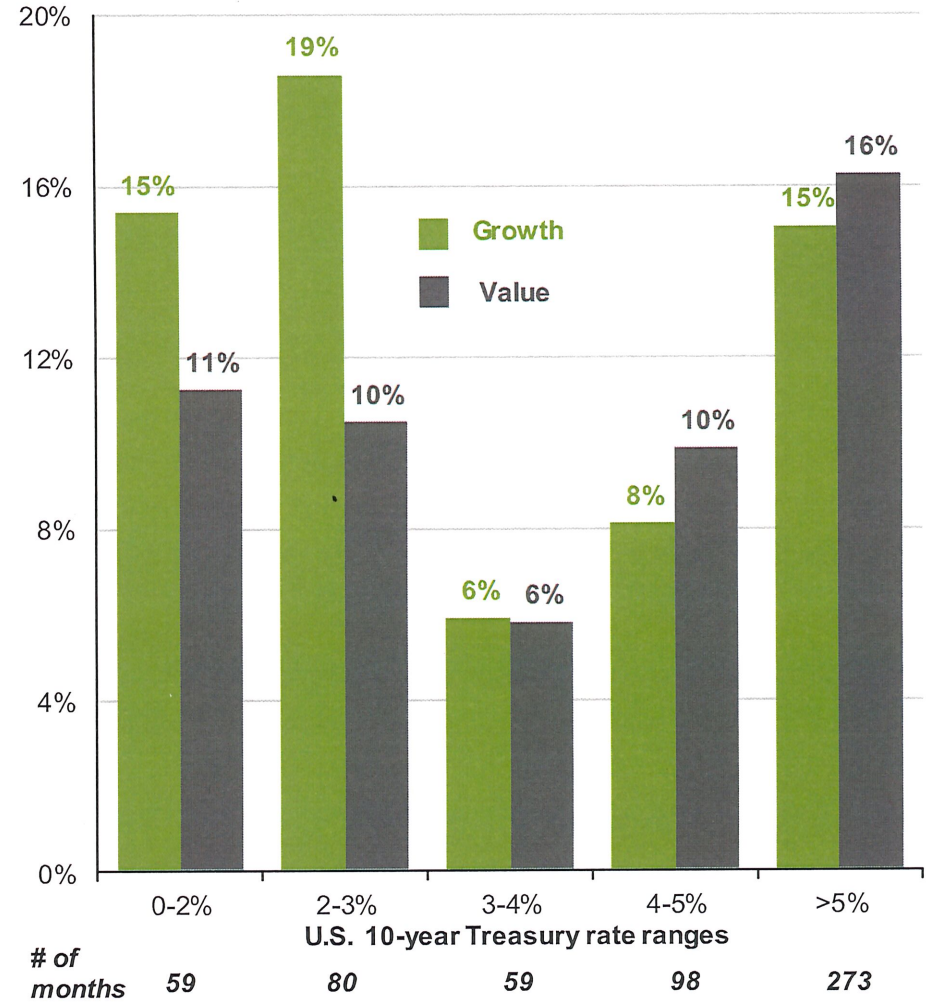
Source: FactSet, FTSE Russell, NBER, J.P. Morgan Asset Management.

Growth is represented by the Russell 1000 Growth Index and Value is represented by the Russell 1000 Value Index. (Left) *Long-term averages are calculated monthly since December 1997. **Dividend yield is calculated as the next 12-month consensus dividend divided by most recent price. (Right) Returns are calculated by annualizing the average monthly performance during each interest rate range.

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Value vs. Growth in different interest rate environments

Annualized total return by 10-year Treasury rate ranges, 1979 - present





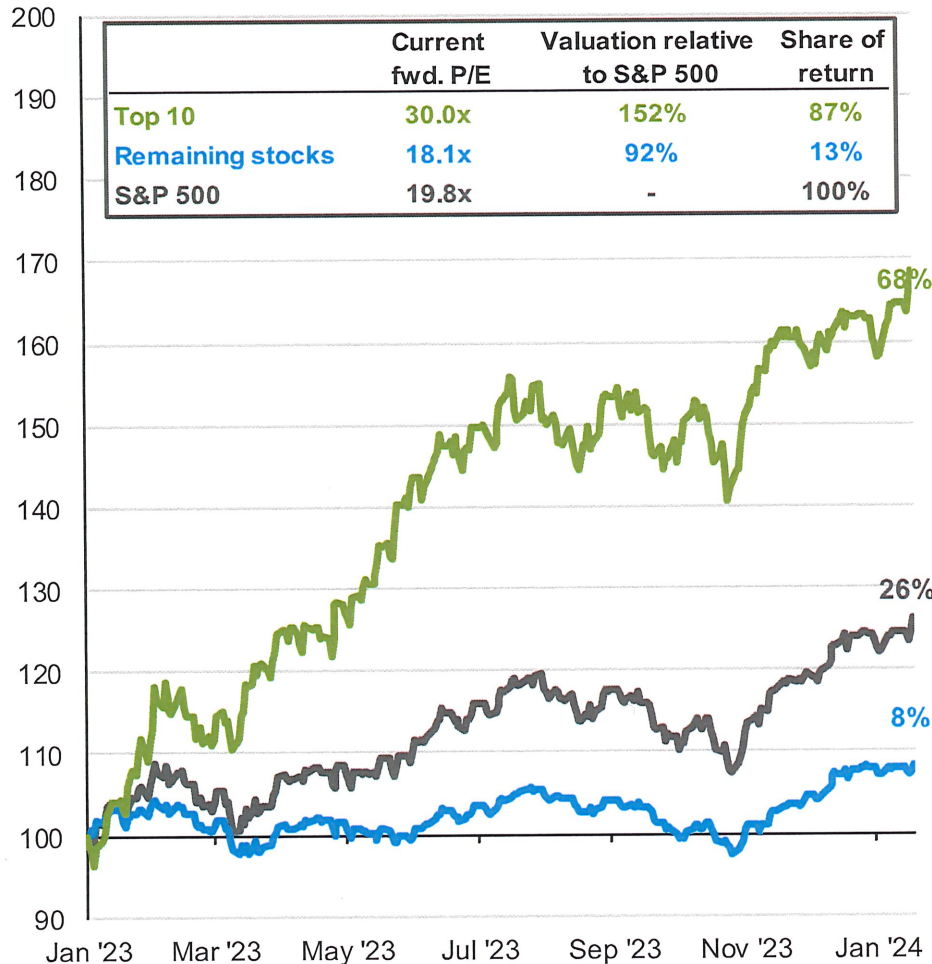
S&P 500: Index concentration

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Equities

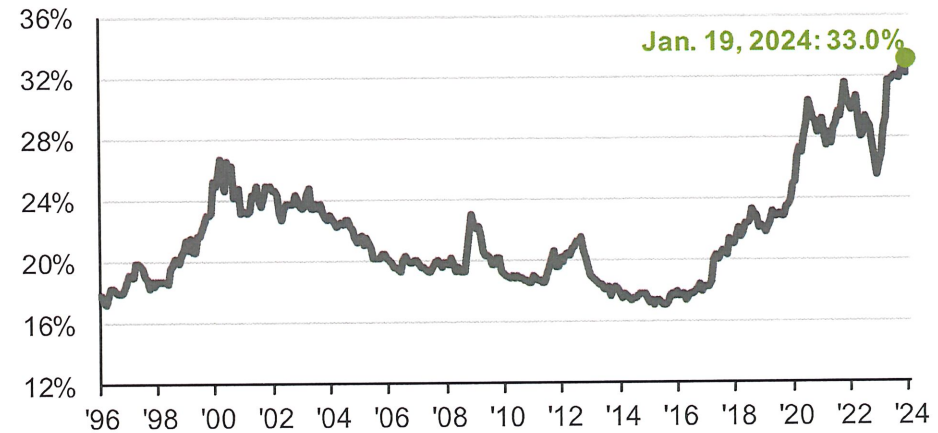
Performance of the top 10 stocks in the S&P 500

Indexed to 100 on 1/1/2023, price return, top 10 held constant



Weight of the top 10 stocks in the S&P 500

% of market capitalization of the S&P 500



Earnings contribution of the top 10 in the S&P 500

Based on last 12 months' earnings



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.

(Left) The top 10 companies used for this analysis are held constant and represent the S&P 500's 10 largest index constituents at the start of 2023. The top 10 stocks are: AAPL, MSFT, AMZN, NVDA, GOOGL, BRK.B, GOOG, META, XOM, UNH, and TSLA. The remaining stocks represent the rest of the 494 companies in the S&P 500. (Right) The top 10 companies used for these two analyses are updated monthly and are based on the 10 largest index constituents at the beginning of each month. As of 12/31/2023, the top 10 companies in the index were AAPL (7.0%), MSFT (6.9%), AMZN (3.5%), NVDA (3.0%), GOOGL (2.1%), META (2.0%), GOOG (1.8%), TSLA (1.8%), BRK.B (1.6%), AVGO (1.2%) and JPM (1.2%).

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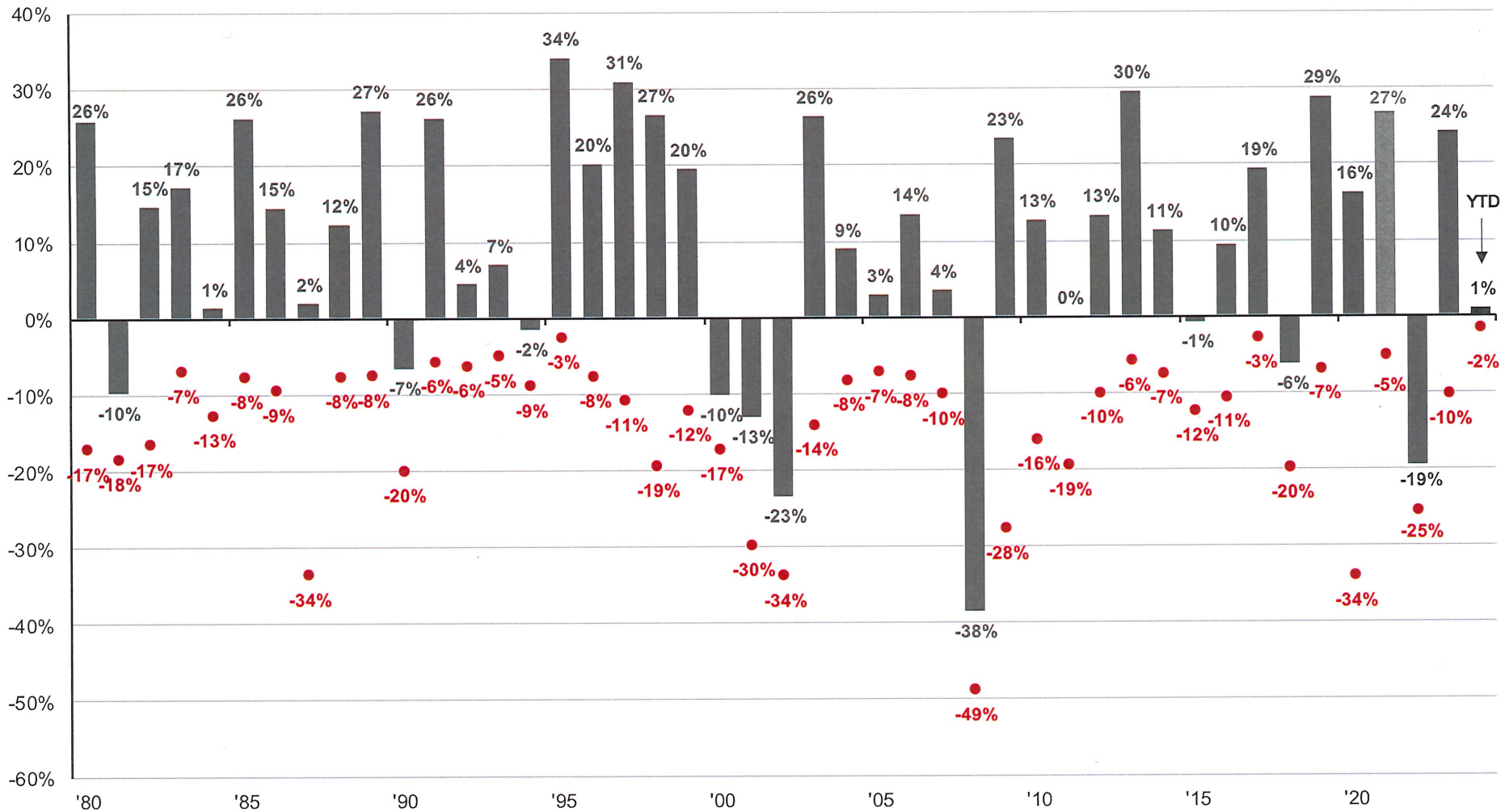


Annual returns and intra-year declines

Equities

S&P intra-year declines vs. calendar year returns

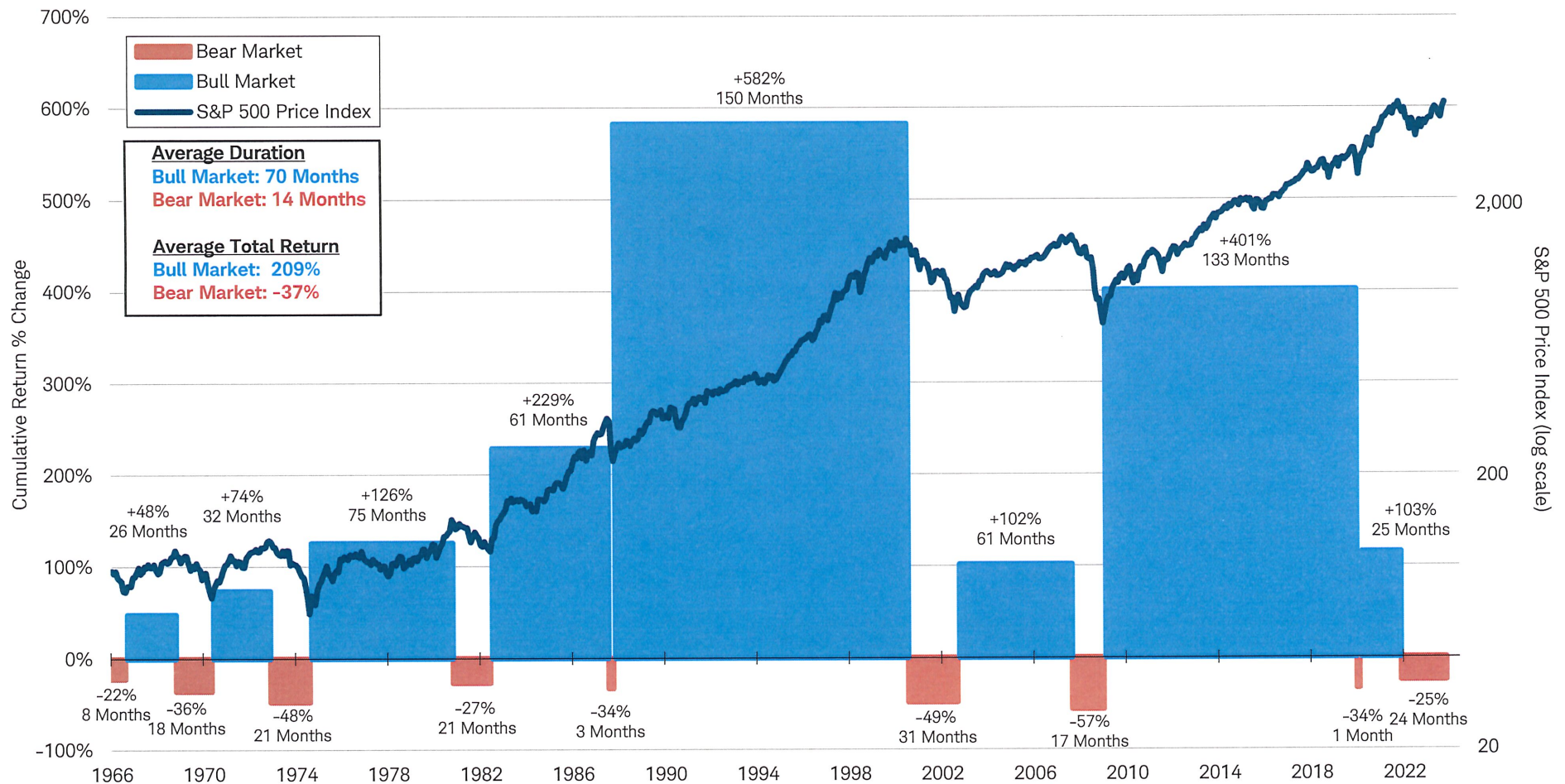
Despite average intra-year drops of 14.2%, annual returns were positive in 33 of 44 years



Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management.
 Returns are based on price index only and do not include dividends. Intra-year drops refers to the largest market drops from a peak to a trough during the year. For illustrative purposes only. Returns shown are calendar year returns from 1980 to 2023, over which time period the average annual return was 9.0%.
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U.S. bull and bear markets

With the S&P 500 close to an all-time high, it is notable that bull markets have generally been longer in duration and greater in magnitude than bear markets, resulting in gains over time.



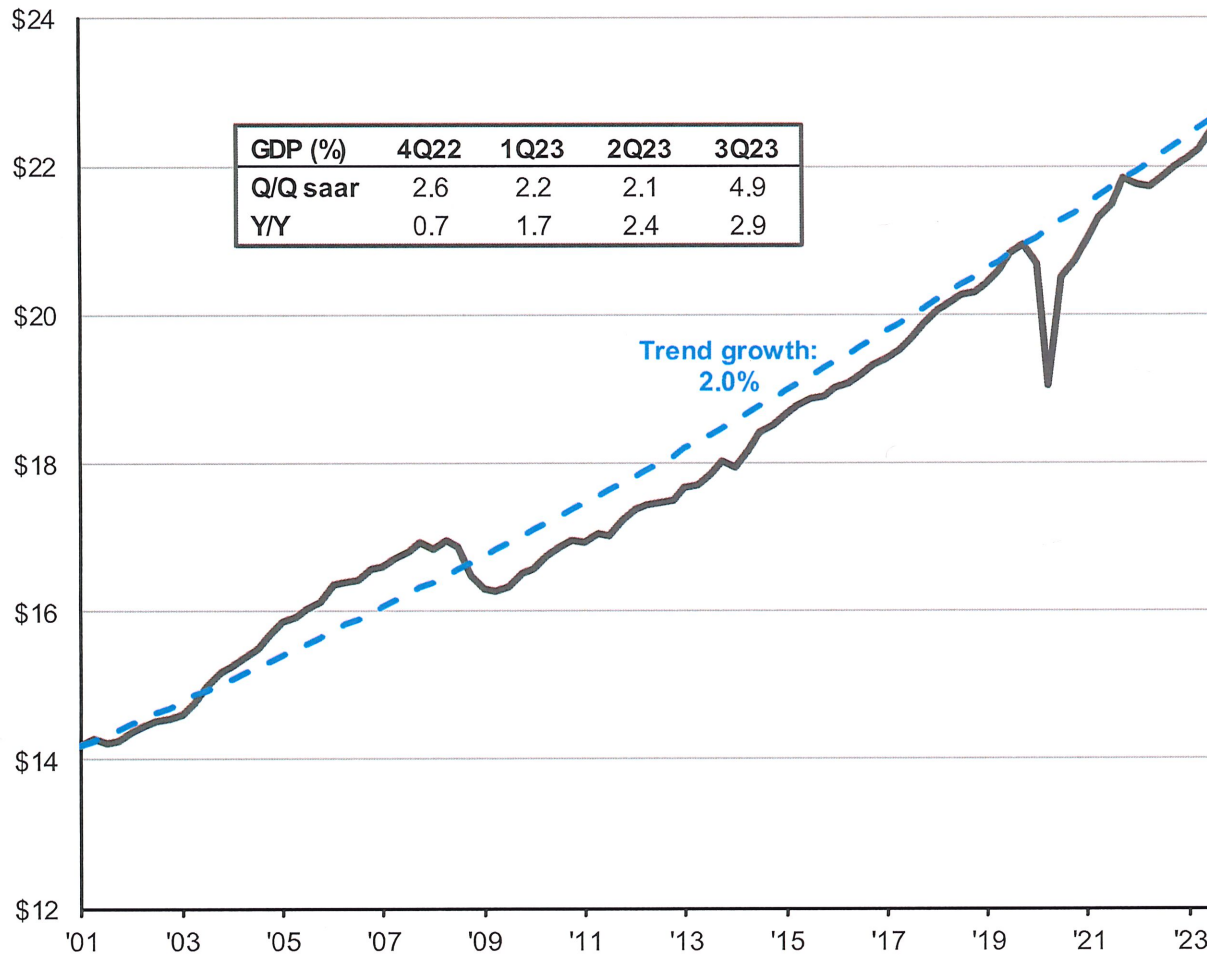
Source: Bloomberg. Bull and bear markets as defined by Yardeni Research. Bear Market starting in 2022 is showing the current trough as of 10/12/2022, but the bear market is still ongoing. Cumulative return is the total change in the investment over a set period of time. Logarithmic (log) scale is a way of displaying a wide range of data in a compact way by increasing the numbers exponentially. Indexes are unmanaged, do not incur management fees, costs and expenses, and cannot be invested in directly. For illustrative purposes only. Investing involves risk, including loss of principal. **Past performance is no guarantee of future results.**



Economic growth and the composition of GDP

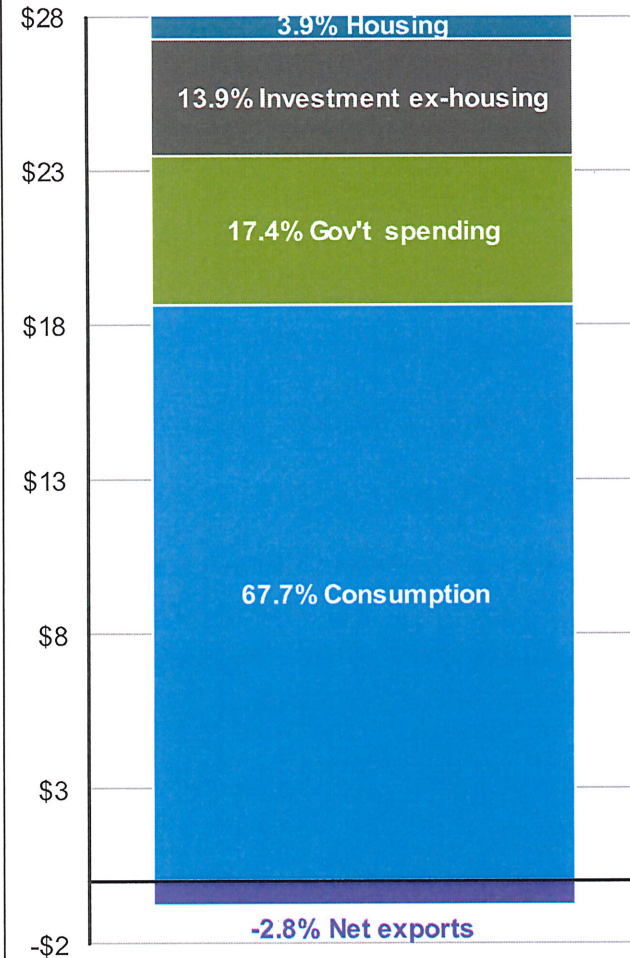
Real GDP

Trillions of chained (2017) dollars, seasonally adjusted at annual rates



Components of GDP

3Q23 nominal GDP, USD trillions



Source: BEA, FactSet, J.P. Morgan Asset Management. Values may not sum to 100% due to rounding. Trend growth is measured as the average annual growth rate from business cycle peak 1Q01 to business cycle peak 4Q19. Guide to the Markets – U.S. Data are as of January 19, 2024.

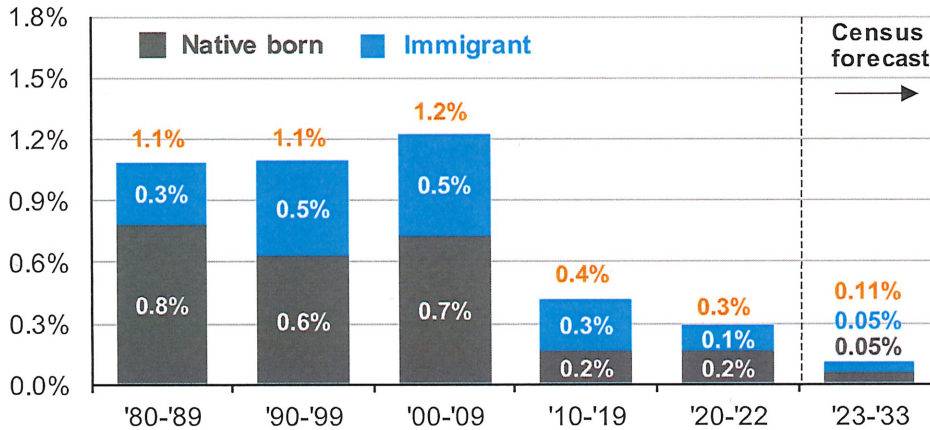


Long-term drivers of economic growth

Economy

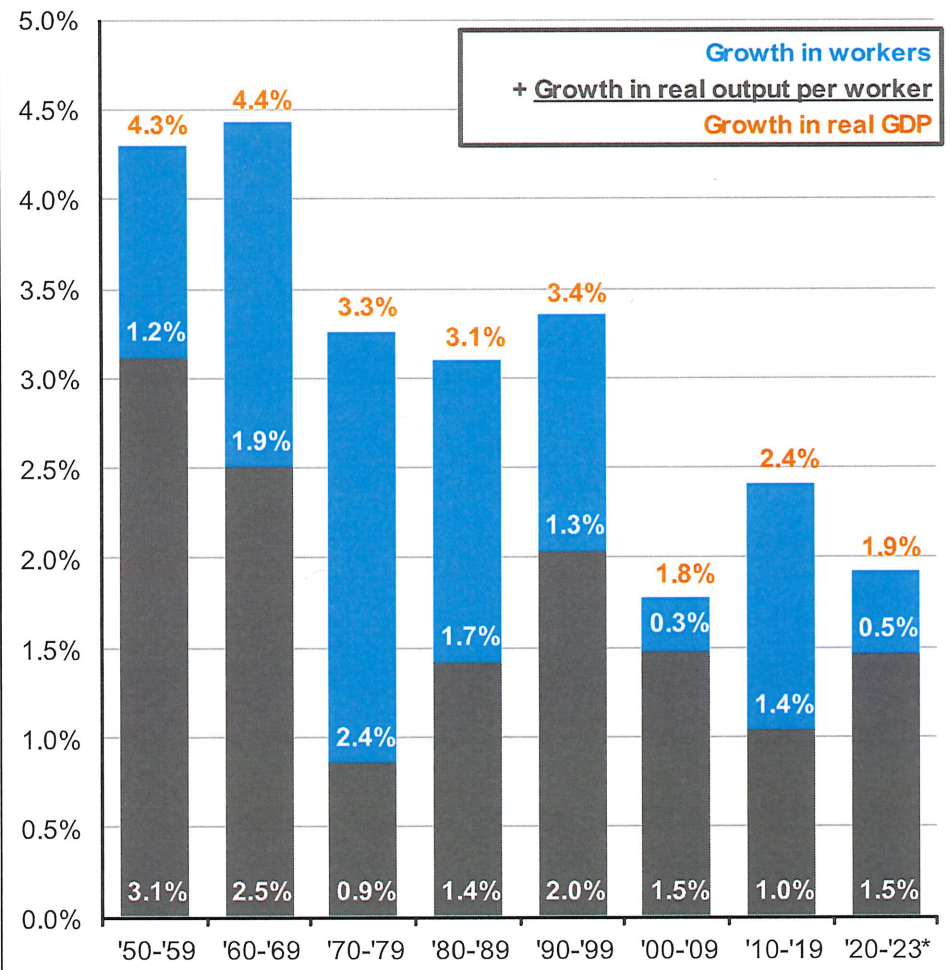
Growth in working-age population

Percent increase in civilian non-institutional population ages 16-64



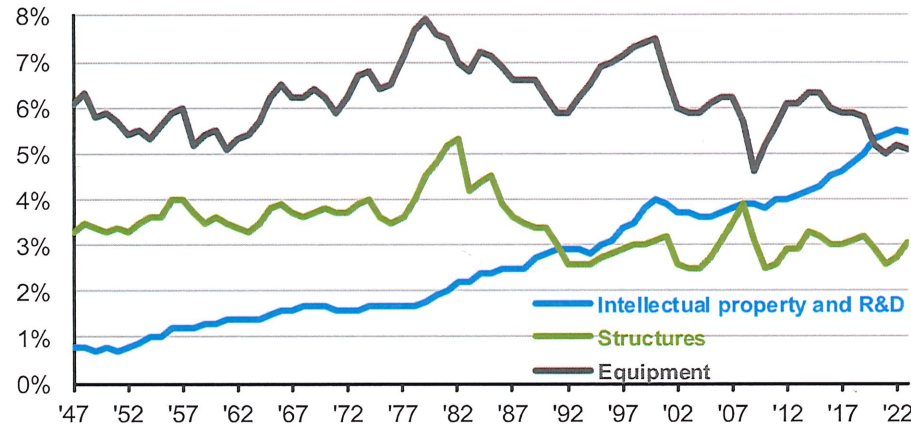
Drivers of GDP growth

Average year-over-year % change



Capital spending components

Share of capital spending as a percent of GDP, annual**



Source: J.P. Morgan Asset Management; (Top left) Census Bureau, DOD, DOJ; (Top left and right) BLS; (Right and bottom left) BEA.
 GDP drivers are calculated as the average annualized growth in the 10 years ending in the fourth quarter of each decade. *The latest period reflects 4Q19 to 3Q23. Future working-age population is based on Census Bureau projections released in November 2023, controlled for military enrollment, growth in institutionalized population and demographic trends. DOD Troop Readiness reports used to estimate percent of population enlisted. Numbers may not sum due to rounding. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.
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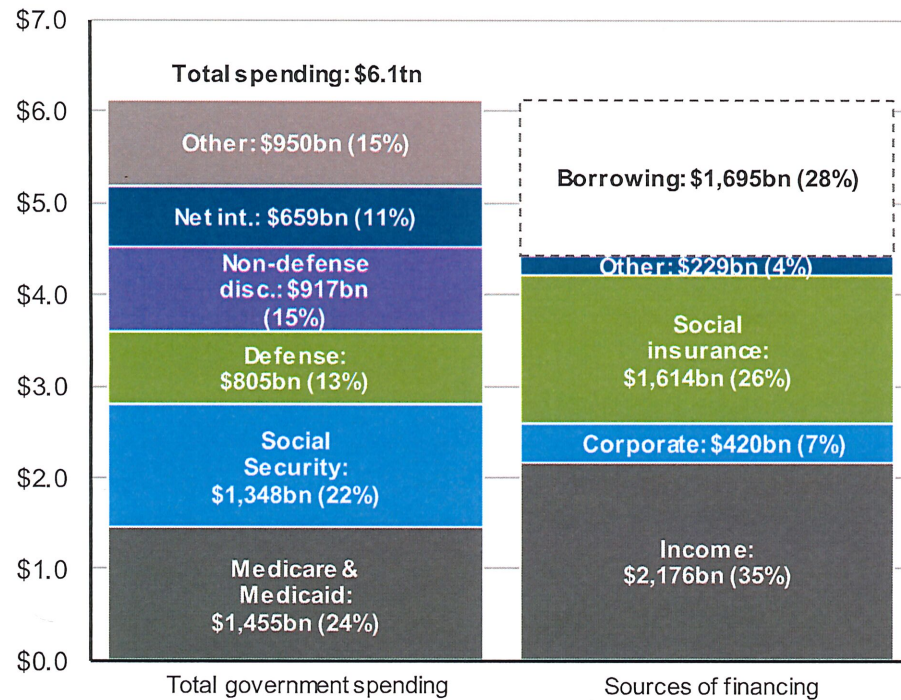
Federal finances

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Economy

The 2023 federal budget

USD trillions

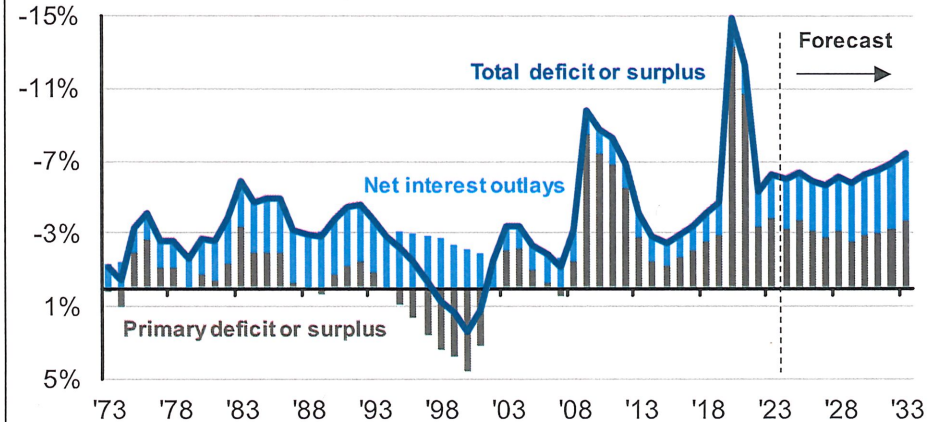


CBO's Baseline economic assumptions

	2023	'24-'25	'26-'27	'28-'33
Real GDP growth	0.9%	2.0%	2.4%	1.9%
10-year Treasury	4.0%	3.8%	3.8%	3.8%
Headline inflation (CPI)	3.3%	2.5%	2.1%	2.2%
Unemployment	4.1%	4.6%	4.5%	4.5%

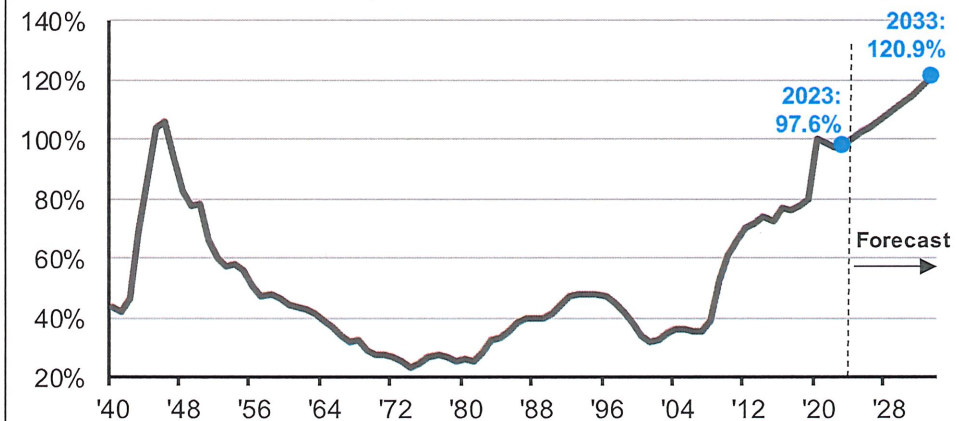
Federal deficit and net interest outlays

% of GDP, 1973-2033, Adj. CBO Baseline Forecast*



Federal net debt (accumulated deficits)

% of GDP, 1940 – 2033, Adj. CBO Baseline Forecast*, end of fiscal year



Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department.

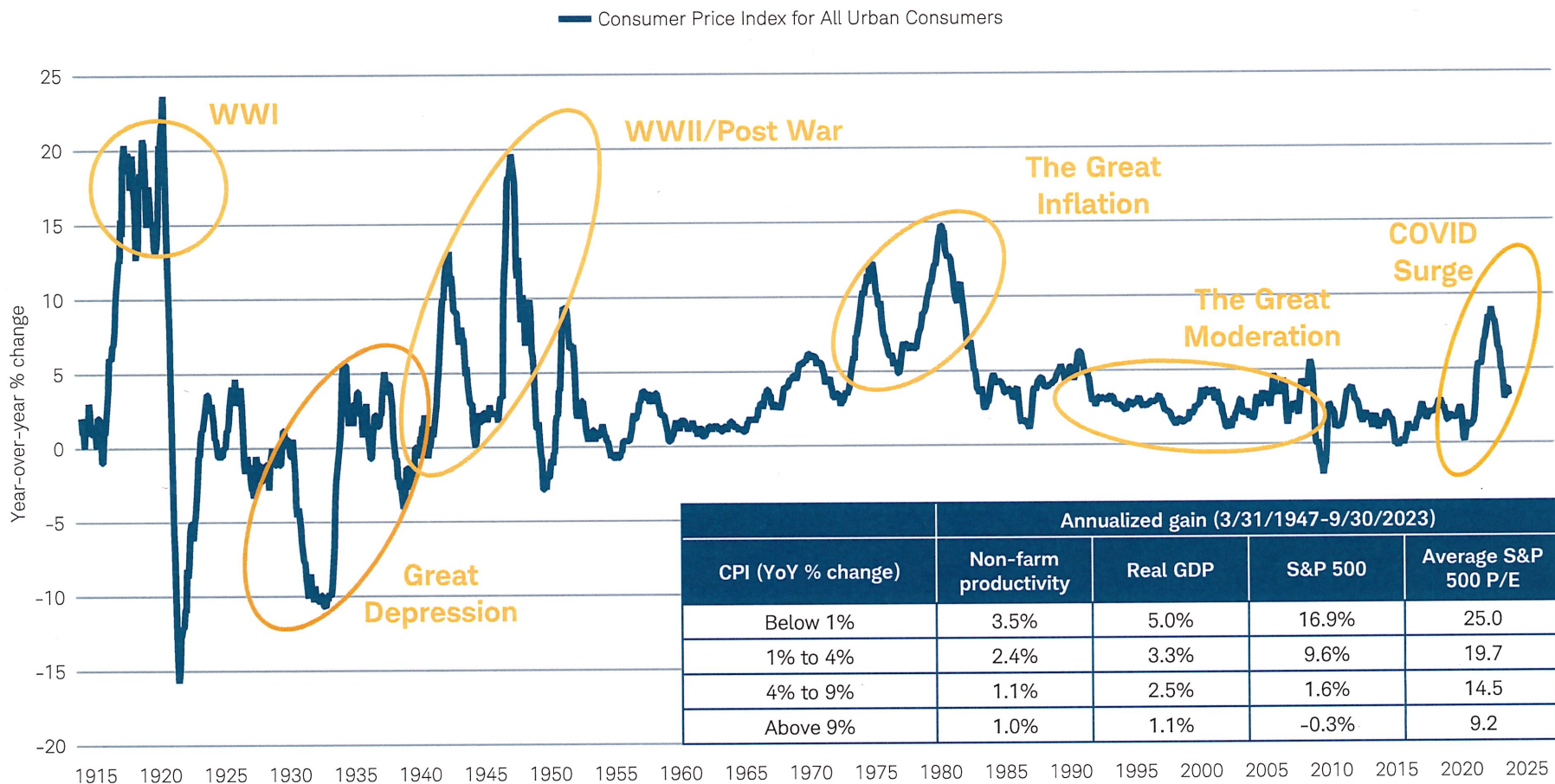
*Estimates are based on the Congressional Budget Office (CBO) May 2023 An Update to the Budget Outlook: 2023 to 2033, adjusted by JPMAM for FY 2023 forecast errors. Other spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Note: Years shown are fiscal years. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated.

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A long-term view of U.S. inflation

Previous surges in inflation were associated with unique events, some of which lasted for years. More active monetary policies have been in place since the early 1980s, although it's uncertain whether the ultra-aggressive Fed actions can contain core inflation in the near term. Historically, higher inflation correlated with weaker stock market and economic gains.



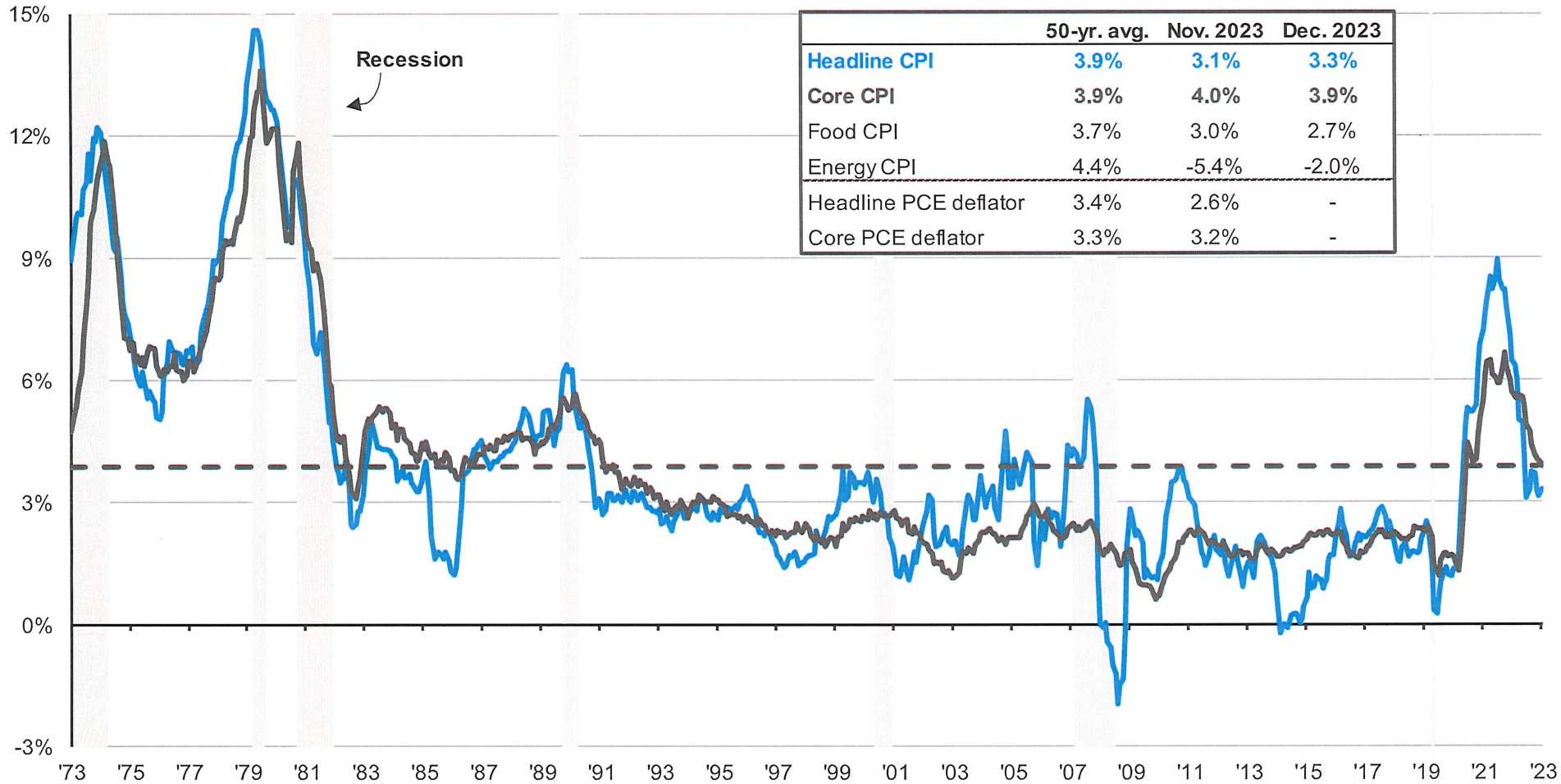
Source: Charles Schwab, Macrobond, Ned Davis Research using monthly data available as of 12/31/2023. U.S. CPI Urban Consumers YoY Not Seasonally Adjusted (CPI YoY Index). Investing involves risk, including loss of principal. **Past performance is no guarantee of future results.**



Inflation

CPI and core CPI

% change vs. prior year, seasonally adjusted



Source: BLS, FactSet, J.P. Morgan Asset Management.

CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations.

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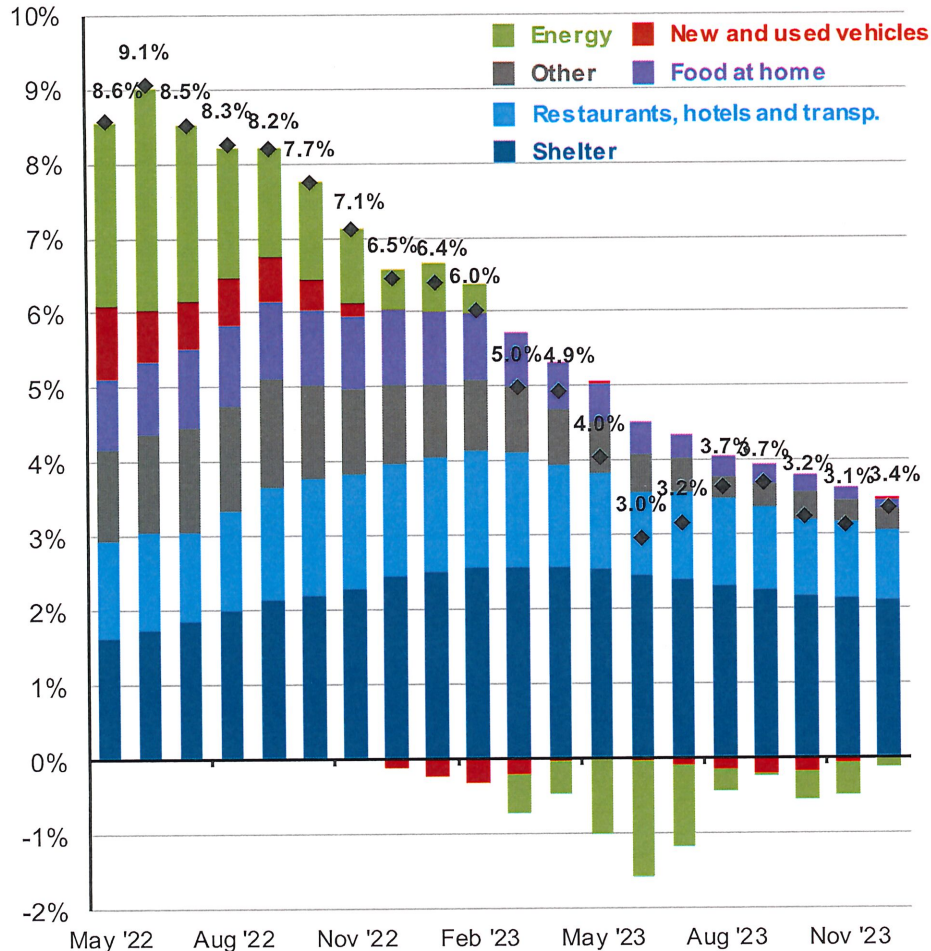


Inflation components

Economy

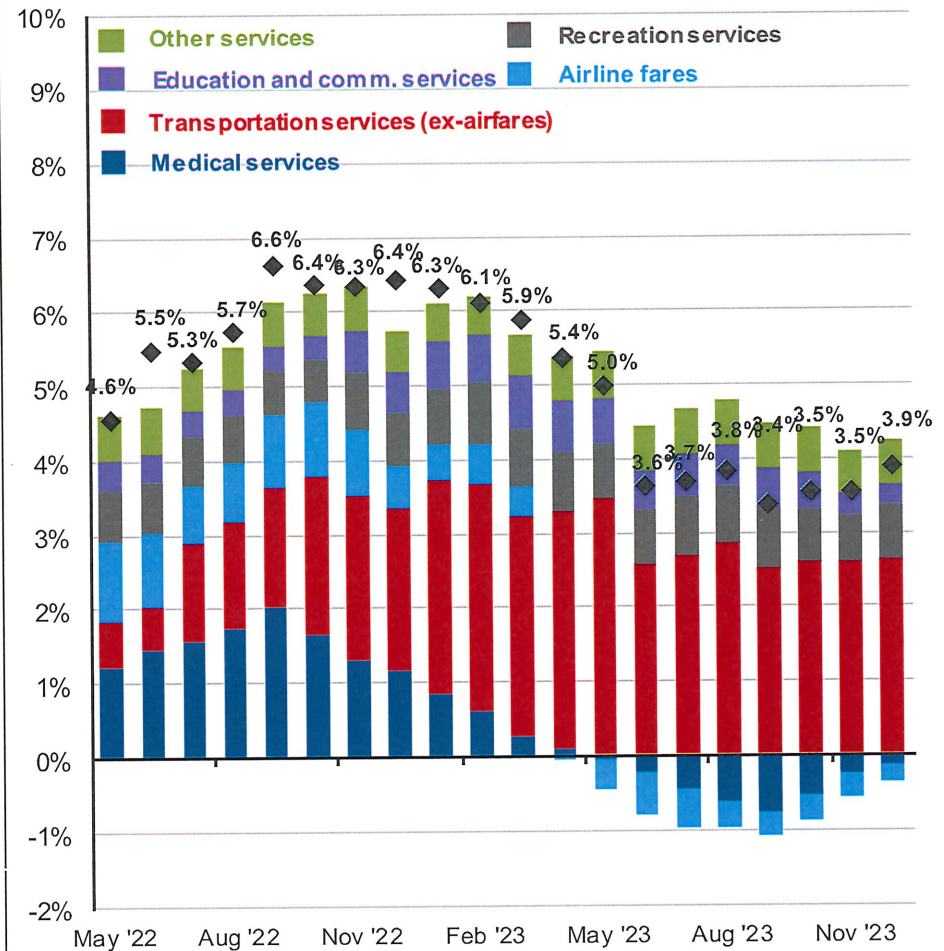
Contributors to headline CPI inflation

Contribution to y/y % change in CPI, non-seasonally adjusted



Contributors to core services ex-shelter CPI inflation*

Contribution to y/y % change in custom CPI index, non-seasonally adj.



Source: BLS, FactSet, J.P. Morgan Asset Management. Contributions mirror the BLS methodology on Table 7 of the CPI report. Values may not sum to headline CPI figures due to rounding and underlying calculations. *Core services ex-shelter CPI is a custom index using CPI components created by J.P. Morgan Asset Management. (Left) "Shelter" includes owners' equivalent rent and rent of primary residence; "Other" primarily reflects household furnishings, apparel, education and communication services, medical care services and other personal services. (Right) "Transportation services" primarily includes leased cars and trucks, motor vehicle insurance and motor vehicle maintenance and repair. Airline fares are broken out from transportation services. Guide to the Markets - U.S. Data are as of January 19, 2024.

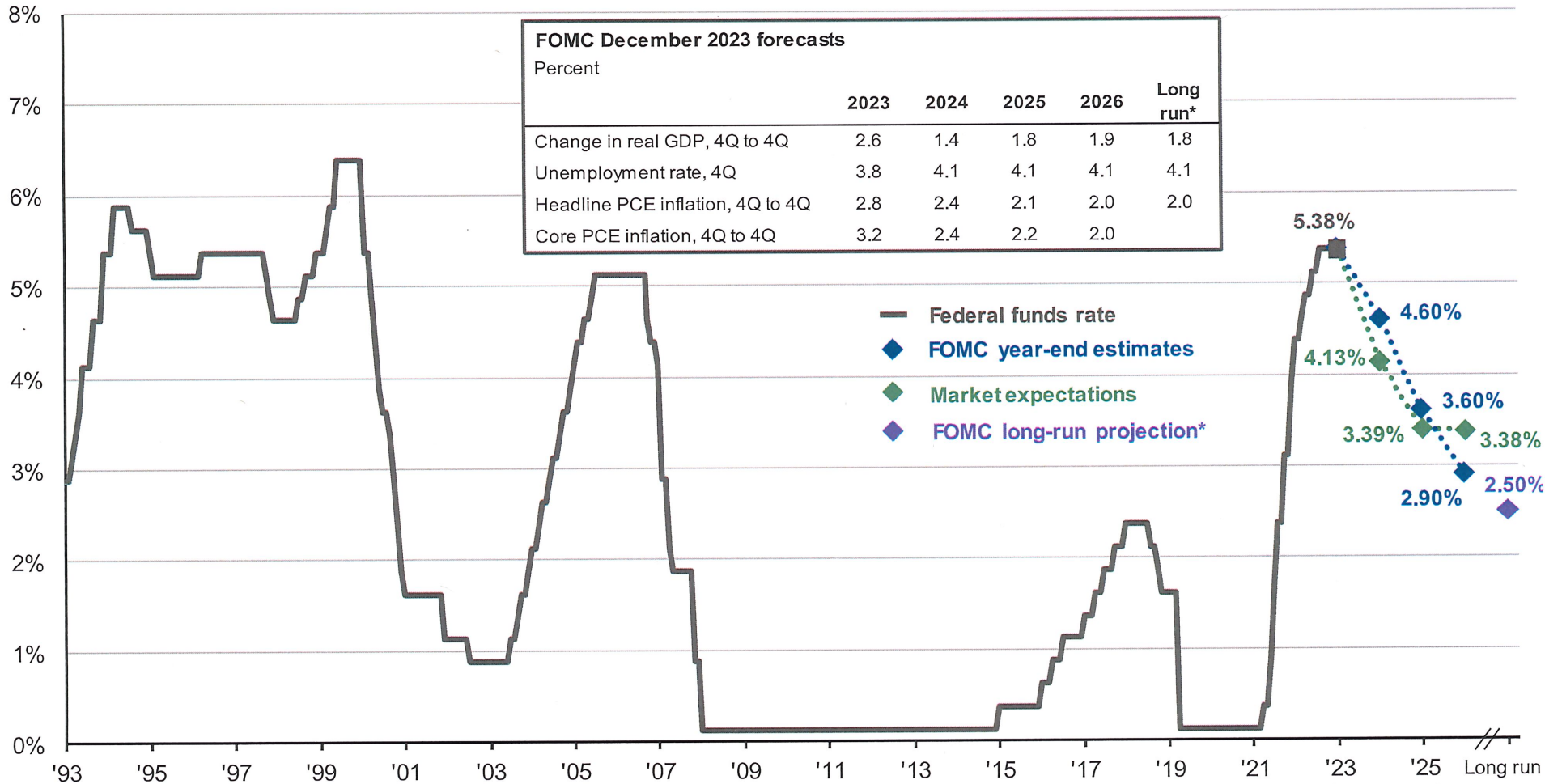


The Fed and interest rates

Fixed Income

Federal funds rate expectations

FOMC and market expectations for the federal funds rate



Source: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management.

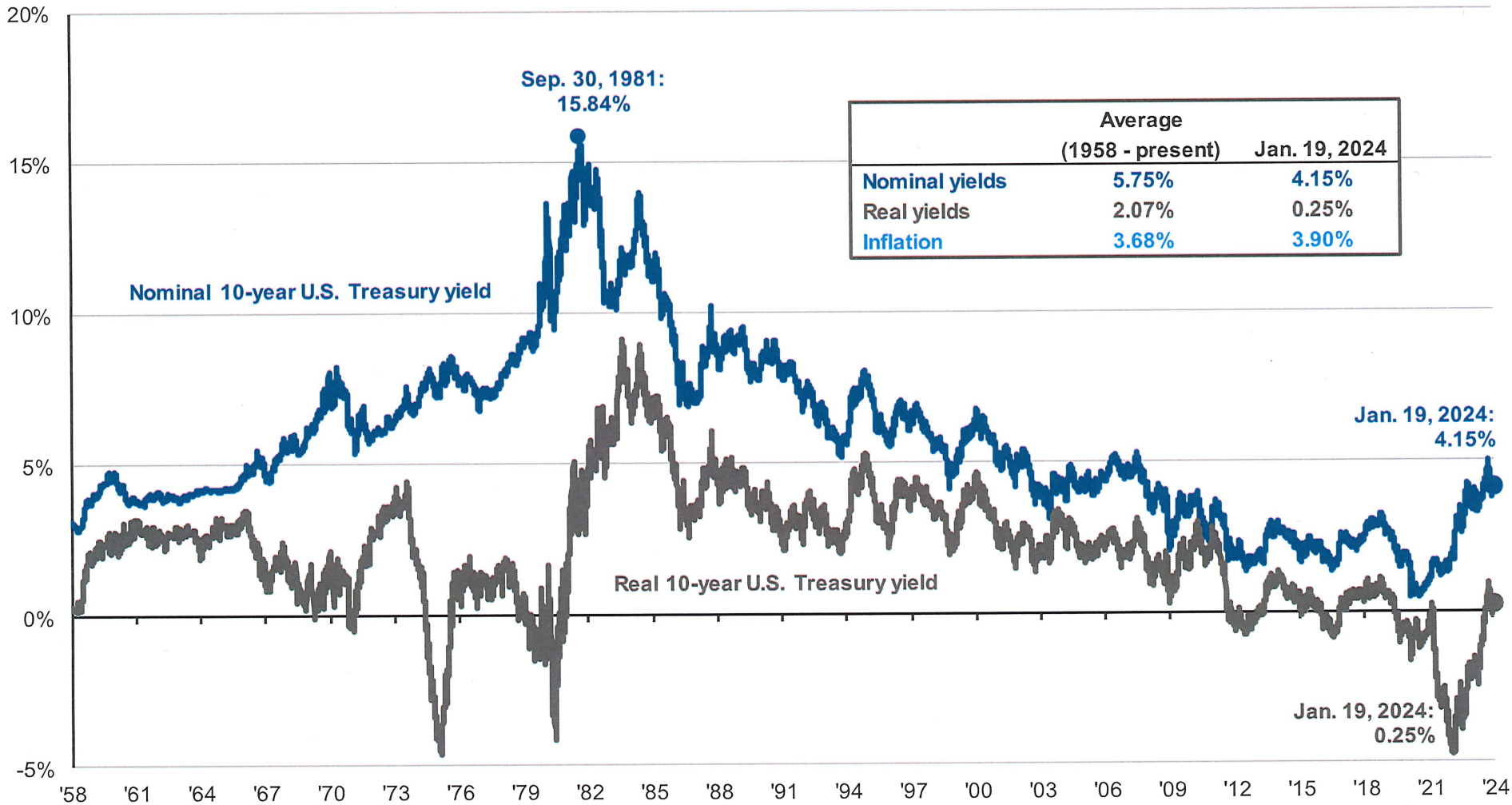
Market expectations are based off of USD Overnight Index Swaps. *Long-run projections are the rates of growth, unemployment and inflation to which a policymaker expects the economy to converge over the next five to six years in absence of further shocks and under appropriate monetary policy. Forecasts are not a reliable indicator of future performance. Forecasts, projections and other forward-looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections or other forward-looking statements, actual events, results or performance may differ materially from those reflected or contemplated. *Guide to the Markets* – U.S. Data are as of January 19, 2024.



Interest rates and inflation

Fixed Income

Nominal and real U.S. 10-year Treasury yields



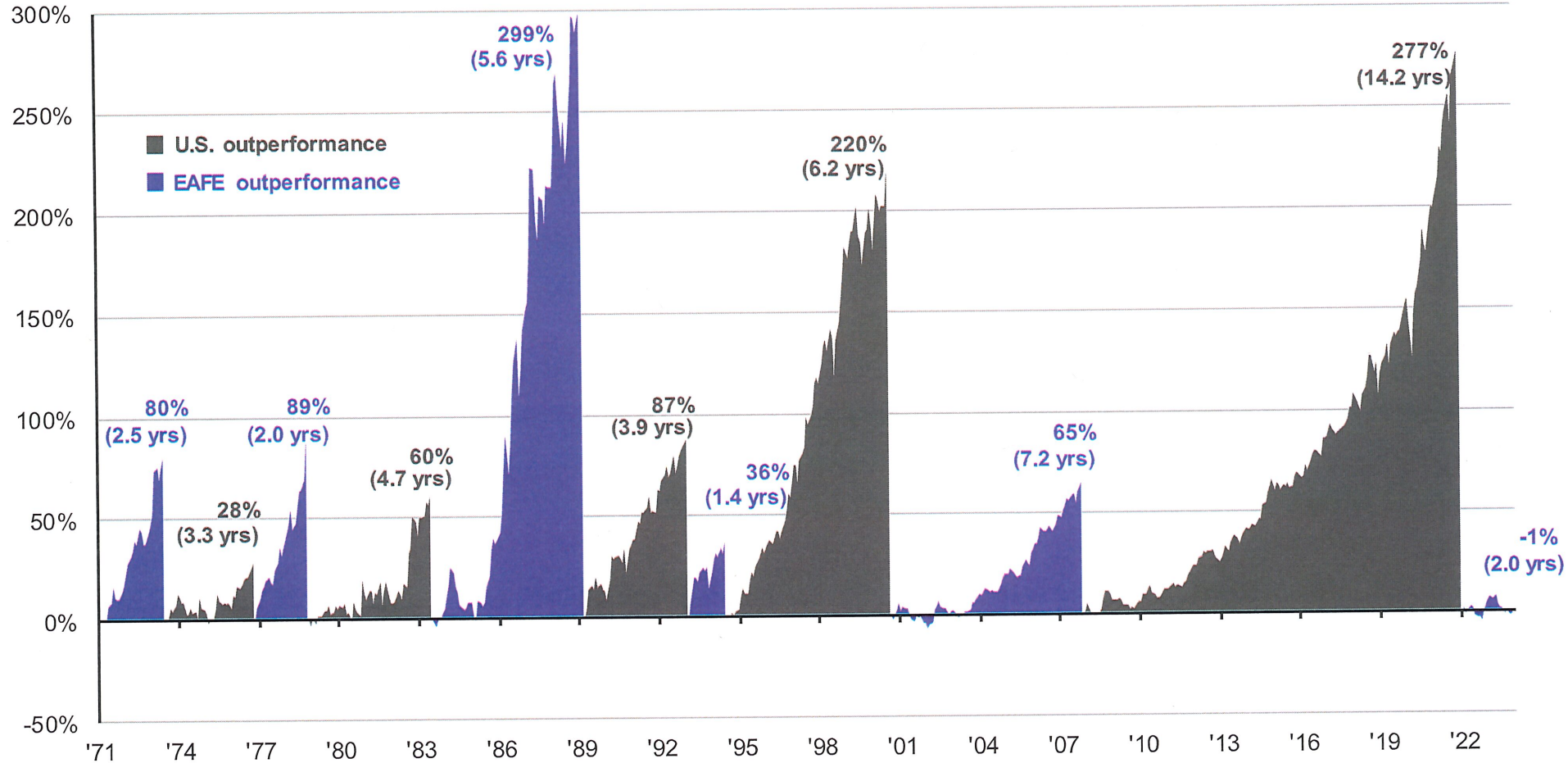
Source: BLS, FactSet, Federal Reserve, J.P. Morgan Asset Management.
 Real 10-year Treasury yields are calculated as the daily Treasury yield less year-over-year core CPI inflation for that month. For the current month, we use the prior month's core CPI figures until the latest data are available.
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Cycles of U.S. equity outperformance

MSCI EAFE and MSCI USA relative performance

U.S. dollar, total return, cumulative outperformance



International

Source: FactSet, MSCI, J.P. Morgan Asset Management.

Regime change determined when cumulative outperformance peaks and is not reached again in the subsequent 12-month period. *Peak MSCI EAFE outperformance vs. MSCI USA occurred in April 2023. If this is sustained for 12 months, the regime will switch in April 2024.

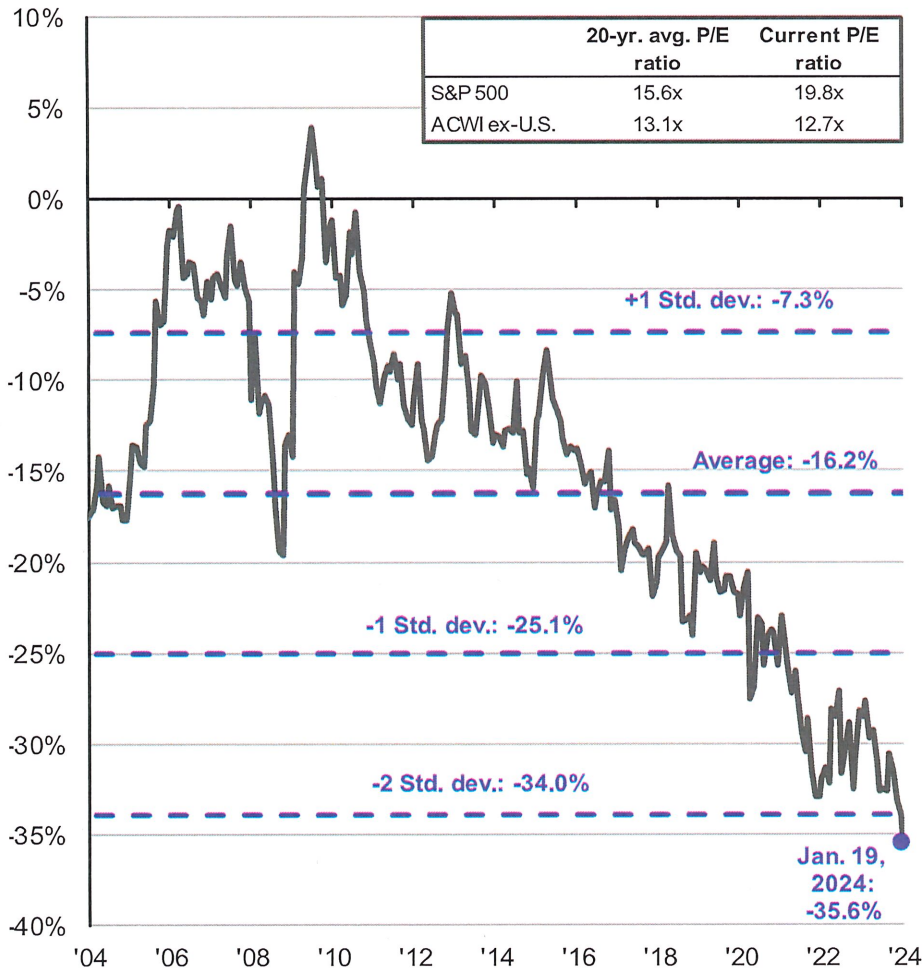
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International valuations and dividend yields

International: Price-to-earnings discount vs. U.S.

MSCI All Country World ex-U.S. vs. S&P 500, next 12 months



International: Difference in dividend yields vs. U.S.

MSCI All Country World ex-U.S. minus S&P 500, next 12 months



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Guide to the Markets – U.S. Data are as of January 19, 2024.

International

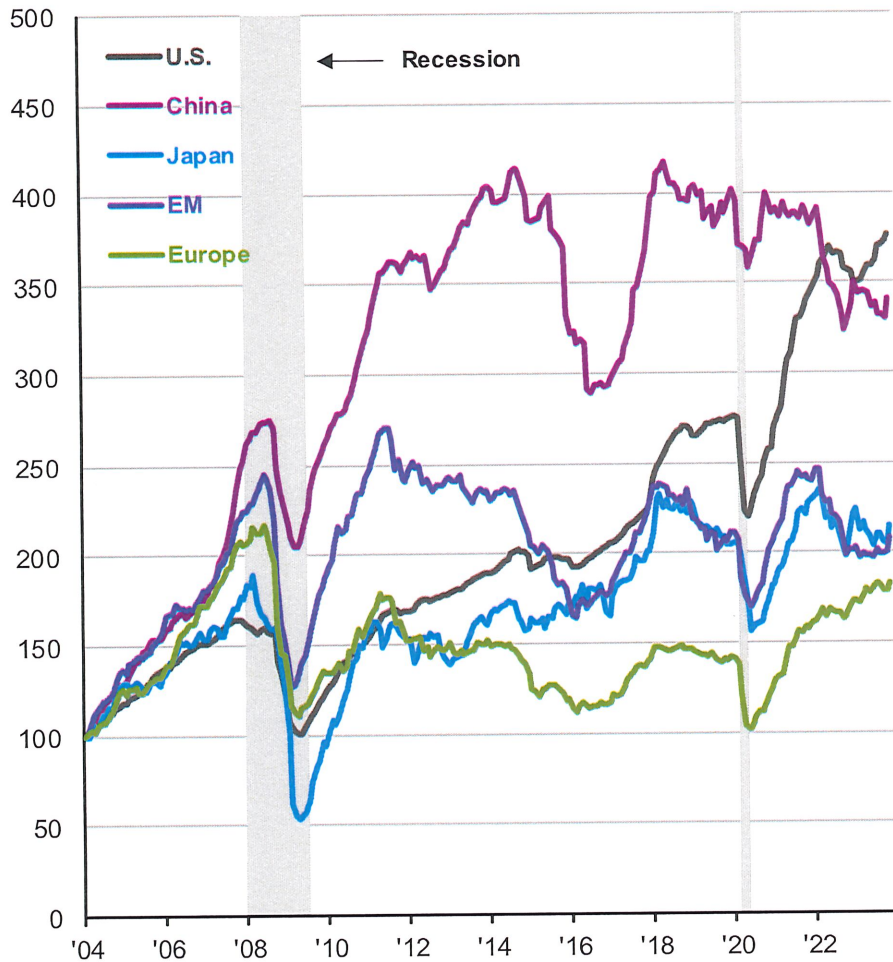


International equity earnings and valuations

International

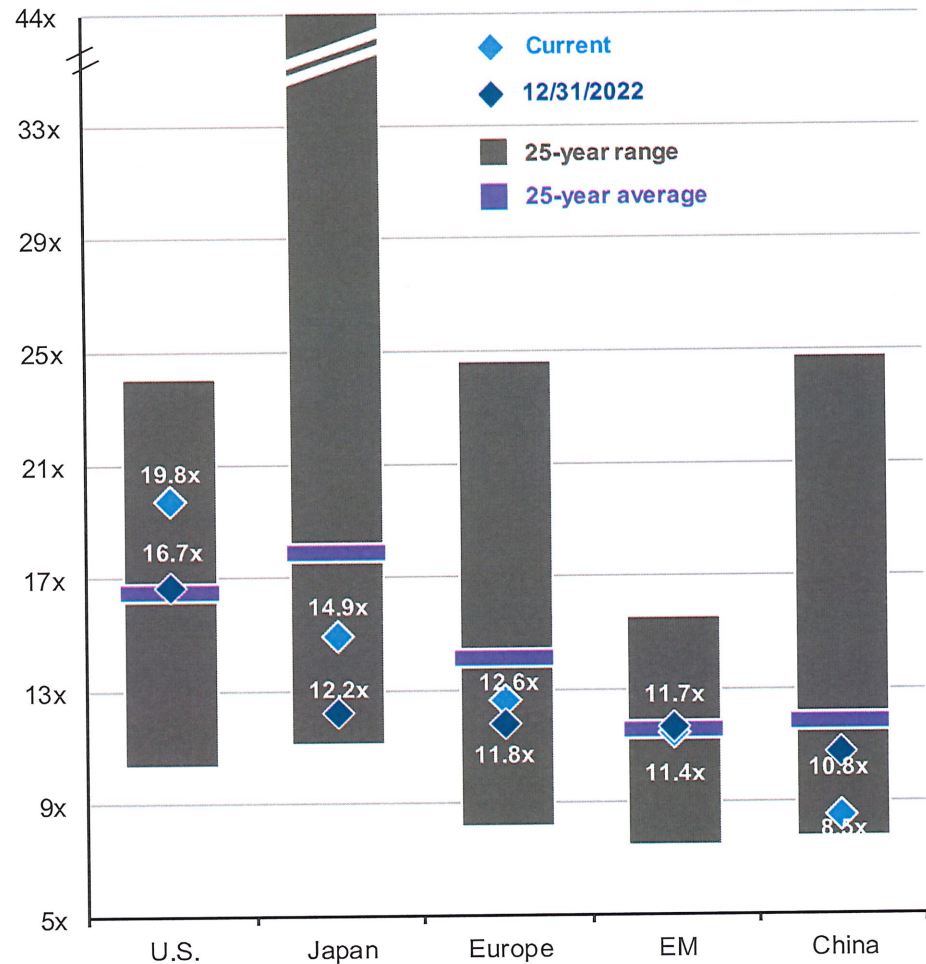
Global earnings estimates

Jan. 2004 = 100, next 12 months consensus estimates, U.S. dollars



Global valuations

Current and 25-year next 12 months price-to-earnings ratio



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. Next 12 months consensus estimates are based on pro-forma earnings and are in U.S. dollars. MSCI Europe includes the eurozone as well as countries not in the currency bloc, such as Norway, Sweden, Switzerland and the UK (which collectively make up almost half of the overall index). Past performance is not a reliable indicator of current and future results. (Right) The purple lines for EM and China show 20-year averages due to a lack of available data. *Guide to the Markets* – U.S. Data are as of January 19, 2024.



"Sometimes the future is bright, sometimes it's dark—it's all cyclical."

• •

Tom